

Chapter 4

Strategic Concepts

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Chapter 4: Strategic Concepts

4.1 INTRODUCTION

This chapter discusses the District's overall strategy for achieving emissions reductions and bringing the San Joaquin Valley into attainment of the federal PM_{2.5} and 8-hour ozone standards. The District's overall approach relies on achieving the maximum reductions in the most expeditious manner possible. The approach relies on sound science and the best available technology. Given the magnitude of reductions needed to reach attainment and the associated challenges associated with such an effort, the District is implementing a four-faceted control strategy, described below.

4.2 OVERALL APPROACH

The District's overall approach is concentrated on feasible measures that will get the most reductions. Each measure the District undertakes demands a significant allocation of staff time and opportunities for public participation, review, and comment. To improve the air as quickly as possible, control measures that are expected to yield the greatest health benefit will be undertaken first.

The District must also approach control measures with sound science and the best available technologies. Achieving emissions reductions requires investment from local businesses and citizens. To ensure that investments will yield the desired returns, the District will support control development efforts with the scientific studies needed to substantiate the investments and efforts. In all cases, the District will rely on the latest advanced technology.

4.2.1 Integration of Ozone and PM_{2.5} Strategies

Since the San Joaquin Valley is also designated nonattainment for both the federal PM_{2.5} and 8-hour ozone standards, control strategies for PM_{2.5} and 8-hour ozone have been integrated and harmonized to the extent possible. NO_x reductions from the ozone plan will also help reduce PM_{2.5} since NO_x is a precursor to both ozone and PM_{2.5}. Additional PM_{2.5} and SO₂ reductions are also needed, though, to ensure attainment of the 1997 PM_{2.5} standard by 2014. Also, federal regulations (40 CFR 51.1002) require PM_{2.5} Plans to identify and evaluate PM_{2.5} direct and SO₂ controls to meet RFP and attainment goals.

4.3 FOUR-FACETED CONTROL STRATEGY

Meeting the challenge of attaining the PM_{2.5} standard in the San Joaquin Valley, with its meteorological and topographical disadvantages as well as its growth rate and automobile-dependent land use patterns, will require an innovative approach that involves every person and business in the Valley. The centerpiece of the District's 2008 PM_{2.5} Plan is the control strategy, the measures that the District and others will put in place to control direct PM_{2.5} and precursor emissions in an effort to decrease concentrations of PM_{2.5}, so that the San Joaquin Valley can attain the federal standards.

To achieve this, the District is considering a four-faceted control strategy:

- **Regulatory Control Measures for Stationary Sources** - The regulatory component will consist of traditional "command-and-control" regulations, like most current rules in the District's Rulebook section titled, "Regulation IV – Prohibitions."
- **Incentive-based Strategies** - Incentive-based strategies will build on the District's current grant programs, which use a combination of state and local funds. These programs have expanded in funding and increased in sophistication over the years.
- **Innovative Strategies and Programs** – This part of the overall control strategy promotes innovative programs that are not traditional regulatory or incentive based strategies. Such innovative strategies achieve reduction of emissions from source categories not traditionally regulated by the District through alternative routes.
- **Local, State, and Federal Sources/Partnerships** - This component of the Valley's control strategy acknowledges that local, State, and Federal agencies must each reduce emissions from the sources under their jurisdiction to achieve sufficient NO_x reductions.

Each facet of the four-part control strategy will consist of a number of emission control measures, each of which will address specific source categories.

The development of the District's components of this strategy is based on twelve guiding principles:

Guiding Principles

1. With public health as our number one priority, meet the federal ambient air quality standards as expeditiously as is practicable.
2. Recognize that the Valley's economic vitality and prosperity are essential to having the resources necessary to achieve our public health goals.
3. Recognize that no "silver bullet" exists – every sector, from the public through all levels of government, business, and industry, must reduce emissions.

