

VISION 2025
ENVIRONMENTAL SUSTAINABILITY
FINAL REPORT
August, 2003

I. Executive Summary

The City of Beverly Hills is committed to ensuring its long term environmental sustainability by thoroughly examining its existing practices and finding new methods to improve its performance. It is also committed to enhancing its understanding of how environmental practices are prioritized in its decision-making process.

The General Plan Environmental Sustainability Topic Committee recommends that the City Council and Planning Commission adopt General Plan principles that facilitate the vision of an environmentally conscious community. Vision 2025 is of a community that has incorporated conservation of natural resources and environmental enhancements of infrastructure to promote a healthy and productive place to live, work, visit, and play. To accomplish this goal, the Committee has set forth a description of both implementation recommendations that describe specific practices, and also of suggestions in how to ensure that implementation occurs throughout all facets of the City.

This report provides an outline of the elements that contribute to a sustainable community: water (potable, wastewater, and stormwater), solid waste, energy, and telecommunications and City infrastructure. With each of these factors, this Committee of environmental professionals, concerned residents, and future leaders illustrate a path to achieve such a community.

II. Introduction

The City of Beverly Hills utilizes natural and synthetic resources and produces wastes in order to provide a viable place to live, work, visit, and play. The natural resources are water, virgin materials, and energy. The synthetic resources are telecommunications and City infrastructure. If we consume our nonrenewable natural resources we will lose them forever, but if we act prudently we can ensure they will last longer. Moreover, for renewable resources, we can also ensure their long-term availability by consuming them in a sustainable manner. The Environmental Sustainability Committee's task is to review the City's environmental practices and to make recommendations to enhance and preserve the resources upon which the City depends, for the City's own short-term benefit as well as that of future generations. Environmental sustainability entails living off the interest of assets -- not depleting the principal without replacing them. Such a policy path will insure that Beverly Hills remains a proud jewel in the Los Angeles region.

The Committee's vision to create a sustainable City in its multiple aspects is expressed throughout this document. The City deals with sustainability issues in two general ways: (i) the practices observed by the City in conducting its municipal operations, and (ii) the practices observed by individuals (residents, businesses and visitors) in the City, which the City may influence by regulations and rate structures. The City itself should implement environmental sustainable behaviors and practices to facilitate the practice of these recommendations throughout the community.

The City should also recognize a level of urgency to finding solutions for water and solid waste issues. Long term water sufficiency for California and the region are headlines in the newspaper. The politics of water rights and groundwater overdrafting is a present day concern. Water consumption is directly linked to the City's solid waste generation as greenwaste is 40% of the waste stream, and is -- at least partially -- a result of irrigation. Irrigation alone consumes 65% of the total City water budget. Consequently, as available solid waste disposal sites are becoming increasingly distant from the City, costs will rise accordingly.

A. City Council Charge

The City Council has directed this Committee to "arrive at a basic understanding of the physical infrastructures and resources upon which the private and public entities in the community depend, and the existing and future physical and economic constraints on the provision of those infrastructures and resources. At a minimum, the Committee shall consider:

- Conservation of resources
- Construction practices
- Energy resources and delivery
- Water resources and delivery
- Gas resources and delivery

- Telecommunications
- City infrastructure (other utilities/refuse disposal, etc.)

B. Process

The Committee began with self-education, and then it conducted its first public outreach. Two hundred people attended the Environmental Sustainability Expo in November of 2002. Subsequently, the Committee divided into five work groups (Land Use, Education, Municipal Codes, Rates & Fees, and Capital Improvement Projects) to tackle comprehensively the charges at hand. The second public outreach consisted of a series of meetings with groups and organizations in the community, including such organizations as a high school earth science class and Roxbury Park Seniors. Committee members presented preliminary recommendations in order to get feedback. Attached is a description of the public outreaches completed (Appendix A).

The Committee members have taken this task very seriously. Not only did the Committee educate itself monthly on different topics, but individual members conducted additional research on the most significant topics for the City's environmental sustainability and shared information from their own professional occupations. This synopsis of the Committee's recommendations indicates the general direction the Committee is suggesting. Most importantly, the Committee feels the environmental consciousness of Beverly Hills stakeholders should be raised to compliment the other high standards of the community.

