

## 7 INFRASTRUCTURE AND PUBLIC SERVICES ELEMENT

*The Infrastructure Element provides information and policy guidance related to community infrastructure available in Livermore and its Planning Area.*

State law does not require a separate Element covering these topics, however it does require the Land Use Element to include “the proposed general distribution and general location and extent of the uses of the land for...solid and liquid waste disposal facilities...” and it requires the Circulation Element to include information on “the general location and extent of existing and proposed...public utilities and facilities.” These components are included in this Element, which covers the following topics:

- ◆ Water Facilities and Service
- ◆ Wastewater Collection and Treatment
- ◆ Storm water Collection

In addition, this element covers the following public services:

- ◆ Public Utilities
- ◆ Police Services
- ◆ Urban Fire Protection
- ◆ Schools
- ◆ Solid Waste Collection
- ◆ Community Health Facilities
- ◆ Child Care
- ◆ Libraries

The Isabel Neighborhood Specific Plan (INSP) establishes the infrastructure improvements and public services needed to support development in the Isabel Neighborhood area (see Figure 3-3 for boundaries). Refer to the Isabel Neighborhood Specific Plan for the applicable policies.

Public services are provided by various government entities. In addition to the City itself, other agencies such as Alameda County, the Livermore Area Recreation and Park District and the Livermore Valley Joint Unified School District provide some of the public services

discussed in this section. This section provides background information on the services provided by both the City and the other agencies. Park and recreation facilities are discussed in the Open Space and Conservation Element.

## **I. WATER FACILITIES AND SERVICE**

### ***A. Background Information***

#### **City of Livermore Water Supply Sources**

Potable water and raw water for agricultural irrigation is provided to the City of Livermore from a variety of sources. Zone 7 Water Agency (Zone 7) is the water wholesaler. California Water Service Company (Cal Water) and Livermore Municipal Water provide retail service, and the City and County of San Francisco's Hetch Hetchy water supply system provides water directly to Lawrence Livermore National Laboratory and Sandia National Laboratory. Cal Water supplies the Downtown area and southern portion of the City, while Livermore Municipal Water serves the northwest, northeast, and eastern portions of the City. These water sources are briefly described below.

#### **Zone 7 Water Agency**

Zone 7 of the Alameda County Flood Control and Water Conservation District supplies treated water to retail water agencies, such as the City of Livermore, Pleasanton, Cal Water and the Dublin San Ramon Services District, for municipal and industrial use. Zone 7 also supplies untreated, or non-potable, water to non-municipal users such as agricultural operators.

Approximately 70 percent of Zone 7's water supply comes from the State Water Project, a statewide system of reservoirs, canals, pipelines, and pump stations that transport surface water drawn from rivers, lakes, and reservoirs, such as the Del Valle Reservoir. In the Livermore area, this system is comprised primarily of the South Bay Aqueduct. The balance of the Zone 7 service area supply is from local runoff conserved in Lake Del Valle, local groundwater, and supplemental surface water sources, such as the Byron Bethany Irrigation District (BBID). Zone 7 also has additional water storage capacity in the Semitropic Water Storage District (Semitropic) in Kern County for storage of surplus water for later use. Dur-

ing dry years, Zone 7 can receive water from Semitropic by way of entitlement exchanges with Southern California State Water Project contractors, such as the Metropolitan Water District of Southern California.

Zone 7 currently has a long-term average sustainable water supply of 84,100 acre-feet/year. In Livermore, the long-term water demand is estimated to be approximately 22,000 acre-feet. Zone 7 projects that it can supply sufficient water supplies to meet the City's future treated water needs, assuming that it continues to receive its contractual allocation from its supply sources.

