



Sustainability Task Force

A Committee of the Chico City Council
Vice Mayor Schwab, Chair

Meeting of September 15, 2008 – 3:00 p.m. to 5:00 p.m.

Council Chamber Building, 421 Main Street, Conference Room No. 1

AGENDA

1. **Consideration of the Butte County Air Quality Management District (BCAQMD) List of Priorities and Model Air Quality Element.**

At its 8/18/08 meeting and at the request of the City Council, the Task Force considered information provided by the BCAQMD and Dr. Incaudo regarding addressing air quality issues in Butte County. The Task Force will continue its discussion of these issues and will review the BCAQMD's list of air quality priorities and a model air quality element for possible incorporation into the City's General Plan Update.

2. **Reports and Communications** - Report on the 9-02-08 City Council Consideration of the Greenhouse Gas Emissions Inventory and Reduction Target.

3. **Business from the Floor** – Members of the public may address the Committee at this time on any matter not already listed on the agenda, with comments being limited to three minutes. The Committee cannot take any action at this meeting on requests made under this section of the agenda.

4. **Adjournment** – The meeting will adjourn no later than 5:00 p.m.

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Sustainability Task Force Agenda Staff Report

Meeting Date: 9/15/08

DATE: September 8, 2008
TO: SUSTAINABILITY TASK FORCE
FROM: MANAGEMENT ANALYST HERMAN
RE: CONSIDERATION OF THE BUTTE COUNTY AIR QUALITY MANAGEMENT DISTRICT AIR QUALITY PRIORITIES AND MODEL GENERAL PLAN AIR QUALITY ELEMENT

RECOMMENDATION:

The Sustainability Task Force is requested to consider the recommendations from the Butte County Air Quality Management District (BCAQMD) concerning air quality issues in Butte County, and to provide recommendations to the City Council on how to address these issues.

BACKGROUND:

At its 8/18/08 meeting, the Task Force considered information provided by the BCAQMD and Dr. Gary Incaudo regarding air quality issues in Butte County. The BCAQMD informed the Task Force that they have prepared a model Air Quality Element and requested that the City consider incorporating the model in the City's General Plan Update. The Task Force requested additional information regarding the City's current air quality general plan policies and how it compared to the BCAQMD's model plan, and requested that the District provide a list of air quality priorities. The Task Force also requested information regarding what other jurisdictions are doing to control wood burning stoves and fireplaces (See Exhibit C attached).

DISCUSSION:

A copy of the City's Air Quality section of the current General Plan is attached as Exhibit A. The BCAQMD model General Plan Air Quality Element is also attached as Exhibit B. The City's Planning staffs have indicated that work has not yet begun on preparing the Air Quality Element for the 2030 update of the General Plan, but that staff intends to include information from the BCAQMD model element in the City's element.

The BCAQMD is also recommending that the City consider implementing the following list of air quality priorities:

1. Require air quality impacts for all projects subject to CEQA be reviewed and fully mitigated in accordance with the most current (January 2008) CEQA Air Quality Handbook.
2. For those projects found to have unavoidable air quality impacts, require the project to provide additional on-site mitigations or pay an off-site mitigation fee into a mitigation fund. The fund could be administered either by the City and/or the Butte County Air Quality Management District. Projects funded would result in emission reductions for the specific pollutant exceeding the District's CEQA thresholds.
3. Incorporate the January 2008 Model Air Quality Element into the City's General Plan as a stand-alone element or into existing elements as appropriate.
4. Provide incentive funding to encourage the replacement of existing non-EPA certified wood stoves with Phase II certified or gas units.
5. Implement woodstove and fireplace measures as recommended by the District Board (currently under review at the District) or as determined by the City. Measures to be considered include; mandatory upgrade of existing wood stoves and fireplaces to EPA Phase II technology or cleaner at time of sale, upgrades during remodeling, or adoption of a City-wide upgrade ordinance.
6. Traffic signalization.

ATTACHMENTS:

Exhibit A: Air Quality Section of the current City of Chico General Plan
Exhibit B: BCAQMD Model General Plan Air Quality Element
Exhibit C: Matrix of Wood Stove Control Measures

DISTRIBUTION:

Sustainability Task Force Distribution List (20)
Council member Gruendl
Jim Wagoner/Gail Williams, BCAQMD (2)

7 OPEN SPACE AND ENVIRONMENTAL CONSERVATION ELEMENT

A major goal of this General Plan is to preserve and enhance the natural environment and ensure that long-term growth does not adversely affect environmental resources. The General Plan Diagram identifies areas proposed for open space uses, including Open Space for Environment Conservation/Safety and Open Space for Agriculture and Resource Management. These land use classifications are discussed in the Land Use Element. In this Element of the General Plan, policies for open space lands and for conservation of natural resources within the Planning Area are presented.