C. Committee Structure

The Committee structured itself into five work groups to tackle the diverse policy issues surrounding water, refuse disposal, energy, infrastructure, and telecommunications.

Land Use: The City establishes the use of land within its boundaries. The City's roads and alleys make up 25% of the land use and the rest of the City is developed for residential single family and multi-family as well as commercial space. This work group addressed the goals of environmental sustainability as they pertain to prescribing land use and how those elements are developed and maintained.

Capital Improvement Projects: Each year the City approves a five-year capital improvement project budget. This budget includes projects such as include replacing water mains, improving streetlight electrical wiring, or building a municipal area network, etc. This work group focused on what type of capital improvement projects should be encouraged over the next twenty years to provide a sustainable community.

Rates and Fees: Water, stormwater, wastewater, and refuse have rates that reimburse the City's expenses to provide these services. Fees are also assessed for permits issued by Building and Safety and Civil Engineering. This work group developed recommendations that promote sustainability over the next twenty years by creating fees and rates based on incentives or disincentives.

Municipal Codes: The Department of Building and Safety follows the US and California Building Codes as well as mandates in the City's municipal code. These codes are intended to promote safe building structures that will resist earthquakes and fires. This work group evaluated how our existing codes either encourage or discourage sustainability and provided recommendations to reach the Committee's sustainability goals by refining the municipal code.

Education: When changing human behavior, the City must be able to communicate why these new practices are important. This work group was responsible not only for establishing educational recommendations in the long term, but also in promoting education on these subjects for acceptance in long-term planning. In addition, they recognized the role that public agencies play as information providers.

D. Report Structure –

The report is organized according to the resources with which the City is concerned: water, refuse disposal, energy, infrastructure and telecommunications, although the Committee's recommendations, as for all General Plan elements, are oriented toward recommended guiding principles for the City's governance. The Committee also decided to develop specific implementation guidelines as sustainability has particular characteristics that can be implemented in the short term, based on current best available technologies or analytical methods. The Committee believes that these objectives are critical to the environmental sustainability of the City, and should therefore be accorded high priority among policy choices faced by the City.

Implementation Recommendations provide greater specificity than the General Plan, and are therefore technically not a part of the General Plan; however, they illustrate currently-promising best technologies and methods of achieving the recommended sustainability goals of the General Plan in the immediate future. The Committee recognizes the substantial rate of change that exists, and that implementation recommendations of today may not be applicable over time – and therefore, should be re-evaluated periodically.

Thus a distinction can be made between the Committee's recommended General Plan Principles (the strategic objectives) and its Implementation Recommendations (the tactics used to achieve those objectives). The

Implementation Recommendations are not goals in themselves; they are means to achieving the goals stated in the recommended General Plan Principles.

This report also highlights those Implementation Recommendations that fulfill more than one General Principle across natural or synthetic resources. Because of these multiple benefits, the highlighted recommendations deserve special attention.

The Committee anticipates that comprehensive planning will be completed before the tactical approaches are selected for implementation. Nevertheless, the need to pursue General Plan Principles sooner rather than later with respect to sustainability is becoming increasingly clear. Recognition of the likelihood that the implementing mechanisms may change over time should not detract from the importance of moving forward on the General Plan Principles as promptly as possible.

III. Environmental Sustainability Process and Structure

A. Issues – Factual Background

At this time there is no one department or commission with the explicit mission of reviewing, suggesting or implementing practices for greater sustainability. The Committee recognizes that some of the current community expectations about the status quo may conflict with environmental sustainability practices (for example, ample green lawns).

As a process, the City makes decisions based on financial values that are approximated by what is physically accounted for in the present with cost benefit analysis. Another process exists called life cycle costing. This methodology is defined as the total cost of owning, operating, maintaining, and eventually disposing of a building system over a given period of time with all costs discounted to reflect the time value of money. Life cycle costing is calculated by surveying different costs such as investment versus operational costs, initial investment versus future costs, and one time costs versus recurring costs. Then the present value is calculated for each of these costs. The sum of the present values equals the life cycle cost. The alternative with the lowest life cycle cost is the preferred alternative where enhancing environmental sustainability is a goal.

