SLO COUNTY apcd | Air Pollution Control District
San Luis Obispo County

TO: Board of Directors, Air Pollution Control District

FROM: Larry R. Allen, Air Pollution Control Officer

DATE: March 28, 2012

SUBJECT: Greenhouse Gas Emission Thresholds for CEQA

SUMMARY

The District's CEQA Air Quality Handbook (CEQA Handbook) serves as a guide for evaluating and mitigating the potential air quality impacts of projects subject to review under the California Environmental Quality Act (CEQA). Last updated by your Board in 2009, the CEQA Handbook recognized legislation requiring the inclusion of greenhouse gas (GHG) emission analysis in the CEQA review process and provided interim guidance to lead agencies, project proponents and the public on how to evaluate and mitigate GHG emissions from new development. The item before you today is the consideration of GHG CEQA Thresholds of Significance for residential, commercial and industrial projects, to assist lead agencies in determining the significance of GHG emission impacts from new land use projects subject to CEQA review.

RECOMMENDATION

That your Board consider the following action:

1) Adopt the attached resolution to:
    a. Certify the Negative Declaration has been completed in compliance with CEQA;
    b. Adopt the Negative Declaration prepared for the GHG CEQA Thresholds of Significance; and,
    c. Adopt the proposed GHG CEQA Thresholds of Significance;
2) Instruct the Air Pollution Control Officer to incorporate the GHG CEQA Thresholds of Significance into the District's CEQA Air Quality Handbook.

DISCUSSION

Background:

The District's CEQA Air Quality Handbook serves as a useful guide for lead agencies, consultants, project proponents, and the general public for quantifying project construction and operational emissions, comparing those emissions to APCD significance thresholds and applying appropriate mitigation measures as necessary. The APCD's CEQA Handbook is one tool among others for implementing its mission to realize and preserve clean air for all county residents and businesses.

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The APCD's CEQA Air Quality Handbook was first released in 1997 and has been updated twice since then. Prior to the most recent update, the Handbook focused primarily on evaluating and mitigating emissions of traditional criteria air pollutants (ozone precursors and particulate matter) from new development. In 2009, the APCD Board adopted significant changes to the CEQA Handbook to update criteria thresholds for construction and operational emissions, add comprehensive guidance for toxic diesel particulate matter, and provide general guidance on the need to assess and mitigate GHG emissions to the extent feasible for all projects throughout SLO County. Staff is now proposing GHG thresholds of significance for residential, commercial and industrial land use projects to help lead agencies meet the GHG reduction goals of Assembly Bill (AB) 32, the California Global Warming Solutions Act.

In 2007, through the adoption of Senate Bill (SB) 97, California's lawmakers identified the need to analyze greenhouse gas emissions as a part of the CEQA process. The Office of Planning and Research developed updates to the CEQA statute to address the analysis and mitigation of GHG emissions in CEQA. The California Natural Resources Agency adopted revisions to the State CEQA Guidelines effective in March 2010 requiring all lead agencies to assess and mitigate, to the extent feasible, GHG emissions from proposed land use development.

To date, very few lead agencies have adopted CEQA significance thresholds for GHG emissions. In the absence of such thresholds, lead agencies are required to individually analyze the GHG emissions of each proposed project and arbitrarily decide their significance level of mitigation needed. This has resulted in a situation where virtually all new land use projects (residential, commercial and industrial), regardless of size, location and description, are required to quantify and mitigate their GHG emissions. In addition, each lead agency within the county may potentially establish separate and inconsistent significance criteria for projects in their jurisdiction. Adoption of appropriate significance thresholds will eliminate the need for projects below the thresholds to quantify and mitigate GHG emissions, provide consistency and more certainty to the review process, and help our region contribute its fair share toward meeting the statewide GHG reduction targets mandated by AB 32.

APCD staff and consultants have conducted considerable research and analyses over the past year in evaluating how to establish appropriate GHG thresholds of significance for our area. The proposed thresholds presented below provide guidance for lead agencies, project proponents and the general public to implement SB 97 in a consistent, defensible manner while substantially streamlining the review process for projects below the thresholds.

Greenhouse Gas Thresholds and Supporting Evidence:
The APCD's *Greenhouse Gas Thresholds and Supporting Evidence* document (Exhibit A) provides a detailed overview of the process used to develop GHG CEQA thresholds of significance for residential, commercial and industrial projects proposed in this county. Staff recommendations are based on AB 32 GHG emission reduction goals, after taking into account the emission reductions expected from the strategies outlined in ARB's Scoping Plan. The threshold recommendations are based on substantial technical analysis and provide both a quantitative and/or qualitative approach for GHG evaluation.

Through extensive research, APCD determined a tiered process for residential / commercial land use projects was the most appropriate and effective approach for assessing the GHG emission impacts

from development proposed in SLO County. Any of the three options below may be used to determine the significance of a residential or commercial project's GHG emission impact to a level of certainty for lead agencies:

1) Qualitative GHG Reduction Strategies (e.g., Climate Action Plans): a qualitative threshold that is consistent with AB 32 Scoping Plan measures and goals; or,
2) Bright-Line Threshold: numerical value to determine the significance of a project's annual GHG emissions; or,
3) Efficiency-Based Threshold: assesses the GHG impacts of a project on an emissions per capita basis.

In addition to the residential/commercial threshold proposed above, a bright-line numerical value threshold is also proposed for stationary source (industrial) projects. A more detailed description of each recommended threshold is presented below.

Residential / Commercial Project Thresholds:

Qualified GHG Reduction Strategy: This entails a lead agency's approved Qualified GHG Reduction Strategy that is tied to the AB 32 emission reduction goals and promotes GHG reductions on a plan level without impeding the implementation of GHG-efficient development. This would recognize the initiative of many SLO County communities who have already developed or are in the process of developing a GHG Reduction Plan. If a project is consistent with an adopted Qualified Greenhouse Gas Reduction Strategy that addresses the project's GHG emissions, it can be presumed the project will not have significant GHG emission impacts and the project would be considered less than significant.

Bright-Line Threshold: The Bright-Line Threshold is a numerical value used to compare a project's GHG emissions on an annual basis. The methodology used in developing the Bright-Line Threshold is intended to help reach the AB 32 emission reduction targets by attributing an appropriate share of the GHG reductions needed from new land use development projects subject to CEQA in the SLO County region. This approach is referred to as the "gap-based approach." Conducting the 8-step Gap Analysis described in the *GHG Thresholds and Supporting Evidence* document was a substantial undertaking requiring considerable data review and a variety of technical analyses. Based on the results of that effort, staff recommends a GHG emissions significance threshold of **1,150** metric tons (MT) of carbon dioxide equivalent (CO_2e) per year. This is approximately equivalent to the operational GHG emissions associated with a 70- unit residential subdivision in an urban setting (49- unit rural) or a 40,000 sq. ft. strip mall in an urban setting.

Staff analysis estimates a total of only 56 projects countywide over the next ten years (about 6 projects per year) would exceed the threshold and require analysis. These projects would account for approximately 19% of all GHG emissions anticipated to occur between now and 2020 from new land use development in SLO County. Typical projects smaller than the screening units above will be streamlined through the CEQA process and found insignificant for GHG emissions. The land use emissions model, CalEEMod, used to estimate a project's criteria pollutant emissions, is also used to calculate a project's annual GHG emissions.

Efficiency-Based Threshold: This threshold option compares a project's estimated emissions to the number of employees and residents it will serve. Unlike the Bright-Line Threshold, this threshold option provides a feasible threshold for larger dense, mixed-use,

infill development whose emissions would otherwise substantially exceed the Bright-Line Threshold; it would facilitate transit-oriented development based on quantitative efficiency measures. Staff proposes a project-level Efficiency Threshold of **4.9** MT CO2e/SP/yr. The SP (service population) is the sum of the number of employees and residents associated with a project. To calculate the efficiency of an individual project for comparison to the efficiency threshold, one can use CalEEMod to estimate the annual CO_2e emissions (MT CO_2e/yr.); this value is then divided by the project's service population (population + employment).

Stationary Source GHG Threshold:
The Industrial Threshold (also called Stationary Source Threshold) applies to new or modified stationary source projects that will need to be analyzed under CEQA and mitigated to the maximum extent feasible. Both the South Coast Air Quality Management District (AQMD) and Bay Area AQMD have adopted a 10,000 MT CO2e/yr threshold for stationary sources based on a goal of capturing and mitigating 90 to 95% of new stationary source GHG emissions. The APCD's proposed **10,000** MT CO2e threshold accounts for 94% of all combustion-related CO2 emissions in the APCD's 2009 GHG emissions inventory for combustion sources from all permitted facilities. Stationary source projects below the 10,000 MT CO_2e/yr. threshold account for only a small portion of SLO County's total GHG emissions from stationary sources. Such small sources will not significantly add to global climate change and will not hinder SLO County's ability to reach the AB 32 goal, even when considered cumulatively.

Environmental Determination:
Pursuant to CEQA, the APCD developed an Initial Study (Exhibit B) to assess if the adoption and implementation of the proposed GHG CEQA Thresholds of Significance would have significant effects on the environment; no potentially significant environmental impacts were found. Based on this finding, mitigation measures were not included in this project and a proposed Negative Declaration was issued on February 15, 2012. Public review of the Negative Declaration occurred from February 15 – March 16, 2012.

Public Engagement:
Extensive public outreach was conducted during development of the proposed GHG CEQA Thresholds of Significance. A public workshop was conducted on December 15, 2011 to meet with stakeholders and discuss the technical analysis and proposed thresholds. At the request of the Home Builders Association (HBA), Economic Vitality Corporation, and Coalition of Labor, Agriculture and Business (COLAB), a second workshop was held on February 23, 2012 to review the final proposed changes with interested stakeholders. The workshops were well attended by State, county and city governmental agencies, consulting firms and trade organizations. Individual presentations were also given in meetings with the Economic Vitality Corporation Board, City/County Community & Planning Directors, and the City/County GHG Stakeholder Committee. In addition, APCD met with HBA and COLAB to discuss their comments and questions on the District's proposal. The draft *GHG Thresholds and Supporting Evidence* document was made available on APCD's website along with the workshop presentations. Written comments were received from the Home Builders Association, City of SLO, Economic Vitality Corporation and SLO County Planning & Building Department. Exhibit C includes the APCD response to the questions received at the two public workshops and written comment letters. All comments received have been addressed.

Next Steps:
Once the GHG CEQA Thresholds of Significance are adopted by the APCD Board, the 2009 CEQA Air Quality Handbook will be updated to include these thresholds. The APCD will then recommend lead agencies within the county use the adopted GHG thresholds of significance when considering the significance of GHG impacts from new projects subject to CEQA. Projects with GHG emissions that exceed the thresholds will need to implement feasible mitigation to reduce the impacts to less than significant. This process can be accomplished through a Mitigated Negative Declaration or an Environmental Impact Report.

The proposed GHG CEQA Thresholds of Significance are intended to serve as interim guides until AB 32 and SB 375 have been fully implemented through adopted regulations, incentives, plans and programs, or the California Air Resources Board (ARB) adopts a statewide GHG threshold. Until then, APCD recommends local agencies throughout SLO County apply the GHG thresholds set forth in the *GHG Thresholds and Supporting Evidence* document. The APCD is committed to reviewing the GHG thresholds at regular intervals to ensure they remain at levels appropriate and necessary to assist our region in its efforts to meet the goals of AB 32 while streamlining the project review process for the development community.

OTHER AGENCY INVOLVEMENT

In the development of the Bright-Line Threshold APCD coordinated with the seven incorporated cities, SLO County and SLO Council of Governments on the evaluation of historical building permits issued over the past ten years. Staff also coordinated with California Air Resources Board, California Attorney General's Office, Office of Planning and Research and California Air Pollution Control Officers Association in the development of the GHG thresholds. After adoption, staff will continue to meet with local agencies and the City/County Planning Directors to ensure familiarity with the revisions and smooth implementation through the CEQA review process.

FINANCIAL CONSIDERATIONS

Board adoption of the GHG CEQA Threshold of Significance will have no fiscal impact on the District's operating budget. Implementation of the thresholds by lead agencies in SLO County is expected to reduce overall costs for new land use development by streamlining the review process and reducing the number of projects subject to GHG analysis and mitigation requirements.

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BOARD OF DIRECTORS
AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN LUIS OBISPO, STATE OF CALIFORNIA

_____ day _____, 2012

RESOLUTION NO. _____

RESOLUTION OF THE AIR POLLUTION CONTROL BOARD CERTIFYING THE NEGATIVE DECLARION HAS BEEN COMPLETED IN COMPLIANCE WITH CEQA, ADOPTING THE NEGATIVE DECLARATION AND ADOPTING THE GHG CEQA THRESHOLDS OF SIGNIFICANCE

WHEREAS, pursuant to Title 14, Chapter 3, Article 5, Section 15064.7 of the California Code of Regulations ("Section 15064.7"), the California Natural Resources Agency encourages public agencies to adopt "Thresholds of Significance" under the California Environmental Quality Act ("CEQA"); and

WHEREAS, pursuant to Section 15064.7, CEQA Thresholds of Significance are identifiable quantitative, qualitative or performance levels of a particular environmental effect, noncompliance with which means the effect will normally be determined to be "significant" under CEQA, and compliance with which means the effect normally will be determined to be less than significant under CEQA; and

WHEREAS, the California Global Warming Solutions Act of 2006 ("AB 32") sets a regulatory framework requiring the California Air Resources Board to achieve a reduction in greenhouse gas (GHG) emissions in California to a 1990 equivalent emissions level by the year 2020; and

WHEREAS, the California Legislature adopted Senate Bill 97 ("SB 97") in 2007 requiring the Governor's Office of Planning and Research ("OPR") to develop, and the Natural Resources Agency to adopt, amendments to the State CEQA Guidelines addressing the analysis and mitigation of greenhouse gas ("GHG") emissions; and

WHEREAS, the Natural Resources Agency adoption of CEQA Guidelines pursuant to SB 97 became effective on March 18, 2010; and

WHEREAS, the District developed GHG CEQA Threshold of Significance options for use in determining the significance of commercial and residential land use projects subject to CEQA, to wit: 1,150 metric tons per year of carbon dioxide equivalent ("CO_2e"); OR, 4.9 metric tons of CO_2e per year per service population (project resident or employee); OR, compliance with an adopted plan for the reduction of greenhouse gas emissions developed pursuant to, and compliant with, Section 15183.5(b) of the State CEQA Guidelines; and

WHEREAS, the District developed a GHG CEQA Threshold of Significance for use in determining the significance of industrial projects subject to CEQA, to wit: 10,000 metric tons per year of CO_2e; and

WHEREAS, the above District-developed Thresholds of Significance are supported by substantial evidence as set forth in Exhibit A hereto; and

WHEREAS, the District held public workshops on December 15, 2011 and February 23, 2012, and the District responded to written and verbal comments that were received during comment periods; and

WHEREAS, the District prepared an Initial Study pursuant to CEQA on the adoption and implementation of the GHG CEQA Thresholds of Significance as set forth in Exhibit B; and

WHEREAS, the Initial Study found that adoption of the GHG CEQA Thresholds of Significance will not have any significant adverse environmental effects; and

WHEREAS, the District prepared a Proposed Negative Declaration pursuant to CEQA based on the findings of the Initial Study, which was duly noticed for public review from February 15 to March 16, 2012; and

WHEREAS, the Board of Directors of the San Luis Obispo County Air Pollution District held a public hearing and considered public comment on the proposed GHG CEQA Thresholds of Significance at its March 28, 2012 meeting; and

WHEREAS, the District, at 3433 Roberto Court, San Luis Obispo, maintains the record of the proceedings upon which this decision is based.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the San Luis Obispo County Air Pollution Control District certifies that the Negative Declaration has been completed in compliance with the California Environmental Quality Act, that the Board of Directors of the District has reviewed and considered the information contained in the Negative Declaration and Initial Study, and that the Negative Declaration and Initial Study reflects their independent judgment.

BE IT FURTHER RESOLVED that the Board of Directors of the San Luis Obispo County Air Pollution Control District adopts the Negative Declaration prepared for the GHG CEQA Thresholds of Significance.

BE IT FURTHER RESOLVED that the Board of Directors of the San Luis Obispo County Air Pollution Control District adopts the GHG CEQA Thresholds of Significance as stated above and set forth in Exhibit A.

BE IT FINALLY RESOLVED that the Board of Directors of the San Luis Obispo County Air Pollution Control District directs the Air Pollution Control Officer to incorporate the GHG CEQA Thresholds of Significance as stated above and set forth in Exhibit A into the District CEQA Handbook, and to recommend their use by local jurisdictions in the CEQA review process.

On motion of Director _____, seconded by Director

_____, and passed and adopted on the following roll call vote:

Ayes:

Noes:

Absent:

Abstaining:

_____
Chair, Air Pollution Control District Board
San Luis Obispo County

Attest:

_____
Clerk, Air Pollution Control District Board

By:_____
Deputy Clerk

Approved as to Form and Legal Effect:

_____
Raymond A. Biering
District Counsel

Date: 3/20/12

I, _____,
County Clerk and ex-officio Clerk of the Board of the Air Pollution Control District, in and for the County of San Luis Obispo, State of California, do hereby certify the foregoing to be a full, true and correct copy of an order made by the Board of the Air Pollution Control District, as the same appears spread upon their minute book.

WITNESS my hand and seal of said Board, affixed this _____ day of _____, 2012.

JULIE RODEWALD
County Clerk and Ex-Officio Clerk of the
Board of the Air Pollution Control District

By _____
Deputy Clerk

GREENHOUSE GAS THRESHOLDS AND SUPPORTING EVIDENCE

Air Pollution Control District
San Luis Obispo County

March 28, 2012

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LIST OF ACRONYMS

AB	Assembly Bill
APCD	San Luis Obispo County Air Pollution Control District
APS	Alternative Planning Strategy
ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
BAU	Business as Usual
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CEQA	California Environmental Quality Act
CO_2e	Carbon Dioxide equivalent
DOF	Department of Finance
EDD	Employment Development Department
EIR	Environmental Impact Report
GHG	Greenhouse Gas
GWP	Global Warming Potential
LCFS	Low Carbon Fuel Standard
LU	Land Use
MMT	Million Metric Tons
MPO	Metropolitan Planning Organization
MT	Metric Tons
RTP	Regional Transportation Plan
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SLO	San Luis Obispo
SLOCOG	San Luis Obispo County Council of Governments
SP	Service Population (Residents + Employees)

1. INTRODUCTION

The San Luis Obispo County Air Pollution Control District (APCD) is a local public agency with the primary mission of realizing and preserving clean air for all county residents and businesses. The APCD's California Environmental Quality Act (CEQA) Air Quality Handbook (Handbook) is one tool for implementing this mission. The Handbook serves as a general guide for lead agencies, consultants, project proponents, and the general public on quantifying project construction and operational emission impacts, comparing those impacts to APCD significance thresholds, and applying appropriate mitigation measures when necessary. The APCD typically acts as a concerned agency (land use projects) or a responsible agency (APCD permit required) in the CEQA process, but can also be designated as the lead or co-lead agency for some projects.

The APCD's CEQA Air Quality Handbook was first released in 1997 and was updated in 2003. These editions primarily focused on evaluating and mitigating the emissions of traditional criteria air pollutants (ozone precursors and particulate matter) from new development. Subsequently, a considerable shift in air quality issues and priorities occurred at both state and local levels. This shift resulted in State programmatic changes and new legislation that placed greater focus on reducing and mitigating health and air quality impacts from toxic diesel particulate matter (DPM) and greenhouse gas (GHG) emissions. The APCD Board adopted significant changes to the Handbook in December 2009 to add comprehensive guidance for toxic DPM and staff is now proposing GHG thresholds of significance and applicable mitigation measures to help lead agencies meet the GHG reduction goals of Assembly Bill (AB) 32, the California Global Warming Solutions Act[1].

In 2007, through the adoption of Senate Bill (SB) 97, California's lawmakers identified the need to analyze greenhouse gas emissions as a part of the CEQA process. Even in the absence of adopted CEQA thresholds for GHG emissions, lead agencies are required to analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions. The proposed GHG thresholds for SLO County provide guidance for lead agencies to implement new development in a manner that will help our region provide its share of the GHG reductions outlined in AB 32. To meet these reduction goals, development in the County must become more sustainable with a focus on energy efficient mixed use urban infill and redevelopment that reduces vehicle dependency and expands alternative transportation modes, all of which supports SLO County's Clean Air Plan[2]. While building efficiency has significantly improved in California over the years and continues to improve, the necessary reductions cannot be achieved by one area or sector alone. It will require careful consideration of site design, location, transportation, energy efficiency, water and waste handling.

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[1] San Luis Obispo County Air Pollution Control District. 2009 (December). APCD *CEQA Air Quality Handbook*. San Luis Obispo, CA. Available: www.slocleanair.org/business/regulations.php#ceqa-handbook. Accessed December 1, 2011.

[2] San Luis Obispo County Air Pollution Control District. 2001. Clean Air Plan San Luis Obispo County. San Luis Obispo, CA. Available: http://www.slocleanair.org/business/pdf/CAP.pdf. Accessed December 1, 2011

Since the adoption of our 2009 Handbook, a number of agencies in California have subsequently developed GHG thresholds of significance for new development being evaluated under CEQA. Extensive research was conducted by the APCD to determine the most appropriate methodology for establishing GHG thresholds for our county[3]. After reviewing the GHG threshold analyses performed by other Air Districts and discussions with the California Attorney General, the California Office of Planning and Research and the Center for Biodiversity, staff determined the methodology used by the Bay Area Air Quality Management District (BAAQMD) was the most appropriate approach. Although SLO County's size and population is not comparable to that of the Bay Area, the technical approach they used to develop appropriate GHG thresholds for their regions was found to be scientifically sound and supported the State's effort to reach defined GHG reduction goals. The methodology employed by the BAAQMD was applied to specific data for SLO County and used to define the land use threshold for our region.

This document provides the necessary substantial evidence[4] in support of the GHG thresholds of significance that the APCD developed. Once adopted by the APCD Board, the 2009 CEQA Air Quality Handbook will be updated to include these thresholds. The APCD will then recommend lead agencies within the county use the adopted GHG thresholds of significance when considering the significance of GHG impacts of new projects subject to CEQA. Projects with GHG emissions that exceed the thresholds will need to implement mitigation to reduce the impacts to less than significant. This process can be accomplished through a Mitigated Negative Declaration or an Environmental Impact Report.

2. GREENHOUSE GAS THRESHOLDS

No single land use project could generate enough GHG emissions to noticeably change the global average temperature. Cumulative GHG emissions, however, contribute to global climate change and its significant adverse environmental impacts. Thus, the primary goal in adopting GHG significance thresholds, analytical methodologies, and mitigation measures is to ensure new land use development provides its fair share of the GHG reductions needed to address cumulative environmental impacts from those emissions. As reviewed herein, climate change impacts include an increase in extreme heat days, higher ambient concentrations of air pollutants, sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts.

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[3] Mathison, Nancy. 2010 (December). *Emerging Trends in Greenhouse Gas Thresholds of Significance for Use under the California Environmental Quality Act*. Master's Thesis, California Polytechnic State University.

[4] As defined in the California Public Resources code (§21080(c))"Substantial evidence" includes facts, reasonable assumptions, predicted upon facts, or an expert opinion supported by facts, but does not include argument, speculation, unsubstained opinion or narrative, evidence that is clearly inaccurate erroneous, or evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment.; *see also* CEQA Guidelines §15384.

2.1 JUSTIFICATION FOR ESTABLISHING GHG THRESHOLDS

The APCD's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions. If a project has the potential to generate GHG emissions above the threshold level, it would be considered a substantial contribution to a cumulative impact and therefore significant. If mitigation can be applied to lessen the emissions such that the project meets its share of emission reductions needed to address the cumulative impact, the project would normally be considered less than significant.

The APCD's framework for developing a GHG threshold for land development projects is based on comprehensive policy and regulatory analysis, as well as considerable technical evaluation of development trends in SLO County.