In addition to the General Plan Diagram, several figures depict natural resources in the Planning Area and thus function as an inventory of open space lands, as required by state law. Additional information on existing natural resources is in the Master Environmental Assessment.

7.1 AIR QUALITY

Air is a critical environmental resource that must be protected. Chico enjoys fairly good air quality in relation to other comparable-sized urban areas in the central valley; however, without conscious efforts to achieve and maintain air quality standards, threats to public health may result. Commercial and industrial facilities that violate state and federal standards are subject to specific penalties. The City may also be subject to penalties unless it cooperates with other public agencies in efforts to meet standards.

In the Planning Area, degradation of air quality is caused, in part, by local topographic and meteorological conditions but, more importantly, by emissions of pollutants from motor vehicles and commercial and industrial development. Wood-burning stoves and agricultural activities also affect air quality. The policies in this section of the General Plan, along with land use and transportation policies in chapters 3 and 4, seek continued maintenance of the high quality of air enjoyed by the residents.

RELATIONSHIP TO STATE LAW

Conservation Element. The purpose of the Conservation Element is to assure the conservation, development and use of natural resources including water, forests, soils, rivers, harbors, fisheries, wildlife, minerals and other natural resources.

Open Space Element. The purpose of the Open Space Element is to assure the continued availability of land for the managed production of resources (such as food and fiber), to protect the enjoyment of scenic beauty and ensure provision of recreation, to identify and preserve lands whose indiscriminate development could compromise public health and safety, and to preserve natural resources.

Open Space Action Program. The Government Code requires that the Open Space Element contain an action program consisting of specific programs the City intends to pursue in implementing its open space plan. Chico's open space action plan for the City of Chico is the sum total of the open space and conservation policies in this Chapter of the General Plan and the open space proposals depicted on the General Plan Land Use Diagram.

RELATIONSHIP TO OTHER GENERAL PLAN ELEMENTS

Open space for outdoor recreation is discussed in the Land Use Element and the Parks and Public Facilities Element, as is water supply and conservation. Policies concerning open space for public health and safety are in the Safety Element. Preservation of historic resources and landmarks is addressed in the Community Design Element as are policies related to compact urban form.

RELATIONSHIP TO MASTER ENVIRONMENTAL ASSESSMENT

This Element builds on an inventory and analysis of natural resources, presented in the following sections of the Master Environmental Assessment:

- 6 Biological Resources
- 7 Air Quality
- 8 Cultural Resources
- 9 Water Resources
- 10 Earth Resources

CONTEXT

The Planning Area is located in the Northern Sacramento Valley Air Basin; the pollutants of greatest concern are carbon monoxide, ozone and particulate matter. According to monitoring stations located in Chico, state standards for these three pollutants were exceeded in 1989, 1990 and 1991, but not in the first half of 1992; more recent data has not been provided by the Butte County Air Pollution Control District. There have been no reported violations of nitrogen dioxide or sulfur dioxide standards anywhere in the Sacramento Valley for at least 15 years.

The federal Clean Air Act and the California Clean Air Act establish a planning and regulatory framework to achieve and maintain air quality standards. Areas not meeting these standards are called "nonattainment" areas and are subject to specific planning requirements. Butte County is considered to be a nonattainment area for ozone, and the Chico Urban Area is a nonattainment area for carbon monoxide. As with most counties in the state, Butte County is also a moderate nonattainment area for particulate matter. The attainment plans for these pollutants are designed to improve air quality.

The North Sacramento Valley Air Basin 1991 Attainment Plan contains a number of feasible control measures and an ambitious implementation schedule; however, calculations of the emissions reductions associated with each control measure are not available, so it is unclear to what extent the control measures will lead to attainment of standards. There is also some question about whether additional control measures are needed to attain the carbon monoxide standard in the Chico Urban Area¹.

Traditional air quality management strategies have focused on controlling stationary sources or pollutants, primarily from manufacturing operations, and reducing motor vehicle emissions with technological controls. In developing this General Plan, the effect of changes in development policies on the viability of ongoing efforts to achieve required reductions in emissions of air pollutants was analyzed. The General Plan is intended to foster an urban development pattern that will reduce reliance on automobile travel, and thus help to achieve and maintain carbon monoxide and ozone standards. However, growth in population and employment over the planning period will generate additional traffic; this will have an adverse effect on air quality that will be only partially mitigated by technological controls.

Interagency Coordination. Air quality planning at the General Plan level allows for more comprehensive solutions to air quality problems than does case-by-case review of individual development proposals. Comprehensive air quality planning is especially important because most readily available pollution control "hardware" has already been applied to stationary sources and motor vehicles. Changes in land use and travel patterns, particularly measures intended to

¹ For further information on the additional control measures, see Section 7 of the Chico Urban Area Carbon Monoxide Plan, July 1992, available from the City.

promote bike and transit use and create "pedestrian-friendly" neighborhoods and commercial areas, will help attain ambient air quality standards and ensure that healthful air is maintained in the future.