B. General Plan Principle and Implementation Recommendation

General Plan Principles

1. The City should incorporate life-cycle costing as a part of the staff recommendation preparation for purchases and projects. Life-cycle costing involves full cost accounting. Most accounting systems are based simply on the initial cost of the purchase or construction, and do not consider life time energy costs, for example, or externalities caused in

extraction, transportation, manufacturing, distribution, construction or use, and disposal. (Appendix B – Pictorial description of life-cycle costing.)

2. The City should change its policy-making structure to incorporate environmental sustainability as a fundamental guiding principle, understanding the interdepartmental nature of such an approach. For example, green building standards will also include alternative energy production, and/or recapturing stormwater on site.

Implementation Recommendations

- a. The City should create a paid position for an environmental expert to advise the City Council with regard to the sustainability of City projects, to work with City staff, and to recommend policy changes to City Council and Commissions. This position is recommended to be a significant role in the City's organization in order to integrate successfully environmental practices and programs throughout the specialized departments.
- b. The Environmental Sustainability Topic Committee volunteers to meet at a minimum annually to re-evaluate the City's progress in implementing the recommended Guiding Principles, in order, to advise the City Council and Commissions.

IV. Water

A. Issues – Factual Background

Water resources do not only include potable (drinking) water, but also stormwater runoff, dry weather irrigation (and other) runoff, and other wastewater. The City provides potable quality water to residents, businesses and visitors for all uses, including drinking, cooking, bathing, other household uses and irrigation. In 2001, the City took a pioneering approach to financing the construction of a water treatment plant. Eighty percent of the City's water supply is from Metropolitan Water District (Appendix B), and up to 25% of the City's water supply is from local groundwater. The City does not have legally adjudicated rights, but rather has rights of appropriation based upon historical groundwater extractions and actions to recharge the groundwater. Currently, the City (residents, businesses and public facilities) consumes 65 % of the water for irrigation. On average it is estimated about only 2% of residential water is used for drinking. Yet all delivered water, whether MWD or pumped from local wells, is treated to potable standards.

Due to excessive irrigation, poor irrigation practices, and conventional grading practices, the majority of stormwater and irrigation water runs off into storm drains (and out to sea); it is estimated less than 10% of this runoff goes back into the groundwater table in the Los Angeles region. The City is required by law to uphold and develop new Regional Water Quality Control Board regulations that

limit the amount of water that is lost into the storm drains from storm events, as well as limit urban runoff that is due to poor or excessive irrigation practices.

The City does not have its own sewage treatment plant; Beverly Hills pays the City of Los Angeles to treat its wastewater. This includes all water that goes down drains inside residences, businesses and civic buildings, as well as excess stormwater. This represents both a cost to residents and loss of a potential water resource.

Groundwater is currently used for about 30% of California's agricultural and urban needs, and many of the state's aquifers are over drafted. Thus there is a serious need to manage our groundwater resources by providing opportunities for wastewater and stormwater to re-infiltrate the aquifer rather than going out to sea.

Over half of California's population lives in Southern California and our construction practices have created vast expanses of impermeable surfaces, preventing rainfall from recharging ground water resources. As the population grows and dry weather conditions persist, a larger demand for groundwater will occur. A study completed by three professors at UC Davis, estimates urban economic losses from water scarcity average \$1.6 billion per year for California in 2020.¹ The study concludes that this economic modeling should help assist in the planning for infrastructure and management alternatives and water conservation measures.

Looking to the future, the Committee discussed two new resources of non-drinking water – recycled water and gray water for non-human contact uses. Recycled water is sanitary sewer water or stormwater treated to be potable. It does not have to meet the same public health standards as drinking water in a distribution system. Recycled water is regulated to be used for most uses except drinking water. Gray water is water from non-kitchen sinks, washers and showers that may be used in non-spray irrigation systems, or for toilet water. These two types of water resources are considered as plausible methods to increase the use of water before it goes back into the hydrologic cycle and thus to reduce potable water demand and increase the availability of water for other uses.

Urgency: Current water usage is not sustainable. The City as a whole uses far more than can be produced locally and outside sources are steadily contracting. It's estimated that 65% of our "drinking" water is consumed for irrigation. Drought is always a threat to southern California as well. Fortunately, there are numerous opportunities to conserve water and a few ways to actually increase water supplies via recycling and groundwater recharging.

