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Board Agenda Item

TO: Air Pollution Control District Board

FROM: Terry Dressler, Air Pollution Control Officer

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SUBJECT: Draft 2007 Clean Air Plan and Associated Supplemental Environmental Impact Report

RECOMMENDATION:

1. Review the draft 2007 Clean Air Plan and Supplemental Environmental Impact Report (Attachments 1 and 2), hold a public hearing to accept comments, and provide direction to staff on any needed changes.
2. Provide direction to staff as to including a Land Use Strategies Chapter (Attachment 3) in the draft 2007 Clean Air Plan.

DISCUSSION:

Air quality in Santa Barbara County continues to improve, with 2005 and 2006 being the cleanest years on record. In fact, our air quality has improved to the point that it meets the federal 8-hour ozone standard and analysis of our 2004 to 2006 air quality data indicates that we attained the state 1-hour ozone standard. Meeting these milestone is clear evidence that Santa Barbara County residents are breathing cleaner air and the United States Environmental Protection Agency (USEPA) has declared us a maintenance area for the federal 8-hour ozone standard. While Santa Barbara County's air quality has improved significantly, we do not yet comply with the more health protective state 8-hour ozone standard. Therefore, we have developed a draft 2007 Clean Air Plan (2007 Plan) that demonstrates that we attain the state 1-hour ozone standard and comply with the associated planning requirements mandated by the 1988 California Clean Air Act as well as a maintenance plan for the federal 8-hour ozone standard as required by the Federal Clean Air Act Amendments of 1990. Additionally, we believe that the strategies proposed in this 2007 Plan will expedite attainment of the state 8-hour ozone standard.

The 2007 Plan represents the blueprint for air quality improvement in Santa Barbara County; its goals are to explain the complex interactions between emissions and air quality and to design the best possible

emission control strategy in a cost-effective manner. The 2007 Plan also represents a partnership among the Santa Barbara County Air Pollution Control District (APCD), the Santa Barbara County Association of Governments (SBCAG), the California Air Resources Board (ARB), the USEPA, local businesses, and the community at large to reduce pollution from all sources: cars, trucks, industry, consumer products, and many more.

We have made remarkable progress in cleaning our air; the number of days on which we experience unhealthful air quality in Santa Barbara County has been reduced over 95 percent from 1988 to now. This decrease was achieved despite an almost 18 percent increase in population and an over 29 percent increase in vehicle miles traveled during the same time frame. The community should be proud of the accomplishments made to date in reducing air pollution. The 2007 Plan reflects a commitment to continue this progress and bring clean air to all of the residents of Santa Barbara County.

Planning Mandates

The 2007 Plan complies with all planning mandates outlined in the federal Clean Air Act Amendments of 1990 (Federal Act) and the California Clean Air Act of 1988 (State Act). For federal purposes, this 2007 Plan must comply with Federal Act section 110(a)(1).

The United States Environmental Protection Agency (USEPA) has issued guidance for states in preparing maintenance plans under section 110(a)(1). Each maintenance plan must contain five required components:

- Attainment inventory
- Maintenance demonstration
- Ambient air quality monitoring
- Contingency plan
- Verification of continued attainment

The key requirements of the California Clean Air Act addressed in this 2007 Plan are the Triennial Progress Report (H&SC Section 40924(b)) and the Triennial Plan Revision (H&SC Section 40925(a)). Additionally, this 2007 Plan must provide an annual five percent emission reduction of ozone precursors, or, if this cannot be accomplished, include an analysis of every feasible measure as part of the emission control strategy. Finally, state law requires this 2007 Plan to provide for attainment of the state ambient air quality standards at the earliest practicable date (H&SC Section 40910).

Section 40924(b) of the California Health and Safety Code requires the APCD to conduct an assessment of its air quality control program every three years, starting in 1994. This assessment must address the expected and revised emission reductions scheduled for adoption during the previous three years. This triennial report must also include an assessment of progress based on monitored pollutant levels and air quality indicators.

H&SC Section 40925(a) requires the APCD to review and revise its attainment plan at least once every three years, beginning in 1994. The review and revisions are to correct for any deficiencies in meeting the interim measures of progress incorporated into the plan pursuant to Section 40914 (emission reductions), and to incorporate new data or projections.

2007 Clean Air Plan Components

The 2007 Plan has an Executive Summary and ten chapters that document our local air quality conditions and how we propose to comply with applicable air quality mandates. A brief summary of each chapter and its major highlights is provided below.

Executive Summary

The Executive Summary uses a question and answer format to address the major requirements and elements of the 2007 Plan.

Chapter 1 – Introduction

This chapter discusses the purpose of the 2007 Plan, current federal and state planning requirements that apply to Santa Barbara County, a summary of our local planning efforts and the Plan's organization. The chapter provides the planning background that has brought us to this point and then describes our efforts to comply with the Federal Act and the State Act.