Environmental review processes under the California Environmental Quality Act (CEQA) will help the City and the Butte County Air Pollution Control District identify new stationary, mobile, and indirect sources. In addition, new stationary sources of air pollutants will be required to meet the rules and regulations of the District. These regulations require that sources of hazardous materials or air pollutants above certain thresholds obtain permits prior to construction or operation of the facility. The District's regulations may require use of Best Available Control Technology (BACT), emission reductions at other locations to offset proposed increases, and detailed analysis and/or modeling of air pollution impacts prior to issuing a permit. In certain cases, the District also may require on-site monitoring prior to and after construction, and may attach conditions on permit approvals, as necessary to avoid public health hazards and community complaints.

Guiding Policies: Air Quality

OS-G-1 Strive to meet all state and federal ambient air quality standards and reduce the generation of air pollutants.

OS-G-2 Encourage mixed-use and pedestrian-oriented development and circulation systems that promote use of alternatives to the automobile for transportation, including bicycles and bus transit, along with car pooling.

Increased use of transit and car pooling, coupled with land use and circulation patterns that promote walking and bicycle use, can lead to a decrease in daily trips, less emissions, and improved air quality.

See also policies in Section 4.1: Bicycle and Pedestrian Circulation, and Section 4.2: Transportation System Management in the Transportation Chapter.

OS-G-3 Promote the use of trees and plants in landscaping to reduce air pollutant levels.

Specific proposals for planting are in the Community Design Element. See policies in Sections 2.1 and 2.2. Landscaping is required for industrial development to protect adjacent non-industrial uses (see Policy LU-I-27).

OS-G-4 Coordinate air quality, transportation, and land use planning efforts with other jurisdictions and public agencies responsible for air quality management.

Implementing Policies: Air Quality

- OS-I-1 Cooperate with the Butte County Air Pollution Control District to achieve five percent annual emissions reductions for nonattainment pollutants, including ozone and particulate matter, by implementation of air pollution control measures as required by state and federal standards.

To reduce potential air emissions to the extent feasible, all new stationary sources in the Planning Area will be subject to the “New Source Review Rule” requirements administered by the Butte County Air Pollution Control District, and Best Available Control Technologies (BACT), or the current best technologies available at the time of project review, will have to be used to reduce air polluting emissions.

- OS-I-2 In new subdivisions with more than 200 dwelling units, require internal street design to include the installation of dedicated pedestrian/bicycle pathways connecting to adjacent residential and commercial areas as well as schools, parks and recreational areas. Bike paths and dedications would be required where allowed by law, as well as connecting paths from internal streets as a condition of development.

This policy is intended to encourage people to walk or bicycle by making it easier to use these modes and thus eliminate the need for more automobile trips, thereby reducing air polluting emissions.

See also Transportation Element policies T-G-5, T-I-10 and T-I-19.

- OS-I-3 Cooperate with the Butte County Air Pollution Control District to implement public education measures outlined in the 1991 Air Quality Attainment Plan.

Measures are divided into three categories, including community contact, education, and public information.

- Community contact measures include the occurrence of community events that promote clean air, such as participating in Rideshare Week/Rideshare Fair displays, public presentations for interested community organizations and schools, and public workshops to present proposed strategies and programs.
- Educational programs include the continued development of multimedia presentations and public displays, development and dissemination of public information materials, and development of advertising and promotion spots.

- Public information programs include continued development of local media relations, involvement of the community in brainstorming workshops to develop regulations and strategies, coordination with and provision of information to local organizations and schools, and development and coordination of an Advisory Program with local schools and media for health alert advisory episodes.

OS-I-4 Urge Butte County to adopt landscaping standards for urban development within the Planning Area that meet or exceed the City of Chico's standards and to participate with the City in the urban forest program.

OS-I-5 Because mobile emissions have been shown to be a direct contributor to air quality problems, encourage child care centers to be provided near centers of employment and/or residential areas with incentives to promote employer participation; encourage flex time, shortened work week and telecommunications for reducing vehicle miles traveled; and continue to evaluate and improve transit scheduling, as appropriate.

Pedestrian and bicycle circulation policies and Transportation System Management policies in Sections 4.1 and 4.2 and land use policies on neighborhood mixed use centers, coupled with limits on urban expansion imposed by the Land Use Chapter, also will reduce total vehicle miles traveled.

OS-I-6 Because the rate of emission releases is correlated to the average speeds, idling times and the amount of stop and go movements, take the following actions to reduce emissions from these activities.

