

Chapter III.

ENVIRONMENTAL RESOURCES

AIR QUALITY ELEMENT

PURPOSE

The Air Quality Element is intended to provide background information and disclose the regulatory framework and physical environment that have the potential to affect the air quality in the Town and region. The Air Quality Element identifies any components within the Town and region that directly or indirectly affect air quality. Goals, policies, and programs are set forth in this element that are designed to avoid, reduce, or limit impacts to air quality that may result from build out of the General Plan.

This Element is intended, in conjunction with local and regional air quality planning efforts, to address ambient air quality standards set forth by the federal Environmental Protection Agency (EPA) and the California Air Resources Board (CARB).

BACKGROUND

Over the past few decades, a noticeable deterioration in air quality has occurred in the Town of Apple Valley and the region due to increased local development and population growth, traffic, construction activity and various site disturbances. Although air pollution is emitted from various sources locally, some of the degradation of air quality can be attributed to sources outside of the Mojave Desert Air Basin (MDAB), in which Apple Valley is located, including air basins to the west and southwest.

The Air Quality Element is directly related to a number of elements within the General Plan. The Land Use and Circulation Elements have the greatest potential to directly affect the Air Quality Element since local and regional air quality are directly influenced by land use types, patterns and intensities. The Town's circulation and transportation system, and the number, length and timing of traffic trips, also impact local and regional air quality. Issues associated with circulation are discussed in greater detail in the Circulation Element of this document.

REGULATORY ENVIRONMENT

Federal and state government air quality standards and regulations have been established to monitor and regulate a variety of air pollutants and to assure that people and the environment are not adversely impacted by poor air quality. The Town of Apple Valley is part of the Mojave Desert Air Basin (MDAB) and is regulated on a regional level by the Mojave Desert Air Quality Management District (MDAQMD).

Federal Regulation

The Clean Air Act (CAA) was initially passed by Congress in 1963 and has subsequently been amended. The Environmental Protection Agency (EPA) established the National Ambient Air Quality Standards (NAAQS) in 1971, which set forth regulation that is intended to protect the health and welfare of citizens and the economy by establishing primary and secondary air quality standards. Primary standards are designed to protect sensitive sectors of the population such as

children and the elderly, whereas secondary standards protect the public welfare as related to crops, buildings, and visibility. NAAQS are established for six criteria pollutants. These are discussed individually below and shown in Table III-13.

State Regulation

On January 1, 1989 the state mandated California Clean Air Act (AB 2595) became effective, and established health-based air quality standards at the state level. The bill established ambient air quality standards and set forth deadlines for attainment. The California Air Resources Board (CARB) developed these state standards, which are generally more stringent than federal standards. For areas in non-compliance with federal standards, State Implementation Plans (SIP) may be prepared to help regional air quality management districts meet the federal and state ambient air quality standards by the deadlines specified in the federal Clean Air Act, and emission reduction targets of the California Clean Air Act. The severity of the region's air pollution determines required emission reductions and attainment deadlines. In addition to oversight of regional air pollution, CARB is charged with evaluating agencies and districts to assure compliance with the California Clean Air Act requirements.

In 2006 the CARB approved the State Area Designations for criteria pollutants, which became effective in July of 2007. CARB sets area designations for nine criteria pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, sulfates, lead, hydrogen sulfide, and visibility reducing particles.

Regional Regulation

As part of its responsibilities in regulating air quality in the MDAB, the MDAQMD is charged with establishing air quality measurement criteria and relevant management policies for the Town of Apple Valley, the Sphere of Influence, and neighboring communities within San Bernardino County and the northeastern portion of Riverside County.

The Town of Apple Valley is subject to the provisions of the MDAQMD Rule Book⁷, which sets forth policies and other measures designed to help the District achieve federal and state ambient air quality standards. The Rule Book, along with the MDAQMD CEQA and Federal Conformity Guidelines⁸, are intended to satisfy the planning requirements of both the federal and state Clean Air Acts. The MDAQMD also monitors daily pollutant levels and meteorological conditions throughout the District. The MDAQMD is also involved in regional management of air quality through various attainment plans.