4. Achieve emission reductions in the most cost-effective way possible to get the “biggest bang for the buck.”
5. When scheduling regulatory actions such as rules and strategies, allow adequate time for full public participation.
6. Consider total impact on businesses; allow reasonable time for implementation of current and future rules.
7. Give precedence to nitrogen oxides (NOx) emissions, as NOx emissions contribute to both ozone and PM formation.
8. Take advantage of imminent new technologies and allow more time to get more reductions if needed.
9. Do not let “one-size-fits-all” governmental policies and bureaucracy stand in the way of timely, innovative, and cost-effective emission reductions.
10. Use sound science in assessing public health impacts, the magnitude of emissions from various source categories, and the availability, effectiveness, and feasibility of emissions control measures.
11. Do not rely exclusively on the state and federal government to reduce mobile source emissions. Consistent with state and federal laws, find effective and innovative regulatory and incentive measures at the local level to address mobile source emissions.
12. Consider seasonal, episodic, and regional measures to more strategically target limited resources for optimum air quality benefits throughout the Valley.

4.4 LOCAL, STATE, AND FEDERAL COMPONENTS

As discussed in Chapter 3, the District has limited jurisdiction over the NOx emissions inventory. The remaining portions of the inventory, which include mobile sources, pesticides and fertilizers, and consumer products, are under the jurisdiction of the state and federal governments. For more information on local, state, and federal controls, see Chapter 7.

4.5 SUPPORT FROM OTHER DISTRICT PROGRAMS

The success of District’s control strategy depends in part on the District’s compliance program. Programs like the District’s environmental review, public information, education, and outreach also contribute to the District’s successes in improving air quality.

4.5.1 Compliance/Enforcement

The District operates a highly efficient and effective compliance program. The Compliance Division's staff of 83 personnel maintains a strong presence in each of the District's three regional service areas. The Compliance Division has a critical role in ensuring that rules and regulations relied upon to attain the NAAQS are fully enforced.

The District uses several methods to increase compliance while maintaining a streamlined process. The first method to ensure compliance is education and outreach. Educational approaches include an extensive array of compliance assistance bulletins, written policies, compliance school for those who have received a notice of violation, training and workshops for specialized programs, participation in the Permit Streamlining Meetings, and, most importantly, one-on-one interaction with regulated sources during field inspections.

A second method is the increased use of information technology. The District's website, along with printed information, helps to ensure that the regulated community has full access to applicable regulations and instructions. The District is automating its permitting system to enable applicants to take advantage of streamlined applications for permits such as those required for agricultural burns. By making the process easier, compliance rates will be higher.

The third method is the traditional field enforcement activities that include rigorous source tests, inspections, and response to complaints. The District has toll free complaint hot lines that enable the public to contact an on-call inspector at any time. The final approach falls into the District's legal and Mutual Settlement area. District legal staff has the authority to issue large penalties as one of the strongest compliance incentives.

"Compliance School" is offered as a voluntary educational training session to individuals and companies who have received a "Notice of Violation Settlement Letter" from the District. A person having the authority and responsibility to control the event that led to the violation of a District rule may qualify for a one-time penalty reduction by attending this two-hour education session. The first hour presents an overview of the air quality problems within the SJVAB. The second hour discusses rule requirements and provides recommendations regarding rule compliance.

The Compliance Department has posted their policies on the District's website for use by regulated sources as another educational tool. All new and modified policies are placed on the Web for public comment, and comments are incorporated into the policy when appropriate. Currently, there are 42 finalized policies on the District's website for use by the public and regulated community and another seven policies in draft form.

The Compliance Department supports its efforts with 39 Compliance Assistance Bulletins and the continuous addition of others to assist regulated sources and the public. These bulletins are mailed out to affected sources, and they are posted on the District's website.