- Explore synchronization of signals on a fair-share basis where new development proposals create the need for intersection signalization along an arterial, secondary, or major highway;
- Consider completion of circulation links, where deficiencies occur, as a project benefit and thus a potential overriding consideration, if warranted;²
- Consider phasing-out "drive-through" uses associated with fast food restaurants and banks;

² Under the California Environmental Quality Act, a statement of overriding considerations is required to approve a project that will cause significant adverse environmental effects that can not be substantially mitigated.

- Work with CUSD to ensure that new schools provide drop-off facilities that will not impede traffic on adjacent streets;
- Prohibit roadway construction and improvements or maintenance, during peak hours, for any roadway operating at level of service "C" or below, or where average speeds are less than 30 mph; and
- Ensure that bus turnouts and sheltered stops are provided along existing and planned transit routes.

OS-I-7 Work with the Butte County Air Pollution Control District on implementing restrictions on burning of leaves, residential and agricultural burnings, and other waste materials, and programs to encourage leaf composting. Participate in public education efforts and employ means of collecting residential leaves and burning composting.

OS-I-8 Require applicants whose development would result in construction-related fugitive dust emissions to control such emissions as follows:

- During clearing, grading, earth-moving, or excavation operations, fugitive dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures.
- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering, with complete coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day.
- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 15 mph averaged over 1 hour.
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by demolition, clearing, grading, earth-moving, or excavation operations shall be minimized at all times.
- Portions of the construction site to remain inactive longer than a period of 3 months shall be seeded and watered until grass cover is grown.

- All on-site roads shall be paved as soon as feasible or watered periodically or chemically stabilized.
- OS-I-9 Require applicants whose development would result in construction-related exhaust emissions to minimize such emissions by maintaining equipment engines in good condition and in proper tune according to manufacturer's specifications and during smog season (May through October) by not allowing construction equipment to be left idling for long periods.
- OS-I-10 Require applicants whose development would result in potential carbon monoxide (CO) "hot spot" impacts to consult with the City to ensure that schools, hospitals, or day care facilities are not located near such "hot spots".
- OS-I-11 Continue to require that all wood burning devices installed in any residence built in a new subdivision or housing development be EPA Phase-II certified or meet EPA standards applicable at the time of project approval.
- OS-I-12 Explore the feasibility of requiring existing older woodburning stoves to be retrofitted with devices meeting federal EPA standards at the time a residence is sold or a major alteration or addition initiated.
- Funding for the retrofit program could come from impact fees required for installation of new wood-burning stoves.
- OS-I-13 Low No_x water heaters shall be installed in any new residence built within the project area.
- OS-I-14 All new construction shall comply with the energy efficiencies mandated by Title 24 construction requirements. New facilities will be substantially more energy efficient than the facilities they replace or existing units, even at higher densities.

Model General Plan Air Quality Element

Butte County Air Quality
Management District

January 2008

Butte County Air Quality Management District Mission

Our mission is to protect the people and environment of Butte County from the effects of air pollution through developing and implementing programs and regulations to improve our air quality.

Board of Directors

- Bill Connelly Chair, Supervisor, District #1
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- Robin Huffman Councilmember, Paradise

Executive Staff

W. James Wagoner, Air Pollution Control Officer

Project Staff

Gail Williams, Senior Air Quality Planner
 Armen Kamian, Air Quality Compliance Specialist II

