

CHAPTER 1

INTRODUCTION

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1. INTRODUCTION

1.1 PURPOSE

The purpose of this 2004 Clean Air Plan (2004 Plan) is to chart a course of action that will ensure clean, healthful air for the residents and environment of Santa Barbara County. Clean air is fundamental to good public health; it enhances the environment and contributes to the attractiveness of the area to residents, businesses, and visitors. Fortunately, our air quality has been improving through the implementation of several air quality plans. These plans have been developed for Santa Barbara County as required by both the 1988 California Clean Air Act (State Act) and the 1990 Federal Clean Air Act Amendments (Federal Act).

Santa Barbara County's air quality has historically violated both the state and federal ozone standards. Ozone concentrations above these standards adversely affect public health, diminish the production and quality of many agricultural crops, reduce visibility, and damage native and ornamental vegetation. Since 1999, however, local air quality data show that every monitoring location in Santa Barbara County complies with the federal 1-hour ambient air quality standard for ozone. And on August 8, 2003, Santa Barbara County officially became an attainment area for the federal 1-hour ozone standard.

While Santa Barbara County's air quality has improved enough to be considered in attainment for the federal 1-hour ozone standard, we do not yet comply with the more health protective state 1-hour ozone standard. Therefore, this 2004 Plan will focus solely on the state 1-hour ozone standard and the associated planning requirements mandated by the State Act.

1.2 CURRENT STATE PLANNING REQUIREMENTS

The California Clean Air Act requires that we report our progress in meeting state mandates and revise our 1991 Air Quality Attainment Plan (1991 AQAP) to reflect changing conditions on a triennial basis. There are two major items required to be in the triennial update (Sections 40924 and

40925 of the California Health and Safety Code): a Triennial Progress Report and a Triennial Plan Revision. The Triennial Progress Report must assess the overall effectiveness of an air quality program and the extent of air quality improvement resulting from the Plan. The Triennial Plan Revision must correct for deficiencies in meeting the interim measures of progress and incorporate new data or projections into the Plan.

The control strategy originally presented in the 1991 AQAP failed to produce the state mandated five percent per year emission reductions, so the Plan was approved under the every feasible measure option. The evaluation of every feasible measure was conducted for subsequent plans developed in 1994, 1998, and 2001 and will be re-evaluated in this 2004 Plan. In addition to the requirements that the State Act mandates for Santa Barbara County as a nonattainment area for the state 1-hour ozone standard, we are also responsible for the impacts our air pollution has on areas downwind of us. The State Act mandates that ARB identify air basins (or portions thereof) in which transported air pollutants cause or contribute to violations of the state 1-hour ozone standard in downwind areas and establish mitigation requirements commensurate with the level of contribution.

This 2004 Plan examines the emission reductions achieved from existing and proposed regulations with respect to every feasible measure and identifies measures for further study. It also examines the change in emissions related to changes in population, industrial activity, vehicle use, and provides updated emission inventories out to 2020. Finally, this plan evaluates local air quality indicators and the impact of our local air pollution on areas downwind of us.

1.3 SUMMARY OF ATTAINMENT PLANNING EFFORTS

Several prior air quality plans have been prepared for Santa Barbara County. The first clean air plan for Santa Barbara County was the 1979 Air Quality Attainment Plan (1979 AQAP) which was updated in 1982. These two plans were prepared in response to mandates established by the Federal Clean Air Act Amendments of 1977. At that time only the southern portion of the county, the region south of the Santa Ynez Mountains, violated the federal 1-hour ozone standard. The 1982

update predicted attainment of the federal ozone standard by 1984, but acknowledged that the county's ability to attain the federal ozone standard was uncertain because pollution generated on the OCS was not considered in the Plan.

The predicted attainment of the federal ozone standard did not occur. As a consequence, the USEPA called for an update to the 1982 Air Quality Attainment Plan on March 17, 1986. On May 26, 1988, the USEPA issued a subsequent mandate that our planning efforts address air quality for the entire county. This new mandate was issued in response to the failure of many regions of the country to attain the federal 1-hour ozone standard by 1987. In response, the APCD prepared the 1989 Air Quality Attainment Plan (1989 AQAP), which was adopted by the APCD Board of Directors in June of 1990 and was designed to bring the southern portion of the county into attainment with the federal 1-hour ozone standard.