Zone 7 also supplies untreated water to agricultural users and privately-owned golf courses in Livermore. The current demand for untreated water is approximately 7,500 acre-feet per year. The City of Livermore anticipates the potential for a large increase in agricultural production in the South Livermore Valley, and possibly the North Livermore Valley, over the next 20 years. Zone 7 meets untreated water demand through deliveries from the South Bay Aqueduct, which is part of the State Water Project and expects to meet its anticipated future raw water conveyance needs for future untreated water demands.

### **California Water Service Company**

Cal Water provides water to an area that generally includes the older Downtown area of the City of Livermore. The Cal Water service area is south of I-580, east of Kitty Hawk Road (Isabel Avenue) and west of First Street to Trevarno Road, Barber Street to Colgate Way, Jackson Avenue to East Avenue, North Mines to Tesla Road and Wente Road.

Water supplied by Cal Water to the Downtown area of Livermore comes from the Zone 7 Water Agency and from wells they own and operate. Currently, the average water supply to the Cal Water service area is 12 million gallons per day (MGD). Cal Water also has 12.09 MGD of storage available in several locations around their Livermore service area. The system is divided into 5 pressure zones.

Cal Water fire flows are lower than the fire flows provided by the Livermore Municipal Water Division, which meet the requirements of the Livermore Pleasanton Fire District. The

water system may require improvements to meet those standards for redevelopment, particularly in the Downtown area.

### **City and County of San Francisco Hetch Hetchy Water Supply System**

The Lawrence Livermore National Laboratory and Sandia Laboratory are served directly from the City and County of San Francisco's Hetch Hetchy water supply system. It is anticipated that the Lawrence Livermore National Laboratory and the Sandia Laboratory will continue to be served directly from the Hetch Hetchy supply system.

### **Livermore Municipal Water Storage and Distribution System**

Livermore Municipal Water is the water retailer in the northwest, northeast, and east portions of the City. The City receives its water from Zone 7 through seven permanent turn-outs. The turn-outs are located off Zone 7's Cross Valley Pipeline, which traverses the City from east to west. Livermore Municipal Water stores water in reservoirs, which are grouped into three main pressure zones. The City's water distribution system along with Cal Water's service area is shown in Figure 7-1.

In order to meet its short term storage needs, the City is planning two new reservoirs (one 3 million gallon (MG) reservoir for Zone 1 and one 5 MG reservoir for Zone 3), which are expected to be constructed by the end of 2004. These new reservoirs are expected to enhance the City's current system reliability. In order to meet the City's projected future storage needs, additional water storage reservoirs will be needed. The exact sizes of these reservoirs and the timing of their construction will be dependent on water usage patterns and future development and General Plan build out projections.

The City's transmission and distribution pipelines, in 2002, included 113 miles of pipeline, which vary in diameter from 6 to 22 inches. The water distribution system delivers water at sufficient volumes and pressures to service residential, commercial and industrial users. Additional water mains will need to be constructed in order to meet the City's projected water use.