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INTRODUCTION TO THE MODEL AIR QUALITY ELEMENT

Importance of Air Quality

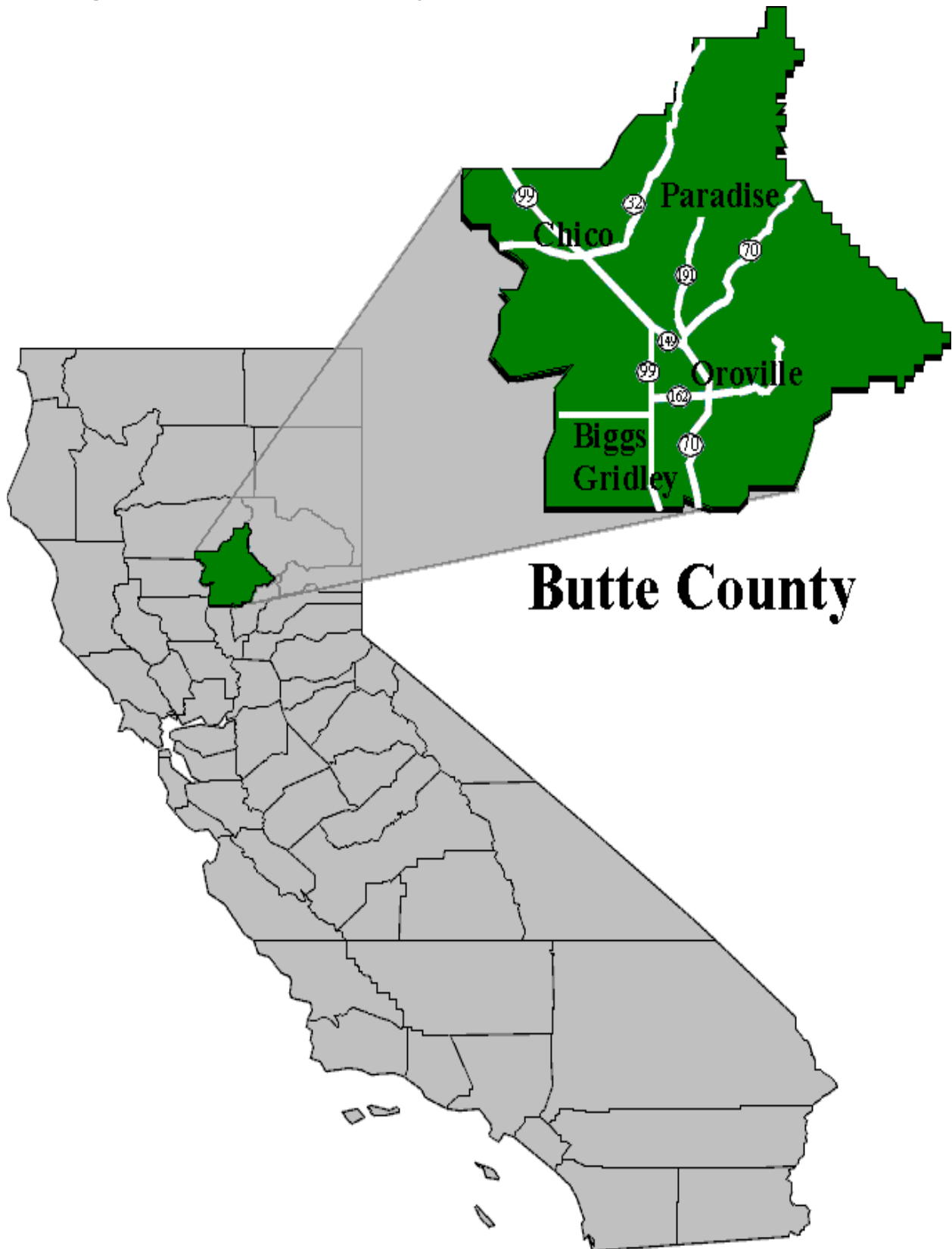
The quality of the air we breathe directly affects our health, environment, economy and quality of life. Improvements to our air quality have been realized through the design and production of cleaner motor vehicles, stronger pollution controls in industrial applications, and open burning regulations. While growth is expected, and the numbers of emission sources and vehicles increase, air pollution will continue to be a concern to our citizens. The Federal Clean Air Act of 1977 directed the Environmental Protection Agency to establish national ambient air quality standards (NAAQS). Primary standards protect public health. Secondary standards protect public welfare associated with the presence of contaminants in the ambient air. States that contain areas that exceed the standards must submit State Implementation Plans for attainment of the standards in those areas. The purpose of the State Implementation Plan is to ensure attainment of primary NAAQS as expeditiously as possible, but no later than the specified attainment deadline.

A “nonattainment” designation indicates that a pollutant concentration has exceeded the federal standard. Butte County is a nonattainment area for the federal eight hour ambient air quality standard for ozone.

The State of California has also established state ambient air quality standards. Butte County is designated as nonattainment for the State respirable particulate matter (PM₁₀) standard, fine particulate matter (PM_{2.5}) annual standard, and ozone standard. In addition, the City of Chico is expected to be designated nonattainment for the Federal PM_{2.5} 24-hour standard to be finalized by U.S. EPA in April 2009.

Although Butte County currently does not meet the State and federal ozone and PM standards, it has made progress towards attainment. Air quality is a regional issue, but there are steps that both regional and local governments can take to improve air quality and to avoid adverse localized air pollution impacts. Local efforts over the past two decades have contributed to the improvement in air quality, and will continue to play an important role in achieving federal and state air quality standards. The County and municipalities are encouraged to consider measures to protect our air quality as land use strategies are planned through the local General Plan process. Figure 1 Map of Butte County.

Figure 1 Map of Butte County



Criteria Pollutants

The United States Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) have established national and state ambient air quality standards, respectively, for pollutants generally known as “criteria pollutants.” These pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead. For some of these pollutants, notably ozone and particulate matter, the state standards are generally more stringent than the national standards. The EPA and ARB have outlined thresholds for ozone and particulate matter emissions levels (Figure 2).

The concentration of ground level ozone is greatest on warm, windless, sunny days, and is often accompanied by temperature inversions. Ozone forms through chemical reactions between volatile organic compounds (VOC) and oxides of nitrogen (NO_x). These reactions occur over time in the presence of sunlight. High levels of ozone create a public health concern because it increases susceptibility to respiratory infections and diseases, and increases the risk of cardiac disorders. The principal sources of VOC and NO_x are the combustion of fuels and the evaporation of solvents, paints, and fuels. In California, over 70% of these ozone precursors are produced from motor vehicles.