Scientific and Regulatory Justification

Climate Science Overview

Prominent GHG emissions that contribute to the greenhouse effect are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons, chlorofluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the natural greenhouse effect and have led to a trend of unnatural warming of the earth's climate, known as global climate change or global warming.

According to Article 2 of the United Nations Framework Convention on Climate Change (UNFCCC), "Avoiding Dangerous Climate Change" means: *"stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system*[5]*."* Dangerous climate change defined in the UNFCCC is based on several key indicators including the potential for severe degradation of coral reef systems, disintegration of the West Antarctic Ice Sheet, and shut down of the large-scale, salinity- and thermally-driven circulation of the oceans. The global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 ppm to 370 ppm currently[6]. "Avoiding dangerous climate change" is generally understood to be achieved by stabilizing global average temperature to 2 degrees Celsius above pre-industrial levels. It is estimated that global atmospheric levels of carbon

[5] United Nations Framework Convention on Climate Change. 2009. Article 2 of the UNFCCC. Available: http://unfccc.int/essential_background/convention/background/items/2536.php. Accessed December 1, 2011.

[6] United Nations Framework Convention on Climate Change. 2011. Essential Background > Basic Facts & Figures. Available: http://unfccc.int/essential_background/basic_facts_figures/items/6246.php. Accessed December 1, 2011.

dioxide equivalent (CO_2e[7]) cannot exceed 450 ppm if we are to prevent global temperatures from rising above 2 degrees Celsius[8].

Executive Order S-3-05

Executive Order S-3-05, signed by Governor Schwarzenegger in 2005, proclaims California's vulnerability to the impacts of climate change, including potentially significant reductions in the Sierra snowpack, further exacerbation of air quality problems and rising sea levels. To combat those concerns, the Executive Order established specific targets to reduce GHG emissions statewide to the level of year 2000 emissions by 2010, to 1990 levels by 2020, and to 80% below the 1990 level by 2050.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, which set the 2020 GHG emissions reduction goal into law. AB 32 finds and declares that "Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020, and establishes regulatory reporting, voluntary and market-based mechanisms to achieve quantifiable reductions in GHG emissions to meet the statewide goal.

In December of 2008, ARB adopted its *Climate Change Scoping Plan* (*Scoping Plan*), which is the State's plan to achieve GHG reductions in California, as required by AB 32[9]. The Scoping Plan contains strategies California will implement to reduce GHG emissions to 1990 levels by 2020. This will require a reduction of 80 million metric tons (MMT) CO_2e emissions, an approximate 16% reduction from the state's projected 2020 emission level of 507 MMT of CO_2e under a business-as-usual (BAU) scenario; this is a reduction of 33 MMT of CO_2e, or almost 7%, from 2008 GHG emissions. The AB 32 Scoping Plan is ARB's plan for meeting this mandate (ARB 2011). While the Scoping Plan does not specifically identify GHG emission reductions from the CEQA process for meeting AB 32 derived emission limits, the scoping plan acknowledges that "other strategies to mitigate climate change . . . should also be explored." The Scoping Plan also acknowledges that "Some of the measures in the plan may deliver more emission reductions than we expect; others less . . . and new ideas and strategies will emerge." In addition, climate change is considered a significant environmental issue and, therefore, warrants consideration under CEQA.

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[7] CO_2e, or Carbon Dioxide equivalent is a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP.

[8] United Nations Framework Convention on Climate Change. 2011. Essential Background > Basic Facts & Figures. Available: http://unfccc.int/essential_background/basic_facts_figures/items/6246.php. Accessed December 1, 2011.

[9] California Air Resources Board. 2008 (December). Climate Change Scoping Plan. Sacramento, CA. Available: http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm. Accessed December 1, 2011.

The AB 32 Scoping Plan establishes the policy intent to control numerous GHG sources through regulatory, incentive and market-based means. CEQA is an important and supporting tool in achieving the required GHG reductions; local adoption of GHG emission thresholds of significance for stationary sources (industrial) and land use development projects (residential and commercial) is important in assisting that effort.

Senate Bill 97

SB 97, signed in August 2007, represents the State Legislature's confirmation of this fact by directing the Governor's Office of Planning and Research (OPR) to develop CEQA Guidelines for evaluation of GHG emissions impacts and recommend mitigation strategies. In response, OPR released the *Technical Advisory: CEQA and Climate Change* (OPR 2008), and proposed revisions to the State CEQA guidelines (April 14, 2009) for consideration of GHG emissions. The California Natural Resources Agency adopted the proposed State CEQA Guidelines revisions on December 30, 2009 and the revisions were effective beginning March 18, 2010. These changes to the Guidelines were adopted in recognition of the need for new land use development to contribute its fair share toward achieving AB 32 goals, or, at a minimum, not hinder the State's progress toward the mandated emission reductions. Even in the absence of clearly defined thresholds for GHG emissions, the SB 97 requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.[10]

Senate Bill 375

Senate Bill (SB) 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS), or Alternative Planning Strategy (APS), that prescribes how land use will be allocated in their Regional Transportation Plan (RTP). ARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years, but can be updated every four years if advancements in emission technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If an MPO does not meet their GHG reduction targets, its transportation projects would not be eligible for State funding programmed after January 1, 2012. New provisions of CEQA incentivize qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

The proposed revisions to the APCD CEQA Air Quality Handbook include methodology consistent with the recently updated State CEQA Guidelines, which provides that certain residential and

[10] Office of Planning and Research, Technical Advisory. 2008. "CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act." Available: http://opr.ca.gov/docs/june08-ceqa.pdf. Accessed: November 15, 2011.

mixed use projects, and transit priority projects consistent with an applicable SCS or APS, need not analyze GHG impacts from cars and light-duty trucks.

2.2 SUBSTANTIAL EVIDENCE SUPPORTING PROJECT LEVEL GHG THRESHOLDS

There are several types of thresholds that can be supported by substantial evidence and be consistent with existing California legislation and policy to reduce statewide GHG emissions. In determining which thresholds to recommend, staff studied numerous options, relying on reasonable, environmentally conservative assumptions on growth in the land use sector, predicted emissions reductions from statewide regulatory measures and resulting emissions inventories, and the effectiveness of GHG mitigation measures.

Staff recommends setting GHG significance thresholds based on AB 32 GHG emission reduction goals after taking into account the emission reductions expected from the strategies outlined in ARB's Scoping Plan. The GHG CEQA significance thresholds recommended in this document were based on substantial technical analysis and provide a quantitative and/or qualitative approach for GHG evaluation. Until AB 32 has been fully implemented in terms of adopted regulations, incentives, and programs, and until SB 375 required plans have been fully adopted, or the California Air Resources Board (ARB) adopts a recommended threshold, the APCD recommends that local agencies throughout SLO County apply the GHG thresholds set forth herein.

The following sections provide the detailed description of the thresholds being proposed. Different thresholds have been developed to accommodate various development types and patterns. Three options are recommended for residential / commercial development:

1) Qualitative Reduction Strategies (e.g., Climate Action Plans): a qualitative threshold that is consistent with AB 32 Scoping Plan measures and goals;
2) Bright-Line Threshold: numerical value to determine the significance of a project's annual GHG emissions;
3) Efficiency-Based Threshold: assesses the GHG efficiency of a project on a per capita basis.

Residential and commercial projects may use any of the three options above to determine the significance of a projects GHG emission impact to a level of certainty for lead agencies. In addition to the residential/commercial threshold, one threshold is also proposed for stationary source (industrial) projects.

2.2.1 Qualified GHG Reduction Strategies

Many local agencies have already undergone or plan to undergo efforts to create or update general plans or other plans consistent with AB 32 goals. The Air District encourages such planning efforts and recognizes that careful upfront planning by local agencies is invaluable to achieving the state's GHG reduction goals. If a project is consistent with an adopted Qualified Greenhouse Gas Reduction

Strategy (e.g. Climate Action Plan) that addresses the project's GHG emissions, it can be presumed that the project will not have significant GHG emission impacts and the project would be considered less than significant. This approach is consistent with CEQA Guidelines Sections 15064(h)[11] and 15183.5(b), which provides that a "lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem."

A Qualified Greenhouse Gas Reduction Strategy (or similar adopted policies, ordinances and programs) is one that is consistent with all of the AB 32 Scoping Plan measures and goals. The Greenhouse Gas Reduction Strategy should identify a land use design, transportation network, goals, policies and implementation measures that would achieve AB 32 goals. Strategies with horizon years beyond 2020 should consider continuing the downward reduction path set by AB 32 and move toward climate stabilization goals established in Executive Order S-3-05.

A Qualified Greenhouse Gas Reduction Strategy adopted by a local jurisdiction should include the following elements as stated in the State CEQA Guidelines Section 15183.5:

(A) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
(B) Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;
(C) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;
(D) Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
(E) Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
(F) Be adopted in a public process following environmental review.

The District's revised CEQA Handbook will include detailed methodology to determine if a Greenhouse Gas Reduction Strategy meets these requirements. In addition, the APCD has developed more specific guidance intended to assist local governments in developing community scale Climate Action Plans. The guidance emphasizes the need for GHG inventories to be comprehensive and based on valid, well documented methodologies; the reduction strategies developed as part of the Climate Action Plans should rely on mandatory measures that address both new and existing development. Please refer to Attachment 1 for the complete guidance document.

[11] California Air Resources Board. 2010 (December). California Greenhouse Gas Inventory for 2000-2008-by IPCC Category. Sacramento, CA. Available: http://arb.ca.gov/cc/inventory/data/tables/ghg_inventory_ipcc_00-08_all_2010-05-12.pdf. Accessed December 1, 2011.

APCD staff recognizes some communities in SLO County have been proactive in planning for climate change but have not yet developed a stand-alone Greenhouse Gas Reduction Strategy that meets the above criteria. Nonetheless, some jurisdictions have adopted climate action policies, ordinances and programs that may, in fact, achieve the goals of AB 32 and a Qualified Greenhouse Gas Reduction Strategy. If a local jurisdiction can demonstrate its collective set of climate action policies, ordinances and other programs is consistent with AB 32 and State CEQA Guidelines Section 15183.5, and includes requirements or feasible measures to reduce its GHG emissions to 1990 levels or 15% below 2008 emission levels, staff recommends the AB 32 consistency demonstration be considered equivalent to a Qualified Greenhouse Gas Reduction Strategy.

Qualified Greenhouse Gas Reduction Strategies that are tied to the AB 32 reduction goals would promote reductions on a plan level without impeding the implementation of GHG-efficient development, and would recognize the initiative of many SLO County communities who have already developed or are in the process of developing a GHG Reduction Plan. Compliance with a Qualified Greenhouse Gas Reduction Strategy (or equitably similar adopted policies, ordinances and programs) would provide the evidentiary basis for making CEQA findings that development consistent with the plan may normally be considered to have a less than significant GHG emissions impact. Therefore, projects approved under qualified Greenhouse Gas Reduction Strategies or equivalent demonstrations would achieve their fair share of GHG emission reductions in meeting AB 32 goals.

2.2.2 Land Use Projects Bright-Line Threshold

The methodology used in developing the Bright-Line Threshold is intended to help reach the AB 32 emission reduction targets by attributing an appropriate share of the GHG reductions needed from new land use development projects subject to CEQA in the SLO County region. This approach is referred to as the "gap-based approach." This approach is a conservative method that focuses on a limited set of state mandates that are currently expected to have the greatest potential to reduce land use development-related GHG emissions. This approach is predicated on the premise that there is a shortfall, or "gap" between the current emissions trajectory (projected emissions with existing control measures) and the desired emissions trajectory needed to reach a defined emissions level at a point in time—the target year. Figure 1 is a graphic representation of the gap-based approach concept.

Figure 1

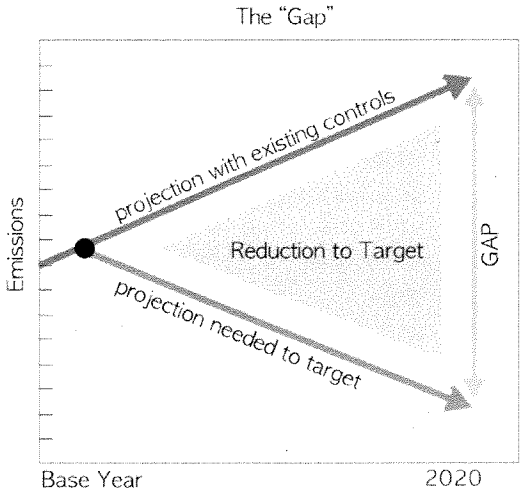

Figure 1: The gap is the amount of GHG emissions reductions that are needed beyond existing controls to meet the reduction target. The recommended threshold will close the gap between the projection with existing controls and the projection needed to reach the target emissions inventory.

The threshold of significance derived from the gap-based approach is assumed to reduce a certain level of emissions from each new land use project expected to be built by the target year (2020). Thus the threshold of significance defines the level of a project's emissions that, under CEQA, would require the project to include emission reduction measures (mitigation) to lessen the project's significance. The appropriate threshold level is found when the total reductions from all new land use projects achieves the level of emission reductions needed to close the gap and alleviate the predicted shortfall.

Preparing the Gap Analysis entailed estimating the statewide growth in emissions between 1990 and 2020 attributable to the land use-driven sectors of the GHG emissions inventory. The emission inventories for 1990 and 2020 were used because AB 32 requires that GHG emissions projected to occur in 2020 under existing conditions be reduced to 1990 emissions level by 2020. This data was used in the Gap Analysis to assess the overall level of emission reductions needed to close the gap (target year shortfall). Only the land use-driven emission sectors (emission sources affected by land use) were considered because the Bright-Line Threshold will apply only to future land use projects. The emission inventory sectors related to land use include On-Road and Off-Road Passenger Vehicles, Electricity and Cogeneration, Residential and Commercial Fuel Use, Landfills, Domestic Wastewater Treatment, Wineries, and Lawn and Off-Road Equipment (i.e. construction vehicles).

GHG reductions expected from a few Scoping Plan measures have not yet been accounted for in ARB's 2020 GHG emissions inventory forecasts (i.e., business as usual). An adjustment was made (credit given) to include those reductions that are also associated with key Scoping Plan measures affecting the land use-driven sectors, such as the Low Carbon Fuel Standard (LCFS), Senate Bill 375 (SB 375), and improvements in energy efficiency. Factoring in these reductions (subtracting from the overall gap referred to above) provided the net residual reduction needed from future regional land use projects.

If all areas of the state reduced their new land use emissions by the percentage reduction derived above, the statewide shortfall (gap) from the land use sector would be eliminated; the percentage reduction needed statewide is each region's fair share of the statewide reduction goal. Thus, the percentage of the statewide reduction needed, or gap, was applied to the SLO County regional land use sector GHG emissions inventory to derive the total aggregate annual mass emission reductions

needed to provide our fair share of reductions from all new regional land use projects anticipated through 2020.

In order to determine the types, sizes and number of future land use projects from which to realize these reductions, development trends in the SLO County region over the past ten years were analyzed. For each future project a baseline, unmitigated emissions level (i.e. assuming all projects were built in conformance with currently adopted building codes) was calculated using computer modeling. In an iterative process referred to as a "threshold sensitivity analysis," various threshold levels and mitigation effectiveness options were analyzed. Each future project with emissions greater than a potential threshold level was assumed to mitigate down to the threshold level or, if unable to feasibly reduce emissions to the threshold level, was assumed to reduce emissions by a given percentage of their total emissions (mitigation effectiveness). Through this iterative analytical process, a threshold level was found that achieved sufficient mass reductions from all future projects to equal the predicted regional 2020 gap, or shortfall.

Development of the Bright-Line Threshold approach involved comprehensive evaluation and analyses through a well-defined eight step process, which is summarized below:

Step 1 Estimate Overall Statewide Growth in GHG Emissions

Using ARB's statewide GHG emissions,[12] estimate the growth in emissions between 1990[13] and 2020[14] that can be attributed to "land use-driven" sectors of the emission inventory. Land use-driven emission sectors include the following categories; Transportation (On-Road Passenger Vehicles; On-Road Heavy Duty), Electric Power (Electricity; Cogeneration), Commercial and Residential (Residential Fuel Use; Commercial Fuel Use), Recycling and Waste (Landfills; Domestic Waste Water Treatment), Agriculture/Farming (Winery), and Off-road Equipment (Lawn and Garden, Entertainment Equipment, Recreational Equipment, Pleasure Craft, Light Commercial Equipment, Construction and Mining Equipment).

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[12] California Air Resources Board. 2007 (November). California Greenhouse Gas Inventory (millions of metric tonnes of CO2 equivalent)-By IPCC Category. Sacramento, CA. Available: http://www.arb.ca.gov/cc/inventory/archive/tables/ghg_inventory_ipcc_90-04_all_2007-11-19.pdf. Accessed December 1, 2011.

[13] California Air Resources Board. 2010 (December). California Greenhouse Gas Inventory for 2000-2008-by IPCC Category. Sacramento, CA. Available: http://arb.ca.gov/cc/inventory/data/tables/ghg_inventory_ipcc_00-08_all_2010-05-12.pdf. Accessed December 1, 2011.

[14] California Air Resources Board. 2010 (October). Greenhouse Gas Inventory – 2020 Emissions Forecast. Sacramento, CA. Available: http://www.arb.ca.gov/cc/inventory/data/forecast.htm. Accessed December 1, 2011.

Methodology: The 2020 projected GHG emissions for land use sectors were developed using growth factors computed from historic trend data that best matched the prospective growth for each sector analyzed. Some examples include:

a. Electricity Usage and On-Road Passenger Vehicles: The predicted 2020 GHG emissions associated with SLO County electricity and passenger vehicle usage was estimated from the average growth factor associated with the SLO County population from 2000 to 2010 as reported by the Federal Reserve, which used Federal Census data.
b. Lawn & Garden Equipment: The predicted 2020 GHG emissions for this sector was based on an annual average growth in all SLO County dwelling units based on the number of units in the 2010 Census compared to the San Luis Obispo Council of Government's projected number of units for 2020.
c. On-Road Heavy Duty Trucks and Commercial Fuel Use: The predicted 2020 GHG emissions for these sectors were based on a projected SLO County economic trend using 2000 to 2010 countywide employment data from the California Employment Development Department (EDD) as the indicator. The 2000 to 2010 trend slope was then extrapolated to 2020 to determine the projected GHG emissions for that year.

Result: As shown in Table 1, California's 1990 land use-driven GHG emissions were estimated at 308.35 MMT CO_2e/yr, [15] while the 2020 business-as-usual land use GHG emissions are projected to be 343.06 MMT CO_2e/yr. Thus a **10.12 % reduction** from projected 2020 land use-driven GHG emissions would be necessary statewide to meet the AB 32 goal of returning to 1990 emission levels by 2020.

[15] California Air Resources Board. 2007(November). California Greenhouse Gas Inventory-Summary by Economic Sector. Sacramento, CA. Available: www.arb.ca.gov/cc/inventory/archive/tables/ghg_inventory_sector_90-04_sum_2007-11-19.pdf. Accessed December 1, 2011.

Table 1

California 1990, 2008, and 2020 Land Use Sector GHG Emissions (MMT CO2e/yr)				
Sector	**1990 Emissions**	**2008 Emissions Projections**	**2020 BAU Emissions Projections**	**% of 2020 Total**
Transportation	**137.99**	**162.80**	**168.10**	**49.00%**
On-Road Passenger Vehicles	108.95	128.00	127.00	37.02%
On- Road Heavy Duty	29.05	34.80	41.20	12.01%
Electric Power	**110.63**	**117.20**	**107.60**	**31.37%**
Electricity	95.39	103.00	91.10	26.56%
Cogen	15.20	14.20	16.50	4.81%
Commercial and Residential	**44.08**	**43.10**	**45.30**	**13.20%**
Residential Fuel Use	29.66	28.40	31.00	9.04%
Commercial Fuel Use	14.43	14.70	13.90	4.05%
Recycling and Waste	**9.09**	**8.68**	**10.45**	**3.05%**
Landfill	6.26	6.71	8.50	2.48%
Domestic Waste Water Treatment	2.83	1.97	1.95	0.57%
Agriculture/Farming	**0.20**	**0.25**	**0.31**	**0.09%**
Winery	0.20	0.25	0.31	**0.09%**
Off-road Equipment	**6.36**	**9.21**	**11.29**	**3.29%**
Lawn and Garden Equipment Subtotal	0.43	0.56	0.65	**0.19%**
Recreational & Pleasurecraft	1.23	1.73	2.55	**0.74%**
Light Commercial Equipment Subtotal	0.91	1.00	1.04	**0.30%**
Construction & Mining Equipment Subtotal	3.78	5.92	7.05	**2.06%**
TOTAL GROSS EMISSIONS	**308.35**	**341.24**	**343.06**	**100%**
*MMT CO2e/yr. = Million Metric Tons Carbon Dioxide Equivalent per year			Calculation: 1 - (308.35 / 343.06) = 0.1012	
% Reduction Goal from Statewide Land Use Driven Sectors			**10.12%**	

Table 1: Land use sector GHG emissions were quantified for the years 1990, 2008, and 2020. Based on comparison to the reduction goals set by the State, a **10.12**% reduction in overall emissions would be needed to reach the 2020 goal.

Step 2 Estimate Statewide "Off-Inventory" GHG Reductions

Estimate the anticipated GHG emission reductions affecting the same land use-driven emissions inventory sectors associated with statewide measures identified in the AB 32 Scoping Plan not yet incorporated into ARB's GHG emissions inventory (i.e. "off-inventory" reductions). These measures, as described in the Scoping Plan, include:

Low Carbon Fuel Standard (LCFS)

According to the staff report for the adopted LCFS rule (CARB, April 2009), the LCFS is expected to result in an approximate 10% reduction in the carbon intensity of transportation fuels. This will result in GHG emission reductions in both the transportation fuel production process and in the mobile-sources burning the lower carbon fuels. Based on CARB's estimate of 15 MMT reductions in on-road emissions from implementation of the LCFS and comparison to the statewide on-

road emissions sector, the LCFS is estimated to result in a 4.6% reduction in SLO County's on-road transportation sector.

SB 375 (Sustainable Communities and Climate Protection Act)
The Scoping Plan used 5.0 MMT CO_2e as a placeholder for potential GHG reductions that could be achieved by the Sustainable Communities and Climate Protection Act of 2008 (SB 375) through sustainable regional transportation and land use planning strategies. The SB 375 Staff Report lowered that estimate to 3.0 MMT CO_2e, which is the aggregate reductions expected from the regional passenger vehicle GHG reduction targets established for the 18 Metropolitan Planning Organizations approved in 2010. For SLO County, SB 375 is projected to achieve GHG reductions of approximately one percent from on-road transportation.

Energy Efficiency and Solar Roof
Energy efficiency and renewable energy measures from the Scoping Plan were also included in the Gap Analysis. The Scoping Plan estimates that energy efficiency gains with periodic improvement in building and appliance energy standards and incentives will reach 6% for natural gas and 13% electricity statewide. The final state measure included in this Gap Analysis is the solar roof initiative, which is estimated to result in reduction of the overall electricity inventory of 1.2%.

Since the GHG reductions expected from these Scoping Plan measures were not accounted for in ARB's or APCD's 2020 GHG emissions inventory forecasts (i.e., business as usual), an adjustment (credit given) was made to include reductions associated with these key Scoping Plan measures for the land use-driven sectors.

Methodology: This step estimates the anticipated reductions in the 2020 GHG emissions inventory that will occur from Scoping Plan measures that ARB has not yet incorporated into the statewide GHG emissions inventory.

a. Estimate the total statewide 2020 emissions reduction for that portion of the off-inventory source category affected by land use development.
b. Determine the portion of the regional end use inventory sector (e.g. On-Road Transportation, Natural Gas) affected by the statewide reduction for each Scoping Plan measure.
c. Calculate the scaled percentage of the regional inventory reduction for each regional end use sector affected by land use development.