The County of San Bernardino, including the Town of Apple Valley, is in non-attainment for ozone and particulate matter. In order to meet the requirements for basins that are in non-attainment, the MDAQMD has established attainment plans for Ozone and PM₁₀.

⁷ "Mojave Desert Air Quality Management District Rule Book," prepared by the Mojave Desert Air Quality Management District, September 2005.

⁸ "Mojave Desert Air Quality Management District California Environmental Quality Act and Federal Conformity Guidelines," prepared by the Mojave Desert Air Quality Management District, June 2007.

CRITERIA POLLUTANTS

Criteria pollutants are air pollutants for which federal and state air quality standards have been established. They include carbon monoxide, lead, ozone, nitrogen dioxide, sulfur dioxide, and suspended particulate matter, each of which is described briefly below.

Carbon monoxide (CO)

Carbon monoxide is produced from the partial combustion of fossil fuels, most notably from motor vehicles. In the atmosphere, carbon monoxide contributes to the production of methane, ozone, and carbon dioxide. It is a colorless, odorless, and tasteless toxic gas that at high concentrations can contribute to the development of heart disease, anemia, and impaired psychological behavior.

Lead (Pb)

Lead occurs in the atmosphere as particulate matter resulting from the manufacturing of batteries, paint, ink, ammunition, and to a lesser extent, leaded gasoline, the use of which has been phased out. Excessive exposure to airborne lead can contribute to anemia, kidney disease, gastrointestinal dysfunction, and neuromuscular and neurological disorders.

Nitrogen Oxide (NO_x)

Nitric oxide (NO) and Nitrogen Dioxide (NO₂) are the primary oxides of nitrogen that are considered criteria pollutants. These oxides are produced at high temperatures during combustion and are a by-product of motor vehicles. Incomplete combustion in motor vehicle engines, power plants, and other industrial operations comprise the primary sources of nitrogen dioxide (NO₂). Short-term exposure to nitrogen dioxide can result in airway constriction, diminished lung capacity, and is highly toxic by inhalation.

Ozone (O₃)

Ozone is formed when by-products of the internal combustion engine and other urban processes react in the presence of ultraviolet sunlight. It is a pungent, colorless, toxic gas commonly referred to as smog. Excessive exposure to ozone can result in diminished breathing capacity, increased sensitivity to infections, and inflammation of the lung tissue.

Sulfur Dioxide (SO₂)

Sulfur dioxide results from the combustion of high-sulfur content fuels, such as coal and petroleum. Sources include motor vehicle fuel combustion, chemical manufacturing plants, and sulfur recovery plants. Sulfur dioxide acts as an acid and is a colorless, odorous gas. Short-term exposure can result in airway constriction and severe breathing difficulties, as well as lung tissue damage and fluid accumulation in the lungs.

Suspended Particulate Matter

Suspended particulate matter consists of fine solid or liquid particles suspended in gas. These fine particles may be from soil and dust, soot and smoke, or aerosols, and are byproducts of fuel combustion, tire wear, and wind erosion. Particulate matter of ten microns (millionths of a meter), or smaller in diameter are referred to as PM₁₀, whereas PM_{2.5} consists of particles smaller than 2.5 microns. Fine particulate matter poses a significant threat to public health and can cause increased respiratory infections, asthma attacks, and lung cancer.

Air Quality and Climate Change

Air quality has become an increasing concern associated with human health issues, and because air pollutants are thought to be contributing to global warming and climate change. The primary contributor to air pollution is the burning of fossil fuels through the use of automobiles, power and heat generators, and industrial processes. Emissions from the combustion of fossil fuels are responsible for the poor air quality that is evident in industrial centers worldwide.

Some air polluting agents are also greenhouse gases, such as carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons, which are released into the atmosphere through natural processes and human activities. These gases are termed greenhouse gases due to their shared characteristic of trapping heat, and may be responsible for the global average increase in surface temperature observed over the last decade. There is much debate over what the effects of climate change will be, but there is a general consensus that the levels of emissions need to be reduced in order to minimize air pollution and limit the amount of carbon dioxide and other pollutants that are released.

In 2006, the California Global Warming Solutions Act (Assembly Bill 32) was passed in order to comprehensively limit greenhouse gas emissions (GHG) at the state level, by establishing an annual reporting program of GHG emissions for significant sources, and set emission limits to cut the state's GHG emissions to 1990 levels by 2020. Significant thresholds as well as standards for calculated greenhouse gas emissions are expected to be established by CARB in the spring of 2009.