On the District's website, under Compliance Assistance, the following categories of information are available to assist regulated sources and the public:

- Abrasive Blasting
- Asbestos Requirements for Demolitions and Renovations
- Bulletins
- Burning
- Dust Control
- Gasoline Dispensing
- INSPECT Program
- Notice of Violation
- Policies
- Record Keeping Forms
- Solvent Degreasing
- Source Testing
- Training Schedule
- Variances

4.5.2 Public Education, Awareness, and Information

Engaging the public in efforts to reduce emissions is a key element of the PM 2.5 attainment strategy. Education increases public support for new and controversial regulations. Helping people understand the complex issues underlying the PM 2.5 problem further improves this support. Individuals can undertake many actions to reduce PM 2.5 emissions. When members of the public are aware that they can make a difference and are convinced that the problem is real, many people will change their behavior in a positive way.

The District's education and information program has expanded and evolved over the years. It uses a variety of media, strategies, models and techniques to ensure the widest possible dissemination of air-quality information. It includes direct-marketing approaches with traditional media, including television, radio and print as well as new technologies, such as the District's website and listserv emails, and non-traditional methods such as viral marketing. The District networks with other agencies, educational institutions, community organizations, industry groups and the news media in educational efforts. It produces educational materials such as videos, brochures, and fact sheets that provide focused information to targeted audiences.

4.5.2.1 Programs

Agriculture Outreach

The District has a strong agriculture outreach component, reflecting the importance of this economic sector to the Valley air basin's economy and to the ozone-attainment

strategy. The District works closely with the Valley's agricultural industry leaders, leading to perhaps the most intensive research into agriculture-related emissions and conservation practices anywhere in the country.

Agriculture Improving Resources (A.I.R.) is a partnership formed to aid agriculture in promoting voluntary improvement of air quality through scientifically proven, cost-effective measures. Partners in A.I.R. include the District, the California Air Resources Board, California Cotton Ginners and Growers Associations, Nisei Farmers League, California Citrus Mutual, California Grape and Tree Fruit League, Raisin Bargaining Association, California Apple Commission, California Plant Health Association, Kern County Farm Bureau, Kings County Farm Bureau, Fresno County Farm Bureau, Tulare County Farm Bureau, Madera County Farm Bureau, Merced County Farm Bureau, Stanislaus County Farm Bureau and the USDA Natural Resources Conservation Service. This partnership will play an increasingly important role in providing information to growers on a wide variety of air-quality programs.

The Dairy Permitting Advisory Group (DPAG) outreach effort was undertaken to address regulation of dairy emissions in compliance with a 2003 state law. Dairy industry stakeholders were concerned by the lack of scientific foundation for establishing emissions estimates and determining Best Available Control Technologies (BACT). Settlement for these concerns established a special commission to evaluate available scientific studies and advise the Air Pollution Control Officer on permitting and BACT determinations. DPAG membership included agency technical staff, scientists, stakeholder experts, and concerned citizens. All proceedings were conducted in public meetings with conference-call access. Scientists conducting new research, requested by the agencies to provide a sound basis for emissions-factor evaluation, appeared at proceedings and participated by phone and written communication in response to questions from the DPAG and public meeting participants. Results of this process were presented to the Air Pollution Control Officer (APCO) and reported to the District Governing Board. In addition to advising the APCO, the results of these proceedings defined additional research projects to fill remaining information gaps and refine emission measurements provided by the initial studies.

Following review of the DPAG proceedings, the District developed Rule 4570 to address emissions from large confined animal facility operations (CAFO) and adopted the rule after holding public workshops and rule adoption hearings. Extensive public outreach has begun for the implementation of this rule. The District will be working with stakeholders to develop an outreach program for compliance assistance. The District works closely with farm bureaus in all eight counties to inform and update agriculture industry members on District activities and policy development. Extensive outreach to the agricultural community was also conducted on the CMP and Major Source (Title V) permitting programs.

Spare the Air versus Healthy Air Living

Spare the Air was a voluntary effort aimed at reducing air pollution on specific days when air quality was expected to be at its worst. While the Spare the Air program has

been successful at educating the public on key air quality issues, the understanding and interest in Valley air quality dictates that this program should evolve.

The Healthy Air Living initiative is a lifestyle program aimed at giving businesses, communities, civic organizations, municipalities, health organizations, families and all Valley residents the tools they need to make substantial permanent lifestyle and behavior changes which will reduce emissions in the Valley year-round.