Result: As shown in Table 2, an estimated **9.57%** reduction can be expected in the land use-driven GHG emissions inventory from adopted Scoping Plan regulations, including Low Carbon Fuel Standards, Sustainable Community Strategies, Energy-Efficiency Measures, and Solar Roofs.

Table 2

2020 Land Use Sector GHG Emission Reductions from State Regulations & AB 32 Measures				
Affected Emissions Source	**California Legislation/AB32 Measure**	**% Reduction from Statewide 2020 LU GHG Inventory**	**End Use Sector**	**Scaled % Emissions Reduction of SLO Area LU Sector (Credit to Overall Statewide LU Gap)**
Mobile	LCFS* (On road only)	7.9%	On road transportation (Pass, LD*) (46%)	3.6%
	LCFS* (On road only)	9.7%	On road transportation (HD*/MD*) (10%)	1.0%
	SB 375	2.4%	On road transportation (Pass, LD) (46%)	1.1%
Area	Energy Efficiency - Gas	6.0%	Natural gas (Residential) (12%)	0.8%
			Natural gas (Commercial) (4%)	0.2%
	Energy Efficiency - Electricity	13.1%	Electricity (20%)	2.6%
Indirect	Solar Roof	1.2%	Electricity (exclude Cogen) (19%)	0.2%
Total credits given land use-driven emission inventory sectors from Scoping Plan Measures				**9.57%**
*LCFS = Low Carbon Fuel Standard			*MD = Medium Density	
*LD = Low Density			*HD = High Density	

Table 2: Based on land use sector GHG emission reductions from statewide regulations and AB 32 measures not included in the inventory prepared by ARB, a reduction of **9.57%** in GHG emissions from this sector is expected to occur by 2020. This value is used to calculate the remaining gap.

Step 3 Calculate the Statewide GHG Emission Gap

Determine any short fall or "gap" between the 2020 statewide emission inventory estimates and the anticipated emission reductions from adopted Scoping Plan regulations. This "gap" represents additional GHG emission reductions needed statewide from the land use-driven emissions inventory sectors, which represents new land use development's fair share of the emission reductions needed to meet statewide GHG emission reduction goals.

Methodology: This estimates the additional regional emission reductions needed from the projected regional 2020 projected inventory.

a. Divide the 1990 statewide land use sector emissions inventory (308.35 MMT CO_2e/yr.) by the projected 2020 emissions inventory (343.06 MMT CO_2e/yr.); this shows a **10.12%** percent difference (gap) in GHG emissions between 1990 and 2020.
b. Subtract the statewide off-inventory reductions calculated in Step 2 above (**9.57%**) from the total estimated statewide reduction gap (**10.12%**) to determine the additional land use sector reductions needed to achieve AB 32 goals (**0.55%**).

Result: The statewide "gap" (emission reductions from the 2020 land use sector inventory needed to reach the statewide 1990 land use inventory goal) was calculated to be a **10.12%** reduction. With the **9.57%** reductions from AB 32 off-inventory Scoping Plan Measures calculated in Step 2 above, there is a "gap" of **0.55%** in necessary additional GHG emissions reductions to meet AB 32 goals of a **10.12%** reduction from statewide land use-driven GHG emissions to return to 1990 levels in 2020.

Table 3

Calculating the Gap	
% Reduction Goal from Statewide Land Use Driven Sectors	10.12%
Total credits given land use-driven emission inventory sectors from Scoping Plan Measures	9.57%
Statewide CEQA Gap (Statewide Reductions Needed Beyond Scoping Plan Measures)	***0.55%***

Table 3: The statewide land use emissions "gap" between projections with existing control and the reduction goals set by AB-32 is **0.55**%, after factoring in the off-inventory land use credits that will be applied from Scoping Plan measures.

Step 4 Apply the Statewide Gap to SLO County Regional Land Use Emissions GHG Inventory

Determine the percent reduction this "gap" represents in the land use-driven emissions inventory sectors from the SLO County Regional 2020 GHG emissions inventory. Identify total emission reductions needed in SLO County to fill the gap from land use-driven emissions inventory sectors[16].

Methodology: The total estimated additional regional reductions needed was calculated by multiplying the total projected land use sector emissions for 2020 (2,506,983 MT CO_2e/yr.) by the remaining gap of **0.55%**.

Result: As shown in Table 4 below, 2008 land use-driven GHG emissions in the SLO County Region were estimated at 2,304,333 MT CO_2e/yr, with 2020 emission projected at 2,506,983 MT CO_2e/yr under business-as-usual conditions. The 2008 land use driven GHG emissions were the baseline use to perform the 2020 projections. Multiplying the projected 2020 SLO County GHG emissions of 2,506,983 MT CO_2e/yr by the **0.55%** reduction gap determined in Step 3 above results in an estimated **13,788** MT CO_2e/yr. of reductions needed from projected new development projects in SLO County to contribute our fair share toward achieving the statewide 2020 GHG reduction targets in AB 32.

[16] San Luis Obispo County Air Pollution Control District. "trklst08.xls." 2011 (June). *Microsoft Excel.* file.

Table 4

SLO County Regional Land Use 2008, 2020 GHG Emissions Inventories and Projections (MT CO2e/yr)*			
Sector	**2008 Emissions (MT CO2e/yr)***	**2020 Forecast w/ Annual Compounding**	**% of Total**
Transportation	**1,310,997.19**	**1,419,690.39**	**57%**
On-Road Passenger Vehicles	1,065,344.33	1,159,744.28	46%
On-Road Heavy Duty	245,652.86	259,946.11	10%
Off-road Res. and Light Commercial	**78,398.29**	**97,974.75**	**4%**
Lawn and Garden Equipment	7,198.11	7,474.11	
Recreational & Pleasure craft	20,317.46	30,814.53	
Light Commercial Equipment	9,514.12	10,548.88	
Construction & Mining Equipment	41,368.59	49,137.23	
Electric Power	**456,766.12**	**497,240.07**	**20%**
Electricity	445,563.64	485,044.94	19%
Cogen	11,202.48	12,195.13	0%
Commercial and Residential	**376,539.30**	**403,504.57**	**16%**
Residential Fuel Use	291,353.48	313,362.23	12%
Commercial Fuel Use - Non-Permitted	85,185.82	90,142.34	4%
Recycling and Waste	**72,023.60**	**78,405.60**	**3%**
Landfill Combustion Sources	22,295.09	24,270.65	
Landfill Fugitive Sources	48,063.01	52,321.87	
Domestic Waste Water Treatment	1,665.51	1,813.09	
Agricultural/Farming	**9,608.53**	**10,167.60**	**0.4%**
Wineries	9,608.53	10,167.60	
Total Sectoral Emissions (MT CO2e/yr)	**2,304,333.03**	**2,506,982.99**	**100%**
Statewide Gap (Applied to Regional Emissions Inventory)			**0.55%**
Calculation: 2,506,982.99 * 0.0055% = 13,788			
*MT CO2e/yr. = Metric Tons Carbon Dioxide equivalent per year			
SLO County Regional Mass Emission Reductions Needed (MT CO2e/yr)*			**13,788**

Table 4: The statewide gap of **0.55%** is multiplied by the regional GHG emission projections for 2020 (i.e. 2,506,982.99 MT CO_2e/yr.), leaving a total of **13,788** MT CO_2e/yr., which will need to be achieved locally from future land use projects to meet the emission reduction goals set by the state.

Step 5 Evaluate Historical Land Use Development Trends in SLO County to Estimate Potential Future Development

Assess SLO County's historical permit database for residential and nonresidential projects (2001-2010) and determine the frequency and distribution trends of project sizes and types that have been subject to CEQA over the past several years.

Methodology: By acquiring historical permit data from local governments and SLOCOG, historical patterns of residential and nonresidential development were determined by evaluating various parameters for each land use development type (e.g. - number of

persons per household; average square footage and number of employees per 1000 sf of commercial development, etc.). Permits were first categorized into individual projects, and then summarized by land use type. The results were then used to calculate typical historical project emissions for each type of land use using CalEEMod. The average project for each land use type was modeled to determine GHG emissions, amortizing construction emissions and adding them to the operational emissions. These emission calculations are used in Step 6 below to distribute anticipated SLO County growth among different future project types and sizes.

Result: The historical trend analysis found that, between 2001-2010, over 2,400 projects were approved to be built, with estimated emissions of more than 22,400 metric tons of CO_2e per year. Table 5 below provides a summary of the historical land use development in the SLO County region. Appendix 2 includes a detailed report of this summary.

Table 5

Historical SLO County Regional Land Use Projects & Emissions 2001-2010				
Land Use Type	**Total LU Projects (2001-2010)**	**LU Projects Per Year (2001-2010)**	**Emissions from LU (2001-2010) MT CO_2e**	**Average Annual LU Emissions per year (2001-2010) MT CO_2e/yr**
Residential	1,934	193	42,674	4,267
Non Residential	469	47	181,589	18,159
Total	**2,403**	**240**	**224,263**	**22,426**

Table 5: Between the years 2001 and 2010 there were 2,403 residential or nonresidential projects approved, equating to 240 projects per year. These projects resulted in emitting more than 22,400 MT CO_2e/yr.

Step 6 Project the Level of New Development Expected in SLO County By 2020

Forecast new land use development trends for SLO County through 2020 based on historical and recent trends. Translate the land use development projections into land use categories consistent with those contained in the California Emissions Estimator Model (CalEEMod).

Methodology: SLO County APCD recognized the continuing economic downturn needed to be factored into any estimates of future growth in land uses where projections are based on historical trends. Thus, this step used more conservative recent historical data (2000 and later) and future regional demographic information to define the growth factors needed to distribute the anticipated growth across the land use types and sizes used in the historical trend analysis in Step 5. The demographic information selected to define future growth rates for specific land use types included

SLO County population, employment, and dwelling units, with the data obtained from federal, state, and local sources. APCD staff specified the demographic parameter that seemed most applicable to each land use sector where future growth was to be determined for the gap analysis (Table 6).

For land use sectors where the growth factor is best represented by population, historical annual (2000 to 2010) SLO County population data was used to define the average annual population growth rate (0.7100%)[17]. For those land use sectors where an economic growth factor seemed most applicable, employment in SLO County was used as a surrogate using historic values over the years 2000 to 2010 to define the future economic growth rate (0.4724%)[18]. The future emissions from lawn and garden equipment associated with land uses was determined with a growth factor based on all dwelling units. The APCD used a conservative approach to predict the future growth rate (.3892%)[19] of SLO County dwelling units using the 2010 U.S. census value[20] for this demographic as well as SLOCOG's dwelling unit predictions for 2015 and 2020[18]. Future land use emissions from related off-road recreational equipment and pleasure craft, and from residential fuel use, were estimated using a growth factor for occupied dwelling units. The APCD used a conservative approach to predict the future growth rate (0.6087%) of SLO County occupied dwelling units using census values for this parameter for 2000 and 2010[19] and predicted occupied dwelling units for 2015 and 2020 based on SLOCOG's dwelling unit values for these years, minus the vacant properties for those years (determined using the average vacancy rate between 1990 and 2010[19]). For the Construction & Mining Equipment activities associated with future

[17] Federal Reserve Bank of St. Lewis. US Department of Commerce: Census Bureau. 2011. Resident Population in San Luis Obispo County, CA. Available: http://research.stlouisfed.org/fred2/series/CASANL9POP?cid=27561. Accessed January 17, 2012.

[18] California Employment Development Department. September 16, 2011. San Luis Obispo–Paso Robles Metropolitan Statistical Area 1990 to 2010 Annual Average Industrial Employment Data Available: www.calmis.ca.gov/file/indhist/slo$haw.xls accessed on: http://www.calmis.ca.gov/htmlfile/county/slo.htm . Accessed January 17, 2012.

[19] San Luis Obispo County Council of Governments. 2010. 2040 Regional Growth Forecast. Available: http://library.slocog.org/PDFs/SpecialProjects/SLOCounty2040RegionalGrowthForecast_aug2011.pdf. Accessed December 1, 2011.

[20] U.S. Census "Total Housing Units" for SLO County for 2010, "Occupied Housing Units" for SLO County for 2000 and 2010, and "Vacant Housing Units" for SLO County for 1990, 2000, and 2010. Available: http://factfinder.census.gov/servlet/QTTable?_bm=y&-context=qt&-qr_name=DEC_1990_STF1_DP1&-ds_name=DEC_1990_STF1_&-CONTEXT=qt&-tree_id=403&-redoLog=false&-all_geo_types=N&-geo_id=05000US06079&-search_results=01000US&-format=&-_lang=en. Accessed January 17, 2012.

land use, 2020 emissions were directly estimated using ARB's 2007 Off-road model[21], therefore a growth factor was not necessary.

The total forecasted emissions for each land use type were combined to determine total emissions for all land use projects anticipated to occur in SLO County through 2020.

Result: Based on population and employment projections and the trend analysis from Step 5 above, approximately 1,142 new development projects were forecasted to occur in SLO County through 2020, averaging about 114 projects per year during that period.

Table 6

Summary of Average Annual Future Growth Rates Used for Defining Future GHG Emissions From Land Use Sectors		
Land Use Sector	**Growth Factor**	**Average Annual Future Growth Rate**
Transportation		
On-Road Passenger Vehicles	Population	0.7100%
On-Road Heavy Duty	Economic	0.4724%
Off-road Res. and Light Commercial		
Lawn and Garden Equipment	All Dwelling Units	0.3892%
Recreational & Pleasure craft	Occupied Dwelling Units	0.6087%
Light Commercial Equipment	Economic	0.4724%
Construction & Mining Equipment	N/A	N/A
Electric Power		
Electricity	Population	0.7100%
Cogen	Population	0.7100%
Commercial and Residential		
Residential Fuel Use	Occupied Dwelling Units	0.6087%
Commercial Fuel Use - Non-Permitted	Economic	0.4724%
Recycling and Waste		
Landfill Combustion Sources	Population	0.7100%
Landfill Fugitive Sources	Population	0.7100%
Domestic Waste Water Treatment	Population	0.7100%
Agricultural/Farming		
Wineries	Economic	0.4724%

Table 6: Future GHG emissions associated with land-uses were determined using historic trends to define applicable growth rates. APCD staff specified the type of growth factor that seemed most applicable to each land use sector. Table 6 summarizes the average annual growth factors used in this GHG forecasting and describes the methods used to define each growth factor.

[21] California Air Resources Board. 2007. Off-road model. Available: www.arb.ca.gov/msei/offroad/offroad.htm. Accessed December 1, 2011.

Step 7 GHG Emissions Reductions Needed from Future Development in SLO County

Estimate the amount of GHG emissions from SLO County land use development through 2020 using CalEEMod. Determine the amount of GHG emissions that can reasonably and feasibly be reduced through currently available mitigation measures ("mitigation effectiveness") for future land use development projects subject to CEQA (based on land use development projections and frequency distribution from Step 6 above).

Methodology: The amount of annual GHG emissions from each projected land use development average project type and size was estimated using CalEEMod and combined to determine the total annual emissions based on unmitigated modeling scenarios. Next, modeling was performed for various land use types and sizes using all reasonable feasible and available mitigation measures to determine the feasible mitigation effectiveness factor; examples of potential mitigation measures used in this analysis are shown in Appendix 3, Tables A-2 and B-2.

Result: Total emissions from new land use in SLO County region through 2020 are estimated to be approximately 114,969 MT CO_2e/yr. (18,068 MT CO_2e/yr. Residential; 96,901 MT CO_2e/yr. Nonresidential). Table 7 below provides a summary of projected land use development in the SLO County region.

Based on the mitigation measure information available and sample CalEEMod calculations, staff found mitigation effectiveness between 23 and 25 percent is feasible.

Table 7

Forecast for SLO County Regional Land Use Projects & Emissions to 2020				
Land Use Type	**Total New LU* Projects (2011-2020)**	**New LU Projects/yr. (2011-2020)**	**New Emissions from LU (2011-2020) MTCO2e**	**Average Annual LU Emissions per year (2011-2020) MTCO2e/yr.**
Residential	979	98	180,677	18,068
Non Residential	164	16	969,015	96,902
Total	**1,142**	**114**	**1,149,692**	**114,969**

*LU = Land Use

Table 7: New emissions from land use are forecasted to total 1,149,692 metric tons CO_2e between the years 2011 and 2020. These emissions are associated with an expected 1,142 new land use projects from the same years.

Step 8 Determine Threshold Level Needed to Close the Regional Gap of 13,788 MTCO_2e/yr.

Conduct a sensitivity analysis of the numeric GHG mass emissions threshold needed to achieve the 2020 emission reductions from the land use-driven emission sectors to meet SLO County's fair share of the statewide "gap", as determined in Step 4.

Methodology: The sensitivity analysis is an iterative process using the following steps:

1. The emissions above various potential threshold levels were calculated for each projected land use project (e.g. 900 MT, 1,000 MT, 1,200 MT, etc.); only those projects above a given threshold option were included in the analysis.
2. The remaining emissions for each project were then subjected to various mitigation effectiveness scenarios (e.g. 25%, 30% and 35%).
3. Mitigated emissions for each project were compared to a given threshold under iterative mitigation scenarios until the threshold level was achieved (CEQA only requires mitigation down to the threshold).
4. The final step in the process identified a threshold level (1,150 MT CO_2e/yr.) and mitigation effectiveness level (23 to 25 percent) that could achieve the total emission reductions needed from all future projects to close the regional "gap" of **13,788** MT CO^2e/yr identified in Step 4, above. Examples of how this analysis was performed are shown in Appendix 3.

Result: Projects with unmitigated emissions (i.e. assuming all projects were built in conformance with currently adopted building codes) greater than the recommended threshold would be required to mitigate to the threshold level, or assumed to reduce project emissions by a percentage (mitigation effectiveness) deemed feasible based on currently available mitigation measures. The base year condition is defined by an equivalent size and type of project with annual emissions using the defaults in CalEEMod (unmitigated project emissions). By this method, land use project mitigations resulting from application of the CEQA GHG thresholds would help close the "gap" remaining after implementation of the key regulations and measures noted above.

The results of the sensitivity analysis conducted in Step 8 found that reductions of about **13,788** MT CO_2e/yr. were achievable and feasible (see Table 8). A mass emissions threshold of **1,150** MT of CO_2e/yr. is estimated to result in approximately 5% of all future projects being above the significance threshold and required to implement feasible mitigation measures through CEQA. This threshold level is approximately equivalent to the operational GHG emissions associated with a 70- unit residential subdivision in an urban setting (49- unit rural development) or a 40,000 sq. ft. strip mall in an urban setting. With 23 to 25 percent mitigation effectiveness, staff estimates the **1,150** MT CO_2e threshold would achieve approximately 13,800-14,200 MT CO_2e/yr. in GHG emissions reductions from new development subject to CEQA from now through 2020. The Bright-Line Threshold of **1,150** MT CO_2e/yr. is expected to capture a total of **56 projects** over the next 10 years; 26 residential projects and 30 non-residential projects.

Table 8

GHG Threshold Sensitivity Analysis						
Threshold Option (MT/Yr)*	**No. of Projected New LU* Projects Over Threshold**	**Percent of Projects Over Threshold (Project Capture)**	**Percent of Emissions Over Threshold (Emissions Capture)**	**Overall Mitigation Program Effectiveness**	**Actual Mitigation Effectiveness**	**Emissions Reduced (MT/Yr)***
1100	56	5%	22%	25%	19.1%	16,508
				30%	20.5%	17,720
				35%	21.9%	18,933
1150	**56**	**5%**	**19%**	**25%**	**16.4%**	**14,158**
				30%	17.8%	15,370
				35%	19.2%	16,583
1175	56	5%	18%	25%	15.0%	12,983
				30%	16.4%	14,195
				35%	17.8%	15,408
*MT/Yr.= Metric Tons Per Year			*LU= Land Use			

Table 8: The Bright-Line Threshold of **1150** MT CO_2e is expected to capture a total of 56 projects (or approximately 5% of total projects) over the next ten years.

Summary of the Bright-Line Threshold

Conducting the 8 Step Gap Analysis described above was a substantial undertaking requiring considerable data review and a variety of technical analyses. Based on the results of that effort, staff recommends a GHG emissions significance threshold of **1,150** MT CO_2e per year to achieve the aggregate emission reductions of **13,788** MT CO_2e/yr. needed in SLO County Region by 2020 to meet AB 32 reduction targets. As shown in Table 8, about 5% of all future projects would exceed that threshold and have to implement feasible mitigation measures to meet their CEQA obligations. These projects would account for approximately 19% of all GHG emissions anticipated to occur between now and 2020 from new land use development in SLO County.

The APCD recommends that project applicants and lead agencies use CalEEMod to estimate a project's GHG emissions, based on project specific attributes, to determine if they are above or below the Bright-Line Threshold. After incorporating all emission-reducing features of a proposed project, those still exceeding the threshold would have to reduce their emissions below that level to be considered less than significant.

Establishing a "Bright-Line" to determine the significance of a project's GHG emissions impact provides a level of certainty to lead agencies in determining when an EIR is required, and whether or not GHG mitigation is needed. If additional regulations and legislation aimed at reducing GHG emissions from land use-related sectors are adopted in the future, the **13,788** MT CO_2e/yr. GHG emissions reduction goal may be revisited and recalculated by APCD.

2.2.3 Efficiency-Based Threshold for Land Use Projects

GHG efficiency metrics can also be utilized as significance thresholds to assess the GHG efficiency of a project on a per capita basis (residential only projects) or on a "service population" basis (the sum of the number of jobs and the number of residents provided by a mixed-use project). GHG Efficiency

Thresholds can be determined by dividing the statewide GHG emissions inventory goal (allowable emissions) by the estimated statewide 2020 population and employment. This method allows highly efficient projects (e.g. compact and mixed use development) with higher mass emissions to meet the overall GHG reduction goals of AB 32.

Staff believes it most appropriate to base the land use Efficiency Threshold on the service population metric for the land use-driven emission inventory. This approach allows the threshold to be applied evenly to all project types (residential, commercial/retail and mixed use) and uses an emissions inventory comprised only of emission sources from land-use related sectors. The efficiency-based threshold encourages infill and transit-oriented development and puts highly auto-dependent suburban and rural development at a severe disadvantage.

Staff proposes a project-level Efficiency Threshold of **4.9** MT CO_2e/SP/yr.; the derivation of this is shown in Table 9. This efficiency-based threshold would accommodate larger, very GHG-efficient projects that would otherwise significantly exceed the bright-line threshold. As stated previously and below, staff anticipates these significance thresholds will function on an interim basis until adequate programmatic approaches are in place at the city, county, and regional level that can allow CEQA streamlining for individual projects. (See State CEQA Guidelines §15183.5 ["Tiering and Streamlining the Analysis of Greenhouse Gas Emissions"]).

To calculate the efficiency of an individual project for comparison to the efficiency threshold, one can use CalEEMod to estimate the annual CO_2e emissions (MT CO_2e/yr.); this value is then divided by the project's service population (population + employment). For projects where the employment is unknown, please refer to Attachment 4, "Employees per 1000sf" to estimate the number of employees associated with any project.

Table 9

Efficiency Threshold **California 2020 Emissions, Population, Employment** (Metric Tons CO_2e)	
Land Use Sectors Greenhouse Gas Emissions Target	308,349,358
Population	44,135,923
Employment	18,226,478
California Service Population (Population + Employement)	62,362,401
Project Level Efficiency Threshold **Allowable GHG Emissions per Service Population (MT CO2e/SP/Yr)***	**4.9**
*MT CO2e/SP/Yr.= Metric Tons Carbon Dioxide equivalent per service population per year	

Table 9: With the Efficiency Threshold, a project can demonstrate compliance by being extremely efficient on a per-capita (service population) basis. Efficiency is calculated by dividing the emissions per year by the service population (residents plus employees). This threshold is a viable option for large, infill, transit-oriented projects that may exceed the Bright-Line Threshold, but are still extremely efficient.