AMBIENT AIR QUALITY STANDARDS

As mentioned above, federal and state air quality standards established for criteria pollutants are designed to protect that segment of the population that is most susceptible to respiratory distress or infection, including the elderly, children, asthmatics, or those who are weak from disease or illness. The following table provides a comparison of state and federal ambient air quality standards. State standards are generally more restrictive than federal standards, particularly in regard to sulfur dioxide and particulate matter.

Table III-13
State and Federal Ambient Air Quality Standards

Pollutant	State Standards		Federal Standards	
	Averaging Time	Concentration	Averaging Time	Concentration
Ozone	1 hour	0.09 ppm	1 hour	0.12 ppm
	8 hour	0.07 ppm	8 hour	0.075 ppm*
Carbon Monoxide	1 hour	20.0 ppm	1 hour	35.0 ppm
	8 hours	9.0 ppm	8 hours	9.0 ppm
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm		
	AAM	0.030 ppm	AAM	0.053 ppm
Sulfur Dioxide	1 hour	0.25 ppm	AAM	0.03 ppm
	24 hours	0.04 ppm	24 hours	0.14 ppm
Particulate Matter (PM ₁₀)	24 hours	50 $\mu\text{g}/\text{m}^3$	24 hours	150 $\mu\text{g}/\text{m}^3$
	AAM	20 $\mu\text{g}/\text{m}^3$	AAM	50 $\mu\text{g}/\text{m}^3$
Particulate Matter (PM _{2.5})	AAM	12 $\mu\text{g}/\text{m}^3$	AAM	15 $\mu\text{g}/\text{m}^3$
	24 hours	35 $\mu\text{g}/\text{m}^3$	24 hours	35 $\mu\text{g}/\text{m}^3$

Notes: ppm = parts per million ; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter of air;

AAM = Annual Arithmetic Mean;

Source: California Air Resources Board, March 2008

* Note that this standard is effective as of May 27, 2008.

MDAQMD operates and maintains six regional air quality monitoring stations throughout its jurisdiction, to determine whether existing ambient air quality complies with the standards shown above. The nearest monitoring station to the Town of Apple Valley is located in Victorville. This station monitors contaminant levels and meteorological conditions on a daily basis.

The Environmental Protection Agency (EPA) and the California Air Resource Board (CARB), respectively, are the federal and state agencies responsible for regulating greenhouse gas emissions . The EPA Office of Air Quality Planning and Standards is responsible for setting the National Ambient Air Quality Standards for criteria pollutants. With the passage in 2006 of Assembly Bill 32, CARB became the responsible state agency for monitoring and reducing greenhouse gas (GHG) emissions in the state of California.

SENSITIVE RECEPTORS

Sensitive receptors are persons or land uses that may be subject to respiratory stress and/or significant adverse impact as a result of exposure to air contaminants. The CARB designates people with cardiovascular and chronic respiratory diseases, children under 14, seniors over 65, and athletes as sensitive receptors. Accordingly, hospitals, nursing and retirement homes, schools, daycares, playgrounds, parks, athletic facilities, and residential and transient lodging facilities are all considered sensitive land uses.

REGIONAL CLIMATE AND METEOROLOGY

The local and regional air quality is a function of the amount of pollutants emitted and dispersed and the climatic, meteorological, and geophysical conditions that reduce or enhance the formation of pollutants.

The Town of Apple Valley, Sphere of Influence, and the region are influenced by moderate coastal conditions, though the area is far enough inland that temperatures can reach over 100° F during the summer, and drop below freezing during the winter. The prevailing wind patterns in the region are controlled by on-shore westerly winds during the day, and off-shore easterly winds in the evenings and at night, with the dominant wind out of the west and southwest. During fall and winter months, climatic conditions associated with strong, dry winds can affect the region, creating a condition known as the Santa Ana winds, which can blow for multiple days. These strong wind events suspend and transport large quantities of particulate matter, including sand and dust, which can reduce visibility, damage property and pose a significant health threat.