Chapter 2 – Local Air Quality

Chapter 2 provides a summary of our local air quality and discusses the nature and extent of the ozone problem. Starting with a discussion on the climate of the county, we transition into how our local and regional weather patterns influence the air quality concentrations recorded at our monitoring stations. Then we review the declining trend of federal 8-hour and state 1-hour standard exceedances, air quality indicators used to assess progress toward the state standard, and our 2004-2006 designation value which demonstrates that we have attained the state 1-hour ozone standard. We also discuss the new state 8-hour ozone standard and our progress towards attaining this standard.

Chapter 3 – Emission Inventory

Chapter 3 establishes an updated inventory for Santa Barbara County by quantifying the emissions of reactive organic compounds (ROC) and oxides of nitrogen (NOx) for the year 2002. This emission inventory is tailored to meet federal requirements and is divided into two geographical regions: Santa Barbara County (including state tidelands out to 3 miles) and the Outer Continental Shelf (OCS). Annual emissions estimates are developed for stationary sources, area-wide sources, mobile sources (both on-road and off-road), and natural sources. The chapter also documents that for planning purposes, several adjustments must be made to the annual inventory. The major adjustments include temporal adjustments to account for the May to October ozone season, the exclusion of natural sources (vegetation, seeps, and wildfires) that are not regulated, and the conversion of the inventory units of tons per year to tons per day. The attainment inventory shows that mobile sources (on- and off-road) are the most significant source of pollution onshore while international marine vessels are the most significant source in the OCS.

Chapter 4 – Emission Control Measures

Chapter 4 provides an overview of the APCD's control measures. APCD measures are classified as adopted, proposed, and further study. For state purposes, each proposed control measure is identified for adoption in the near-term or mid-term. There are twelve measures proposed for adoption in the 2007 Plan. Eleven of these control measures involve revisions to existing APCD rules and one will require a new rule

to be adopted. For federal purposes, the twelve proposed measures are classified as contingency and identified for federal emission reduction credit. Since these measures have a schedule for adoption, implementation, and credit, they effectively go beyond the federal requirements for contingency measures. If we experience a violation of the federal 8-hour ozone standard prior to 2014, any measures that have not been adopted will be evaluated and expedited. The chapter also summarizes our progress made since the adoption of the 2004 Clean Air Plan and identifies additional measures that require further study.

Chapter 5 – Transportation Control Measures

Chapter 5 discusses the transportation control measures (TCMs) evaluated for this Plan and identifies them as adopted, proposed, contingency, further study, or deleted. There are no new TCMs identified in this Plan, although a suite of new projects identified during the Santa Barbara Association of Government's "101 in Motion" process are identified as proposed for adoption. An emission overview is also provided to document the travel and emission factor modeling executed to estimate the on-road mobile source emissions for 2002, 2010, 2015, and 2020. No "emissions budgets" are established in this chapter as it is anticipated that transportation conformity requirements will not apply to Santa Barbara County.

Chapter 6 – Emission Forecasting

Chapter 6 details the forecast procedures used to develop future year emission inventories for 2010, 2015, and 2020. Forecasting emissions is accomplished by applying various activity indicators (future estimates of population, housing units, etc) and control factors (estimates of emission reduction strategies) to the base year (2002) inventory. The future inventories are then adjusted slightly to reflect the current amount of emission reduction credits available in Santa Barbara County and will also be adjusted to reflect an existing growth allowance for Vandenberg Air Force Base. Future emission inventories are presented for Santa Barbara County (including state tidelands out to three miles) and the OCS. Mobile sources (both on-road and off-road) show a significant decline in both NO_x and ROC emissions by 2020 while international marine vessel NO_x emissions almost double and continue to be the largest component of the OCS emissions. The potential reduction of marine vessel emissions due to proposed International Maritime Organization emission standards is also illustrated. Unfortunately, further discussion by the IMO of these and other proposed standards has been delayed from July 2007 until March 2008.

The 2004 Regional Growth Forecast (2004 RGF), prepared by the Santa Barbara County Association of Governments (SBCAG), is utilized in the 2007 Plan to forecast future emissions for on-road motor vehicles and certain stationary source categories (e.g., residential fuel combustion). With respect to on-road vehicle emissions, 2004 RGF data are used in SBCAG's Travel Model, which together with another model (ARB's EMFAC) generate the on-road emission estimates. The 2004 RGF is currently being updated and the draft version of the 2007 Regional Growth Forecast (2007 RGF) has been released by SBCAG for public comment. SBCAG staff anticipate that the 2007 RGF will be adopted by their Board sometime in early fall of this year. After the 2007 RGF's approval, the Travel Model will need to be rerun to generate the on-road emission estimates. This process would require an additional four to six months after the 2007 RGF is finalized.