2.2.4 Stationary Source GHG Threshold

Staff's recommended significance threshold for stationary source GHG emissions to be evaluated under CEQA uses the Governor's Executive Order S-3-05 emission reduction goals as its basis. To avoid hindering attainment of these goals, new or modified stationary source projects above the threshold will need to be analyzed under CEQA and mitigated to the maximum extent feasible. The proposed level for requiring that analysis and potential mitigation is based on capturing at least 90% of the GHG emissions from all new or modified stationary source projects. This means at least 90% of total emissions from all new or modified stationary source projects would be subject to a CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact report, which includes analyzing feasible alternatives and imposing feasible mitigation measures.

A 90% minimum emission capture rate results in an emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future population and economic growth, yet high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. These small sources are already subject to Best Available Control Technology requirements for other pollutants and are more likely to be single-permit facilities, which limit the opportunities readily available to reduce GHG emissions from other parts of their facility.

The recommended GHG significance threshold to capture at least 90% of GHG emissions from new or modified stationary sources was derived using the SLO APCD 2009 GHG emissions inventory for combustion sources from all permitted facilities. This analysis is based on combustion emissions because that covers the vast majority of GHG emissions from stationary sources in the SLO County; all fuel types are included in the estimates. Emission values are actual and do not account for any offsets (i.e., Emission Reduction Credits) applied. It should also be noted this analysis did not include other possible GHG pollutants such as methane or nitrous oxide, nor GHG emissions from mobile sources or indirect electricity consumption.

Conducting the analysis described above showed facilities with CO_2e emissions above 10,000 metric tons accounted for 94% of all combustion-related CO_2e emissions in 2009, generating 356,000 tons CO_2e compared to a countywide total of 377,000 tons CO_2e from all combustion sources. For comparison purposes, 10,000 MT CO_2e/yr. would be equivalent to an industrial boiler with a rating of approximately 27 million British thermal units per hour (mmBtu/hour) of heat input, operating at an 80% capacity factor.

The South Coast Air Quality Management District (SCAQMD) and Bay Area Air Quality Management District (BAAQMD) have already adopted a 10,000 metric tons of CO2 equivalent (MT CO_2e) per year CEQA significance threshold for stationary sources with the goal of achieving emission capture rates between 90 to 95 percent; Sacramento Metropolitan AQMD and Santa Barbara County are also considering a 10,000 MT CO_2e per year threshold for stationary sources. The threshold analyses conducted by these other districts were very similar to ours and also focused on CO_2e emissions from stationary combustion sources subject to district permit requirements.

Based on these findings, staff recommends a stationary source GHG emissions significance threshold level of 10,000 metric tons of CO_2e per year to capture at least 90% of the GHG emissions from new stationary sources in San Luis Obispo County. This threshold level is consistent

with precedence established throughout the state and would focus only on the larger, most significant GHG sources and not expose the smaller sources to unnecessary requirements. This would be considered an interim threshold that Air District staff will reevaluate as AB 32 Scoping Plan measures are more fully developed and implemented at the state level.

2.2.5 Summary of Recommended GHG Thresholds

Table 10 below summarizes the GHG emission thresholds recommended in this document:

Table 10

GHG Emissions Threshold Summary	
Residential and Commercial Projects	**Compliance with Qualified GHG Reduction Strategy** OR **Bright-Line Threshold of 1,150 MT of CO_2e/yr.** OR **Efficiency Threshold of 4.9 MT CO_2e/SP*/yr.**
Industrial (Stationary Sources)	**10,000 MT of CO_2e/yr.**

*SP = Service Population (residents+employees)

Table 10: For projects other than stationary sources, compliance with either a Qualified Greenhouse Gas Reduction Strategy, or with the Bright-Line (1,150 CO_2e/ yr.) or Efficiency Threshold (4.9 MT CO_2e/SP/yr.) would result in an insignificant determination, and in compliance with the goals of AB 32. The construction emissions of projects will be amortized over the life of a project and added to the operational emissions. Emissions from construction-only projects (e.g. roadways, pipelines, etc.) will be amortized over the life of the project and compared to an adopted GHG Reduction Strategy or the Bright-Line Threshold only.

The Bright-Line numeric threshold of 1,150 MT CO_2e/yr. represents an emissions level below which a project's contribution to global climate change would be deemed less than "cumulatively considerable." This threshold is equivalent to a project size of approximately 70 single-family dwelling units, or a 70,000sf office building; it is anticipated to capture approximately 5% of all future projects, which equates to approximately 19% of future unmitigated emission.

Emissions from projects that exceed the **1,150** MT CO_2e/yr. Bright-Line Threshold could still be found less than cumulatively significant if the project as a whole would result in a GHG efficiency of **4.9** MT CO_2e per service population per year. If projects as proposed exceed both thresholds, they would be required to implement mitigation measures to bring them below the **1,150** MT CO_2e/yr. Bright-Line Threshold or within the **4.9** MT CO_2e Service Population Efficiency Threshold. If required mitigation could not bring a project below either threshold requirement, the project would be found cumulatively significant and could be approved only with a Statement of Overriding Considerations and a showing that all feasible mitigation measures have been implemented. A project's GHG emissions could also be found less than significant if they comply with a Qualified Greenhouse Gas Reduction Strategy.

If the land use projects expected in SLO County between now and 2020 are built in compliance with these thresholds, their resulting GHG emissions would be approximately **0.55%** below projected 2020 business as usual emissions and would achieve an aggregate reduction of approximately **13,788** $MTCO_2e/yr$. This is the level of reductions needed from land-use sector emissions to provide our fair share toward meeting the AB 32 statewide reduction goals, per ARB's Scoping Plan as discussed above. Although the emissions from such projects would add an incremental amount to the overall greenhouse gas emissions that cause global climate change impacts, emissions from projects consistent with these thresholds would not be a "cumulatively considerable" contribution under CEQA (see CEQA Guidelines §15064(h)(1)).

Building all new projects expected in SLO County between now and 2020 in accordance with the proposed GHG significance thresholds will achieve the appropriate overall share of GHG reductions for our land use sector. Further, each local project will achieve its respective portion of the GHG reductions needed to accomplish the overall statewide AB 32 reduction targets. Even though these local projects will add an incremental amount of GHG emissions, their incremental contribution will be less than "cumulatively considerable" because they are helping to achieve the cumulative solution, not hindering it. Such projects will therefore not be "significant" for purposes of CEQA (see CEQA Guidelines §15064(h)(1)). This idea of a project's relative insignificance is also supported by CEQA Guidelines §15030(a)(3), which provides that a project's contribution to a cumulative problem can be less than cumulatively considerable "if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact."

It is also worth noting that this "fair share" approach is flexible and will allow a project's significance to be determined by how well it is designed from a greenhouse gas efficiency standpoint, not just by the project size. For example, a large high-density infill project whose GHG emissions might otherwise be found cumulatively significant could be found to have insignificant GHG emissions if located in an urban core near public transit and/or other alternative transportation options, and built using state-of-the-art energy efficiency methods and improvements such as solar panels, as well as all other feasible mitigation measures. Projects such as this hypothetical development with low greenhouse gas emissions per service population are what California will need to accommodate future growth while doing its part in achieving a solution to the problem of global climate change. The determination of significance under CEQA will therefore need to take these factors into account to accomplish this important policy goal. In all, land use sector projects that comply with the GHG thresholds would not be "cumulatively considerable" because they would be helping to solve the cumulative problem as a part of the AB 32 process.

Likewise, new permit applications for industrial stationary sources that comply with the quantitative threshold of 10,000 $MTCO_2e/yr$. would not be "cumulatively considerable" because they would not hinder the State's ability to solve the cumulative greenhouse gas emissions problem pursuant to AB 32. While industrial stationary source projects will need to comply with the cap-and-trade program once it is enacted and reduce their emissions accordingly, the program will be phased in over time starting in 2012 and will initially apply only to the very largest GHG emission sources. Meanwhile, stationary source projects with large GHG emissions will still have a cumulatively considerable impact on climate change.

The proposed 10,000 MT CO_2e/yr. threshold would capture 90% or more of the stationary source sector GHG emissions in SLO County. Stationary source projects below the 10,000 MT CO_2e/yr. threshold account for only a small portion of SLO County's total GHG emissions from stationary sources. Such small sources will not significantly add to global climate change and will not hinder SLO County's ability to reach the AB 32 goal, even when considered cumulatively.

The proposed GHG CEQA significance thresholds are intended to serve as interim levels until AB 32 and SB 375 have been fully implemented through adopted regulations, incentives, plans and programs, or the California Air Resources Board (ARB) adopts a statewide GHG threshold. Compliance with such thresholds will be part of the solution to the cumulative GHG emissions problem and is essential for California to meet its statewide GHG reduction goals.

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Appendix 1

San Luis Obispo County Air Pollution Control District

Qualified GHG Plan Level Guidance

This guidance is intended to assist local governments in developing community scale Climate Action Plans. In drafting this guidance, the San Luis Obispo County Air Pollution Control District (APCD) has drawn from established methodologies and practices, rather than creating new protocols or quantification methods. This guidance should be interpreted as recommended approaches rather than a formal protocol. This guidance will be continually updated as new tools, methodologies and protocols are developed and refined.

Any Climate Action Plan (CAP) that aims to support tiering of future development projects for purposes of CEQA review of GHG impacts must include these standard elements.

a) A community-wide GHG emissions inventory and "business-as-usual" forecast of year 2020 community-wide GHG emissions;

b) GHG reduction targets consistent with AB 32;

c) An analysis of local and state policies and actions that may impact GHG emissions within the jurisdiction;

d) Quantification of GHG reduction measures demonstrating that, if fully implemented, the GHG reduction targets will be met;

e) An implementation and monitoring strategy and timeline;

f) An adequate environmental review of the proposed CAP.

Early consultation with APCD staff is essential; the importance of communicating with District staff early in the climate planning process cannot be overemphasized. District staff is available to meet with local government planners, review methodologies, discuss approaches and any other issues throughout the process of preparing the CAP.

An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project; if those requirements are not otherwise binding and enforceable, they must be incorporated as mitigation measures applicable to the project. If there is substantial evidence that the effects of a particular project may be cumulatively considerable, notwithstanding its compliance with the specified requirements in the plan for the reduction of greenhouse gas emissions, an EIR must be prepared for the project.

Qualitative Requirements for Qualified GHG Reduction Strategies

1) The GHG emissions inventory should be complete and comprehensive

Any GHG emissions source addressed in this guidance should be included in the GHG inventory and forecast for the local CAP. If an emissions source is not included (for example, direct access electricity use or wastewater treatment), it should be clearly explained why that source was omitted. District staff will review this explanation as part of the evaluation of the CAP.

2) Calculations and assumptions should be transparent

It is important to emphasize that all methodologies and assumptions should be documented and explained within the CAP document.

3) GHG reduction strategies should rely primarily on mandatory measures

To date, most CAPs have emphasized voluntary GHG reduction measures over mandatory measures, indicated with language like "should promote," and "will encourage," etc. However, because implementation of voluntary measures cannot be guaranteed, their contribution to meeting the GHG reduction target is more speculative than that of mandatory measures. Problems that may result from over-reliance on voluntary measures include the following:

- It could be very difficult for local jurisdictions to demonstrate that GHG reduction targets are being met through voluntary measures.
- This, in turn, will make it difficult for a local government to determine if a project is complying with the adopted CAP in order to appropriately tier off of the CAP CEQA document.
- If the local government cannot document that its CAP is on track to achieve the GHG reduction target, then the CAP may cease to comply with the "qualified" criteria. In this case subsequent projects would not be eligible to benefit from the tiering provisions of CEQA.

For these reasons, the APCD has consistently recommended that the majority of measures included in the CAP be mandatory. Some examples include:

- energy efficiency requirements for new construction that exceed Title 24;
- a time-of-sale residential or commercial energy conservation ordinance (RECO/CECO) energy efficiency requirement that exceeds Title 24 for existing development;
- water efficiency requirements for new development;
- density and mixed-use requirements for new development in commercial areas;
- parking strategies such as pricing, eliminating minimum parking requirements for new development, and unbundling parking costs from rents;

- a transportation demand ordinance that requires existing, as well as new employers, to provide transit subsidies, a guaranteed-ride-home program, a parking cash-out policy, etc.;
- requirements for preferential parking for rideshare vehicles, mandatory inclusion of ridesharing in employer TDM programs (for existing and new employers), etc.;
- adoption of a commuter benefit ordinance that requires employers to allow commuters to pay for transit with pre-tax dollars.

If voluntary measures are included in the CAP, distinctions should be drawn between those that are more or less likely to result in full implementation. For example, incentive-based programs (like AB 811 programs) are usually more likely to achieve results than outreach-based programs. Some CAPs have taken a cautious approach and have not quantified GHG reductions from the latter type of measure, due to their highly speculative nature. The APCD recommends only mandatory measures and strong voluntary measures (such as incentive-based programs) be quantified as contributing toward the GHG reduction target.

4) Build in a margin of safety

Once the CAP enters the implementation phase it is possible that unforeseen issues or obstacles may arise that prevent full implementation of all CAP measures, or the emission reductions achieved for some measures may be less than anticipated. These risks may be heightened by unforeseen economic or political developments that adversely affect implementation of the measures. Therefore, APCD recommends the CAP build in a margin of safety to ensure it can continue to serve as a defensible "Qualified GHG Reduction Strategy." This can be accomplished by:

- Including more GHG mitigation measures than needed to meet the GHG reduction target, thus creating a "buffer" against lower than anticipated results;
- Emphasizing mandatory over voluntary measures;
- Including contingency measures (with quantified emission reduction estimates) that can be activated to fill any gap needed to maintain the expected rate of progress toward achieving the emissions reduction target.

5) Measures should address existing as well as new development

The AB 32 target of reducing GHG emissions to 1990 levels by 2020 represents an initial step toward achieving the longer term goal of Executive Order S-3-05, which calls for reducing GHG emissions to 80% below 1990 levels by 2050; this equates to less than 2 metric tons of GHGs per capita. Reducing GHG emissions from new development alone cannot provide sufficient GHG reductions to achieve this long-term target. Therefore, climate action plans should address energy use and emissions from existing development as well. In its review of climate action plans, the APCD recommends aggressive and innovative strategies to achieve emission reductions from existing as well as new development.

6) *Implementation and monitoring should be clearly defined*

The parameters for determining if the CAP is being fully implemented, and if development projects are consistent with the CAP, must be clearly laid out. If a local government plans to tier future projects off the environmental review performed on a CAP, the monitoring program should include the following elements:

- *Annual tracking/reporting on implementation of all CAP measures, including measures that address existing development.* The phasing-in of mitigation measures should be addressed (i.e. — have all the measures that were to have been adopted or expanded in the past year actually been adopted/expanded?).
- *Annual reporting of how new development projects have been implementing CAP measures.* Tracking individual project attributes and implementation of mitigation measures should be done on a project-by-project basis. This can be facilitated through the use of a compliance checklist for new development projects to demonstrate consistency with the plan (listing all mandatory and voluntary measures that apply to new development) and whether the project is implementing the measures; the District will request a copy of this checklist (or similar documentation) when reviewing projects for CEQA.
- *Annual review of the State's implementation of measures included in the CAP.* Are state-level policies achieving the reductions anticipated?
- *Periodic update of the GHG inventory.* The APCD recommends updating the community-wide GHG inventory at least once every 5 years. However, updating the inventory on a more frequent basis may improve the ability to monitor progress toward achieving the GHG reduction target in the CAP.
- *Analysis of whether the CAP is still a "qualified" plan for CEQA purposes.* The analysis should be based on level of implementation and effectiveness of measures.

Appendix 2

Historical Permit Data

Dev. Type	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total # of Projects (2001-2010)	Ave. Size (sf)	Average # of employees	Emissions per Project (CO2e MT/yr)	Total Emissions per Land Use
NON-RESIDENTIAL															
Automobile Care Center															
# Projects per year	0	1	2	1	3	1	1	0	0	0					
Ave. Size per project		2,518	5,798	6,815	12,838	36,308	42,314			3,670	9	15,752	21	404	
Ave. # Employees per project		1	13	12	47	30	40			5					3,635
Bank (w/drive-through)															
# Projects per year	0	0	0	2	1	0	0	1	0	0					
Ave. Size per project				6,075	10,200			2,832			4	6,369	17	314	
Ave. # Employees per project				29	20			1							1,254
City Park															
# Projects per year	0	0	0	0	0	0	1	0	0	1					
Ave. Size per project							3,622			2,720	2	3,171	16	30	
Ave. # Employees per project							30			1					61
Convenience Market w/gas pumps															
# Projects per year	2	2	0	1	1	2	1	0	0	0					
Ave. Size per project	3,370	4,284		5,048	3,110	10,758	4,773				9	5,224	12	644	
Ave. # Employees per project	8	18		12	8	16	12								5,794
Day Care Center															
# Projects per year	0	2	2	0	0	0	0	0	0	0					
Ave. Size per project		3,601	13,584								4	8,592	6	90	
Ave. # Employees per project		3	9												358
Elementary School															
# Projects per year	0	0	0	0	0	1	0	0	0	0					
Ave. Size per project						11,000					1	11,000	6	163	
Ave. # Employees per project						6									163
Fast Food Restaurant w/drive-thru															
# Projects per year	0	1	1	2	0	1	2	0	3	0					
Ave. Size per project		1,180	2,174	2,391		2,500	2,832		4,675		10	2,625	17	469	
Ave. # Employees per project		12	33	14		20	14		11						4,693
Fast Food Restaurant w/o drive-thru															
# Projects per year	0	0	0	0	1	2	0	0	0	0					
Ave. Size per project					3,634	6,359					3	4,997	9	1,355	
															4,064

Ave. # Employees per project					10	8									
Gasoline/Service Station															
# Projects per year	0	0	1	1	0	1	0	0	1	1					
Ave. Size per project			2,546	2,742		3,992			4,715	0	5	2,799	5	240	
Ave. # Employees per project			9	3		5			5	4					1,202
General Light Industry (≤20,000sf)															
# Projects per year	5	7	5	13	10	10	5	8	3	6					
Ave. Size per project	5,715	11,693	9,662	9,355	6,716	8,592	7,833	5,974	3,705	5,744	72	22,845	16	337	
Ave. # Employees per project	17	7	18	14	13	8	13	15	5	6					24,249
General Light Industry (>20,000sf)															
# Projects per year	4	3	1	4	1	3	4	2	0	0					
Ave. Size per project	59,209	42,930	50,125	49,683	46,440	31,277	57,693	76,162			22	12,846	14	2,584	
Ave. # Employees per project	34	22	29	29	32	25	4	30							56,838
General Office Building (≤20,000sf)															
# Projects per year	5	7	5	14	8	10	12	8	4	3					
Ave. Size per project	2,546	10,926	5,636	6,322	7,066	4,923	8,389	6,002	6,797	3,948	73	6,255	20	96	
Ave. # Employees per project	6	35	41	19	14	13	43	15	13	5					6,994
Government Office Building (>20,000sf)															
# Projects per year	1	1	2	2	1	2	1	1	2	1					
Ave. Size per project	42,516	20,393	37,142	49,460	23,040	62,597	23,273	20,867	23,126	21,000	13	32,341	56	1,205	
Ave. # Employees per project	80	21	88	188	30	67	30	20	20	15					15,670
Golf Course															
# Projects per year	0	0	0	1	0	0	0	0	0	0					
Ave. Size per project				6,767							1	6,767	5	150	
Ave. # Employees per project				5											150
Government Office Building															
# Projects per year	0	1	2	0	0	2	0	0	1	0					
Ave. Size per project		2,470	3,794			10,960			6,341		6	5,891	21	215	
Ave. # Employees per project		25	22			33			5						1,292
Hardware/Paint Store															
# Projects per year	0	1	0	1	0	0	0	1	0	0					
Ave. Size per project		12,150		34,775				4,320			3	17,082	24	605	
Ave. # Employees per project		10		28				35							1,815
Health Club															
# Projects per year	0	0	1	1	1	1	1	1	2	0					
Ave. Size per project			5,475	5,555	4,320	31,710	36,600	39,000	33,206		8	22,267	54	650	
Ave. # Employees per project			5	30	35	25	94	15	177						5,198
High Turnover (Sit Down Restaurant)															
# Projects per year	0	0	0	2	0	4	5	1	3	0					
Ave. Size per project				1,219		1,911	5,052	2,007	27,105		15	7,459	33	376	
Ave. # Employees per project				6		5	6	20	128						5,640

Hospital															
# Projects per year	0	0	0	0	1	1	0	0	0	0					
Ave. Size per project					116,548	6,701					2	61,625	51	3,084	
Ave. # Employees per project					100	1									6,169
Hotel															
# Projects per year	0	0	1	0	1	3	6	1	3	0					
Ave. Size per project			12,180		19,412	34,402	51,323	75,319	60,088		15	42,121	36	888	
Ave. # Employees per project			24		40	28	34	51	38						13,322
Medical Office Building															
# Projects per year	1	1	2	1	1	0	1	1	0	2					
Ave. Size per project	1,440	2,184	2,815	3,372	5,086		7,765	12,166		27,351	10	7,772	21	250	
Ave. # Employees per project	5	0	8	30	46		10	39		30					2,498
Motel															
# Projects per year	1	2	0	2	2	1	1	2	0	0					
Ave. Size per project	650	3,464		5,236	5,086	20,191	21,870	28,832			11	12,190	6	120	
Ave. # Employees per project	1	0		7	5	15	8	6							1,323
Place of Worship															
# Projects per year	3	0	1	1	1	1	3	1	1	1					
Ave. Size per project	4,824		7,100	9,014	11,550	14,595	16,386	21,890	360	1,805	13	9,725	9	146	
Ave. # Employees per project	2		5	1	3	16	10	16	2	30					1,904
Quality Restaurant (≤3,000sf)															
# Projects per year	0	0	0	2	2	2	3	4	5	4					
Ave. Size per project				1,083	2,011	1,524	1,534	1,824	1,659	2,025	22	2,005	6	175	
Ave. # Employees per project				16	1	6	7	2	6	6					3,859
Quality Restaurant (>3,000sf)															
# Projects per year	0	0	0	0	1	1	2	4	4	0					
Ave. Size per project					8,527	3,178	4,706	8,889	7,871		12	6,634	6	641	
Ave. # Employees per project					5	5	7	10	6						7,686
Refrigerated Warehouse-No Rail															
# Projects per year	0	0	0	0	2	1	8	5	9	1					
Ave. Size per project					3,683	53,700	7,755	12,831	8,537	10,407	26	16,152	12	466	
Ave. # Employees per project					9	17	8	13	8	18					12,105
Regional Shopping Center															
# Projects per year	3	1	1	0	4	4	1	0	1	0					
Ave. Size per project	101,154	7,400	142,816		21,352	1,346	2,794		4,980		15	40,263	47	1,426	
Ave. # Employees per project	135	1	150		24	5	3		12						21,388
Strip Mall (≤10,000sf)															
# Projects per year	1	1	12	4	2	7	8	3	3	0					
Ave. Size per project	3,359	8,500	3,820	2,605	2,402	3,907	4,082	3,574	4,719		41	4,107	17	101	
Ave. # Employees per project	8	53	29	10	10	9	7	6	20						4,124
Strip Mall (>10,000sf)															
# Projects per year	2	0	0	2	3	1	4	4	0	2	18	22,232	46	528	9,495

Ave. Size per project	39,717			14,536	27,560	14,565	16,975	16,231		26,042					
Ave. # Employees per project	58			38	58	41	49	36		40					
Unrefrigerated Warehouse-No Rail															
# Projects per year	3	3	2	5	2	1	1	1	4	2					
Ave. Size per project	48,700	27,031	6,416	9,474	2,486	9,360	4,957	10,500	21,201	3,848	24	14,397	12	408	
Ave. # Employees per project	56	4	3	15	2	17	11	5	6	3					9,796
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total # of Projects (2001-2010)**	**Ave. Size (sf)**	**Ave. # Units**	**Emissions per Project (CO2e MT/yr)**	**Total Emissions per Land Use**
RESIDENTIAL															
Congregate Care/ Assisted Living															
# Projects per year	1	0	0	0	0	1	0	0	0	0					
Ave. number units per project	64					38					2	No Data	51	262	
Average size project (Sf)	ND					ND									523
Retirement Community															
# Projects per year	1	0	0	0	0	0	1	0	0	0					
Ave. number units per project	19						29				2	16,073	24	169	
Average size project (Sf)	17,690						14,456								339
Single Family Housing (1 Units)															
# Projects per year	134	103	106	118	97	120	103	83	49	39					
Ave. number units per project	1	1	1	1	1	1	1	1	1	1	952	2,371	1	20	
Average size project (Sf)	2,255	2,328	2,130	2,439	2,257	2,501	2,502	2,628	2,493	2,173					19,126
Single Family Housing (2-40 Units)															
# Projects per year	225	137	90	85	76	73	55	32	30	10					
Ave. number units per project	10	7	6	6	7	5	4	4	4	6	813	68,689	6	100	
Average size project (Sf)	2,321	2,213	2,435	4,370	3,856	9,250	16,483	47,858	97,928	500,174					80,950
Single Family Housing (41+ Units)															
# Projects per year	26	8	7	9	2	3	0	2	1	0					
Ave. number units per project	90	71	102	90	196	77		48	154		58	250,215	103	1,357	
Average size project (Sf)	244,523	232,349	312,740	222,107	460,240	169,119		82,670	277,975						78,706
Apartments Low Rise (1-100 units)															
# Projects per year	15	13	4	4	3	3	5	4	1	1					
Ave. number units per project	14	17	20	15	17	6	5	20	7	25	53	17,492	15	232	
Average size project (Sf)	17,771	20,157	18,864	25,279	15,170	9,620	6,267	18,406	6,638	36,750					12,281
Apartments Low Rise (101+ units)															
# Projects per year	0	0	0	1	0	1	0	0	0						
Ave. number units per project				212		232					2	158,606	222	1,955	
Average size project (Sf)				218,282		98,930									3,909
Condo/Townhouse															
# Projects per year	1	2	5	3	3	7	16	12	2	1					
Ave. number units per project	36	5	19	13	17	9	16	7	20	4	52	21,783	15	173	
Average size project (Sf)	66,020	8,841	31,177	18,905	15,228	14,134	20,206	7,959	29,073	6,288					9,015
TOTAL											**2,403**			**22,426**	**437,586**

Appendix 3

Example Projects

Example A:

As shown in Table A-1 below, a 100 unit single family housing development modeled for the year 2020 was calculated to have emissions of 1330.02 MT CO_2e/yr. By incorporating mitigation measures outlined in Table A-2 below, the project's total annual emissions were reduced to 1101.72 MT CO_2e/yr.; therefore the project fell into compliance with the Bright-Line Threshold (1150MT CO_2e/yr.) with 16% mitigation effectiveness. With the same mitigation measures, this project also fell into compliance with the Efficiency Threshold (4.9MT CO_2e/SP/yr.) by achieving 4.7 MT CO_2e/SP/yr.