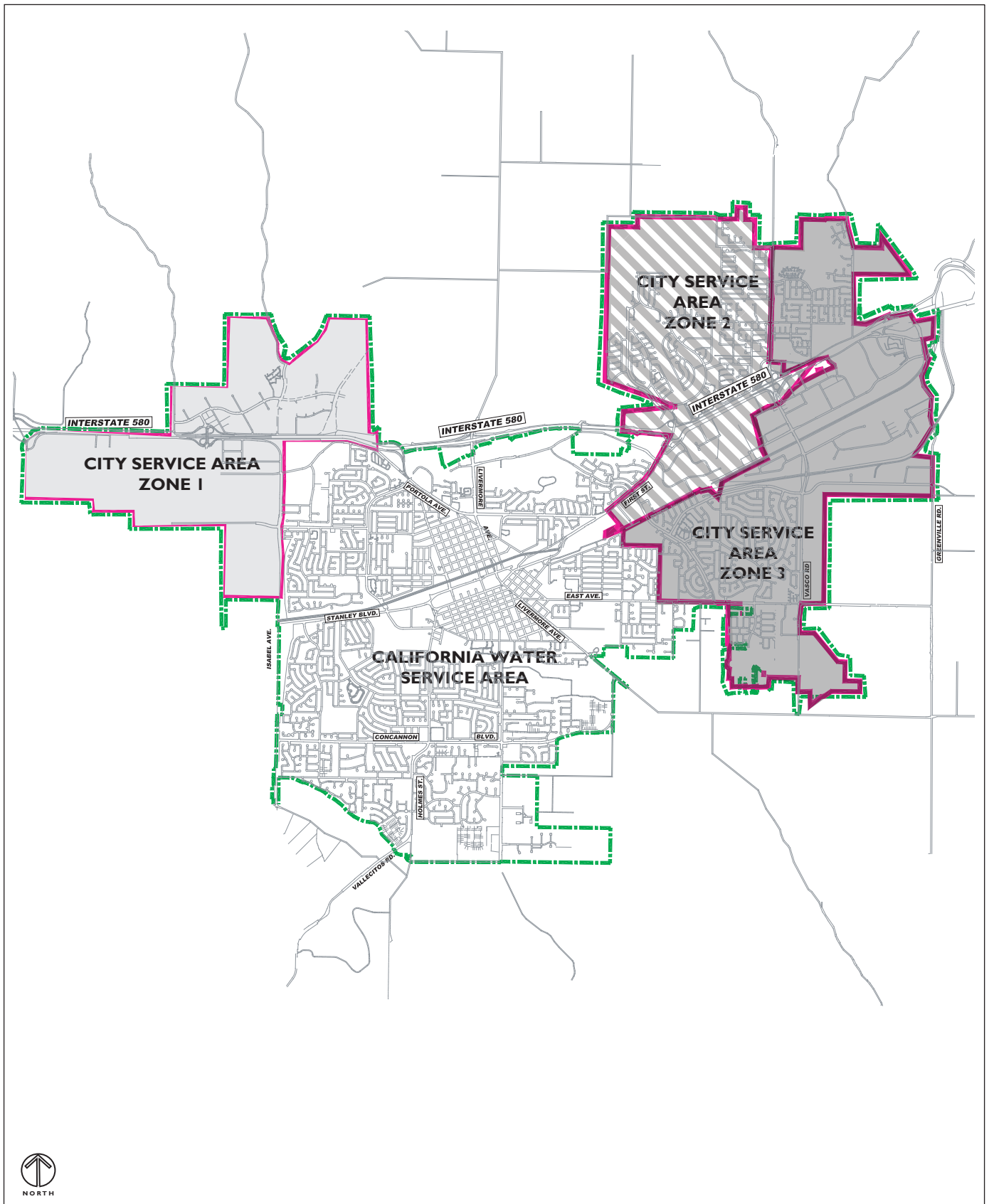


FIGURE 7 - 1

## WATER SERVICE DISTRICTS

*B. Goals, Objectives, Policies, and Actions*

<p><b>Goal INF-1</b> Provide sufficient water supplies and facilities to serve the City in the most efficient and financially sound manner, while maintaining the highest standards required to enhance the quality of life for existing and future residents.</p>
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**Objective INF-1.1** Plan, manage and develop the public water treatment, storage and distribution systems in a logical, timely and appropriate manner.

Policies

- P1. Potable water shall be available to the City's residents and businesses.
- P2. The City shall maintain a water system capable of sustaining required fire flows at all times. The City shall work with California Water Service Company to insure its system also meets required fire flows.
- P3. Support the development of additional sources of irrigation water for vineyards and other cultivated agriculture by investigating recycled water and development of other supply and delivery resources.
- P4. The City shall work with Zone 7 to consider developing a pump monitoring and cost allocation system to cover the cost of new potable water in the event that additional supplies are needed.
- P5. Development will not result in a reduction of water quality below those standards set forth in State and federal laws and regulations.