B. General Plan Principles and Implementation Recommendations

¹ Jenkins, Marion, Jay R. Lund and Richard E. Howitt, "Using Economic Loss Functions to Value Urban Water Scarcity in California," American Water Works Association Journal. February 2003, p 69.

1. The City should reduce the amount of water used for landscaping, particularly water treated to potable water standards.

Implementing Recommendations:

- a. In maintaining public facilities, the City should use efficient watering systems, should use recycled or gray water and should use vegetation that needs less water.
- b. The City should encourage the use of efficient watering systems as indicated by soil moisture and climatic conditions, and irrigate at optimal times during the day such as early morning or late afternoon.
- c. The City should encourage use of systems using recycled or gray water for landscaping.
 - By applying for available state and federal funding, the City should prepare and implement a recycled water master plan to serve its irrigation needs including linking up with regional projects such as the Hyperion feeder line being extended to the Los Angeles Country Club.
- d. The City should encourage use of vegetation that needs less water. (Appendix D – Photography of Native Landscaping)
- e. The City should structure water rates to discourage excessive use by implementing a sliding pricing scale or tiered rate structure. The revenue collected is not intended to raise the City’s water enterprise fund balance, but rather to provide a mechanism that will reduce rates from those that conserve and increase rates for those that consume excessively. This is an example of using price structures as incentives for sustainable practices.

2. The City should consider other strategies to reduce the demand for water, and for water treated to potable water standards.

Implementing Recommendations:

- a. The City should research and establish benchmarks to establish water conservation goals for the next 20 years.
- b. The City should explore methods of retaining and using stormwater that would otherwise go into stormdrains as runoff.
- c. The City should encourage/require the use of water conserving appliances. Revenue neutral monetary incentive programs should be considered. (Appendix E – Flyer that describes water savings and cost savings for water use efficient appliances.)
- d. The City should structure water rates to encourage conservation and discourage excessive use.
- e. The City should consider using recycled water for firefighting.
- f. The City should consider building a recycled water infrastructure.

g. The City should consider notifying customers of extraordinary water usage such as a leak detection program.

3. The City should explore new sources of water based upon the water usage of residents, businesses, and visitors.

Implementing Recommendations:

- a. The City should explore viable uses of recycled and gray water for the community.
- b. The City should explore co-operative ventures with other jurisdictions to obtain new sources of water (such as desalination).
- c. The City should explore increased groundwater storage and recharge development.

4. The City should assure compliance with applicable regulations regarding stormwater runoff and use best available technologies to do so.

Implementing Recommendations:

- a. The City should explore the use of permeable surfaces for and beyond green space to include alleys and driveways for residential, commercial and City properties.
- b. The City should continue to enforce the existing regulations and evaluate amendments or modifications to the municipal code to strengthen the enforcement of these regulations.
- c. The City should adopt the state of the art technologies for water monitoring and conservation being implemented throughout other parts of Southern California.
- d. The City should implement new technologies to prevent trash and debris from going down the stormwater drain.

5. The City should replenish groundwater

Implementing Recommendations

- a. The City should explore developing stormwater collection chambers to recharge the groundwater table.
- b. The City should investigate collaborative regional efforts to recharge the groundwater table.
- c. The City should use its existing parks and open spaces for stormwater capture and recharge

V. Solid Waste Disposal

A. Issues – Factual Background

Approximately 75,000 to 80,000 tons of trash, including recyclables, streetsweeping debris, construction debris and greenwaste, are generated from all sources in Beverly Hills each year. The tonnage is counted from the City's refuse trucks, those of private refuse companies, construction operators, and landscaping services. In 1990 the State of California adopted AB 939 that required all California jurisdictions to reduce waste sent to landfills by 50 percent no later than 2000; the City has achieved this reduction through recycling and collection of greenwaste.

The Public Works Department's Solid Waste Division staff collects trash from all single family residential areas, and all multifamily buildings that do not have bins in subterranean parking structures. The staff also collects all recycling materials and greenwaste left out by residents from all areas of the City. A private refuse company, under contract to the City, collects refuse from all commercial areas and from approximately 20-25 percent of multifamily residential buildings (those with trash bins in subterranean locations).