In light of this timeline both APCD and SBCAG staff have agreed that the current 2004 RGF forecast should be used in the 2007 Plan. It should be noted that the draft 2007 RGF projects less growth than the current 2004 RGF projections used in the 2007 Plan.

Chapter 7 – Federal Maintenance Plan

Chapter 7 documents how this 2007 Plan complies with USEPA guidance for maintenance plans required under section 110(a)(1) of the Federal Act and demonstrates how we will continue to be in maintenance of the federal 8-hour standard by 2014, as required by the USEPA guidance. Additionally the significance of marine vessel NOx emissions in the Outer Continental Shelf are discussed. While NOx emissions from onshore and State Tidelands sources continue to decline linearly from 2002 through 2020, international marine vessel NOx emissions almost double in this time period. The chapter concludes by indicating that additional action by the USEPA and ARB is required to reduce these marine vessel emissions.

Chapter 8 State and Federal Clean Air Act Requirements

Chapter 8 provides an overview of all state and federal Clean Air Act planning requirements and discusses how the work completed in conjunction with this 2007 Plan complies with all applicable requirements.

Chapter 9 State Mandated Triennial Progress Report and Triennial Plan Revision

Chapter 9 summarizes how the development and adoption of this 2007 Plan satisfies the triennial progress report and plan revision requirements of the State Act. We also discuss the progress made towards attaining the new state 8-hour ozone standard which has resulted from control measures aimed at attaining the state 1-hour standard.

Emphasis Areas

There are three important emphasis areas that have potential implications to the 2007 Plan and our local planning process: 1) Transportation Conformity, 2) Marine Shipping Emissions and 3) Land Use Strategies. Each of these topics is discussed in more detail below.

Transportation Conformity

The USEPA, in its maintenance plan guidance for the federal 8-hour ozone standard, determined that certain areas such as Santa Barbara County were no longer subject to federal Transportation Conformity requirements and consequently are not required to identify motor vehicle emission budgets in their maintenance plans¹. However, a recent federal appellate court decision essentially voided USEPA's rules and consequently leaving the maintenance plan guidance in a state of uncertainty.

After extensive consultation involving APCD, USEPA Region IX and SBCAG on whether to identify motor vehicle emission budgets in the 2007 Plan, APCD and SBCAG staff concluded they would not be identified in the 2007 Plan. This decision was based on USEPA's position that Santa Barbara County will not likely be subject to Transportation Conformity requirements. If new USEPA guidance requires emission budgets, staff will need to conduct a process that would establish budgets using the emission

¹ USEPA's Transportation Conformity regulation requires metropolitan transportation organizations (e.g., SBCAG) to ensure that on-road motor vehicle emissions resulting from planned and programmed projects (as specified in the regional transportation plan and regional transportation improvement program) do not interfere with a clean air plan's goal of meeting federal air quality standards. An USEPA-approved motor vehicle emissions budget as identified in a region's clean air plan sets the maximum allowable vehicle emissions from these projects. Various sanctions can be imposed if the planned and programmed project emissions exceed the identified budget.

forecasts contained in the 2007 Plan. We will be allowed one year to complete this process per the Transportation Conformity Regulation.

Marine Shipping Emissions

The emission impacts from marine shipping activities (mostly international) are documented in Chapter 6 of the 2007 Plan. Currently, emissions from this largely uncontrolled source account for over 45 percent of the total NOx emissions and are projected to account for almost 75 percent by 2020. This greater than 50 percent increase in marine shipping emissions, combined with the already large emission contribution, result in a net increase in total NOx emissions throughout the forecast horizon. In March 2007 your Board directed “the Air Pollution Control Officer to take the necessary actions to mitigate emissions from this source.” To that end, the APCD is participating in a local, state and federal effort to demonstrate the feasibility and cost-effectiveness of retrofitting an ocean going vessel with emission control equipment.

Additionally, we are also continuing to pursue regulatory based approaches to address the problem. We have been following activities by both the USEPA and the International Maritime Organization. Recently the United States membership of Bulk Liquids and Gases (BLG) subcommittee of the International Maritime Organization drafted a NOx control proposal for large marine vessels engaged in international commerce. If adopted, these controls could reduce forecasted marine vessel NOx emissions by 3 tons/day in 2012 and by about 28 tons/day in 2020. While this proposal, along with ones submitted by other nations, was scheduled for further discussion by the BLG in July 2007 these discussions have been postponed until March 2008. Because of this delay, we have urged the USEPA to reconsider postponing its deadline for promulgating controls for new large marine engines from April 2007 until December 2009. We have also asked USEPA to establish and commit to a firm and timely deadline to develop and implement stringent emission standards for marine vessels

Land Use

The APCD Community Advisory Council recommended that the 2004 Clean Air Plan contain a chapter devoted to Land Use Strategies and recommended that the APCD Board direct staff to develop, as warranted, an Indirect Source Review Rule or Program. The purpose of the Land Use Strategies chapter was to discuss the connection between land use development, transportation and air quality and set forth some policies and strategies through which air pollution impacts of population growth could be minimized. It was not envisioned that all local jurisdictions would become uniform in adopting more intensive land development policies. Communities could have decided which elements of these policies to embrace to offer opportunities not currently available.