Table A-1

100 Unit, Single Family Housing Development	
Land Use	**Size Metric**
SFH	100 units
Service Population (Residents)	236 people
Annual Emissions (MTCO2e/yr) without mitigation	**1330.02**
Annual Emissions (MTCO2e/yr) with mitigation	**1120.53**
Per Capita Emissions (MTCO2e/SP/yr) without mitigation	**5.6**
Per Capita Emissions (MTCO2e/SP/yr) with mitigation	**4.7**

Table A-1: This single family housing development exceeded both the Bright-Line and efficiency thresholds before mitigation, but complies with both thresholds after incorporating mitigation.

Table A-2

Mitigation Measures	Applied Metric
Traffic	
Improve Destination Accessibility	0 miles to job center
Increase Transit Accessibility	0 miles to transit station
Integrate Below Market Rate Housing	10 number of units
Improve Pedestrian Network	Yes site, and connecting off-site
Provide Traffic Calming Measures	100 % streets with improvement
	100 % intersections with improvement
Area	
Uses Electric Landscape Equipment	75 % Electric
Energy	
Installs High Efficiency Lighting	30 % Energy Reduction
On Site Renewable Energy	25 % of Electricity Generated
Water	
Use Reclaimed Water	75 % outdoor use
Install Low-Flow Bathroom Faucet	32 % Reduction in flow
Install Low-Flow Kitchen Faucet	18 % Reduction in flow
Install Low-Flow Toilet	20 % Reduction in flow
Install Low-Flow Shower	20 % Reduction in flow
Turf Reduction	60 % Reduction
Use Water Efficient Irrigation Systems	6.1 % Reduction
Solid Waste	
Institute Recycling and Composting Services	50 % Reduction in Waste Disposed

Table A-2: By applying mitigation measures in Traffic, Area, Energy, Water, and Solid Waste categories this single family housing project reduced emissions by 16%.

Example B:

As shown in Table B-1 below, a commercial development with 3,000sf of quality restaurant, and a 45,000sf of strip mall modeled for the year 2020 was calculated to have emissions of 1465.34 MT CO_2e/yr. By incorporating the mitigation measures outlined in Table B-2 below, the project's total annual emissions were reduced to 1141.21 MT CO_2e/yr.; therefore the project fell into compliance with the Bright-Line Threshold (1150MT CO_2e/yr.) with 22% mitigation effectiveness. No further action would be required.

Table B-1

Commercial Strip Mall and Restaurant	
Land Use	**Size Metric**
Quality Restaurant	3 1000 sf
Strip Mall	45 1000 sf
Parking Lot	100 Spaces
Service Population (population+employment)	111
Annual Emissions (MTCO2e/yr) without mitigation	**1465.34**
Annual Emissions (MTCO2e/yr) with mitigation	**1141.21**
Per Capita Emissions (MTCO2e/yr/SP) without mitigation	**13.2**
Per Capita Emissions (MTCO2e/yr/SP) with mitigation	**10.3**

Table B-1: This commercial development project exceeded both the Bright-Line and efficiency thresholds before mitigation, but complies with the Bright-Line threshold after incorporating mitigation.

Table B-2

Mitigation Measures	Applied Metric
Traffic	
Improve Pedestrian Network	Yes site, and connecting off-site
Limit Parking Supply	25 % with improvement
Energy	
Exceed Title 24	10 % Improvement
Installs High Efficiency Lighting	50 % Energy Reduction
On Site Renewable Energy	75 % of Electricity Generated
Water	
Water Conservation Strategy	15 % reduction outdoor water use
Install Low-Flow Bathroom Faucet	32 % Reduction in flow
Install Low-Flow Kitchen Faucet	18 % Reduction in flow
Install Low-Flow Toilet	20 % Reduction in flow
Solid Waste	
Institute Recycling and Composting Services	50 % Reduction in Waste Disposed

Table B-2: By applying mitigation measures in Traffic, Energy, Water, and Solid Waste categories this commercial development project reduced emissions by 22%.

Appendix 4

Employees per 1000sf, Based on Land Use

LAND USE	Employees per 1000sf
Automobile Care Center	2.47
Bank (w/drive-through)	1.59
City Park	0.23
Convenience Market w/gas pumps	2.50
Day-Care Center	1.01
Elementary School	0.55
Fast Food Restaurant w/drive-thru	6.22
Fast Food Restaurant w/o drive-thru	1.74
Gasoline/Service Station	2.22
General Light Industry	1.54
General Office Building	2.52
Golf Course	2.96
Government Office Building	3.63
Hardware/Paint Store	1.56
Health Club	2.47
High Turnover (Sit Down Restaurant)	1.97
Hospital	1.07
Hotel	0.64
Library	0.39
Medical Office Building	3.33
Motel	0.95
Place of Worship	0.80
Quality Restaurant	1.19
Refrigerated Warehouse-No Rail	0.66
Regional Shopping Center	1.39
Strip Mall	2.39
Unrefrigerated Warehouse-No Rail	0.84

Employees Per 1000sf developed from the historical trend analysis based on historical permit data from SLOCOG for the years 2001 to 2010

SLO COUNTY apcd | Air Pollution Control District
San Luis Obispo County

PUBLIC NOTICE - PROPOSED NEGATIVE DECLARATION

NOTICE OF INTENT TO ADOPT PROPOSED NEGATIVE DECLARATION

Project Title: Greenhouse Gas CEQA Thresholds of Significance

Project Description: Approval of the Project will establish threshold options that local lead agencies may use to determine the significance of greenhouse gas emissions impacts under the California Environmental Quality Act (CEQA) that are caused by land use development projects proposed within San Luis Obispo County.

Project Location: Incorporated and Unincorporated Areas of San Luis Obispo County, CA

Project Sponsor and Lead Agency:
San Luis Obispo County Air Pollution Control District
3433 Roberto Court, San Luis Obispo, CA 93401

Proposed Environmental Finding: Based on the findings of the initial study prepared for the Project, the Lead Agency finds that the proposed Project will not have a significant effect on the environment. Based on this finding, mitigation measures have not been included in the Project.

Copies of the Proposed Negative Declaration, Initial Study and supporting documents are available for review at the APCD office located at the address above or at: slocleanair.org. For more information please contact Aeron Arlin Genet at 805-781-5912.

Public Review Period: Begins February 15, 2012 and closes at 5:00 PM, March 16, 2012

Public Workshops and Hearings:

Public Workshop
February 23, 2012, 10:00 AM
Meadow Park Building
2333 Meadow Street
San Luis Obispo, CA

Public Hearing
March 28, 2012, 9:00 AM
SLO County APCD Board of Directors
County Government Center Board Chambers
1055 Monterey Street, Room D-170
San Luis Obispo, CA

DATED: February 15, 2012

INITIAL STUDY

1. Project title: **Greenhouse Gas CEQA Thresholds of Significance**

2. Lead agency name and address:

   San Luis Obispo County Air Pollution Control District
   3433 Roberto Court
   San Luis Obispo, CA 93401

3. Contact person and phone number: Aeron Arlin Genet, (805) 781-5912

4. Project location: Incorporated and Unincorporated Areas of San Luis Obispo County, CA

5. Project sponsor's name and address:

   San Luis Obispo County Air Pollution Control District (APCD)
   3433 Roberto Court
   San Luis Obispo, CA 93401

6. General plan designation: Various

7. Zoning: Various

8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

   Approval of the Project will establish APCD recommended options for greenhouse gas (GHG) significance thresholds that lead agencies may use to determine the significance of greenhouse gas emissions impacts under CEQA that are caused by land use development projects proposed within San Luis Obispo County. CEQA encourages public agencies to adopt thresholds of significance (State CEQA Guidelines §15064.7(b)). The proposed greenhouse gas (GHG) CEQA thresholds of significance, which are supported by substantial evidence, satisfies the CEQA requirement that if a threshold is intended for general use, it must be adopted through a public review process (State CEQA Guidelines §15064.7(b)).

9. Surrounding land uses and setting: Briefly describe the project's surroundings:

   San Luis Obispo County constitutes a land area of approximately 3,316 square miles with varied vegetation, topography and climate. The county is located along the Pacific Ocean in the Central Coast of California, bordered by Monterey County to the north, Santa Barbara County to the south, and Kern County to the east. The area is more rural and

agricultural than many other coastal regions in California. From a geographical and meteorological standpoint, the county can be divided into three general regions (i.e., Coastal Plateau, Upper Salinas River Valley, and East County Plain) that provide a wide variety of coastal and inland hill ecologies to support many kinds of aquatic, agriculture, and tourist activities.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement).

    No other public agency approval is required besides the San Luis Obispo County APCD. Other lead agencies within SLO County may, at their discretion, adopt the greenhouse gas thresholds to use in review of land use development projects under their purview.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Utilities/ Service Systems	☐ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☑ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Aaron Arlin Genet, Manager, Planning and Outreach
SLO County Air Pollution Control District

15 Feb 12
Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☑
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☑	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☑	☐

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would occur in conjunction with the environmental review of individual projects. Some project proponents may choose to install devices, such as solar panels, to reduce a project's GHG emissions below the proposed thresholds. Such devices, installed on individual development projects, may produce nominal degradation of visual character or glare. Significant aesthetic impacts from solar panels are associated with large solar arrays (e.g. California Valley Solar Ranch, San Luis Obispo County, SCH # 2009021009) rather than individual project applications that are likely to be used to mitigate GHG emissions. Aesthetic impacts resulting from adoption of the proposed Project are expected to be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☑
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Insofar as the proposed thresholds may encourage more compact development, the proposed Project may forestall some forest and farmland conversions and have a beneficial impact on agriculture and forestry. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. The proposed Project is not expected to cause any adverse impacts to agricultural or forestry resources.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☑
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☑
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☑
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☑
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☑

The Project is not expected to cause any adverse impacts to air quality or conflict with adopted air quality plans. The proposed thresholds of significance for greenhouse gas emissions will reduce future greenhouse gas emissions and may provide concurrent reductions of other air pollutants, a beneficial impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☑
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Adverse impacts to biological resources are not expected to occur from approval of the proposed Project.

V. CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	☐	☐	☐	☑
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☐	☑
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Adverse impacts to cultural resources are not expected to occur from approval of the proposed Project.

VI. GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☑
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii) Strong seismic ground shaking?	☐	☐	☐	☑
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
iv) Landslides?	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☑
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☑
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☑
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Adverse impacts to geology and soils are not expected to occur from approval of the proposed Project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☑
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☑

The Project, if adopted and fully implemented, is expected to reduce about 14,000 metric tons of carbon dioxide-equivalent emissions (CO2e) per year (greenhouse gases) from new land use development projects by 2020, a beneficial impact. In addition, the proposed Project encourages development and adoption of qualified greenhouse gas reduction strategies and plans by local jurisdictions, which will allow streamlined environmental review of projects consistent with a local jurisdiction's adopted reduction strategy or plan, a beneficial impact. The proposed Project is not expected to have any adverse impacts on greenhouse gas emissions.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☑
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☑
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Significant adverse hazards or hazardous materials impacts are not expected to occur from adoption of the proposed Project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☑
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☑
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☑
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☑
f) Otherwise substantially degrade water quality?	☐	☐	☐	☑
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☑
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☑
i) Expose people or structures to a significant risk of loss, injury or	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
death involving flooding, including flooding as a result of the failure of a levee or dam?				
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Significant adverse impacts to hydrology and water quality are not expected to occur from adoption of the proposed Project.

X. LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☑
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Insofar as the proposed thresholds may encourage more compact development, the Project may forestall some land conversions and have a beneficial impact on rural, agriculture, and forestry lands throughout the county. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Significant adverse impacts to land use and planning are not expected to occur from adoption of the proposed Project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Significant adverse impacts to mineral resources are not expected to occur from adoption of the Project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☑
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☑
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☑
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Significant adverse noise impacts are not expected to occur from adoption of the Project.

	Potentially Significant Impact	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☑
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Insofar as the proposed thresholds may encourage more compact development, the Project may improve the jobs/housing development throughout the region. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Significant adverse population and housing impacts are not expected to occur from adoption of the Project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES.				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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 any of the public services:				
Fire protection?	☐	☐	☐	☑
Police protection?	☐	☐	☐	☑
Schools?	☐	☐	☐	☑
Parks?	☐	☐	☐	☑
Other public facilities?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Insofar as the proposed thresholds may encourage more compact development, the Project may enhance the use of some public services (e.g., transit) and reduce costs to provide public services in areas far removed from the urban core (e.g., roads, fire protection, etc.). Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Significant adverse public service impacts are not expected to occur from adoption of the Project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
facilities such that substantial physical deterioration of the facility would occur or be accelerated?				
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☑
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Significant adverse recreation impacts are not expected to occur from adoption of the Project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☑
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☑
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☑
e) Result in inadequate emergency access?	☐	☐	☐	☑
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Several available mitigation measures that new project may select to implement will mitigate GHG emissions and encourage alternate forms of transportation other than single-occupant vehicles (public transit, bicycles) and use of alternate fuel vehicles, reducing transportation/traffic impacts, a beneficial impact. Significant adverse transportation or traffic impacts are not expected to occur from adoption of the Project.

	Potentially Significant Impact	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
XVII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☑
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☑
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☑
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☑

The Project does not include a proposal to construct buildings or any other type of facility. Some ancillary construction may result if individual development projects install features or devices designed to mitigate greenhouse gas emissions in order to meet the proposed thresholds. Consideration of these impacts would also occur in conjunction with the environmental review of individual projects. Many of the mitigation measures project proponents would use to reduce GHG emissions (e.g. use of reclaimed water/gray water, low-flow fixtures, water efficient landscapes, etc.) would also conserve water resources, a beneficial impact. Significant adverse utility and service system impacts are not expected to occur from adoption of the Project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☑
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☑

Public Comments and Responses to Comments

I. Questions from December 15, 2011 Public Workshop

1) How was construction amortization applied for projects?

Construction emissions are divided by the life of the project. For residential, project life is 50 years. For commercial, project life is 25 years. This annualized construction greenhouse gas (GHG) impact value is then added to the annual operational GHG emission value and compared against the 1150 MT CO2e/year threshold.

2) If the project you are reviewing is under the screening table number, is there anything else you have to do?

The GHG screening table in the APCD Handbook is only a guide for considering whether a proposed project may result in significant GHG impacts. The table should not be used as a threshold and does not waive lead agency to comply with Section 15064.4 requirements to describe, calculate or estimate the amount of GHG resulting from a project. Before considering a project relative to the screening table, the project location needs to be considered. For some of the land-use categories in the screening table, there are two project sizes that reach the GHG threshold with the distinction being whether the project is set in an urban or rural location. The table values based on an urban setting assumes that the associated one-way work commute distance is 13 miles with all other trips associated with the land-use having a 5 mile one-way trip distance. For rural settings, the table values were modeled using a 13 mile one-way trip length for all trip distances.

If the project is close to the value for the screening table, it would be appropriate to run the project in CalEEMod to determine project specific emissions.

The screening table was developed using CalEEMod defaults for SLO County urban and rural settings (e.g. trip distances listed above). Users need to recognize that the table is limited to screening for a single land use at a time and therefore projects with multiple land uses will need to perform a CalEEMod emissions evaluation to determine whether they have significant GHG emissions. Also, projects with atypical travel lengths or other parameters would also need to calculate emissions using CalEEMod as opposed to using the screening table.

3) What is the scale of screening criteria for the efficiency threshold? Is there a separate screening table for the efficiency threshold?

We did not develop a screening table for the efficiency threshold option because this criteria is independent of a project's size whereas the size is a critical measure for the Bright Line threshold screening table. There are many variables that determine a project's greenhouse gas efficiency including energy use, water use and the need for project occupants to rely on personal vehicles for transportation. In addition, a project's GHG efficiency is not solely dependent on the magnitude of its total GHG emissions, but rather the magnitude of GHG emissions attributable to each resident and employee. For example, a large project with high GHG emissions that is located near significant levels of transit options and services within walking distance, and utilizes highly efficient energy and water conservation systems, may be more efficient than a very small project highly dependent on personal transportation for travel to jobs and services.

4) Does CalEEMod calculate the value we will need for the Bright Line threshold as well as for the efficiency threshold?

To determine a project's compliance with the efficiency threshold, annual emissions estimated with CalEEMod are to be divided by the service population in an off-model calculation. The Service Population for a project is the sum of residents living on site and employees working on site. The default value for residents per unit is 2.4. The APCD has developed default values for employees based on land use to use as a tool in calculating service population if specific project information is unavailable. Please see *Greenhouse Gas Thresholds and Supporting Evidence* document Paragraph 4 of Section 2.2.3 and Attachment 4, "Employees per 1000sf."

5) Who chooses which method we evaluate under? Is it a local agency decision?

Under CEQA it is the lead agency's responsibility to determine the significance of any project they consider for approval. CEQA also allows a lead agency to "...consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." (State CEQA Guidelines §15064.7 (c)) The APCD has developed the recommended thresholds of significance, which are supported by substantial evidence, specifically for lead agencies within SLO County. Each lead agency has the discretion to use any of the recommended thresholds as a single threshold, or in combination, or to use all of the thresholds together as options for project proponents. The APCD recommends that lead agencies employ all three threshold options to provide flexibility for the development community and encourage proactive long-term planning through qualified Greenhouse Gas Reduction Plans. Please see *Greenhouse Gas Thresholds and Supporting Evidence* document Paragraph 4 of Section 2.2.

6) Where did the APCD come up with 2.36 residents per unit? Can we use a different number for residents per unit? Based on census data for water district purposes, there can be between 2 and 3.5 PPH on average.

The APCD used the 2.36 residents per household as an average value for all households in the county. The 2.36 value is based on the best available information including U.S. Census data, California Department of Finance data and APCD staff's analysis of local historical development data. The APCD recommends this value as an average default value. However, it would be acceptable to use a different value if evidence is available to support a more appropriate value for a project.

7) Do you have any more mitigation guidance?

The type of mitigation measures appropriate for a specific project should be determined on a case by case basis. As indicated in the CAPCOA guidance document entitled *Quantifying Greenhouse Gas Mitigation Measures* there are certain rules for combining greenhouse reduction measures and strategies (page 56). Mitigation measures or strategies are frequently implemented together with other measures. Often, combining measures can lead to better emission reductions than implementing a single measure by itself. Unfortunately, the effects of combining the measures are not always as straightforward.

For example, if there were a series of measures that each, independently, was predicted to reduce emissions from a source by 10%, and if the effect of each measure was independent of the others, then implementing ten measures would reduce all of the emissions.

However, in practice successive measures tend to be less effective than predicted when implemented on their own. So simply looking at a table to determine the overall emission reduction achieved by a strategy or combination of strategies can be misleading. All of the greenhouse gas

measures that are included in the CAPCOA document referenced above are incorporated into the computer model CalEEMod. This model preforms the calculations and implements all the required rules to ensure that effects of measures are not under or over estimated.

8) Where is CalEEMod available?

It is publicly available and free on the CalEEMod website. www.caleemod.com.

9) Do any SLO County Communities have a plan?

Currently the SLO County has adopted the EnergyWise plan to reduce GHG emissions countywide. The City of SLO is in the process of developing and approving their GHG Reduction Plan. The APCD is working with the remaining six cities throughout our region to develop a toolkit that will be used for customizing GHG Reduction Plans for the remaining cities, and is expected to finish by 2013.

10) What if there was a solar factory in SLO, and it outsourced jobs to places outside of the county or state? Would those be included as employees in the efficiency threshold?

No. The service population is based on employees that are working directly from the project site. It focuses on on-site employees and residents.

11) If the city possesses GHG emissions reduction credits, can they use the credits in the CEQA process?

Yes, both local agencies and project proponents can use greenhouse gas emission credits that are real, quantifiable, permanent, enforceable and surplus.

12) Thresholds of significance for construction are not specifically identified, but some projects are only construction, such as highway safety, road construction and pipeline projects. What do those projects do? How do we define the duration of the project during construction?

For projects involving only construction, where there will not be any future residents or employees occupying the project after construction (except for occasional maintenance crews), should estimate the construction emissions, amortized over 25 years (or project specific data as available), and compare the annualized emissions to the Bright-Line threshold. If the construction project is specifically identified in a qualified GHG Reduction Plan (or Sustainable Community Strategy) that provides specific mitigation measures that will be implemented by the project, the project may be considered less than significant and project emissions do not need to be estimated. The efficiency threshold is not applicable for construction projects since there will not be any long term residents or employees occupying the project.

13) Did the APCD do a cost analysis based on the amount that mitigation would cost to implement for the developers of these projects?