Clean Green Yard Machines

The Clean Green Yard Machines program, the District's annual lawnmower trade-in program, is one of the most popular programs administered by the District. This is a valuable component of the District's overarching emissions reduction strategy, as gas-powered lawnmowers are a significant contributor to precursor emissions. The program represents a significant commitment of District resources, including advertising, planning and execution. The Clean Green Yard Machines program commands an extremely high level of media visibility, including positive editorial coverage by every daily newspaper in the District's eight counties.



Check Before You Burn



The District's Check Before You Burn Program is an educational program that supports the wood burning curtailment component of Rule 4901. As with other outreach programs, public-outreach information is regularly conveyed through cooperation with broadcast and print editorial media in all three regions.



Air Quality Index Forecasts

The daily forecast for the Air Quality Index (AQI) (formerly known as the PSI – Pollutant Standards Index) is faxed and emailed directly to local television and radio stations, newspaper publications, as well as schools, health organizations, and others who have signed up to receive the notices. The forecast AQI helps educate the public about air pollution and advise residents when air quality is expected to be unhealthy, so they can modify their activities and protect their health. Although the number of unhealthy-air days is affected by many factors, the exceedingly low number of such days during 2004-05 was in part attributed to a high level of public awareness and commensurate voluntary participation in emission-mitigating behaviors, as a result of pervasive publicity surrounding daily air-quality forecasts. The District's staff meteorologists provide highly accurate air-quality predictions for the air basin. Forecasts now use more detailed information specific to the local daily conditions.

Youth Education

As part of the youth education program, the District's Public Information staff makes frequent and regular presentations to schools within the District's eight counties, ranging from pre-school through college, and at any time, day or night. Public Information staff is contacted frequently by school district officials to offer input on questions of student health during episodes of poor air quality and alternative activity suggestions.

Furthermore, the District offers elementary, middle, and high school air-quality curriculum materials to all teachers in the San Joaquin Valley. The elementary school curriculum is accompanied by class material and incentive items, and focuses on general air-quality issues. The middle and high school curriculum focuses on mobile source emissions and is a science-based laboratory series. Public Information staff has also participated on a mentor basis for in-depth, long-term high-school science projects in specialized programs such as the Center for Advanced Research and Technology (CART), in the Fresno Unified and Clovis Unified school districts. Furthermore, the District has partnered with California State University at Fresno Division of Global and Continuing Education to offer a seven week college course on Air Quality Management.

The District has also partnered with local organizations to distribute Air Quality Flag program materials to all schools in the Valley over the next few years. The multi-colored flags are flown each day to indicate the forecast air quality. The program has accompanying materials that provide indoor activities for students on days when air quality is expected to be poor. Furthermore, the materials outline behavior modifications children and adults can take to help improve air quality.

Bilingual Outreach

The ability of the District to provide real-time translation services for a significant portion of the Valley's population is a priority of utmost importance. Therefore, in 2007, the District's Public Information section hired a second full-time staff member for Spanish-language outreach and translation activities. The District now has additional live translation capabilities, a service that has been used at board meetings, public meetings, the Town Hall meetings, and other events. Additionally, the District provides

Hmong-language and Punjabi-language information and outreach materials for the two major outreach programs: Healthy Air Living and Check Before You Burn.

Media Relations

The District maintains an effective and efficient media relations program, providing timely information to reporters and helping ensure news coverage accurately reflects the Air District's position, actions, and rules. Staff members handle about 1,400 media inquiries annually from local, regional, national, and international news organizations. The District also provides a dedicated phone number for reporters who need information during non-work hours. District staff work to cultivate open communication with environment beat reporters to help them understand the air basin's complex air-quality issues and encourage them to contact the Air District any time an air-quality story warrants District comment.

Public Awareness Study

In 2005, an extensive, broad-based marketing study was commissioned by the District to reveal and quantify the public's level of air-quality knowledge, behavior adaptation to current air-quality information and general understanding of the District's mission and activities. The study reported an exceptionally high level of understanding of air quality issues, which the research group attributed to successful public outreach by the District.