The City currently collects and disposes of trash, recycling, and green waste utilizing a fleet of 30 trucks and five street-sweepers. The collection is done in the alleys or at the curbside. The City provides communal color-coded containers for household trash and recyclables in the City's alleyways, and residents are asked to place yard waste next to the containers so that the yard waste can be recycled. The City is converting to individual household receptacles for greenwaste for alley pickup service in order to increase greenwaste collection and avoid excess debris in the alley.

The County issues a waste collection permit to the City's Transfer Station that specifies a maximum capacity of 250 tons per day. This is adequate for the waste currently collected by the City. The contract refuse company has a transfer facility outside the City. The waste material is brought by the City collection vehicles to the transfer station located on the northeast corner of Third Street and Civic Center Drive and dumped on a "tipping floor." From there, the materials are loaded into a semi tractor-trailer and taken to landfills or recycling facilities.

Urgency: The landfills used by the City are rapidly running out of space for solid waste disposal. In the next few years garbage hauling costs are expected to increase from \$17 to \$55 per ton (325% increase). The hauling costs are also increasing because the refuse must be taken further the City limits as facilities with more space are sought. About 40% of Beverly Hills' solid waste is green landscape material. Thus we are wasting our precious water supplies by over watering our landscapes yielding too much growth that winds up clogging our landfills. Measures for reducing

greenwaste while saving water are available and presented throughout this report.

B. General Plan Principles and Implementation Recommendations

1. The City should reduce the amount of solid waste deposited in landfills by moving to a system that treats solid waste disposal more like other utilities, charging users in proportion to usage.

Implementation Recommendations:

- a. The City should research and establish benchmarks to reduce refuse disposal and increase recycling for the next 20 years.
 - b. The City should replace the current system of large communal receptacles, each serving several properties, with smaller receptacles, serving single residences. Each residence should be responsible for what goes into its receptacle. Zoning laws should require that each residential lot include sufficient area, not accessible by others, for storage of the receptacles.
 - c. Residents should be charged by the number of refuse receptacles used, with steeply incremental fees for large numbers of receptacles. Charges should be reduced or eliminated for use of “recycling” or “greenwaste” receptacles, as long as the recyclable materials are not significantly “contaminated” by other waste.
2. The City should recycle, compost, and reduce greenwaste (lawn clippings, etc.) because it accounts for such a large percentage of the City’s solid waste.

Implementation Recommendations:

- a. The City should provide educational programs for professional gardeners to increase their compliance with new sustainability rules/guidelines.
 - b. The City should regulate professional gardeners and enforce compliance with greenwaste requirements.
3. The City should make it easier for residents to recycle and to otherwise participate in reducing the amount of solid waste being deposited in landfills.

Implementation Recommendations:

- a. Each residence should be provided with separate receptacles for recyclable materials and green waste.²

² This recommendation is also referenced under Solid Waste Disposal 1.c.

- b. New multi-family structures should be required to include separate chutes or other facilities making it easier for residents to separate recyclable materials.
4. The City should consider other strategies to reduce the amount of solid waste being deposited in landfills.

Implementation Recommendations:

- a. The City should require recycling of demolition waste.
 - b. The City should aggressively publicize impending dramatic increases in the cost of disposing of solid waste, and the reasons for those increases.
 - c. The City should consider notifying customers of extraordinary amounts of waste being disposed once individual accountability collection program is established throughout the City.
5. The City should encourage the growth of markets for recycled products.

Implementation Recommendations:

- a. The City should use recycled products whenever recycled products are comparable in quality to products made from virgin materials.
 - b. The City should encourage the use of recycled materials in private construction projects.
6. The City should anticipate needs for new facilities and equipment adapted to future refuse disposal needs.

Implementation Recommendations:

- a. The City should invest in replacement vehicles designed to move refuse to more distant landfills or transfer stations that stay within the principles for energy efficiency.
- b. The City should explore greater co-operation with nearby cities in developing transfer stations.

VI. Energy Resources and Delivery

A. Issues – Factual Background

The City's residents, businesses and visitors are all energy users by the fuel consumed in their vehicles and the power that comes to the facility they occupy. Energy is not provided by the City, but rather by investor-owned utilities. The Southern California Gas Company provides the City natural gas. For the majority of electric customers within the City boundaries, Southern California Edison (SCE) is the power provider. SCE is an investor-owned utility regulated by the California Public Utilities Commission (CPUC). Assembly Bill 1890, the 1996 electric deregulation bill, allowed for electric customers to

purchase power independently from SCE, but still kept in place the distribution monopoly. After the energy crisis, the State legislature issued legislation that suspended indefinitely the option to choose an energy supplier and funded millions of dollars worth of energy efficiency programs and initiatives. Residents, businesses, local governments and contractors may access these funds, depending upon the specific program.