The Town of Apple Valley is also susceptible to air inversions, which trap a layer of stagnant air near the ground, where it can be further loaded with pollutants. Inversions in the Mojave Desert Air Basin generally occur between 6,000 and 8,000 feet above ground surface, and create conditions of haziness caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces and various other sources.

The Town of Apple Valley is influenced by the surrounding region's natural geological conditions. Air pollution generated in the South Coast Air Basin enters the Mojave Desert Air Basin by passing over the San Gabriel and San Bernardino Mountains. Similarly, air pollution from the San Joaquin Air Basin passes through the Tehachapi Mountains, thereby entering the Mojave Desert Air Basin and contributing criteria pollutants.

On the valley floor, temperatures range from the lower 20s during winter months, and commonly exceed 100 degree Fahrenheit in the summer. Prevailing winds range from 5 to 10 knots per hour from the west and southwest. On average the Town of Apple Valley receives approximately 2 inches of rainfall annually and experiences 350 days of sunshine.

Natural vegetation is representative of the desert ecosystem and contains sparse and widely spaced natural groundcover. Surface soils, therefore, are readily exposed to wind. The area is frequently subjected to strong winds, causing sand and dust to become airborne. This condition, known as blowsand, poses an often destructive environmental hazard. In addition to health problems associated with the presence of dust particles in the air, dust storms reduce highway and air traffic visibility.

REGIONAL POLLUTANTS OF CONCERN

The Mojave Desert Air Basin, including the desert portions of San Bernardino County, Riverside County, Los Angeles County, and Kern County, covers 21,480 square miles. The Mojave Desert Air Basin, which includes the Town of Apple Valley, exceeds state and federal standards for fugitive dust (PM₁₀) and for ozone. State and federal standards for carbon monoxide, nitrogen oxides, sulfur dioxide, and lead are in attainment within the Town of Apple Valley and the Mojave Desert Air Basin.

As previously mentioned, the Mojave Desert Air Quality Management District operates and maintains regional air quality monitoring stations at numerous locations throughout its jurisdiction, including the Victorville Monitoring Station, which monitors air in the Town of Apple Valley. According to the EPA, and supported by the Victorville monitoring station, the Town of Apple Valley and the Mojave Desert Air Basin are in non-attainment for ozone, PM₁₀, and PM_{2.5}. These pollutants are further discussed below.

Ozone

Based on data collected at the Victorville Monitoring Station, from 2000 through 2008 ozone levels in the area were exceeded for the State 1-hour standard an average of 14 days a year. The Federal 1-hour ozone standard was exceeded on 8 days over the 9-year period from 2000 through 2008, and the Federal 8-hour standard was exceeded an average of 12 days per year.⁹

The Mojave Desert Air Basin has a history of exceeding state and federal ozone standards, and is currently (2008) designated as a “moderate” ozone non-attainment area under the federal Clean Air Act.

In the Town of Apple Valley, ozone is generated by motor vehicles, both from local and regional roadways, as well as other local sources. In addition, ozone transported from the nearby South Coast Air Basin (SCAB) contributes to the total ozone in the Mojave Desert Air Basin. The South Coast Air Quality Management District (SCAQMD) reports that in 2006 the Basin exceeded federal health 1-hour standards for ozone on a total of 35 days, and the federal 8-hour standard on 86 days. The more stringent State standards for the 1-hour and 8-hour standards were exceeded on 102 and 121 days, respectively in the SCAQMD.¹⁰

The 2008 Ozone Attainment Plan sets forth strategies and control methods to attain federal air quality standards for ozone. As part of this plan, the MDAQMD has adopted emission limitations, maintains a permitting program for emitters and has set up monitoring systems throughout the District. Based on ozone concentrations from 2001 through 2003, the EPA classified the region as moderate non-attainment and established an attainment year of 2010. Air quality modeling results show that expected level of emissions will not achieve established ozone concentration standards by 2010. Therefore, the MDAQMD has requested a reclassification to Severe-17, with an attainment date of June 15, 2021. Modeling results indicate that MDAQMD could achieve attainment by 2021.¹¹

Particulate Matter

PM₁₀ Emissions

The region has a history of elevated PM₁₀ emissions, which are the result of both human activities, such as vehicle use and construction activity, and natural occurrences, such as windstorms. For the period between 2000 and 2007, the 24-hour state standards for PM₁₀ levels were exceeded on an average of approximately 4 days per year. Although state standards are

⁹ “Air Quality Management District: Exceedances of Standards and Maximum Concentrations,” Victorville Monitoring Station, MDAQMD, 2000-2008.