Actions

- A1. Review and update as necessary ordinances, policy procedures and/or fee programs establishing the requirement and mechanisms for collecting financial contributions from new development.

- A2. Update the master plan prepared for water as necessary for the areas supplied by the City to identify appropriate storage, pumping and distribution systems to support the current and proposed land use development projections in the General Plan.
- A3. Identify and budget for additional operation costs to support the expanded water storage, pumping and distribution system.
- A4. Implement the capital improvement project recommendations contained in the updates to the master plan prepared for water.
- A5. Work with Cal Water to improve their existing infrastructure to meet City and fire flow, pressure and storage standards.
- A6. Prepare a multi-year schedule in the Capital Improvement Program of water infrastructure improvements.
- A7. Criteria to be used for the design of the potable water system shall be in the master plan prepared for water, including maximum day water demand, peak hour/maximum day water demand, fire flow requirements, water storage requirements, and adequate water pressure.
- A8. All new development projects shall be responsible for constructing an adequate potable water distribution system and paying water connection fees to construct additional necessary storage, pumping and distribution facilities.

**Objective INF-1.2    Require coordination between land use planning and water facilities and service to ensure that adequate water supplies are available for proposed development.**

### Policies

- P1. The potable water distribution and storage system shall be sized to serve development anticipated under the General Plan and shall not provide for additional growth and development beyond that anticipated under the General Plan.
- P2. The approval of new development shall be conditioned on the availability of sufficient water supply, storage and pressure requirements from the City, California Water Service Company and Zone 7 for the project as applicable.
- P3. Structures with plumbing that are located within City limits shall connect to the water system, unless distance from public water system or other factors indicate a need for an exemption.
- P4. Extensions of water service beyond the City-approved service area shall be prohibited. Exceptions shall be made for unusual public health and safety hazards, as determined by the City Council.
- P5. Water storage and distribution system extensions beyond the approved service area shall be prohibited unless such water services are needed to serve properties within the City's Urban Growth Boundary (UGB).
- P6. A water storage tank site study shall be conducted to identify the location of proposed water storage tanks. The location selection and construction of these storage tanks should seek to minimize the visual and environmental impacts that such facilities could have to the surrounding areas.
- P7. Major utility lines, such as water supply mains and fire protection mains, shall be carefully planned where they cross a seismic fault. They shall cross at right angles, or nearly so, be accessible for rapid repair, and be provided with safety features such as automatic shutoff valves, switches and expansion joints. Other equipment shall be provided to ensure minimal adverse impact on adjacent and surrounding areas and to facilitate restoration of service in the event of fault displacement.

- P8. The design of water distribution systems shall seek to minimize crossings of wetlands or creeks. Water lines that cross existing creeks should be located at road crossings and use sewer bridges to span the creek at crossings, where possible, or go under creeks.
- P9. Installation of the water distribution system should occur concurrently with construction of new roadways to maximize efficiency and minimize disturbance due to construction activity.
- P10. Rural development using individual wells shall be responsible for conforming to applicable health standards and for obtaining the necessary permits from the State of California Department of Health Services, Alameda County, and Zone 7.

**Objective INF-1.3 Identify potential water conservation and recycling opportunities that could be served by the City's existing recycled water system.**

Policies

- P1. Voluntary reductions by existing users in per capita water use shall be encouraged.
- P2. Projects deemed appropriate for the use of recycled water shall be required to use recycled water, when available, for uses outlined in the State Water Code.
- P3. The City shall adopt a series of Best Management Practices for water conservation measures that will be mandatory in new development and strongly encouraged in existing developments.
- P4. Require compliance with the State and City's mandatory water efficient landscape ordinance.

Actions

- A1. Develop and provide incentives for existing and future customers to reduce water consumption.