The APCD also prepared a 1991 Air Quality Attainment Plan (1991 AQAP). This plan was required by the State Act to bring the entire county into attainment of the more health protective California ozone standard. The APCD Board of Directors adopted the 1991 AQAP in December 1991 and ARB approved it in August 1992.

In 1990, Congress amended the federal Clean Air Act (Federal Act). The Federal Act required Santa Barbara County, as a "moderate" nonattainment area, to submit a Rate-of-Progress Plan to the USEPA by November 15, 1993, and an attainment demonstration by November 15, 1994. The 1994 Clean Air Plan (1994 CAP) that contained these required elements was adopted by the APCD Board of Directors and formally submitted to the USEPA on November 15, 1994. The 1994 CAP included: amendments to the 1993 Rate-of-Progress (1993 ROP) Plan; an attainment demonstration of the federal ozone standard by 1996; a request for redesignation from a nonattainment area to an attainment area for the federal ozone standard; and a plan to show maintenance of the federal ozone standard through the year 2006. The 1994 CAP also provided a three-year update to the 1991 AQAP for the state ozone standard, as required by the State Act.

On January 8, 1997, the USEPA approved several elements of the 1994 CAP, including the amendments to the 1993 Rate-of-Progress Plan, the base year emission inventory, and the control

strategy. USEPA did not approve the attainment demonstration element due to violations of the federal 1-hour standard that occurred during 1994-1996. This element was withdrawn from the 1994 CAP submittal. Similarly, the USEPA never acted upon the maintenance plan element due to the measured violations of the federal 1-hour ozone standard.

On December 10, 1997, the USEPA issued a final action finding that Santa Barbara County had not attained the federal 1-hour ozone standard by the statutory attainment date for “moderate” nonattainment areas of November 15, 1996. As a result, the entire Santa Barbara County nonattainment area was reclassified as a “serious” nonattainment area by operation of federal law. The USEPA action mandated that we continue progress toward the federal 1-hour ozone standard through the development of a revised Clean Air Plan. The 1998 CAP was adopted by the APCD Board of Directors on December 17, 1998, and forwarded by the ARB to the USEPA on March 19, 1999. The 1998 CAP addressed all the new federal planning requirements for “serious” nonattainment areas and was approved by the USEPA on August 14, 2000. The 1998 CAP also addressed the triennial plan revision and progress report requirements under the State Act.

Since 1999, local air quality data collected in Santa Barbara County showed that we had achieved the federal 1-hour ozone standard. Achieving this milestone allowed us to request USEPA to designate the county as an attainment area for this standard. The 2001 CAP was adopted by the APCD Board of Directors on November 15, 2001 and subsequently amended on December 19, 2002. The 2001 CAP addressed all federal planning requirements for “maintenance plans” and provided for ongoing attainment of the federal 1-hour ozone standard through the year 2015. The plan was forwarded by the ARB to USEPA on February 21, 2002, formally approved by USEPA on July 9, 2003, and became effective on August 8, 2003 with Santa Barbara County being officially designated as an attainment area. The 2001 Plan also addressed the state triennial plan revision and progress report requirements under the State Act.

A summary of Santa Barbara County’s planning activities that addressed state mandates is presented in Table 1-1 beginning with the 1991 AQAP.

1.4 PLAN ORGANIZATION

Chapter 2, Local Air Quality, provides a summary of Santa Barbara County's climatology, air quality trends, and discusses the status of ARB's re-assessment of our transport contributions to neighboring air districts.

Chapter 3, Emission Inventory, establishes an emissions inventory for Santa Barbara County by quantifying the emissions of reactive organic compounds and oxides of nitrogen for the year 2000. This emission inventory is tailored to meet state requirements.

Chapter 4, Emission Control Measures, provides an overview of the APCD's control measures in relation to the "every feasible measure" requirement of the State Act. This chapter identifies the status of each control measure in relation to state requirements.

Chapter 5, Transportation Control Measures, describes all transportation-related control measures, and identifies their applicability to state requirements.

Chapter 6, Emission Forecasting, details the forecast procedures used to develop future year emission inventories for 2005, 2010, 2015, and 2020.

Chapter 7, Public Participation, summarizes all public input received during the development of this 2004 Plan.

REFERENCES

California Health and Safety Code: 2004 Edition.

United States Public Law 101-549, Nov. 15, 1990 104 Stat.2399.