¹⁰ “2006 Air Quality Data Tables” prepared by South Coast Air Quality Management District, October 2007.

¹¹ “MDAQMD Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area,” prepared by Mojave Desert Air Quality Management District, June 9, 2008.

more stringent than federal standards PM₁₀ levels also exceeded federal standards, but only on one (1) day during the period. The Basin is currently designated as a PM₁₀ non-attainment area for both state and federal standards.

The Town relies on applicable state code and AQMD Rules, including Rule 403 (Fugitive Dust), for authority to enforce fugitive dust compliance as needed since it does not have its own fugitive dust ordinance. The Town's Municipal Code does include provisions for off-road dust generation by prohibiting nuisance dust or dirt emissions (Chapter 11.30, Section 020).

In 2005 the MDAQMD adopted the "List and Implementation Schedule for District Measures to Reduce PM Pursuant to Health & Safety Code §39614(d)," which identifies the most readily available, feasible, and cost-effective control measures that could reduce particulate matter in the District. The document identifies measures that are currently being employed to reduce particulate matter in the District, sets forth new measures that could further reduce particulate matter, and lists those new measures that need further evaluation prior to implementation.

Particulate matter in the Town of Apple Valley is generated by vehicle emission, construction, and fugitive dust. One of the state's largest contributors of particulate matter, Cemex, is located in the Apple Valley Sphere of Influence.¹² Cemex operates the Black Mountain Quarry for the production of cement and aggregate. The facility is estimated to emit 277 tons per year of PM₁₀ and 183 tons per year of PM_{2.5}.

Mineral extraction operations and associated processes have the potential to generate fugitive dust and emit other criteria pollutants into the atmosphere, which adversely impact local and regional air quality. The Town of Apple Valley, Sphere of Influence, and the surrounding region have identified valuable mineral deposits, some of which are actively being mined. In order to minimize fugitive dust generation resulting from mineral extraction facilities operating within the Town's jurisdiction, a number of policies and programs have been developed to regulate extraction procedures and reduce impacts to air quality. These are outlined below.

PM_{2.5} Emissions

Federal and state standards have been developed to regulate fine particulate matter smaller than 2.5 microns in diameter. To achieve federal attainment, a jurisdiction must provide the Environmental Protection Agency (EPA) with air quality monitoring data that does not violate the fine particle standards over a three-year period. In March of 2007 the EPA issued the Clean Air Fine Particle Implementation Rule, which describes the framework and requirements that state and local governments must achieve in developing their PM_{2.5} implementation plans. The Rule requires that states meet the PM_{2.5} standards by 2010, but may grant attainment extensions of up to 5 years. Therefore, the 2007 Rule requires that all states meet federal standards for attainment no later than 2015.

The Mojave Desert Air Basin and the Town of Apple Valley are classified as being in non-attainment for PM_{2.5}, based on the 2007 State Area Designations. Although the region is classified as being in non-attainment for the state standard, the region is classified as being in

¹² "High Emitting Facilities for the Mojave Desert Air Basin Appendix A," prepared by the California Air Resources Board, 2007.

attainment/unclassifiable for the national standard, based on 2006 national area designations despite the air quality monitoring data from the Victorville station that shows zero (0) exceedances for either the state or federal 24 hour standard from 2000 through 2007.

Toxic Air Contaminants

Pursuant to Assembly Bill 1807, which was enacted in 1983, Toxic Air Contaminants (TACs) include substances such as asbestos, benzene, beryllium, inorganic arsenic, mercury, vinyl chloride, and any other contaminants not addressed by the national ambient air pollution program. TACs are required to be inventoried on a statewide level. There are a number of processes and facilities within the state that generate TACs, including electroplating and anodizing operations, gasoline distribution facilities, petroleum refineries, and others. TAC generation and emissions are regulated by the Toxic Air Contamination Control Program. The primary health concern associated with TACs is from mobile sources of particulate matter which are known for their carcinogenic potential. Approximately 70 percent of the risk is attributed to diesel particulate emissions, and about 20 percent to other toxics associated with mobile sources.