- A2. Develop and institute a City-sponsored program of mandatory water conservation measures for new development. Develop a program for existing developments that is based on a voluntary participation with incentives to achieve specific targets for water conservation. Examples include:
- (a) Ultra-low flush toilets
  - (b) Plumbing retrofits
  - (c) Leak detection
  - (d) Efficiency standards for water-using appliances and irrigation devices, and industrial and commercial processes
  - (e) Gray water use
  - (f) Swimming pool and spa conservation measures such as covers to reduce evaporation
  - (g) Xeriscape landscape design standards
- A3. Require all new industrial, commercial and office development within pressure Zone 1 to use reclaimed water for landscape irrigation, where available.

## II. WASTEWATER COLLECTION AND TREATMENT

The following discussion provides information on the wastewater collection, treatment, and disposal system in Livermore.

### *A. Background Information*

Within the City of Livermore, sewer service is provided by the City of Livermore's Public Services Department. With the exception of two pump stations, all of the wastewater flow in Livermore is conveyed to the wastewater treatment plant by gravity. The City's wastewater treatment plant treats raw sewage to meet regional standards. The majority of treated water is then conveyed to an export system which transports the treated effluent to a

discharge point in the San Francisco Bay. A portion of the treated wastewater is used as reclaimed water. A brief discussion of Livermore's wastewater facility is outlined below:

### **Wastewater Collection**

The City of Livermore owns, operates and maintains a wastewater collection system. As of May 2003, there were over 250 miles of existing sewer lines within the City ranging in size from six to forty-eight inches in diameter.

In order to determine appropriate collection system sizing, a new Sewer Master Plan will be prepared. The amount of wastewater generated by various land uses within the City of Livermore was estimated by using the flow coefficients identified in the City's 1995 Facilities Planning Guidelines. Based on projected wastewater flow for the General Plan build out, there will be a need for extensive improvements to the existing collection system.

### **Wastewater Treatment**

The Water Resources Division of the City's Public Services Department operates the City of Livermore's Water Reclamation Plant. The Water Reclamation Plant's 2003 capacity is 8.5 MGD (average dry weather flow).

The 2001 Livermore Water Reclamation Plant Master Plan identifies a shortfall of capacity to treat and dispose of sewage flows beyond the current average dry weather flow of 8.5 MGD. New facilities at the Water Reclamation Plant would be needed to handle projected ultimate flows. The City has planned a Phase VI expansion project to address this need and has a sanitary sewer impact fee program in place to fund the required improvements. Completion of the Phase VI project would provide sufficient capacity for the plant to process the projected ultimate flows.

The 2003 average dry weather daily inflow to the treatment plant is approximately 6.5 MGD and peak wet weather flows regularly approaches 8.0 MGD. Development already approved by the City is estimated to generate an additional dry weather inflow of up to 0.6 MGD. It is estimated that at build-out of the General Plan, sewage flows are estimated to reach 10.0 MGD of average dry weather flow and approximately 12.26 MGD of wet weather flow.

## **Wastewater Disposal**

Wastewater treated at the Livermore Water Reclamation Plant is conveyed to the Livermore Amador Valley Water Management Agency (LAVWMA) export pipeline via a gravity-flow pipeline (known as the Livermore sole-use interceptor) that conveys the effluent to a LAVWMA metering structure. The rated capacity of the Livermore gravity interceptor is 9.2 MGD for both dry weather and wet weather flows. At the metering structure, effluent from the Livermore Water Reclamation Plant combines with wastewater treatment plant effluent from the Dublin San Ramon Service District and the City of Pleasanton. The combined effluent then flows through two flow equalization basins, receives additional chlorination, and is pumped through the LAVWMA export pipeline to the East Bay Dischargers Authority, which is responsible for dechlorination and final flow discharge into the San Francisco Bay.

The 2002 peak wet weather flow capacity of the existing LAVWMA export pipeline was 21 MGD. The City shares this overall capacity with Dublin San Ramon Service District and the City of Pleasanton. Livermore's portion of the existing LAVWMA pipeline capacity is 8.73 MGD during peak wet weather flow conditions.