U.S. Environmental Protection Agency: Clean Air Act Reclassification; California Santa Barbara Nonattainment Area; Ozone. December 10, 1997 (62 FR 65025-65030).

U.S. Environmental Protection Agency: Approval and Promulgation of State Implementation Plans; California -- Santa Barbara. August 14, 2000 (65 FR 49499-49501).

U.S. Environmental Protection Agency: Approval and Promulgation of State Implementation Plans and Designation of Areas for Air Quality Planning Purposes; 1-hour Ozone Standard for Santa Barbara, CA. July 9, 2003 (68 FR 40789-40791).

Table 1 - 1

Comparison of the 1991 AQAP, 1994 CAP, 1998 CAP, 2001 CAP, and the 2004 Plan

	1991 AQAP	1994 CAP	1998 CAP	2001 CAP	2004 Plan
Mandates	California Clean Air Act of 1988	Federal Clean Air Act Amendments of 1990 California Clean Air Act of 1988.	Federal Clean Air Act Amendments of 1990 California Clean Air Act of 1988	Federal Clean Air Act Amendments of 1990 California Clean Air Act of 1988	California Clean Air Act of 1988
Air Quality Standards	The state 1-hour ozone standard is 0.09 parts per million.	Addresses both the state 1-hour ozone standard (0.09 parts per million) and the federal 1-hour ozone standard (0.12 parts per million).	Addresses both the state 1-hour ozone standard (0.09 parts per million) and the federal 1-hour ozone standard (0.12 parts per million).	Addresses both the state 1-hour ozone standard (0.09 parts per million) and the federal 1-hour ozone standard (0.12 parts per million).	Addresses only the state 1-hour ozone standard (0.09 parts per million).
Region Covered	All of Santa Barbara County failed to attain the state 1-hour ozone standard. The 1991 AQAP covered the entire county.	Under the Federal Clean Air Act of 1990, all of Santa Barbara County failed to attain the federal 1-hour ozone standard. The 1994 CAP covers the entire county and the Outer Continental Shelf.	The USEPA re-classified the entire county as a “serious” nonattainment area. The 1998 CAP covers the entire county and the Outer Continental Shelf.	The Maintenance Plan and redesignation request covers the onshore area of Santa Barbara County. Emission Inventories are also provided for the Outer Continental Shelf.	The 2004 Plan covers the onshore area of Santa Barbara County and the Outer Continental Shelf.
Emission Inventory	A 1987 baseline inventory of emission sources countywide was developed, but excluded sources in the Outer Continental Shelf.	A 1990 baseline inventory of emission sources countywide was developed, which included an updated inventory of Outer Continental Shelf sources. Also, an "emission budget" for ROG and NO _x was established.	A 1996 baseline inventory of emission sources countywide was developed, including an updated inventory of Outer Continental Shelf sources. The 1996 inventory will be used to update the 1990 emissions and to forecast the 1999 and 2005 emissions. Also, an "emission budget" for ROG and NO _x was established.	A 1999 baseline inventory of emission sources countywide was developed, including an updated inventory of Outer Continental Shelf sources. The 1999 inventory will be used to develop an “attainment inventory” and to forecast 2005, 2010, and 2015 emissions. Also, an "emission budget" for ROG and NO _x are re-established.	A 2000 baseline inventory of emission sources countywide was developed including an updated inventory of Outer Continental Shelf sources. The 2000 inventory will be used to forecast 2005, 2010, 2015, and 2020 emissions. No “emission budgets” are established or re-established in the plan.
Plan Summary	The 1991 AQAP was required to reduce ROG and NO _x emissions by 5% per year until the state 1-hour ozone standard was achieved, or to have included all feasible control measures.	The 1994 CAP was required to demonstrate attainment of the federal 1-hour ozone standard by 1996; document amendments to the 1993 ROP Plan; initiate the federal re-designation process; and satisfy state triennial update requirements.	The 1998 CAP is required to demonstrate attainment of the federal 1-hour ozone standard by 1999 and show a 24% reduction in ROG emissions between 1990 and 1999. This 1998 CAP also satisfies state planning requirements.	The 2001 Plan contains a Maintenance Plan and redesignation request for the federal 1-hour ozone standard. This 2001 Plan also satisfies state planning requirements.	The 2004 Plan focuses solely on California Clean Air Act requirements.