FUTURE DIRECTIONS

The Town will continue to act locally to meet existing and future state and federal air quality regulations. Apple Valley is pursuing alternative energy options, such as wind turbines and solar energy, electric and alternative fuel vehicles, and Green Building technology as viable options for enhancing air quality by reducing greenhouse gas emissions and other air pollutants.

In compliance with the California Clean Air Act (Assembly Bill 2595), which requires that air quality policies and programs be developed to protect and preserve the environment and general public from the harmful effects of air pollutants, the following goals, policies, and programs have been developed.

In an effort to reduce greenhouse gases and address climate change, the County of San Bernardino, has set forth the Green Valley Initiative. This Initiative invites cities and towns to participate in the County's effort to reduce greenhouse gases, increase production of green technologies, and integrate residents and businesses with natural resources. These efforts are intended to create jobs, reduce environmental impacts, and enhance the quality of life for residents by creating healthy economic and environmental conditions.

Participating jurisdictions document their commitment to the Initiative by identifying a Green Valley coordinator and pledging to address at least five of the following:

1. Green Building Programs
2. Buy Green/Buy Local
3. Green Business Programs
4. Conservation and Recycling
5. Solar and Alternative Energy
6. Encourage Green Economic Development
7. Green Valley Land Use
8. Green Valley Coordinators

GOAL, POLICIES, AND PROGRAMS

Goal

To preserve and enhance local and regional air quality.

Policy 1.A

The Town shall cooperate with the Mojave Desert Air Quality Management District to assure compliance with air quality standards.

Program 1.A.1

Apple Valley shall adhere to existing and future greenhouse gas and global warming rules, regulations, and requirements to monitor and reduce emissions.

Responsible Agency: Planning Division, and MDAQMD.

Schedule: 2009 and Ongoing

Policy 1.B

The Town shall proactively regulate local pollutant emitters by coordinating and cooperating with local, regional and federal efforts to monitor, manage and decrease the levels of major pollutants affecting the Town and region, with particular emphasis on PM₁₀ and ozone emissions, as well as other emissions associated with diesel-fueled equipment and motor vehicles.

Program 1.B.1

The Town shall participate in efforts to monitor and manage emissions from construction and other sources for all criteria pollutants, TAC's, and all other air pollutants of regional concern.

Responsible Agency: Building and Safety Division, Public Services Department, Planning Division, MDAQMD.

Schedule: 2009 and Ongoing

Program 1.B.2

The Town shall work to establish fugitive dust criteria to limit particulate matter generated by mining operations.

Responsible Agency: Public Services Department, Planning Division, MDAQMD.

Schedule: 2009 and Ongoing

Policy 1.C

The Town shall coordinate land use planning efforts to assure that sensitive receptors are reasonably separated from polluting point sources including mineral extraction operations.

Program 1.C.1

The Town's General Plan Land Use Element shall assure that air pollution point sources, such as manufacturing operations and highways, are sited at an appropriate distance from sensitive receptors, including hospitals, schools, hotels/motels and residential neighborhoods.

Responsible Agency: Planning Division, MDAQMD

Schedule: 2009-2010

Policy 1.D

All proposals for development activities within the Town shall be reviewed for their potential to adversely impact local and regional air quality and shall be required to mitigate any significant impacts.

Program 1.D.1

All projects that have the potential to generate significant levels of air pollution shall be required to provide detailed impact analyses and design mitigation measures that incorporate the most advanced technological methods available. Prior to the issuance of grading or demolition permits, the Town shall review and determine the effectiveness of proposed mitigation measures and set forth additional measures as needed.

Responsible Agency: Planning Division

Schedule: Ongoing

Program 1.D.2

The Town shall provide consistent and effective code enforcement for construction, grading activities, and off-road vehicle use to assure ground disturbances do not contribute to blowing sand and fugitive dust emissions.

Responsible Agency: Building and Safety Division, Code Enforcement, Sheriff's Department, MDAQMD

Schedule: On-going

Policy 1.E

The use of clean and/or renewable alternative energy sources for transportation, heating and cooling, and construction shall be encouraged by the Town.