In response to conservation efforts in the summer of 2001, 31% of the residential accounts and 20% of the commercial/industrial accounts qualified for the 20/20 Rebate Program offered that summer by the investor-owned utilities in conjunction with the State. In 2002, State legislation modified the suspension to choosing an energy supplier by granting cities and other community jurisdictions the ability to aggregate purchasing power from another company other than the franchised investor-owned utility who distributes power to the consumer. The City has taken a “wait and see” policy to see what form of aggregation will take shape.

For construction, the Building and Safety Department implements the energy efficiency practices specified in Title 24 of the State Building Code. The US Green Building Council has created a tiered certification process, called Leadership in Energy and Environmental Design (LEED), for energy efficient, water use efficient, and recyclable construction material structures. The certifications establish thresholds of efficiency above Title 24 standards; from merely LEED “certified” to a “platinum” level of efficiency. Each threshold has to meet clearly specified criteria established by the US Green Building Council, and must be certified by trained and credentialed experts as meeting the criteria for each level of certification.

The City indirectly makes policy regarding alternative fuel or energy efficient vehicles. The state and federal government regulate vehicle emissions. The City manages parking structures and parking meters that facilitate the storage of vehicles in public places. Also, the City makes its right of ways accessible to telecommunications companies to build information highways that require no vehicles after installation.

Urgency: Thus the City is faced with another situation where present practices, if unaltered, will become impracticable. Pollution levels continue to increase. Energy costs are accelerating as sources are becoming more difficult to retain without armed conflicts. Pollution lowers the desirability of living and working in the City, resulting in lower property values, business taxes, etc. Alternative energy programs could save the City in efficiencies for costs and health. Leadership and investment are required to implement solutions.

B. General Plan Principles and Implementation Recommendations

1. In analyzing the costs of construction and equipment purchases, the City should consider using life cycle costing, which includes the initial purchase price, estimated energy and other costs over the expected operating life of the item.³
2. The City should encourage energy-efficiency and use of renewable energy sources in City-owned facilities and operations.

Implementation Recommendations:

- a. The City should research and establish benchmarks to achieve energy conservation goals for the next 20 years.
 - b. The City should adopt “green building” standards (e.g. LEED) for all new construction and remodeling, so long as the completed facilities are built at reasonable life cycle cost and perform their intended functions to the high levels expected by the City.
 - c. The City should purchase or lease energy efficient vehicles and equipment, provided that they can deliver required levels of performance at a reasonable life cycle costing assessments.⁴
 - d. The City should continue to monitor energy use in existing facilities and convert to more efficient technologies when appropriate.
 - e. The City should consider the feasibility of satisfying some or all of its own electrical power needs through solar power; large public facilities such as parking structures and roofs may be appropriate locations for solar receptors.
 - f. Where large capital investments are necessary, or where a larger operating base than the City can provide is necessary, the City should encourage the development of regional facilities to exploit energy-efficient technologies.
 - g. The City should use landscaping for public facilities and streets that promotes energy conservation, such as shade trees on south facing walls, and reduce the urban heat island effect by providing shade.
 - h. The City should purchase energy produced from renewable energy sources.
3. The City should require energy-efficiency in new construction and remodeling that goes beyond Title 24, and encourage the use of renewable energy sources.

Implementation Recommendations:

- a. The City should accelerate the use of energy-efficient technologies and construction methods in private construction through its municipal codes.

³ This recommendation is also referenced under Environmental Sustainability Process and Structure.

⁴ A similar recommendation is also referenced under Solid Waste Disposal.

- b. The City should actively promote education of building contractors, residents, business owners and the public generally about green building practices.
 - c. The City should encourage the use of landscaping that promotes energy conservation such as the use of street trees and vegetation for shading.⁵
 - d. The City should encourage the use of renewable energy sources (for example, solar panel installation).
4. The City should attempt to minimize the need for fuel-inefficient vehicle trips.