Airborne dust contains respirable particulate matter (PM₁₀), which consists of particles or droplets less than 10 microns in diameter. PM₁₀ emissions are caused by road dust, diesel soot, combustion products, tire and brake abrasion, construction operations, and fires. The level of PM₁₀ in the air is a public health concern because it can bypass the body’s natural filtration system more easily than larger particles, and can lodge deep in the lungs causing respiratory problems and permanent lung damage. It also scatters light and significantly reduces visibility. Fine particulate matter (PM_{2.5}) is defined as extremely small suspended particles or droplets with a diameter of less than 2.5 microns. PM_{2.5} consists mostly of combustion byproducts from the reaction of exhaust sulfates and nitrates, along with finer dust particles. It is more closely linked to adverse health effects, and contributes to hospital and emergency room visits and is associated with asthma, bronchitis, cardiac arrhythmia, heart attack, and premature death.

Figure 2 Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.08 ppm (157 µg/m ³)		
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³		

Note: Partial list of pollutants is shown above
 Source: California Air Resources Board – 2-22-07
<http://www.arb.ca.gov/aqs/aags2.pdf>

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants which may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health. While ambient air quality standards have not been established for the hundreds of identified toxic air contaminants (TACs), exposure to these pollutants can cause or contribute to chronic health effects. Exposure to TACs during infancy or childhood could affect the development of the respiratory, nervous, endocrine or immune systems – increasing the risk of cancer later in life. Short-term effects of TACs include irritation to the eyes, nose, throat, and lungs and can result in coughing, headache, dizziness, and nausea. Long-term contact is associated with increased risks of developing cancer, lung diseases such as asthma, damage to the immune system, and allergies. Of all the toxic air contaminants measured in ARB’s monitoring network, diesel particulate matter has been found to contribute the greatest overall statewide risk to public health; furthermore, proximity and long-term exposure to diesel emissions have been proven to increase the risk of lung cancer by as much as 40 percent. Motor vehicles are the primary source of the top three toxic air contaminants, thus contributing to the risk of developing adverse health effects.

Causes of Poor Air Quality

Poor air quality can largely be attributed to emissions from anthropogenic and natural sources, Sacramento Valley geography, and meteorological settings. Anthropogenic sources include air pollution emissions from stationary, area and mobile sources. Natural sources include biogenic hydrocarbons, natural wind-blown dust and wildfires.

Butte County is located within the boundaries of the Sacramento Valley Air Basin, bounded by the Coast Ranges on the west and Sierra Nevada Mountains on east. The intervening terrain is flat, providing a place for air pollutants to settle. The mountains surrounding the Sacramento Valley create a barrier to airflow, which can trap air pollutants in the Valley when meteorological conditions are right. The surface concentrations of pollutants are highest when temperature inversions trap pollutants near the ground. The region is largely agricultural in nature, but as California's population grows and communities expand, there is expected growth in residential and industrial development.

Air Quality Element Authority

The Air Quality Element is consistent with State Government Code Section 65303, which states that "the general plan may include any other elements or address any other subjects which, in the judgment of the legislative body, relate to the physical development of the county or city." While it is not a mandatory component of the General Plan, the Air Quality Element identifies and establishes the policies governing the achievement and maintenance of acceptable air quality.

The Need for Air Quality Elements in Butte County

As identified above, this Air Quality Element explains the role local jurisdictions play in helping Butte County achieve the goal of meeting federal and state health-based air quality standards. Furthermore, this Element emphasizes the significance that land use patterns and resulting transportation behavior have on air quality. The policies outlined in this Element focus primarily on "smart growth" development and secondarily on transportation demand management.

The creation of either a separate Air Quality Element within the General Plan or the integration of air quality polices within the existing General Plan framework recognizes that air quality is an important local and regional concern. Just as issues of land use, circulation, open space, conservation, noise, housing, and safety are essential to a community's well-being, the issue of air quality is a critical component in the planning process.

What Cities and Counties Can Do

Leaders of local government in Butte County are in the position of engaging in and guiding multi-disciplinary collaboration between competing interests for development, growth and the enhancement of community quality of life. Community groups, businesses, developers and individuals present a complex environment which may result in conflicting interests, and can affect policy decisions and future planning issues.

In order to achieve balanced growth, local government leaders can show support of smart growth principles through comprehensive planning that transforms stakeholder wishes into a cohesive community vision. Development of policies and processes for implementation of these visions is essential.

Return benefits can be in the form of a unified framework to reduce infrastructure costs, improve services, and support of a vibrant economy which addresses social concerns as well as preserving natural resource.