Program 1.E.1

The Town shall consider incentive programs, rebates, and refunds for the use of energy efficient appliances, windows, and building designs for new and remodeled structures.

Responsible Agency: Utility providers, Building and Safety Division, Planning Division.

Schedule: Ongoing

Program 1.E.2

The Town shall, when purchasing new vehicles for its fleet, purchase vehicles that use alternative fuel sources, such as compressed natural gas and electricity.

Responsible Agency: Town Council, Finance Department

Schedule: Ongoing

Policy 1.F

The Town shall support, encourage, and facilitate the development of projects that enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle paths and lanes, and community-wide multi-use trails.

Program 1.F.1

To minimize vehicle miles traveled, the Town shall pursue a balance of employment and housing opportunities that encourage pedestrian and other non-motorized transportation alternatives.

Responsible Agency: Economic and Community Development Department, Redevelopment Agency..

Schedule: On-going

Program 1.F.2

The Town shall continue to promote the use of mass transit services, coordinating with all agencies to link residential and commercial business and employment centers with the Town's residential neighborhoods and nearby communities. Mass transit services shall be expanded as needed.

Responsible Agency: Economic and Community Development Department, Redevelopment Agency, Victor Valley Transit Authority, Municipal Services Department.

Schedule: Ongoing

Program 1.F.3

Ridesharing, carpooling, flexible work scheduling, telecommuting, and Park and Ride programs shall be encouraged for public and private employers.

Responsible Agency: Public Works Division, Economic and Community Development Department, Municipal Services Department, Transit Agencies, major regional and local employers.

Schedule: Ongoing

Program 1.F.4

Shade trees with non-damaging root systems shall be planted in medians, within street easement, and parking lots as appropriate, to cool the asphalt and reduce Reactive Organic Compounds (ROC) and Volatile Organic Compounds (VOC) generated by streets and parking lots. A list of permitted trees with non-damaging root systems shall be developed.

Responsible Agency: Planning Division, Public Works Division.

Schedule: 2010-2011, Ongoing

Policy 1.G

Future residential, commercial, and industrial development and remodeling projects, shall strive to exceed Title 24 standards by 15% and/or achieve LEED certification or similar performance standards for buildings.

Program 1.G.1

The Town shall initiate public events that highlight green building materials, designs, and techniques. The program should include a recognition programs for companies and developers that offer energy conservation products and/or manufacture or use recycled products.

Responsible Agency: Town of Apple Valley.

Schedule: 2009 and Ongoing

Program 1.G.2

The Town shall consider economic development incentives for green building construction.

Responsible Agency: Town of Apple Valley.

Schedule: 2009 and Ongoing

Policy 1.H

Residential, commercial, and industrial projects that reduce vehicle miles traveled (VMTs) by providing alternative transportation options, home office and live/work spaces, and/or promote employees living close to work are preferred.

Program 1.H.1

The Town shall encourage all new development to include wiring for high speed internet for all tenants and/or residents.

Responsible Agency: Planning Division, and utility providers.

Schedule: 2009 and Ongoing

Policy 1.I

The Town shall continue to reduce waste generation, enhance recycling or reuse programs, and expand grey water systems for landscape irrigation.

Program 1.I.1

The Municipal Services Department and JPA shall coordinate to assure that waste reduction programs are effective and achieve established targets.

Responsible Agency: Solid Waste Management Department and JPA

Schedule: 2009 and Ongoing

Policy 1.J

The Town shall promote the use of solar and alternative energies and give priority to projects that include the use of solar cells and other alternative energy sources in their designs.

Program 1.J.1

The Town shall encourage the use of solar and alternative energy and the sharing of excess electricity.

Responsible Agency: Public Works Department, Utility Providers, and Planning Division.

Schedule: 2009 and Ongoing

Policy 1.K

The Town shall participate in regional greenhouse gas reduction planning efforts.

Program 1.K.1

The Town shall participate in the San Bernardino Associated Governments' Climate Action Plan, including assisting in providing data and background information, and implementing greenhouse gas reduction strategies established in the Plan, when complete.

Responsible Agency: Planning Division

Schedule: 2010-2011 and Ongoing