4.5.2.2 Events

Air-Quality Conferences

The District organizes and executes an extensive air-quality conference every year. A wide variety of organizations, businesses, and individuals participate. More than 250 representatives of business and industry, along with civic leaders, air-quality experts, health officials, and community activists, come together to discuss the Valley's air challenges at the District's Annual Air Quality Symposium. Outreach to inform the public on air quality research for ozone and particulates was expanded in 2006 through a free public symposium. "Central California Air Quality Research, How Science is Charting a Path to Cleaner Air" was co-sponsored by the District, ARB, and participants in the Central California air quality studies. The one-day conference provided information to the public developed by more than \$60 million of research on ozone and particulates. Keynote speakers provided policy-relevant and technical findings of both the CCOS and the California Regional Particulate Air Quality Study (CRPAQS). Public questions were encouraged after each presentation, facilitated as needed by Spanish translation provided by District staff. Public interest in the symposium exceeded expectations and fully booked the capacity of the conference center.

Town Hall Meetings

Throughout the year, the District often hosts Town Hall meetings to educate and inform stakeholders and the general public about both short-term and long-term air quality goals and challenges.

These meetings are held in each region of the District and included rural locations, in order to include populations unlikely to attend regular meetings in urban settings. The District sends its highest-ranking officials and managers to make presentations and responds to public questions and comments: the APCO, Deputy APCO, Director of Planning and other key staff, as well as representation by Public Information administration. Additionally, live Spanish translation is provided. Public turnout has been exceptional.

Other Events

The District works with local groups such as the American Lung Association and rideshare agencies to promote annual events that reinforce clean-air activities. Some of the annual local and national events in which the District participates include:

- Earth Day – local organizations sponsor various events, in April;
- Clean Air Month – American Lung Association sponsors various events, in May;
- Air Quality Awareness Week – sponsored by the U.S. Environmental Protection Agency, in May;
- Rideshare Week – sponsored by local rideshare committees, in October;
- Car Care Month – sponsored by the American Lung Association and Calif. State Automobile Association, in October.
- Bike To Work Week – sponsored by the Fresno County Bicycle Coalition, in May.

Many local activities are conducted by organizations and agencies throughout the Valley, including the annual Clean Air Business Expo, sponsored by Valley Clean Air Now; the World Ag Expo in Tulare; and the annual Conservation Fair by the County of San Joaquin. The District participates in these events and many others, and encourages activities that increase public awareness of air pollution and public participation in programs or activities to reduce air pollution. Many of the District activities can be found on its web site at www.valleyair.org.

4.5.2.3 Materials

Informational Brochures

The District continues to develop new and updated brochures to address air-quality issues in the air basin. Existing brochures and those under development include:

- There is Money in the Air: information about emission-reduction incentive programs and how to apply
- Healthy Air Living
- Spare the Air
- Hazard Reduction Burning
- Indirect Source Review
- NEAP: Natural Events Action Plan
- Become a Spare the Air Employer Partner
- Complaint Procedures
- Understanding Air Toxics and Risk

- Aqueous Cleaning Solutions Used in Degreasing Operations
- Lets' Clear the Air!: discusses emissions from motor vehicles and provides practical tips on how to reduce those emissions, keep a car well tuned, and report smoking vehicles
- Fact Sheet: in bullet points, discusses air-quality improvements and challenges, and details District program activities
- Check Before You Burn: provides information on the District wood-burning rule and how to comply
- Reg VIII: Fugitive Dust Control
- Air Quality Natural Events Action Plan Episodes
- Air Quality Flag Program
- Leading the Way to a Clearer Future: provides general information about air quality, the Air District and how members of the public can help clear the air
- Indirect Source Review: summarizes a rule designed to reduce emissions from new development in the SJVAB and informs developers how to comply
- Clean-Air Yard Care: provides pollution-reducing tips for lawn and garden care

Educational Videos

A wide variety of educational videos are used to promote behavior change and to educate the public on air-quality issues.