Local governments have the flexibility to address air quality issues through ordinances, local circulation systems, transportation services, and land use. The District has authority to reduce emissions from stationary sources, some area sources, and certain indirect sources. In coordinating efforts with Butte County Association of Governments (BCAG) and CARB, planning for future growth projections and the development and implementation of transportation control measures as well as the control measures for mobile sources will provide the District with a foundation necessary to apply a positive approach to improving air quality and protecting our citizens.

Persuading people to use alternatives to their car is a difficult task. This task is made harder by the prevalent design of our communities. For the last fifty years or so, we have designed and built our communities for the efficient use of the automobile at the expense of alternatives to the automobile. The first step in reversing this trend is to ensure that the General Plan, which guides the development of our communities, supports walking, bicycling, and transit for more of our transportation needs.

This document provides a comprehensive set of policies that promote development patterns, site designs, and transportation systems that support alternatives to the automobile. Additionally, it promotes the idea of incentives for smart growth development. Cities and counties can use this information as a resource during general plan updates. They can select policies appropriate for addressing the issues and concerns of their individual communities. As development occurs in a manner consistent with air quality policies, local government control measures will be more effective and growth in vehicle trips and vehicle miles traveled will be reduced.

The policies contained in this Air Quality Element offer an effective way to reduce local and regional air pollution, and the enforcement of these essential guidelines will help ensure the health of people throughout Butte County.

AQ I – LAND USE STRATEGIES (Land Use Element)

Policies: Land Use Patterns for Businesses

- AQ1 Encourage strategic land use patterns for businesses that reduce the number and length of motor vehicle trips, and that encourage alternative modes of travel.
- AQ2 Encourage employment-intensive development with a high Floor Area Ratio where adequate transit service is planned, and discourage such development where adequate transit service is not planned.
- AQ3 Support the location of ancillary employee services (including, but not limited to, child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.
- AQ4 Ensure industrial, manufacturing, and processing facilities are located an adequate distance from residential areas and other sensitive receptors.

Policies: “Smart Growth” Planning

- AQ5 Promote projects that are developed through a collaborative and inclusive planning process that includes broad partnerships among a variety of stakeholders.
- AQ6 Promote compact development within 1/4 to 1/2 mile of bus transit corridors.
- AQ7 Promote mixed-use developments inclusive of homes, schools, civic uses, employment, retail and commercial services, and daycare facilities within walking distance of each other, that are well-served by transit, or will help build the capacity for future transit investment and use.
- AQ8 Support a community’s infill or transit-oriented development and neighborhood revitalization activities as a priority over urban expansion, where appropriate.
- AQ9 Identify and adopt incentives for planning and implementing infill development projects within urbanized areas near job centers and transportation nodes.
- AQ10 Support land use, transportation management, infrastructure and environmental planning programs that reduce vehicle emissions and improve air quality.
- AQ11 Promote street design that provides an environment which encourages biking and walking by adding or enhancing pedestrian, transit and/or bicycle facilities, and by strengthening the links between these facilities and between these facilities and major activity nodes.

Policies: Project Design Guidelines

- AQ12 Encourage all new development to be designed to promote pedestrian and bicycle access and circulation, to the greatest extent feasible.
- AQ13 Support the location of neighborhood commercial shopping areas to serve new residential development.
- AQ14 Recommend the use of traffic calming measures where appropriate within a subdivision plan (e.g., traffic circles, curb extensions, and median islands).
- AQ15 Coordinate with the Butte County Air Quality Management District on the review of proposed development projects.
- AQ16 All new development projects which have the potential to result in substantial air quality impacts should incorporate design or operational features that result in a reduction in emissions below the significance threshold levels that would be produced by an unmitigated project, based upon best available mitigation measures under CEQA.
- AQ17 Provide incentives to encourage developers and investors to implement smart growth types of designs.
- AQ18 Provide incentives to cities and the county for planning and encouragement of smart growth development.
- AQ19 Provide incentives to encourage local communities or neighborhoods that are required to accept change.
- AQ20 Where emissions from new development cannot be mitigated on-site, off-site mitigations should be considered as appropriate, coordinating with the Butte County Air Quality Management District.
- AQ21 Maximize air quality benefits through selective use of landscaping vegetation which is low in emission of volatile organic compounds (VOC), and through re-vegetation of appropriate areas.
- AQ22 Evaluate greenhouse gas emissions and mitigate to the extent possible.
- AQ23 Evaluate projects for cumulative impacts and apply appropriate impact fees to help offset mitigations, public outreach, and compliance assistance programs.

Policies: Control Measures

- AQ24 Work with the District to reduce particulate emissions from construction, grading, excavation, and demolition to the maximum extent feasible.
- AQ25 Enforce fugitive dust related air quality mitigation measures adopted through the CEQA process.

Policies: Environmental Justice

- AQ26 Ensure that all land use decisions are made in an equitable fashion in order to protect residents – regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location – from the health effects of air pollution.