During the adoption hearing for the 2004 Clean Air Plan, your Board rejected including a Land Use Strategies chapter in that plan. Rather, staff was directed to work with city and County planning departments to determine whether they wished to have such a chapter included in APCD’s next clean air plan (i.e., this 2007 Plan). In November 2005, APCD staff discussed the Clean Air Plan Land Use Strategies chapter with members of SBCAG's Technical Planning Advisory Committee. At that time there were mixed opinions from local planning agencies on including such a chapter in future Clean Air Plans. Planning Directors from each jurisdiction in the county were again polled in April 2007 regarding including a Land Use Strategies chapter in the 2007 Plan. The cities of Carpinteria and Santa Barbara and the County are supportive while Solvang raised several concerns but did not express a preference for

including a Land Use Strategies chapter. The remaining jurisdictions, Guadalupe, Santa Maria, Lompoc, Buellton and Goleta did not respond.

Several members of the current Community Advisory Council have expressed a desire to include a Land Use Strategies chapter in the 2007 Plan and at its June 13, 2007 meeting, the CAC will decide whether or not to recommend that your Board take such an action. If the CAC does recommend including a Land Use Strategies chapter, staff is requesting direction from your Board as to whether to do so.

Santa Barbara County Association of Governments Board Action

On June 21, 2007 the SBAG Board of Directors will consider the Transportation Control Measure (TCM) component of the 2007 Plan per the existing Memorandum of Agreement between SBCAG and the APCD. The proposed action is subject to a noticed public hearing.

Community Advisory Council Process

The Community Advisory Council (CAC) was established by your Board to review APCD rules and plans. Starting January 2006, the CAC met monthly to review and provide input on individual chapters of the 2007 Plan. The CAC provided a range of input including grammatical and formatting suggestions, specific technical input, and policy direction that helped shape many components of the 2007 Plan. Staff appreciate the time and effort the CAC devoted to the development of the 2007 Plan. Some of the CAC suggestions are:

- Follow the California Air Resources Board's methodology to estimate base year and forecasted marine shipping emissions.
- Clarify that another reason Rule 333 will be revised is the state Air Toxics Control Measure for compression ignition internal combustion engines.
- Include an explanation of the "all feasible measures" requirement for the state plan.
- Review California Department of Oil, Gas and Geothermal data to determine whether the 2007 Plan's projection of a decline in the number of oil and gas wells was consistent with current industry trends.

Public Process

On February 12, 2007, the 2007 Clean Air Plan and Draft Supplemental Environmental Impact Report were released for a 45-day public comment period. A public notice was published in the Santa Barbara News Press, the Santa Maria Times and the Lompoc Record. Over 100 copies of the 2007 Clean Air Plan and Supplemental Environmental Impact Report (SEIR) were distributed to interested parties, organizations, libraries, industry, local governments, the California Air Resources Board, and the U.S. Environmental Protection Agency. The documents were also available on the APCD website at www.sbcapcd.org. The public comment period for the 2007 Plan closed on March 28, 2007.

On March 14, 2007, a public workshop was held immediately prior to the APCD Community Advisory Council meeting in Buellton to receive comments on the 2007 Plan. Both APCD and SBCAG staff attended the workshop. Public comments and questions from the workshop and all written comments received by the close of the public comment period along with all APCD and SBCAG staff responses are

included in Chapter 10 – Public Participation. This chapter was reviewed and considered by the CAC at their June 13, 2007 meeting and will be provided in your Board's 2007 CAP adoption package in August.

Compliance with the California Environmental Quality Act

To comply with the California Environmental Quality Act (CEQA), the APCD prepared a Supplemental Environmental Impact Report (APCD-2007-SEIR-01, SCH No. 1991031045) for the 2007 Clean Air Plan. The public review period for the draft SEIR began February 12, 2007 and closed March 28, 2007. We will ask your Board to certify the SEIR at the August 16, 2007 hearing on the 2007 Clean Air Plan.

Attachments:

1. Draft 2007 Clean Air Plan
2. Supplemental Environmental Impact Report for the 2007 Clean Air Plan
3. Draft Land Use Strategies Chapter