Newsletter

Valley Air News is a monthly publication of the District and is widely distributed throughout the air basin. The newsletter highlights current activities of the District, summarizes Governing Board actions, commends efforts by Valley businesses to reduce air pollution beyond what is required, and discusses other relevant air quality issues.

Board Highlights

The District's Board Highlights are distributed monthly as a one-sheet publication summarizing board activities and actions of that month.

Public Service Announcements

Public Service Announcements (PSAs) have been created for use on television and radio stations throughout the air basin. These 30- to 60-second announcements remind the public to use public transportation, share rides to work, walk to lunch, buy nonvolatile consumer products, refrain from using their fireplaces on certain unhealthy-air days, keep their vehicles properly tuned, use electric-powered lawn equipment, etc.

4.5.3 Environmental Review

The District reviews California Environmental Quality Act (CEQA) and development proposals received from cities, counties, and other agencies. Whenever development is planned or occurs, the District focuses on potential sources of emissions. Among the areas examined are agriculturally productive lands as they convert to non-agricultural

uses, construction and demolition activities, traffic-generating sources, and potential for facilities that may generate hazardous materials. The District developed two documents as resources for agencies to use when evaluating potential air quality impacts: the Air Quality Guidelines for General Plans (AQGGP) and the Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI). The AQGGP is a guidance document and resource for cities and counties to use to address air quality in their general plans. Section 65302.1 of California Government Code requires cities and counties in the San Joaquin Valley to amend appropriate elements of their general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies (such as those in the AQGGP) to improve air quality in their next housing element revisions. Cities and counties are required to submit these air quality amendments to the District for comment at least 45 days before adoption.

The GAMAQI is an advisory document that provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality in environmental documents. Certain types of development projects are also reviewed under the District's Indirect Source Review (ISR) Program, which reduces emissions of NOx and PM10 from new development projects. Other recent development projects have mitigated their air pollution impacts through voluntary development contracts with the District.

4.5.4 Sustainable Incentives

Alternative approaches for reducing emissions, as discussed in the following paragraphs, have been suggested for consideration by a number of parties. The District is considering how to work these ideas for alternative approaches into its control strategy where feasible.

To promote the implementation of practices that reduce air pollution from a variety of sources, including exempt sources, industry suggested the development of sustainable incentives. The concept of sustainable incentives includes financial measures, programs, and/or prohibitory rule Advanced Emissions Reductions Options plans that provide an economic mechanism to fund air pollution reduction measures. Sustainable incentives may be in the form of private industry and/or foundation grants, federal and/or state government grants, tax credits, prohibitory rule incentives, and other programs.

The concept of sustainable incentives is based upon existing programs such as the federal farm bill's "Environmental Quality Incentives Program (EQIP); the State's Carl Moyer Program; the District's Heavy-Duty Program (see next section), and other programs that offset the implementation cost of pollution reduction measures. Many of these existing programs operate within the framework of a partnership involving private industry, the public, and public agencies.

As proposed by industry, the concept of sustainable incentives revolves around a market-based approach to pollution reduction using measures that are economically sound and that are supported by scientific research. Basic concepts could include:

- Local air pollution control/air quality management districts, EPA, and ARB would assist local municipalities and other public agencies in acquiring additional funding. The funding would be used to implement emission reductions; expand existing incentive programs, such as EQIP and Carl Moyer; and offset mitigation cost needs of the local transportation agencies and communities. Such funding could be generated from either governmental sources in the form of grants or from industrial sources in the form of alternative compliance fees or penalties.
- These regulatory agencies would consider suggestions for alternative emission reduction programs that generate equivalent emissions reductions to those identified in prohibitory rules, but are less costly to implement. Such programs would obtain emission reductions by contributing to other programs like EQIP, by reducing onsite emissions, or by allowing the use of valid emissions reductions from secondary sources located in the immediate vicinity of those sources seeking the use of the alternative emission reductions. Sustainable and other District incentives have demonstratively provided a more flexible route for emission reductions.

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