The economic impacts from the adoption of the GHG thresholds has been evaluated and based on the data presented below determined to not result in any additional economic impacts to local businesses.

a) The new GHG thresholds developed pursuant to SB97 do not create any new requirements rather they are provided as guidance and intended to assist lead agencies in their interpretation of greenhouse gas impacts from development projects. SB 97 already requires greenhouse gases be assessed and mitigated.

b) Project proponents are already required to quantify criteria pollutants and mitigate those impacts. The inclusion of greenhouse gases does not and should not require any

additional work. Computer models exist that will quantify both criteria pollutant as well as greenhouse gases and many of the mitigation measures that are implement for criteria pollutant will also reduce greenhouse gases. Therefore are already being done.

c) Many of the mitigation measures that are required for criteria and greenhouse gases have the added benefit of reducing energy consumption thereby reducing the cost of operation of the facility being developed. Therefore, in the long run resulting in an economic benefit.
d) The greenhouse gas thresholds developed may tend to reduce costs associated with environmental analysis of greenhouse gas emissions. For example, the new thresholds allow for and encourage tiering and streamlining of existing environmental analyses to the extent possible in order to reduce duplication. Tiering and streamlining mechanisms are consistent with current CEQA Guidance.
e) The cost of building energy efficiency into a building when it is created is typical a fraction of the cost of retrofitting it later. Many builders are now using energy efficiency measures as a selling feature for their housing stock (http://www.wathen-castanos.com/hybrid-home/hybrid-homes/)
f) Many options are available through site selection and site design that would have cost associated with it if basic design elements are considered when planning development.
g) The thresholds options will also eliminate the need for many smaller projects throughout our region that fall below the significance threshold to implement mitigation measures.

14) Has the local inventory used for the threshold develop been reconciled with the 7 cities and the county?

The local GHG emissions inventory that was used for the development of the GHG thresholds follows the same protocol that is used by the APCD for criteria pollutant inventories (e.g., reactive organic gas, nitrogen oxide, particulate matter). Sources of air pollution are grouped into major categories of stationary, mobile, area-wide and natural sources. Once the countywide 2008 GHG inventory was developed, the land use sectors were used to develop the Bright-Line threshold. The inventory used for the seven cities and county were based on a different year (2005) and followed the ICLEI protocol that evaluates a subset of all emissions, only those emissions that fall within the agency's jurisdiction. The ICLEI model relies on numerous assumptions and is limited by the quantity and quality of available data.

15) What about projects that are going to be developed in rural areas? Sometimes farmers need to sell their land to a developer as a retirement plan. If this threshold is going to make it harder to develop rural land, the selling price of the land will decrease.

Small rural parcel splits are not likely to trigger the new GHG threshold. As an example, using the CalEEMod model, the APCD determined that it would take a 49 single family home rural land development to exceed the Bright-Line threshold of 1,150 MT CO2e per year, compared to 70 single family homes in an urban setting.

16) How would rural, large prescribed burns be evaluated using these proposed thresholds?

Prescribed burns are a vegetation management tool, used to minimize the amount of vegetation and reduce the risk of catastrophic fires. By reducing the risk of catastrophic fire, prescribed burns are a useful tool to reduce air pollution and GHG emissions. This measure was included in the SLO County's Conservation and Open Space Element (COSE) of the General Plan (Implementation Strategy AQ 3.1.3) and by the Board of Supervisors on May 2010. An EIR was certified that evaluated

the GHG impacts of all strategies included in the COSE. The thresholds identified in the *Greenhouse Gas Thresholds and Supporting Evidence* document are not intended to be used to compare emissions from prescribed burns.

17) How do Reduction Plans work?

A qualified GHG Reduction Plan is a long-term community-wide strategy detailing how a community will meet the overall goals of AB 32 and do its fair share to reduce the impact of its greenhouse gas emissions on climate change. CEQA also provides that communities with adopted Greenhouse Gas Reductions Plans may allow a project's environmental review to rely on the environmental document prepared for the plan and thus determine that the project may have less than significant GHG impacts (State CEQA Guidelines §15183.5). In communities that have adopted a qualified GHG Reduction Plan containing specific mitigation measures that are required to be applied to all projects, individual project emissions do not need to be estimated and the project may be considered less than significant. A project's GHG emissions can be above the thresholds and still be in compliance with a qualified GHG reduction plan. Please see *Greenhouse Gas Thresholds and Supporting Evidence* document, Section 2.2.1.

II. Response to Home Builders Association of the Central Coast Comment Letter dated January 6, 2012 (attached)

Please refer to the attached HBA letter that has the corresponding number next to each question that is answered below.

1.1 The GHG thresholds developed pursuant to SB97 do not create any new requirements rather they are provided as guidance and intended to assist lead agencies in their interpretation of GHG impacts from development projects. SB 97 already requires GHG emissions to be assessed and mitigated. Project proponents have historically been required to quantify criteria pollutants impacts. The air quality computer models (e.g. CalEEMod) used to evaluate these impacts also quantify GHG impacts, thus there is minimal increase in work to include the GHG impact evaluation. The CalEEMod model also includes many mitigation measures that a project proponent can select to reduce both criteria pollutant and GHG impacts. Finally, the proposed GHG thresholds options will eliminate the need for many smaller projects throughout our region that fall below the significance threshold to implement mitigation measures, thus streamlining the process.

1.2 The methodology used to develop the Bright-Line GHG CEQA threshold in the Bay Area and the methodology used in SLO County are similar only in how the statewide "gap" was derived. See question number 4.11 (January Public Workshop) below or Section 2.2.2 in the *Greenhouse Gas Thresholds and Supporting Evidence* document.

1.3 The footnote that you are referring to has been deleted from the document. Both "substantial evidence" and "feasible" are defined in Title 14, California Code of Regulation, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act, Article 20, Sections 15364 and Section 15384. State Law dictates what local agencies must follow when complying with CEQA requirements. It is up to the lead agency to determine what they consider feasible.

15364. Feasible
"Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Sections 21002, 21002.1, 21004, 21061.1, 21080.5, and 21081, Public Resources Code; Section 4, Chapter 1438 of the Statutes of 1982.

Discussion: This section provides an additional interpretation of the statutory language by adding the word "legal" to the statutory language. The legal limitation is incorporated in the concept of feasibility as it applies to the findings an agency must make concerning whether to mitigate or avoid significant effects identified in an EIR. The lack of legal powers of an agency to use in imposing an alternative or mitigation measure may be as great a limitation as any economic, environmental, social, or technological factor.

In ARB Scoping Plan FED page 13 for the purpose of this section "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors, and consistent with the state board's legislatively mandated responsibilities and duties (CCR section 60006)

15384. Substantial Evidence
(a) "Substantial evidence" as used in these guidelines means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency. Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence.
(b) Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.

Note: Authority cited: Section 21083, Public Resources Code; References: Sections 21080, 21082.2, 21168, and 21168.5, Public Resources Code; No Oil, Inc. v. City of Los Angeles (1974) 13 Cal.3d 68; Running Fence Corp. v. Superior Court (1975) 51 Cal.App.3d 400; Friends of B Street v. City of Hayward (1980) 106 Cal.App.3d 988..

Discussion: "Substantial evidence" as used in the Guidelines is the same as the standard of review used by courts in reviewing agency decisions. Some cases suggest that a higher standard, the so called "fair argument standard" applies when a court is reviewing an agency's decision whether or not to prepare an EIR.

Public Resources Code section 21082.2 was amended in 1993 (Chapter 1131) to provide that substantial evidence shall include "facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts." The statute further provides that "argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly inaccurate or

erroneous, or evidence of social or economic impacts which do not contribute to, or are not caused by, physical impacts on the environment, is not substantial evidence."

1.4 (a) The GHG reductions for new and future construction are reflected in the calculations that were done for the current and forecasted emissions. Please see *Greenhouse Gas Thresholds and Supporting Evidence* document, Section 2.2.2, step 4.

(b) As the energy efficiency regulations change and become more stringent this will be reflected in the computer models that are used to calculate the GHG emissions, thereby lowering the overall GHG emissions from development projects. The models will be updated to include the new requirements as energy efficiency improves.

(c) The APCD is not in the business of developing new technologies and therefore is not aware of all the possible energy efficiency options that will be available in the future. However, it should be noted that energy efficiency of the building is only one contributor to GHG associated with new development. This document is intended to address all possible sources (e.g. stationary and mobile) of GHG emissions that are attributed to new projects.

(d) The intent of this document is to modify the APCD's CEQA Handbook that addresses new development, not existing development. As local cities adopt their Climate Action Plan, measures will be incorporated in those plans to address existing building stock.

1.5 The *GHG Thresholds and Supporting Evidence* document provides the substantial evidence used to set the GHG thresholds it contains. For the development of these thresholds the APCD consulted with or obtained data from the following organizations; seven cities in the county, the county planning and building department, San Luis Obispo Council of Governments, California Air Resources Board, South Coast Air Quality Management District, Bay Area Air Quality Management District, California Air Pollution Control Officer Association, Sacramento Metropolitan Air Quality Management District, California District Attorney Office, California Department of Finance, California Employment Development Department. In addition, we held two public workshops and solicited input from a number of local stakeholders.

1.6 These references have been removed from the *GHG Thresholds and Supporting Evidence* document.

1.7 The substantial evidence for the bright line threshold is detailed in Steps 1-8 on pages 12-22 the substantial evidence for the efficiency threshold is detailed on pages 23 of the *GHG Thresholds and Supporting Evidence* document.

1.8 The 2008 Scoping Plan considered a range of GHG emission reduction measures, including direct regulations, Alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, a market-based cap-and-trade system, and a fee regulation to fund the program. For a complete listing of the items please refer to ARB's website. (http://arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm) An example of the incentives program referenced in the Scoping Plan would be the Million Solar Roof program. Cap and Trade is an example of the market-based program.

1.9 MT stands for metric tons. CO2e is carbon dioxide equivalent. SP stands for service population. The service population is the sum of the number of jobs and the number of residents provided by a project.

1.10 A certain percent of the population will own recreational vehicles (i.e. boat, off-road vehicles). The associated GHG emissions must be captured somewhere in the GHG emission inventory much like the criteria pollutants from these sources are currently captured in emission inventory information provided by the ARB. The assumption made is that the majority of them will be used for pleasure and not business purposes. Since the recreational vehicles are associated with the residential sector, new emissions from these vehicles were attributed to new residential development.

1.11 The "gap" is explained in Section 2.2.2 of the *GHG Thresholds and Supporting Evidence* document.

1.12 The 13,788 MT/year of reductions needed from new development for SLO County to meet its fair share of the Statewide reductions required under AB32 will be achieved with mitigation measures from new projects that exceed the thresholds of significant. Many of these mitigation measures are included in this analysis and in CalEEMod were compiled from Air Districts across California and have been achieved in practice. Both "substantial evidence" and "feasible" are defined in Title 14, California Code of Regulation, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act, Article 20, Sections 15364 and Section 15384. State Law dictates what local agencies must follow when complying with CEQA requirements. It is up to the lead agency to determine what they consider feasible.

15364. Feasible: "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, and environmental, legal, social, and technological factors.

1.13 Comment noted. Text has been updated on Page 23 of the *GHG Thresholds and Supporting Evidence* document to describe how the Bright-Line threshold was determined using recent data. On Page 34, the document identifies that the thresholds will be re-evaluated periodically based on new data.

(a & b) These tables have been clarified and changes incorporated into the *GHG Thresholds and Supporting Evidence* document.

1.14 The tables referred to have different totals because the first totals California's statewide land use emissions (Table 2), and the second totals land use emissions from SLO County (Table 4). The text has been clarified in the *GHG Thresholds and Supporting Evidence* document.

1.15 The table placement has been updated in the *GHG Thresholds and Supporting Evidence* document.

1.16 The typeface error has been rectified in the *GHG Thresholds and Supporting Evidence* document.

1.17 Section 2.2.5 of this document references one typical commercial and one typical residential project expected to exceed the Bright Line threshold. For more detailed residential and commercial example projects, and how they compare to both the Bright Line and Efficiency thresholds, please refer to Appendix 3, "Example Projects", of the *GHG Thresholds and Supporting Evidence* document.

1.18 The intent of this document is to provide guidance to lead agencies as they comply with SB97, which address new development. Existing development is being addressed in Climate Action Plans that are being developed by local cities and the county. As indicated in the Scoping Plan, achieving the goals of AB 32 will require a wide range of approaches. Every part of California's economy needs to play a role in reducing GHGs. New land use is one part.

1.19 The reasonably foreseeable mitigation language referenced in this question has been deleted from the document. As a point of reference, "reasonably foreseeable mitigation" is a reference from SB 97, demonstrating a categorical exemption from CEQA. It is impossible to anticipate every possible factor that could influence the upcoming technological advancements or economic conditions. Therefore the reasonable foreseeable qualifier is included to allow for some flexibility.

1.20 The environmental assessment was included in the Initial Study for the proposed GHG thresholds and technical information was presented in the GHG Thresholds and Supporting Evidence document.

Question number 13 from the December 15 Public Workshop (listed above) provides a list of economic factors that were evaluated as part of this process. Additionally, the California Natural Resources Agency, in their Statement of Reasons for SB97 determined that the Amendments will not have a significant, statewide adverse economic impact directly affecting businesses. A complete explanation and associated case law can be found at http://ceres.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf on page 105. In addition, the proposed GHG thresholds options will also eliminate the need for many smaller projects throughout our region that fall below the significance threshold to implement mitigation measures, thus streamlining the process and minimizing the economic costs associated with the implementation of mitigation measures.

Implementation of mandatory measures is the only way to ensure reduction will be achieved.
Again these guidelines are not creating new requirements. The requirement to reduce GHG has been mandated in SB97. This guidance document is intended to provide assistance to lead agencies in assessing GHG emission impacts from new development and when there is a threshold exceedance, selecting appropriate mitigation to bring the impacts to a level of insignificance.

The APCD provides comments on most development projects and suggests measures to improve and concentrate development within the urban core. Increasing the energy efficiency of a building is only one of many ways to reduce greenhouse gases for a new development project. As the Title 24 efficiency requirements increase, projects will need to look to other project aspects (e.g. mobile sources, project location, and/or project design elements) to reduce GHGs. In addition, as Title 24 requirements increase, this will be

factored into future versions of CalEEMod. Such improvements will be included in the periodic re-evaluation of GHG threshold of significant values, ultimately readjusting the thresholds values.

1.21 There is no doubt that this economic downturn has been more severe than we have seen in recent history, however economy is cyclical and will, as it has in the past, recover. We are not insensitive to the current economic conditions but also need to develop strategies that will ensure SLO County compliance with AB 32 which is why we have included a margin of safety into the calculations.

1.22 Again it is important to put the context of this document into perspective. The intent of CEQA is to address impacts from new development which is why this document focuses on new development. Existing development will be addressed in other venues such as GHG Reduction Plans.

III. Responses to City of San Luis Obispo Comment Letter dated January 5, 2012 (attached)

Please refer to the attached City of SLO letter that has the corresponding number next to each question that is answered below.

2.1 For most development projects, the APCD is a responsible/commenting agency. In this case, it is up to the lead agency and the governing Board to approve the MND or EIR.

2.2 Determining if a CAP is a Qualified GHG Reduction Strategy is the responsibility of the lead agency. The CEQA Guidelines to outline the six aspects that need to be addressed in the qualified plan. The California Office of Planning and Research is currently in the process of developing an advisory on the element of a CAP but this will be an advisory document only. See question number 4.1 below (February 23 Public Workshop).

2.3 The statewide gap was determined as a starting point; it was then used to determine the local area's fair share of emissions that needed to be reduced to ensure compliance with the goals of AB 32. See question number 4.11 below (February Public Workshop).

2.4 The 0.55% gap was calculated on statewide data and then applied to the local land use emissions inventory. See response to question number 2.3 above.

2.5 The efficiency threshold is based on statewide population and employment and is not associated with the goals of SB 375.

IV. Responses to San Luis Obispo Economic Vitality Corporation Letter Dated January 2, 2012 (attached)

Please refer to the attached EVC letter that has the corresponding number next to each question that is answered below.

3.1 The comment period was extended to accommodate additional review and input from all stakeholders

3.2 A second Public Workshop was held on February 23, 2012 and outreach for this events was coordinated with EVC and its members.

V. Questions from February 23, 2012 Public Workshop

4.1. Does the County's EnergyWise plan fall under the category of a Qualified GHG Plan?

The lead agency is responsible for determining whether a Climate Action Plan meets the criteria as defined in State CEQA Guidelines for Qualified GHG Plan (see criteria listed below). As with any CEQA determination, these decisions can be challenged by concerned parties.
State CEQA Guidelines Qualified GHG Plan Elements. A plan for the reduction of greenhouse gas emissions should include the following:

> (a) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
> (b) Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;
> (c) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;
> (d) Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
> (e) Establish a mechanism to monitor the plans progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
> (f) Be adopted in a public process following environmental review.

4.2. Why does new development have to do more when other people have done less?

See answer to question number 1.4 (d) above (HBA Letter).

4.3. Why is new construction responsible if someone buys a jet ski?

See answer to question number 1.10 above (HBA Letter).

4.4. Will subdivisions smaller than 40 units trigger the threshold?

In our analysis, the answer is no. The average residential subdivision of 40 units will likely not exceed the Bright-Line threshold of 1,150 MT/yr based on urban and rural defaults.

4.5. Do you have a sense on the size or scale of wineries that could be subject to the threshold?

There are too many variables to determine which size or scale of wineries would exceed the thresholds. Each project must be assessed individually to account for the project operations (e.g., vineyard vs. winery), winery size, location, tasting room, special events, etc.

4.6. As a new homebuilder, subject to CEQA, is new development responsible for the entire gap?

Based on our assessment, new development is responsible for 0.55% of the statewide land use sectors of the GHG emissions. The statewide land use emissions "gap" between projects with existing control and the reduction goals set by AB 32 is 0.55%, after factoring in the off-inventory land use credits that will be applied from the Scoping Plan measures. See Section 2.2.2 in the *GHG Thresholds and Supporting Evidence* document.

4.7. What growth projections were used throughout this assessment?

The following summarizes the five growth factors used in this assessment. Four were determined using historic data from 2001 through 2010 which averages values from both solid and recessed economic times. The fifth was determined from modeling results that does not account for the recession, but was the best emission estimation tool available at the time.

a. The APCD concluded that an annual growth factor due to a projected population increase (0.71%) was most appropriate in estimating GHG emissions from new development that affects the following land-use sectors:
   - On-road passenger vehicle transportation
   - Standard and co-generated electrical power use
   - Landfill combustion and fugitive sources

b. The APCD concluded that an annual growth factor due to the increase in the projected occupied dwelling units throughout SLO county (0.61%) was most appropriate in estimating GHG emissions from new development that affects the following land-use sectors:
   - Recreational pleasure craft
   - Residential fuel use

c. The APCD concluded that an annual growth factor due to the increase in the projected dwelling units throughout SLO county (0.39%) was most appropriate in estimating GHG emissions from new development that affects the following land-use sectors:
   - Lawn and garden equipment use

d. The APCD concluded that an annual growth factor due to the increase in the projected economic influence as estimated using employment as a surrogate (0.47%) was most appropriate in estimating GHG emissions from new development that affects the following land-use sectors:
   - On-road heavy duty transportation
   - Light commercial equipment use
   - Fuel use from new commercial properties that do not have an APCD permit
   - Wineries

4.8. Why is there a big difference in the screening table between general office bldg. vs. govt office bldg?

Trips to government buildings include employees and a significant number of patron trips whereas trips to general office buildings have significantly fewer patron trips. Specifically, the Institution of Transportation Engineering average weekday trip rate for these two land use categories is 69 trips/1000 square feet and 11 trips/1000 square feet respectively.

4.9. Do we have an automatic DeMinimis level?

CEQA no longer supports de minimis impact findings. The State CEQA Guidelines were amended in the late 1990s with provisions which allowed a lead agency to determine an incremental contribution to a cumulative impact as de minimis, meaning no further study was necessary (§ 15064(i)(4) and 15130(a)(4), 1998). In mid-2001, Sacramento County Superior Court Judge Ronald Robie overturned these amendments. This decision was upheld on appeal and the relevant CEQA sections were removed from the State CEQA Guidelines. Therefore, the District does not intend that the screening tables establish de minimis levels, but merely provide guidance as to when an effect may rise to the level of significance. As a project's size approaches the levels within the screening table, it is recommended that the project's emissions be analyzed with greater scrutiny and compared to the thresholds.

4.10. What is the urban/rural trip length mileage?

The typical average one way commute trip length in SLO County is about 13 miles. Typical non-commute urban one-way trip lengths are about 5 miles. Typical non-commute rural one-way trips lengths are about 13 miles. When determining impacts from new development, project specific information should be used if available. For example, a high density, mixed use urban core development could demonstrate that the associated non-commute specific trip length is less than 5 miles. Further, it may not be appropriate to use the typical 5 mile non-commute trip length value for new development on the urban fringe. Note: the typical values identified above are the SLO County defaults in the CalEEMod model. Those defaults need to be changed if project specific information dictates that the defaults are too high or too low; substantiated evidence for default changes need to be provided with the modeling results that are provided with the project referrals that the lead agency submits to the APCD for review.

4.11. Surprised at how high the threshold is, 70 single-family housing, (49 rural), if threshold is too high, is there something about using BAAQMD method that is not in tune with a rural county.

The methodology used to develop the bright-line GHG CEQA threshold in the Bay Area and the methodology used in SLO County are similar only in how the statewide "gap" was derived. For both the Bay Area and SLO County, the statewide gap, expressed as a percentage, is then applied to the local regional GHG emissions inventory. Thus, only the GHG emissions of a particular region, urban or rural, are considered when establishing the level of reductions needed for that region to provide its appropriate share of the total statewide gap.

4.12. What is the added cost for mitigation? Mitigation is not financially feasible in private sector, can't achieve if not financially feasible.

See answers to question number 13 from the December 15 Public Workshop) and question number 1.1 (HBA Letter) above. As indicated above this is not a new requirement. The development of a threshold for GHG gases should make it easier for developers as they will know what is expected up front and be able to determine what mitigation is appropriate for the specific development.

4.13. How much of ag and recreational off road equipment is ag?

The off-road category included lawn and garden equipment; recreational and pleasure craft; light commercial equipment; and construction and mining equipment. The off-road category accounted for 3.4 % of the 2008 SLO County Land Use Inventory. Agricultural /Farming was a separate category in the inventory and was composed primarily of wineries. This category accounted for 0.4% of the 2008 inventory.

4.14. How is urban and rural defined?

See response 4.10 above (February Public Workshop).

4.15. How do you assess projects in relation to URL boundary?

New development and redevelopment inside existing Urban and Village Reserve Lines tends to reduce future emissions relative to if this development/redevelopment was in rural settings. Each project has its own specifics and as such lead agencies, project proponents, and air quality modeling consultants need to consider the setting for a propose project to determine if the typical trip lengths as described in response 4.10 (February 23rd Public Workshop) above are appropriate or if they should be changed to best represent the project.

4.16. Are you not assuming SLO as job center?

We are assuming the City of San Luis Obispo is one of the job centers throughout the region. In fact the City of SLO may contain several job centers. A job center is simply an area with a significant concentration of jobs. Job centers also tend to have concentrations of services, including transit, that usually have the effect of reducing emissions. Counterbalancing this effect is the distance employees of the job center travel to their jobs and whether that work trip is by single-occupant automobile, carpool or transit.

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Home Builders Association
OF THE CENTRAL COAST
creating quality housing and communities

Friday, January 06, 2012

San Luis Obispo County Air Pollution Control District
Aeron Arlin Genet
Manager, Planning & Outreach Division
3433 Roberto Court
San Luis Obispo, CA 93401

Dear Ms. Genet:

The Home Builders Association is disappointed with the APCD "Proposed Greenhouse Gas Thresholds and Supporting Evidence" document released Dec. 8, 2011.

We have been involved in this issue with the San Luis Obispo Council of Governments, San Luis Obispo County, San Luis Obispo City, Santa Barbara Council of Governments, and Santa Barbara County. We served on a coalition with APCD on this issue and have attended and participated in workshops and public hearings on GHG reductions in which APCD also participated. All of which added to our surprise when we were not notified about this document until mid-December and had no opportunity for input during its formation. APCD was mailing notices to an address we last used in 2004, three moves ago. We assume those notices were "Returned to Sender" since we would have corrected the address error if we had seen it.