Implementation Recommendations:

- a. The City should allow mixed-use developments in commercial areas.
- b. The City should participate in regional programs to facilitate and improve public transit and alternative means of transportation.
- c. The City should encourage telecommuting for employment and education.

VII. Telecommunications

A. Issues – Factual Background

Telecommunications is an industry that is no longer telephone service transmitting voice, but rather one that encompasses voice, video and data (telephony, cable and Internet). The City is approaching this phenomenon by assessing the City as a consumer of these services as well as an enabler of these services. As a consumer, the City is constructing the Municipal Area Network to share information and using the Internet to offer more services to the community. As an enabler, the City is regulating how these telecom companies enter or expand within this jurisdiction.

The Committee formulated recommendations regarding cable TV, Municipal Area Network, and general deployment of telecommunications services throughout the City. This topic branches into economic sustainability, which is also a part of the Committee's charge. At the same time promotion of advanced telecommunications potentially reduces pollution and traffic congestion.

B. General Plan Principles and Implementation Recommendations

- 1. The City should continue development of the Municipal Area Network for City and school facilities.

⁵ A similar recommendation is also referenced under Energy 2.g.

2. The City should explore opportunities for expanding the Municipal Area Network to residences and businesses.

Implementation Recommendations:

- a. The City should explore the possibility of using the network for utility meter-reading.

3. The City should encourage development of one or more broadband networks in the City.

Implementation Recommendations:

- a. The City should encourage private investment of the necessary capital costs (e.g., by licensing the use of space in existing sewer pipes for fiber-optic cable, thereby avoiding the costs and inconvenience of digging up streets to lay new conduit).

4. The City should anticipate needs for wireless antenna placement and encourage placement on appropriate existing City facilities.

VIII. Other City Infrastructure (streets, alleys and other public rights of way)

A. Issues – Factual Background

The Committee formulated recommendations regarding streets, alleys, and other public rights-of-way. The City's infrastructure has been maintained in the past according to master planning documents that study the life of the system and existing or new technologies. The Committee agrees with this approach of assessing maintenance and upgrade needs, but urges the adoption of life cycle costing in such considerations. The Committee suggests consistency in infrastructure development with the other environmental sustainability goals, including energy, water and refuse disposal.

B. General Plan Principles and Implementation Recommendations

1. The City should continue to maintain and upgrade infrastructure according to schedules based on the anticipated life of each system, while adopting proven practices and technologies that will advance other environmental sustainability goals, maintain high quality standards and reduce long-term costs.

Implementation Recommendations:

- b. The City should use recycled products and material whenever they are comparable quality to products made from virgin materials.⁶
- c. The City should consider the use of water-permeable materials where appropriate.⁷

⁶ This recommendation is also referenced under Solid Waste Disposal.

⁷ This recommendation is also referenced under Water.

- d. The City should implement a centrally controlled irrigation system to promote water-use efficiency.

IX. Resources for Implementation

A. Capital Investments:

Many of the implementing recommendations for the City as an entity will require capital investments. Sustainability requires capital investments routinely made by the City to utilize life-cycle costing in the budget analysis.

B. Education:

In order to raise the awareness of environmental sustainability principles, significant public outreach effort is recommended. Education will also be the means to dealing with those in the public who may initially resist some of these recommendations. The outreach should be tailored to specific audiences, and will include print materials such as posters, bookcovers, brochures, to postcards. In addition, City should develop web pages on the City's web site and utilize cable TV to spread the message. The Committee also recommends building collaborative relationships between the school district, the business community and other community associations to raise awareness. The City should utilize existing facilities to create learning space to illustrate environmental principles such as at the Public Works Facility.

C. Human Resources

City staff time will either have to be reallocated to help implement these goals or new positions will have to be created. Staff would be required to educate, implement and enforce these recommendations. If existing staff is used, training about environmental sustainable principles is suggested. In addition, the Committee recommends using volunteers in the outreach campaigns.

X. Conclusion

The General Plan Environmental Sustainability Topic Committee respectfully submits these recommendations to the City Council and the Planning Commission for approval. The vision for the City is to achieve a greater degree of environmental sustainability within the City and at the same time making good business investments that will see returns in the near and far future.