Policies: Toxic and Hazardous Emissions

- AQ27 Ensure residential development projects and projects categorized as sensitive receptors to be located an adequate distance from existing and potential sources of toxic emissions such as freeways, major arterials, industrial sites, and hazardous material locations.
- AQ28 Enforce the Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operation, and the ATCM for Surfacing Applications.

AQ II – TRANSPORTATION (Circulation Element)

Policies: Trip Reduction and Transportation Demand Management

- AQ29 Ensure that, wherever feasible, public transit is a viable and attractive alternative to the use of single occupant motor vehicles through the promotion and expansion of a public transit system.
- AQ30 Encourage employers to provide transit subsidies, bicycle facilities, and alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education, and preferential parking for carpools/vanpools.
- AQ31 Promote and adequately advertise for shuttles from local transit stations to special event centers.
- AQ32 Encourage business owners to schedule deliveries at off-peak traffic periods.
- AQ33 Provide disincentives for single-occupant vehicle trips through parking supply and pricing controls in areas where supply is limited and alternative transportation modes are available.
- AQ34 Support the development of Service Areas (i.e. County or municipality) in order to create funding for transportation services and road improvements that provide air quality benefits.
- AQ35 Encourage transportation policy that gives funding preferences to public transit.
- AQ36 Encourage transportation impact fees on new development in order to facilitate and increase public transit service.
- AQ37 Incorporate bicycle lanes into street systems in regional transportation plans, subdivisions and large developments.

Policies: Encourage the Use of Low-Emission Vehicles

- AQ38 Replace County or municipality fleet vehicles with lowest emission technology vehicles, wherever possible.
- AQ39 Encourage lowest emission technology buses in public transit fleets.
- AQ40 Consider adoption of a policy that provides a preference to contractors using reduced emission equipment for County or municipality construction projects as well as for contracts for services (e.g., garbage collection).
- AQ41 Encourage developments and street systems that support the use of Neighborhood Electric Vehicles (NEV).

AQ III – ENERGY CONSERVATION (Conservation Element)

Policies: Efficiency Measures

- AQ42 All County and municipality facilities should consider incorporation of feasible energy-conserving design and construction techniques.
- AQ43 Promote criteria for all new parking lots to include tree plantings that will result in 50% shading of parking lot surface areas within 15 years.
- AQ44 Encourage the use of building materials and methods that increase efficiency beyond State Title-24 standards, such as efficient lighting, reduction of water to sewer systems and incorporating water reuse systems.
- AQ45 Encourage solar technology in new construction where feasible.
- AQ46 Encourage the use of “EPA Energy Star” certified appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units, where feasible.
- AQ47 Encourage the implementation of cost-effective and innovative emission-reduction technologies in building components and design.
- AQ48 Promote the implementation of sustainable design strategies for “cool communities” such as reflective roofing, light colored pavement, and urban shade trees.
- AQ49 Expand city and county recycling services and programs for residents and businesses.
- AQ50 Encourage projects to reuse and recycle construction and demolition waste.

APPENDIX D Potential Control Measures

TABLE 1

Air District	PM2.5 Design Value ¹	Rule	Mandatory Solid Fuel Burning Curtailment	Prohibition of Exceeding Visible Emission Limit	Sale, Transfer & Installation of Used Devices	Criteria for Devices in New Building Construction	Criteria for Devices in Existing Construction ²	Requirements for Sale of Seasoned Wood	Incentive Programs
San Joaquin Valley	64	4901	X	X	X	X	X (upon sale of a home)	X	X
South Coast	57	445	X		X	X		X	X
Butte County³	56	207			X	X			X
Sac- Metro Air District	49	417 ⁴	X		X			X	
		421 ⁵	X	N/A	N/A	N/A		N/A	X
Feather River ⁶	40	3.17			X	X			X
Bay Area	39	3	X	X	X	X	X (for remodels only)	X	X
Placer County	31	225		X	X	X	X		X
Yolo-Solano	30	2.40				X		X	X
Shasta	22	3.23			X	X			X
Great Basin	19 UC ⁷	431	X	X	X	X	X	X	X

In December 2006, the U.S. EPA lowered the 24-hour PM2.5 standard from 65 micro grams per cubic meter (ug/m3) to 35 ug/m3

¹ PM2.5 design value is based on data collected from 2004-2006 3yr average 98th percentile

² Placer County Rule requires retrofit upon sale or transfer of real property effective January 2012

³ City of Chico within the Butte County Air District

⁴ Rule 417 is an existing rule governing wood burning criteria other than no-burn restrictions.

⁵ Rule 421 is a rule solely affecting mandatory no-burn restrictions.

⁶ The combined cities of Yuba City/Marysville within the Feather River Air District

⁷ UC = Great Basin – counties of Alpine, Inyo and Mono are unclassifiable areas due to incomplete data