We acknowledge and appreciate that you and APCD Executive Officer Larry Allen met with us Jan. 3 to discuss concerns raised herein. We know you plan to make some changes and additions. But since we haven't seen that revised draft, we currently believe that this document needs "substantial" work before it is ready for adoption. There was insufficient public outreach during the report's development. For a private sector layman interested and involved in this topic, this report is difficult to read and understand. It is poorly organized in places. It needs a glossary for words, phrases, and acronyms. It should include facts about what new construction has done in the last 20 years and will be doing in the next five years to decrease GHG emissions. It shows little concern for the ongoing impacts that the worst recession in 80 years is having on the private sector. Championing clean air is neither an excuse nor a justification for ignoring the economic misery many still suffer today.

We know this report aims at using the California Environmental Quality Act to target GHG emissions from new construction. However, by narrowly focusing only on new construction, mostly residential, the entire report misses the big picture and loses the overall context. So it draws the wrong conclusions, targets the wrong industry, and is both **economically and environmentally counterproductive**. Your failure to include plans to address real sources of GHG emissions makes it impossible to analyze if the requirements herein represent new construction's fair share.

Consol, a nationally recognized energy consulting firm commissioned to do several reports for the California Building Industry Association (with which the HBACC is affiliated), noted in "Carbon Footprint of Single Family Residential New Construction" that new construction is not the problem. It noted in 2007, when the building boom was ending, California had 13,270,000 housing units and added 113,000 that year, a 1 % increase, adding only 0.12 % to annual GHG emissions (about one-tenth of 1 %). New housing normally adds about 145,000 homes statewide. The total this year statewide is about 45,000 units, so the 2011 GHG contribution is about 60 % less than in 2007.

The same percentage breakdowns hold for San Luis Obispo County. The county now has about 117,000 homes and has averaged countywide 1,336 new homes annually since 1990, meaning new residential building in the county is increasing about a 1.1 % and producing about 0.12 % more GHG emissions yearly. However, in 2007, the number

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of new homes fell to 1,039, a yearly increase of 0.8 %. In 2011, that number will be 250 new homes, a growth rate of 0.2 % and a microscopic increase in GHG emissions, about one-fifth of the 2007 contribution (about 0.024 %).

Consol reported that the carbon footprint of a new home built in 2007 produced 25 % fewer GHG emissions than a home built in 1990. That means that new homes built in 2007 and today **already** exceed the AB32 requirement that new homes emissions by 2020 be no greater than 1990 levels. And the state building code has **already** increased the energy-efficiency requirements by 15 % for new construction since 2007. That means this proposal is unnecessary now and tomorrow and was unnecessary before it started. We further elaborate on this point in item No. 4 below.

Consol also noted that more than 70 % of GHG emissions statewide come from homes built before 1980, when the state had no energy code. The San Luis Obispo County Climate Action Plan reported that 80 % of the GHG emissions in the county come from the existing building stock and vehicle miles county residents now travel. I repeat just to emphasize -- 80 % vs. 0.12 % -- to illustrate where the problem does and doesn't lie.

When these facts are added to Consol's cost-effectiveness study, the obvious conclusion is that the most economically sound and most environmentally effective approach to GHG emission reduction is to focus on retrofitting the existing housing stock and commercial building inventory. That will require government to develop legitimate incentives that offset costs to convince existing building owners to address this problem. Consol's study found that retrofitting existing homes with energy-efficient features is four-to-eight times more carbon- and cost-efficient than adding the kind of additional energy-efficient features that APCD proposes mandating for new housing. Consol concluded that spending $10,000 to retrofit a 1960 home could cut GHG emissions by 8.5 tons a year, equaling $558 to $1,176 per ton, depending on tax credits and incentives. Increasing energy efficiency in a new home today by 35 % would cost $5,000 and only cut emissions by 1.1 tons, about $4,545 a ton.

APCD's report makes numerous references to "substantial evidence" to support various opinions and statements, but does not provide that evidence, doesn't explain how calculations were made, and refers to mitigations and incentives without offering examples or specifics to explain what they would be. It isn't sufficient from our perspective for you to cite state laws for your word choices or conclusions of what is feasible. We want to know what the mitigations are specifically so we can make our own judgments on their credibility based on actual field, practical experience.

There is no list of experts with whom you spoke. What development community representatives did you talk with in order to understand what is being done, what can be done in the near and distant future, what is financially and technically feasible and achievable in building today? Where is the balance you should have used to make sure you were developing a complete, fair, achievable picture before deciding on a course of action? We have given you the name and contact information of key a building industry expert for you to speak to on these topics.

In addition, if you choose to dispute Consol's practical, real world experience and findings, you will find its website is www.consol.ws and phone number is (800) 526-6765. The California-based company has 30 years of experience providing energy solutions to government agencies, utilities, trade associations and builders. It works on energy codes including Title 24 and IECC, compliance documentation, energy efficiency, retrofits, green program design and management, builder energy code training, and Home Energy Rating Systems (HERS). It has also served as a team leader in the federal Department of Energy's Building America program. Consol has serviced clients in Arizona, California, Colorado, Hawaii, Idaho, Nevada, New Mexico, Oregon, Utah and Washington. Consol's award-winning team has helped the building industry construct more than 10,000 above code homes.

As public servants, you owe the public not only a more detailed and more clearly worded explanation of what you are proposing, what it will cost, and who will pay, but also a cost-benefit analysis that substantiates your conclusions. This document needs to be written for the public's understanding, instead of being jargon-filled mumbo-jumbo only bureaucrats understand.

Our specific comments are as follows:

1) Page 3, first paragraph – Calling this a "guide" seems disingenuous. It is advocacy over science. You ultimately ask local governments to make GHG reduction requirements mandatory and to make new development do even more than is necessary to achieve your unsubstantiated, isolated, and arbitrary goal. 1.1

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2) Page 3, last paragraph – You call the Bay Area Air Quality Management District's method for establishing GHG thresholds in SLO County "the most appropriate approach." We request a full explanation of why and how standards applied in the second biggest metropolitan area in the state are relevant and applicable to a small, rural, lightly populated county with little industry. 1.2

3) Page 4, first paragraph footnote – You define "substantial evidence" as "facts, reasonable assumptions … expert opinions supported by facts, but do not include argument, speculation, unsubstantiated opinion."
   a. Page 4, first paragraph under 2, Greenhouse Gas Thresholds – You recommend that local governments "apply all feasible mitigation measures to lessen potentially significant adverse impacts." It isn't scientifically valid from our perspective to defend the use of "feasible" by noting that it comes from state standards and laws. We want to know how feasibility is measured and by whom. We also question the phrase "potentially significant adverse impact." What doesn't have a "potentially significant adverse impact?" Such subjective, hyperbolic, non-factual writing illustrates a recurring problem in APCD's attempt to justify its advocacy. 1.3

4) Page 4, same paragraph – The last sentence claims that past, present and future development projects contribute substantially to global climate change. As noted above and immediately below, that statement in your document is false on every level.
   a. New construction is now 50 % more energy efficient than homes built in 1990. The CalGreen Code, which all local cities and the county will adopt, will add another 15 %, raising it to 65 %. Where does your document show what GHG reductions new construction has already made? 1.4a
   b. The California Energy Commission has publicly stated that it will increase that percentage another 25 % in 2014 and 15 to 25 % more in 2017. The federal government will add 5 % on top of that in 2015. There is no reference to any of that in your report. 1.4b
   c. Since new construction within five years will be more than 100 % more energy-efficient than homes built in 1990 and already pays for alterative transportation improvements, how does APCD expect home builders to squeeze more GHG reductions from those homes by exceeding Title 24 standards? What will the cost be? What is the technology we will use? If you know the answers to those last two questions, state them. If you don't, admit it. But more importantly, your agency should answer the question: "For the dollars spent on new construction GHG mitigations beyond those already anticipated through legislation, is there a more effective area or segment from which to harvest more GHG reductions?" This is also known as the "biggest bang for the buck" theory. 1.4c
   d. About 90,000 homes in the county were built before the Title 24 efficiency standards started taking effect in 1990 and 27,000 have been built since. Those 90,000 and their real contribution today to GHG emissions are unmentioned in your report until a paragraph on the next to last page. You are ignoring the key source of the problem and making no attempt to fix it. 1.4d

5) Page 5, first paragraph – This again cites "substantial evidence" used to set your GHG thresholds. Again we ask for the evidence. We want to make sure that you were fair, balanced, didn't only seek experts who agreed with you, and asked building industry experts what was technically achievable or fiscally possible. Just because you can require a mitigation doesn't make is a wise solution. 1.5

6) Page 5, third paragraph – This is another example of advocacy creeping into an allegedly scientific report. You inaccurately write (italics added): "If *left unchecked*, GHG emissions from new land use development in California will result in cumulatively considerable GHG emissions that will substantially hinder the State's ability to meeting the reduction goals of AB 32."
   a. As noted in point 4 above, it is already widely known and documented that new construction's GHG emissions have not and are not being "left unchecked" yesterday, today or tomorrow.
   b. Alleging that new construction will "substantially hinder" the state from meeting its goals is equally inaccurate and unfortunately points to a real lack of understanding of the issue. 1.6

7) Page 5, fourth paragraph – Ends with another reference to using "substantial evidence" for providing your GHG thresholds. Please provide that evidence. 1.7

8) Page 6, third paragraph under Assembly Bill 32 – The first sentence references controlling GHG sources through regulations, incentives and market means. What are the incentives and what market means would be used? Will they offset the cost of compliance or simply reduce how much extra these regulations will cost new construction, new home buyers and renters? 1.8

9) Page 7, Table 1 – Please explain what the following means in the first right-hand box: "4.9 MT CO2e/SP/yr. (residents + employees)". 1.9

10) Page 9, Step 1 – Please explain how the growth in emissions in the land use-driven sector can include entertainment and recreational equipment or pleasure craft. Are you suggesting that buying a new home 1.10

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makes someone buy a pleasure craft? That fiddles, banjos, swimming suits, baseball bats or tennis racquets emit GHGs? Or that new construction is responsible for the energy used at a musical concert? 1.10

a. APCD is reaching way too far to make new construction responsible for more than it should be.

11) Page 10, Step 3 – Please provide a more detailed explanation of the "gap." It reads like you want new construction to assume more than its share of the responsibility for cutting statewide emissions that aren't being addressed by the perpetrators. If that is your intent, it is wrong. SLO County is a microscopic contributor to state, national, and global GHG emissions and should only be responsible for our share. 1.11

12) Page 11, Step 8, second paragraph – You claim a GHG reduction of 13,788 metric tons per year is "achievable and feasible" for new construction. By whose standards? As in our item number 3.a above, we question and object to your use of what is "achievable" and "feasible" without getting real world information from industry experts. The APCD staff does not build developments and doesn't know what can and cannot be done in construction today. 1.12

13) Page 11, last paragraph – APCD references an inherent amount of uncertainty about capturing as many GHG emissions as planned and that emissions "*would exceed*" (italics added) the threshold. This is another disturbing use of language. It is as likely that, given the uncertainty, emissions would be less and not exceed the targeted amount as there are that they would increase or exceed them. 1.13

14) Page 12 – Tables 2 and 3 are hard to follow and need substantially more explanation. For example: 1.14

a. Table 2 has no guide to show readers when they must add lines in gray or white. There is no explanation of how you divided emissions between on-road passenger, commercial or residential use. If I drive from home to shop for my GHG-emitting fiddle or global warming baseball bat is that a commercial or residential use? Is it only showing up in commercial or residential or is it being counted twice by inclusion in both or thrice by also being in the "transportation" row?

b. In Table 3, what does LCFS stand for? What do Pass, LD, HD, MD mean numerically? Please provide a detailed explanation of what "Scaled % Emissions Reductions of SLO Area LU Sector (Credit to Overall Statewide Gap)" really means.

15) Page 13 – Please explain why the emissions totals for 2008 in Tables 4 and 2 differ. How many of the projects in Table 5 will be residential, commercial, and industrial, and how was that division determined? 1.15

16) Page 14 – It is a mistake you must rectify to have explanations on page 14 for tables on pages 12 and 13 if you want people to understand what you are doing. 1.16

17) Page 17 – There appears to be a typeface error or inconsistency inside Table 6 and in the line below it. 1.17

18) Page 18, first paragraph under Summary of Justification – This is the first reference to a commercial project exceeding a threshold, a 70,000 square foot office building. This oversight adds to the document's unjustified fixation on new residential development as a prime culprit of GHG emissions. 1.18

19) Page 19, second full paragraph – How is focusing solely on new construction a "fair share" approach? 1.19

20) Page 21, Section 21159 (a) 2 – Where do you enumerate the "reasonably foreseeable feasible mitigation measures"? If they are reasonably foreseeable, we should be able to see them. 1.20

21) Page 21, Section 21159 (c) – Where do you list the environmental, economic and technical factors referenced herein? 1.21

22) Page 24, Attachment 1, No. 3 – Your suggestion that local Climate Action Plans should rely primarily on mandatory measures reflects how much poorer your work is for avoiding public outreach. 1.22

a. If the county changed its CAP to be mandatory, it would negate hundreds of hours the public contributed to the project and the staff spent working with those suggestions to come up with attractive voluntarily approaches.

b. It is irresponsible to pile more costs on people barely surviving during the worst recession since the Great Depression. Nationwide, 25 million are unemployed. In the state, nation, and county, the real unemployment rate is 16 % when we include the long-term unemployed who've given up looking for a job, the under-employed who can no longer find work in their chosen careers, and the recent unemployed. That means one of every six workers you know is troubled!!!!!!!

c. If you want to reduce GHG emissions and help the economy, you should lobby local governments to increase urban infill densities and streamline the development review process to promote urban infill along main transportation corridors. You should not damage an already fragile economic recovery by heaping mandatory regulations on a building industry stuck in the worst financial conditions in 80 years.

d. How do you expect jurisdictions to require new development to exceed Title 24 requirements since those requirements will achieve 100 % within five years anyhow?

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e. Have you spoken to the real estate community about the difficulties and downside of mandatory retrofits at point of sale?
f. Have you communicated with the financial industry regarding its likelihood or willingness to fund urban infill, mixed-use projects?
g. Have you communicated with the Economic Vitality Corp.'s Economic Development Strategy about recommending that current and new businesses be required to provide transportation subsidies, a guaranteed-ride-home program, a parking cash-out policy, etc. for its workforce?

1.22

23) Page 26, No. 4 – It is hard to comprehend how you can realistically look at local economic conditions and propose requiring new construction to do more than you think necessary in order to have a margin of safety for GHG reductions when we only contribute a minuscule, microscopic amount of global, state and local emissions.

1.23

24) Page 26, No. 5 – On the next to last page, like an afterthought, you finally use one paragraph to reference the source of 40 % of all GHG emissions in the county today. "Reducing GHG emissions from new development alone cannot provide sufficient GHG reductions to achieve this long term goal. Therefore, climate action plans should address energy use and emissions from existing development as well."
    a. If local governments also treat retrofitting existing building as cavalierly as APCD has, CAPs will spend a lot of time accomplishing nothing constructive and allowing GHGs to continue.

1.24

You cannot achieve GHG reduction goals simply by attacking new construction. It has already done more than any other industry to reduce GHG emissions and improve energy-efficiency. It will be doing more than any other industry in the next five years to further cut GHG emissions and enhance energy efficiency. In addition, there is essentially nothing left for you to suck out of new construction. And, as everyone knows, it is the wrong time to increase the cost of new construction. It already makes no financial sense to build today and will not for another two to five years. If you really want to achieve your goal, you must target the cause of the problem – existing home and business owners today, vehicle miles traveled by current county residents, and government policies that prevent urban infill or make it prohibitively expensive to build, buy or rent. If we do not build a single new home, those problems remain and existing GHG emissions continue to grow.

Thank you for considering our comments.

Sincerely yours,

Jerry Bunin, Government Affairs Director
(805) 459-2807 (cell)
jbunin@hbacc.org

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City of San Luis Obispo
Community Development Department • 919 Palm Street, San Luis Obispo, CA 93401-3218

January 5, 2012

Aeron Arlin-Genet
Air Pollution Control District
3433 Roberto Court
San Luis Obispo, CA 93401

SUBJECT: **Draft APCD Greenhouse Gas Thresholds.**

Dear Ms. Arlin-Genet:

The City of San Luis Obispo appreciates the opportunity to comment on the SLO County Air Pollution Control District's draft *Greenhouse Gas Thresholds and Supporting Evidence.* The document contains underlying technical data to support the outlined thresholds. There has been a tremendous amount of hard work and dedication to develop a comprehensive approach to analyze and develop GHG thresholds for San Luis Obispo County.

Please find the enclosed copy with a few questions and comments. The sections highlighted in yellow were identified as key elements for local municipalities. The main questions that arose are about the gap analysis for the 'bright-line' threshold. Is APCD applying the State gap between target emissions and projected reductions (0.55%) to SLO County's reduction target? Is the bright-line threshold of 1,150 MT/yr based on achieving a 0.55% emission reduction in SLO County by 2020? Shouldn't the County percentage be weighted to its relative contribution to emissions statewide? Perhaps some further explanation will help clear this up.

The City is currently developing a Climate Action Plan (CAP) and is developing measures and policies so that it meets the requirements of a Qualified GHG Reduction Strategy per CEQA Section 15183.5. The attachment included with the draft document provides guidance for the development of a CAP that will help assist the City in its efforts. The City continues to look forward to APCD's input on the draft CAP as it moves through the approval process.

Please contact Associate Planner James David at (805) 781-7576 if you have any questions about the City's comments or CAP.

Sincerely,

Derek Johnson
Community Development Director

This document provides the necessary substantial evidence[1] in support of the GHG thresholds of significance that the APCD developed. Once adopted by the APCD Board, the 2009 CEQA Air Quality Handbook will be updated to include the GHG thresholds. The APCD will then recommend lead agencies within the county use the adopted GHG thresholds of significance when considering the significance of GHG impacts of new projects subject to CEQA. Projects with GHG emissions that exceed the thresholds will need to implement mitigation to reduce the impacts to less than significant. This process can be accomplished through a Mitigated Negative Declaration or an Environmental Impact Report, both of which need impact evaluations and mitigation that are APCD approved. 2.1

2. GREENHOUSE GAS THRESHOLDS

In the absence of adopted thresholds of significance for greenhouse gases staff currently recommends lead agencies quantify GHG emissions from new development and apply all feasible mitigation measures to lessen potentially significant adverse impacts. The primary goal in adopting GHG significance thresholds, analytical methodologies, and mitigation measures is to ensure new land use development provides its fair share of the GHG reductions needed to address cumulative environmental impact from those emissions. GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. As reviewed herein, climate change impacts include an increase in extreme heat days, higher ambient concentrations of air pollutants, sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts. No single land use project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects, however, contribute substantially to global climate change and its associated environmental impacts.

2.1 JUSTIFICATION FOR ESTABLISHING GHG THRESHOLDS

The APCD's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions. If a project has the potential to generate GHG emissions above the threshold level, it would be considered a substantial contribution to a cumulative impact and therefore significant. If mitigation can be applied to lessen the emissions such that the project meets its share of emission reductions needed to address the cumulative impact, the project would normally be considered less than significant.

[1] "Substantial evidence" includes facts, reasonable assumptions, predicted upon facts, or an expert opinion supported by facts, but does not include argument, speculation, unsubstained opinion or narrative, evidence that is clearly inaccurate erroneous, or evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment. Cal. Pub. Res. C. §21080(c); *see also* CEQA Guidelines §15384.

Summary of Comments on Microsoft Word - Draft_GHG_Thresholds_and_Supporting_Evidence12_8_11.doc

Page: 4

Author: jdavid Subject: Sticky Note Date: 12/20/2011 11:23:50 AM -08'00'

Does APCD have authority to approve MND or EIR mitigations, or is this Council/Board of Supervisors decision?

2.2.1 Qualified Reduction Strategies

Many local agencies have already undergone or plan to undergo efforts to create or update general plans or other plans consistent with AB 32 goals. The Air District encourages such planning efforts and recognizes that careful upfront planning by local agencies is invaluable to achieving the state's GHG reduction goals. If a project is consistent with an adopted Qualified Greenhouse Gas Reduction Strategy that addresses the project's GHG emissions, it can be presumed that the project will not have significant GHG emission impacts. This approach is consistent with CEQA Guidelines Sections 15064(h)(3) and 15183.5(b), which provides that a "lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem."

A qualified Greenhouse Gas Reduction Strategy (or similar adopted policies, ordinances and programs) is one that is consistent with all of the AB 32 Scoping Plan measures and goals. The Greenhouse Gas Reduction Strategy should identify a land use design, transportation network, goals, policies and implementation measures that would achieve AB 32 goals. Strategies with horizon years beyond 2020 should consider continuing the downward reduction path set by AB 32 and move toward climate stabilization goals established in Executive Order S-3-05. 2.2

Qualified Greenhouse Gas Reduction Strategy
A qualified Greenhouse Gas Reduction Strategy adopted by a local jurisdiction should include the following elements as described in the State CEQA Guidelines Section 15183.5:

(A) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
(B) Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;
(C) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;
(D) Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
(E) Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
(F) Be adopted in a public process following environmental review.

The District's revised CEQA Handbook will include detailed methodology to determine if a Greenhouse Gas Reduction Strategy meets these requirements. In addition, the APCD has developed more specific guidance intended to assist local governments in developing community scale Climate Action Plans. This guidance is included in Attachment 1 of this document.

Author: jdavid Subject: Sticky Note Date: 1/5/2012 11:49:16 AM -08'00'
Is there some sort of certification process for a CAP to qualify as a GHG Reduction Strategy?

Step 3 Determine any short fall or "gap" between the 2020 statewide emission inventory estimates and the anticipated emission reductions from adopted Scoping Plan regulations. This "gap" represents additional GHG emission reductions needed statewide from the land use-driven emissions inventory sectors, which represents new land use development's share of the emission reductions needed to meet statewide GHG emission reduction goals.

Result: With the 9.57 percent reductions from AB 32 Scoping Measures, there is a "gap" of 0.55 percent in necessary additional GHG emissions reductions to meet AB 32 goals of a 10.12 percent reduction from statewide land use-driven GHG emissions to return to 1990 levels in 2020. (See Table 2)

Step 4 Determine the percent reduction this "gap" represents in the "land-use-driven" emissions inventory sectors from the APCD's 2020 GHG emissions inventory. Identify total emission reductions needed in SLO County from land use-driven emissions inventory sectors.

Result: A 0.55 percent reduction in APCD's projected 2020 GHG emissions would require reductions of an estimated 13,788 MT CO2e/yr from the land use-driven sectors. (See Table 4) 2.3

Step 5 Assess APCD's historical CEQA database (2001-2010) to determine the frequency distribution trend of project sizes and types that have been subject to CEQA over the past several years.

Result: Historical patterns of residential, commercial and industrial development were determined by ranges of average sizes for each development type. The results were then used in Step 6 below to distribute anticipated San Luis Obispo County growth among different future project types and sizes.

Step 6 Forecast new land use development for San Luis Obispo County using DOF/EDD population and employment projections and distribute the anticipated growth into appropriate land use types and sizes needed to accommodate the anticipated growth (based on the trend analysis in Step 5 above). Translate the land use development projections into land use categories consistent with those contained in the California Emissions Estimator Model (CalEEMod).

Result: Based on population and employment projections and the trend analysis from Step 5 above, approximately 1,142 new development projects were forecast to occur in San Luis Obispo County through 2020, averaging about 114 projects per year during that period.

Step 7 Estimate the amount of GHG emissions from each land use development project type and size using CalEEMod. Determine the amount of GHG emissions that can reasonably and feasibly be reduced through currently available mitigation measures ("mitigation

Page: 10

Author: jdavid Subject: Sticky Note Date: 3/15/2012 3:49:20 PM

Why is statewide gap, 0.55% reduction, being used for SLO County GHG reduction target? Shouldn't this % be weighted to the % of statewide emissions SLO County is responsible for?

Detailed Basis and Analysis

Derivation of Greenhouse Gas Reduction Goal

To meet the 1990 emissions limit target established in AB 32, total GHG emissions would need to be reduced by approximately 16 percent from projected 2020 forecasts. The AB 32 Scoping Plan is ARB's plan for meeting this mandate (ARB 2011). While the Scoping Plan does not specifically identify GHG emission reductions from the CEQA process for meeting AB 32 derived emission limits, the scoping plan acknowledges that "other strategies to mitigate climate change . . . should also be explored." The Scoping Plan also acknowledges that "Some of the measures in the plan may deliver more emission reductions than we expect; others less . . . and new ideas and strategies will emerge." In addition, climate change is considered a significant environmental issue and, therefore, warrants consideration under CEQA. SB 97 represents the State Legislature's confirmation of this fact by directing the Governor's Office of Planning and Research (OPR) to develop CEQA Guidelines for evaluation of GHG emissions impacts and recommend mitigation strategies. In response, OPR released the *Technical Advisory: CEQA and Climate Change* (OPR 2008), and proposed revisions to the State CEQA guidelines (April 14, 2009) for consideration of GHG emissions. The California Natural Resources Agency adopted the proposed State CEQA Guidelines revisions on December 30, 2009 and the revisions were effective beginning March 18, 2010. These changes to the Guidelines were adopted in recognition of the need for new land use development to contribute its fair share toward achieving AB 32 goals (or, at a minimum, not hinder the State's progress toward the mandated emission reductions).

Foreseeable Scoping Plan Measures Emission Reductions and Remaining "Gap"

Step 1 of the Gap Analysis entailed estimating, from ARB's statewide GHG emissions inventory, the growth in emissions between 1990 and 2020 attributable to land use driven sectors of the inventory. Through that analysis, it was determined that California would need to achieve an approximate 10 percent reduction in GHG emissions from the emissions sectors related to land use development (e.g. on road and off road passenger vehicles, electricity and cogeneration, residential and commercial fuel use, landfills, domestic wastewater treatment, wineries, lawn and off road equipment) staff determined these land use-driven sectors (ARB 2009a) to provide its proportionate share to meeting the AB 32 reduction goal of returning to 1990 emission levels by 2020.

Next, in Step 2 of the Gap Analysis, staff determined the GHG emission reductions expected within the land use-driven sectors from implementation of the Scoping Plan measures statewide, which are summarized in Table 3 and described below. Since none of the GHG reductions expected from the Scoping Plan were accounted for in ARB's or APCD's 2020 GHG emissions inventory forecasts (i.e., business as usual), an adjustment was made to include reductions associated with key Scoping Plan measures for the land use-driven sectors that have already been adopted as regulations, such as the Low Carbon Fuel Standard (LCFS), Senate Bill 375 (SB 375), and improvements in energy efficiency. These State regulations are estimated to achieve a 9.6 percent reduction in GHG emissions by 2020. In factoring these reductions into Step 3 of the Gap Analysis, staff determined that the SLO County would still need to achieve an additional 0.55 percent reduction from projected 2020 GHG emissions to meet the 1990 GHG emissions goal from the land-use driven sectors. This 0.55 percent reduction in projected GHG emissions from the land use sector is the "gap" San Luis Obispo County needs to fill to contribute its share of reductions toward meeting the AB 32 GHG targets. Refer to the following explanation and Tables 3 through 5 for data used in this analysis.

2.4

Page: 14

Author: jdavid Subject: Sticky Note Date: 1/5/2012 11:37:21 AM -08'00'

Is 0.55% gap statewide or County specific? If County, how do we get there from statewide gap analysis?

Staff proposes a project-level efficiency threshold of 4.9 MT CO2e/SP/year, the derivation of which is shown in Table 6. This efficiency-based threshold reflects very GHG-efficient projects. As stated previously and below, staff anticipates these significance thresholds will function on an interim basis only until adequate programmatic approaches are in place at the city, county, and regional level that will allow the CEQA streamlining of individual projects. (See State CEQA Guidelines §15183.5 ["Tiering and Streamlining the Analysis of Greenhouse Gas Emissions"]). 2.5

Table 6
California 2020 Emissions, Population, Employment & GHG Efficiency Threshold
Project Level - Land Use Inventory Sectors
(Metric Tons CO_2e)

Land Use Sectors Greenhouse Gas Emissions Target	308,349,358
Population	44,135,923
Employment	18,226,478
California Service Population (SP)(Population + Employment)	62,362,401
Project Level Efficiency Threshold: Greenhouse Gas Emissions/Service Population (Metric Tons CO_2e per SP)	**4.9**

Note: GHG Efficiency levels are calculated using only the land-use related sectors

22.4. Stationary Source GHG Threshold

Staff's recommended significance threshold for stationary source GHG emissions to be evaluated under CEQA uses the Governor's Executive Order S-3-05 emission reduction goals as its basis. To avoid hindering attainment of these goals, new or modified stationary source projects above the threshold will need to be analyzed under CEQA and mitigated to the maximum extent feasible. The proposed level for requiring that analysis and potential mitigation is based on capturing at least 90 percent of the GHG emissions from all new or modified stationary source projects. This means at least 90 percent of total emissions from all new or modified stationary source projects would be subject to a CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact report, which includes analyzing feasible alternatives and imposing feasible mitigation measures.

A 90 percent minimum emission capture rate results in an emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future population and economic growth, yet high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. These small sources are already subject to Best Available Control Technology requirements for other pollutants and are more likely to be single-permit facilities, which limits the opportunities readily available to reduce GHG emissions from other parts of their facility.

The recommended GHG significance threshold to capture at least 90 percent of GHG emissions from new or modified stationary sources was derived using the SLO APCD 2009 GHG emissions inventory for combustion sources from all permitted facilities. This analysis is based on combustion emissions because that covers the vast majority of GHG emissions from stationary sources in the

Author: jdavid Subject: Sticky Note Date: 3/15/2012 3:25:51 PM

How does this per-SP threshold align with SLOCOG/ARB per-capita reduction target of 8% by 2020? May be helpful to provide comparison.

Economic Strategy Project

Building Design & Construction

Proposed Greenhouse Gas Thresholds

January 2, 2012

Mr. Larry Allen
Executive Director
San Luis Obispo County
Air Pollution Control District
3433 Roberto Court
San Luis Obispo, CA 93401

Re: Request for continuance

Dear Mr. Allen,

It has recently come to the attention of the Building, Design, and Construction (BDC) Cluster, affiliated with the Economic Vitality Corporation ("EVC") Economic Strategy Project, that the Air Pollution Control District Board of Directors will consider adoption of the "Proposed Greenhouse Gas Thresholds and Supporting Evidence" on January 25, 2012, and that the comment period closes on January 6, 2012.

Prior to notification last week of this pending action, neither the BDC Cluster nor the EVC and its stakeholders received notification of the above, nor the public workshop that the APCD held on December 15, 2011.

The BDC Cluster is very concerned about the potential negative impacts that these regulations may have on sectors of our local economy as they relate to land use decisions, business expansion, and job creation. As such, we hereby request that consideration of adoption of the Proposed Greenhouse Gas Thresholds and Supporting Evidence be continued to ensure that additional review and input from the business community can occur.

REQUESTS

1. Please extend the comment period to allow additional review and input from the business community. 3.1
2. Please hold another APCD work shop on this matter. The EVC welcomes the opportunity to invite stakeholders of the Economic Strategy to another workshop. 3.2

If you have any questions or comments, please contact Christine Rogers, Program Manager of the EVC at (805) 459-2040 or at info@sloevc.org.

Sincerely,

Dick Wilhoit, Co-Chair
Leonard Grant, Co-Chair
Kris Vardas, Co-Chair
Greg Nester, Co-Chair

cc:

Air Pollution Control District, Board of Directors
Supervisor Adam Hill
Supervisor Frank Mecham
Supervisor Paul Teixeira
Supervisor Bruce Gibson
Supervisor James Patterson
Michael Manchak, President & CEO, Economic Vitality Corporation
Board of Directors, Economic Vitality Corporation

SAN LUIS OBISPO COUNTY

DEPARTMENT OF PLANNING AND BUILDING

March 14, 2012

Aeron Arlin-Genet
San Luis Obispo County
Air Pollution Control District
3433 Roberto Ct
San Luis Obispo, CA 93401

SUBJECT: GREENHOUSE GAS EMISSIONS CEQA THRESHOLDS

Dear Ms. Arlin-Genet:

The Department of Planning and Building would like to thank the District Board and staff for the effort to develop thresholds for Greenhouse Gas (GHG) emissions. Our Department produces a great number of CEQA related documents each year and fully understand the importance of your work to establish rationale and defensible thresholds for CEQA related environmental impacts such as GHG emissions. Staff from this Department has participated in your process and reviewed the proposed CEQA thresholds. As part of that process, our staff attended the District sponsored workshops where the data and evidence used to develop and support the thresholds were discussed. We appreciate the District's efforts to include our Department in developing the thresholds.

Based on our review of the evidence, discussions with District staff at the workshops, and our own experience addressing both CEQA and GHG emissions, we fully support the District's work on CEQA GHG thresholds. We have found the evidence supporting the threshold compelling, well developed, rationale and legally supportable.

We look forward to working with the District to implement the thresholds in our evaluation of projects through the CEQA review process. We believe that in combination with the County's EnergyWise Plan, GHG emission reductions are being fully addressed in the unincorporated jurisdiction.

Sincerely,

Chuck Stevenson, AICP
Division Manager, Long Range Planning

Home Builders Association
OF THE CENTRAL COAST
creating quality housing and communities

Friday, March 16, 2012

San Luis Obispo County Air Pollution Control District
Aeron Arlin Genet
Manager, Planning & Outreach Division
3433 Roberto Court
San Luis Obispo, CA 93401

Dear Ms. Genet:

The Home Builders Association considers the Feb. 15, 2012, Air Pollution Control District's "Proposed Greenhouse Gas Thresholds and Supporting Evidence" draft to be an improvement over the earlier draft released Dec. 8, 2011, but the document needs more work in order to be accurate, fair, and productive.

Most of the questions asked in the HBA's Jan. 6, 2012, letter remain unanswered. So we have included them again herein. As builders are stakeholders and taxpaying county residents, our comments are entitled to be treated respectfully and answered during the public hearing process. In addition, we have been involved in this issue for several years with the San Luis Obispo Council of Governments, San Luis Obispo County, San Luis Obispo City, Santa Barbara Council of Governments, Atascadero City Council, Arroyo Grande City Council, and Santa Barbara County. We also met with yourself and APCD Executive Officer Larry Allen on Jan. 3 and participated in the APCD Feb. 23, 2012, workshop.

We recommend that the San Luis Obispo County Air Pollution Control District Board of Directors delay adopting the Proposed Greenhouse Gas Thresholds and Supporting Evidence and direct district staff to conduct the public outreach necessary to obtain a more complete and balanced understanding of greenhouse gas emissions. The staff should be required to seek information from private sector experts in order to more fully understand buildings efforts today to reduce GHG emissions, the coming technology and requirements, and the role costs and cost-effectiveness plays in good policy development. We are not suggesting that economic considerations be the only or final determining factor. But this document totally ignores the economic component and needs to include it so decision-makers have more of the information they need to set good public policy.

Summary of the GHG Threshold report's problems

The association knows that this report is using the California Environmental Quality Act to target GHG emissions from new construction and that there is an advantage for new construction to have a fair, realistic, comprehensive plan in place to avoid each project needing to do its own separate GHG analysis. However, by narrowly focusing only on new construction, mostly residential, the entire report:

A. Misses the big picture by not examining what is being done to cut GHG emissions. So it draws the wrong conclusions, attacks the wrong industry, and is **economically and environmentally counterproductive**;
B. Fails to address the real sources of GHG emissions;
C. Relies on an inadequate modeling system;
D. Uses wholly wrong examples;
E. Makes unreliable growth projections;
F. Requires a glossary for bureaucratic and scientific jargon so the public you serve can use this report; and

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G. Needs real world input from the building community to understand what has been, is being and can be done to reduce GHG emissions.

These shortcomings make it impossible to analyze if this report represents new construction's fair share, makes financial sense, is achievable, or will have any impact other than making economic development less likely to occur. While some changes have been made in this draft, following our critique of the Dec. 8, 2011, draft, the district has given no indication that it plans to gather any practical information from experienced builders today, even though we provided contact information for Consol, a nationally recognized energy consulting firm.

Missing the big picture

Consol has worked for the California Building Industry Association (with which the HBACC is affiliated). In "Carbon Footprint of Single Family Residential New Construction," it reported that new building only contributes microscopically to GHG emissions. When the housing boom ended in 2007, the state had 13,270,000 housing units after adding 113,000 that year, a 1 % increase in homes and 0.12 % in GHG emissions (one-tenth of 1 %). The state usually adds 145,000 new homes annually. 2011's total statewide of 45,000 units was about 60 % less than 2007. Similar percents hold for San Luis Obispo County. It has 117,000 homes and has averaged countywide 1,291 new homes annually since 1990, adding 1.1 % homes and 0.12 % GHG emissions yearly. In 2011, that number was 293 new homes, a growth rate of 0.2 % and a minuscule GHG emission increase of 0.024 %.

Consol reported that the carbon footprint of a home built in 2007 caused 25 % fewer GHG emissions than one built in 1990. So a new home built in 2007 was **already** below AB32's requirement that new homes emissions be no greater than 1990 levels by 2020. And the state building code has already increased the energy-efficiency requirements by 15 % more for new construction in 2011, added 15 % under the state green building code, and plans additional 15 to 35 % increases in 2014 and in 2017. So APCD's proposal is unnecessary now, tomorrow and was so before it began because new construction has met its fair share. We elaborate on this point in item No. 5 below.

Failing to address the real GHG sources

APCD's report only focuses on new construction, ignoring real GHG sources, failing to put these proposed requirements in the overall framework of a comprehensive approach to GHG reduction.

Consol reported that more than 70 % of GHG emissions statewide today come from homes built before 1980, when the state had no energy code. The San Luis Obispo County Climate Action Plan reported that 80 % of the GHG emissions countywide come from the existing building stock and vehicle miles county residents now travel. We repeat just to emphasize -- 80 % vs. 0.12 % -- existing vs. new to illustrate where the problem does and doesn't lie.

Yet APCD thoroughly ignores:

A. The San Luis Obispo city's huge jobs-housing imbalance – 43,000 jobs vs. 20,000 homes. Good environmental planning requires adding 8,000 homes to cut the long distance commuting the city causes;
B. Energy-efficiency retrofitting the existing housing and commercial building inventory. Consol found that energy-efficiency retrofitting existing homes and businesses is four-to-eight times more carbon- and cost-efficient than mandating the energy-efficient features that APCD proposes for new housing; and
C. Urging local cities to zone more land for higher density projects in order to cut long-distance commuting.

APCD's inadequate modeling tool

At the Feb. 23 workshop, APCD explained that its analytical model had no economic component and paid no attention to cost while promoting new construction to exceed state energy-efficiency standards that are the nation's toughest.

Information explaining the enormous reductions new building has already made in GHG emissions and will make in the next five years should be part of this report in order to put APCD recommendations in context. Decision-makers should be provided a full and accurate picture by a government agency that wants more stringent requirements. In

addition, the district should conduct research to understand the cost of compliance so decision-makers know how to structure requirements that provide the greatest bang for the buck. APCD's approach seems to be to require everything without worrying if it is affordable or cost-effective. That is a very poor approach to policy development.

Furthermore, these thresholds might seem straight-forward in the abstract to bureaucrats, but lack real world functionality because the CalEEMod program doesn't fit all types of development. A small miscalculation in the program can cost thousands of dollars. APCD should provide a list of possible mitigation measures, their costs, and examples of how to develop cost-effective greenhouse gas reduction strategy.

APCD wallowing in wholly wrong examples

At its Feb. 23 workshop, the district presented two totally wrong examples – a Cal Poly housing project and a downtown San Luis Obispo City mixed use project -- of what projects can do to reduce GHG emissions.

The Cal Poly housing project has no relationship to most developments. The Cal Poly builder didn't have to pay for land or impact fees and had a totally captive market. So the cost of more dramatically cutting GHGs is far less problematic than for a builder paying $50,000 per lot for land and $50,000 more in impact fees.

Even worse, the district staff trumpeted a huge mixed project in downtown San Luis Obispo City without noting that all housing has been removed from the development. So everyone working in it must commute long distance to work. To highlight a GHG generating project in the context of GHG emission reduction is shockingly misguided.

Unreliable growth projections

We believe this report inaccurately projects future development by using the last 10 years to predict the next eight, a mistake that will let APCD propose more draconian restrictions in the future. The housing bubble and economic recession last decade had major distorting effects on new construction, and new environmental rules now taking effect restrict future development. They make that period an inappropriate time frame for comparison or to extrapolate from. APCD would know this if it talked to real builders.

Consol contact information

There is no list of experts or footnotes in the report to see everyone you spoke to or to see if you spoke to anyone knowledgeable about construction to understand what is being done, what can be done in the near and distant future, what is financially and technically feasible and achievable today. No evidence shows that you made any effort to develop a complete, fair, achievable and objective picture before deciding on a course of action.

You should contact a well-respected business like Consol so you have practical, real world understanding in your findings. Here is Consol's website (www.consol.ws) and phone number is (800) 526-6765. The California-based company has 30 years of experience providing energy solutions to government agencies, utilities, trade associations and builders. It works on energy codes including Title 24 and IECC, compliance documentation, energy efficiency, retrofits, green program design and management, builder energy code training, and Home Energy Rating Systems. It has served as a team leader in the federal Department of Energy's Building America program and served clients in Arizona, California, Colorado, Hawaii, Idaho, Nevada, New Mexico, Oregon, Utah and Washington and helped the building industry construct more than 10,000 above code homes.

General conclusions:

This document ignores economic considerations. It looks at this issue in a vacuum, using simple math to derive reductions without examining such other factors as affordable housing, transportation, social justice, equity, economic development, incentives, or mitigation measures. District staff should know that good government policy, like nature, abhors a vacuum.

To effectively cut carbon emissions, a broader approach is needed to tackle how San Luis Obispo County functions as a whole, resulting in a plan that cooperates with new development in a cost-effective means in order to decrease

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automobile trips, promote alternative transportation, and create a more sustainable environment rather than simply jamming costly, ineffective rules onto new development. The overwhelming majority of GHG emissions produced in San Luis Obispo County are due to existing "employee commuting," not from new construction. The cities and county must improve the job-housing imbalance and provide more land for higher density, urban infill to reduce the job commute.

Our specific comments are as follows:

1) Page 4, last paragraph – The last two sentences contradict each other. "While building efficiency has significantly improved in California over the years and continues to improve, the necessary reductions cannot be achieved by one area or sector alone. It will require careful consideration of site design, location, transportation, energy efficiency and waste handling." The first sentence says one sector cannot do this alone and the second sentence discusses only the land use sector. The district should detail how much new construction has done and what existing homes, businesses and drivers must do to reduce emissions.
2) Page 5, first paragraph – This highlights the district's narrow perspective. "After reviewing the GHG threshold analyses performed by other Air Districts and discussions with the California Attorney General, the California Office of Planning and Research, and the Center for Biodiversity, staff determined the methodology used by the Bay Area Air Quality Management District was the most appropriate approach." In other words, after talking only to bureaucrats and to no one experienced in building today, the district decided to act as if it was fully informed.
3) Page 5, first paragraph under Greenhouse Gas Thresholds – "Thus, the primary goal in adopting GHG significance thresholds, analytical methodologies, and mitigation measures is to ensure new land use development provides its fair share of the GHG reductions needed to address cumulative environmental impacts from those emissions." How can new land use's fair share be determined if it is the only thing analyzed herein and if the report fails to examine what new development is doing to meet its fair share?
4) Page 6, second paragraph under 2.1 – "APCD's framework for developing a GHG threshold for land development projects is based on comprehensive policy and regulatory analysis, as well as considerable technical evaluation of development trends in SLO County." We request a list of the policies and regulations the district analyzed, a written explanation of how those policies were analyzed, a description of how that information was used to develop a formula that reflects local building trends, and a list of what local builders the district consulted in order to determine the validity of its conclusions.
5) Page 7, last paragraph – In the reference to reducing "GHG emissions to 1990 levels by 2020," the district does not report that new construction has already achieved that level.
    a. New construction is now 50 % more energy efficient than homes built in 1990. The CalGreen Code, which all local cities and the county will adopt, is adding another 15 %, raising it to 65 %.
    b. The California Energy Commission plans to increase energy efficiency 25 % more in 2014 and 15 to 25 % more in 2017. The federal government will add 5 % on top of that in 2015. There is no reference to any of this in the report.
    c. About 90,000 homes in the county were built before the Title 24 efficiency standards started taking effect in 1990. Their contribution to GHG emissions are barely mentioned in this report.
6) Page 9, first paragraph under 2.2 – "Staff studied numerous options, relying on reasonable, environmental conservative assumptions on growth." Who determined what is reasonable and conservative and how? We also request a list of what the "numerous options" are and an explanation of how they were ranked.
7) Page 12, second paragraph -- The report says, "Preparing the Gap Analysis entailed estimating the statewide growth in emissions between 1990 and 2020." What is the county's share of the statewide growth? How did the county's share change between 1990 and 2020? What were the causes of the county's GHG growth? How can you determine local new construction's share until you answer such questions?
8) Page 13, Step 1 – The emissions inventory makes an incredible leap to include off-road passenger vehicles, lawn and garden equipment, and heavy duty truck and commercial fuel use under land use.
    a. Are you suggesting that building a home causes someone to buy a jet ski or dune buggy or that home builder are responsible for the recreational driving habits of a buyer?
9) Page 15, Table 1 -- Transportation and electric power are considered on their own and attributed to land use. This seems like double counting, making residential development responsible for more than its share.
10) Page 17, Step 3, first paragraph – Since home building has already met the AB32/SB375 goals, it has already met its legal "fair share" requirement and should not be forced to fix someone else share. Why is

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new construction being held to a double standard while APCD seemingly ignores the sources that aren't in compliance with state law? APCD should target those who haven't met their fair share, not those that have.

11) Page 20, first full paragraph – "The historical trend analysis found that, between 2001-2010, over 2,400 projects were approved." This is another example where APCD would have produced a better, more useful report if it had talked the building community before jumping to wrong conclusions. There is a large difference how many GHGs might be produced by approved projects and those produced by actually built projects. Many approved projects are never built, particularly given our recent historic "Great Recession." The result is that APCD's guessestimate of many projects will exceed the threshold and the share of GHGs that come today from new construction are wrong because they are based on the wrong information.
12) Page 24, Step 8, first paragraph – Regarding "SLO County's fair share of the statewide 'gap,'" we request a list of what each California county's share is and how that was divided to reflect actual GHG contributions.
13) Page 24, last paragraph – The document states how much SLO County GHG reductions "were achievable and feasible." Who determined what was achievable and feasible? How? Using what standards of measurement? How were cost and cost-effectiveness used in these calculations?
14) Page 31, Attachment 1 – It is wrong to ignore today's difficult economic times and promote relying primarily on mandatory measures instead of using a voluntary, incentive driven approach. Good government works with the public. It does not dictate to it.
    a. Page 32, bullets at the bottom of the page and top of 33 – It is misleading for APCD to push for exceeding Title 24, adding water efficiency requirements, and lobby for transportation demand ordinances without making an effort to report the reality of what building is doing today on all these topics. By leaving out such information, the district is not giving decision-makers an accurate picture of this issue. That is irresponsible.

You cannot achieve GHG reduction goals simply by attacking new construction. It has already done more than any other industry to reduce GHG emissions and improve energy efficiency. It will be doing more than any other industry in the next five years to further cut GHG emissions and enhance energy efficiency. In addition, there is essentially nothing left to suck out of new construction, and it is the wrong time to increase the cost of new construction since it makes no financial sense to build today and will not for another two to five years.

In order to achieve your goal, you must target the cause of the problem – existing home and business owners, vehicle miles traveled by current county residents, and government actions that make urban infill prohibitively expensive to build, buy or rent and make orderly development along the urban edge unwelcome.

If we do not build a single new home, those problems remain and existing GHG emissions continue to grow.

Thank you for considering our comments.

Sincerely yours,

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Assisted by Guy Duer
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