### *LAVWMA Export Pipeline Facilities Improvement Project*

LAVWMA has initiated a project to increase its wastewater disposal capacity by expanding wastewater export facilities. This project began construction in May 2001 and is expected to be completed in 2004. This project was taken to the voters of the cities of Pleasanton and Livermore in November of 1998. Neither Pleasanton nor Livermore has any responsibility to participate in the expansion portion of the project unless their respective voters approve their participation, although both cities will participate in the rehabilitation of the existing pipeline. The City of Pleasanton did vote to participate in the project, but the ballot measure in Livermore (Measure Q) failed.

Completion of the project will expand LAVWMA's average dry weather flow disposal capacity from 21 MGD to 41.2 MGD through a combination of replacement pipelines, parallel pipelines, rehabilitation of the existing export pipeline, and construction of new pumping stations. The LAVWMA Joint Powers Agreement limits the City to a maximum LAVWMA allocation of an average daily flow of 11.1 MGD, but this capacity can only be reached if the discharge line is upgraded and the City's treatment plant is expanded.

One option to increase effluent disposal capacity is to reconsider participation in the LAVWMA expansion project. This option, which is open through November 2005, would increase Livermore's capacity to a peak wet weather flow of 12.4 MGD and would be capable of accommodating projected build-out flows under the General Plan.

#### *Water Reclamation*

Water reclamation, or recycling, is a potential alternative means for providing additional effluent disposal capacity at the Livermore Water Reclamation Plant (WRP). The City currently maintains approximately 10 miles of reclaimed water pipe lines. Water recycling could be used as an alternative to participation in the LAVWMA expansion project. However, significant modifications to the existing system would be needed to provide reliable year-round additional disposal capacity. Additional recycled water receiving sites must be identified to provide sufficient disposal capacity. Also, additional storage, pumping and transmission main facilities must be provided to store and distribute recycled water over the year to match demand, as the majority of recycled water demands would occur during the irrigation season between May and October.

The difficulty in using recycled water involves the timing of (1) wastewater flow and (2) irrigation demand in Livermore. In order for Livermore to increase the use of recycled water, the City would need to expand its long-term (seasonal) and short-term (daily) storage capacity and integrate it into its overall water recycling system. Seasonal storage is required when there is no other alternative disposal option available during the winter months. Short term or daily storage is required because most recycled water is used during the night for irrigation, although the majority of wastewater is produced during the day.

#### *B. Goals, Objectives, Policies, and Actions*

<p><b>Goal INF-2</b>    <b>Collect, treat and dispose of wastewater in ways that are safe, sanitary, environmentally acceptable and financially sound while maintaining the</b></p>
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**highest standards required to enhance the quality of life for existing and future residents.**

**Objective INF-2.1 Plan, manage and develop wastewater collection, treatment and disposal systems in a logical, timely and appropriate manner.**

Policies

- P1. Municipal sewer treatment shall be available to the City's residents and businesses.
- P2. Septic tanks shall be allowed only in agricultural zones if approved by Zone 7 and the Alameda County Health Department.
- P3. The approval of new development shall be conditioned on the availability of adequate long-term capacity of wastewater treatment, conveyance and disposal sufficient to service the proposed development.
- P4. The City shall implement a wastewater disposal master plan designed to provide for the disposal of peak wet weather flows anticipated under buildout of the General Plan. No new development entitlements shall be granted once the Average Dry Weather Flow reaches 7.0 million gallons per day at the Water Reclamation Plant until a master plan for sewer has been adopted that addresses the capacity shortfall, including a schedule for implementation. This master plan may include any, or a combination of the following components:
  - (a) Increased water reclamation, storage and disposal via agriculture irrigation and/or other uses.
  - (b) Increased water reclamation, storage within an approved Zone 7 facility such as the Chain of Lakes, and disposal via irrigation within Livermore and the surrounding vicinity.
  - (c) The purchase of additional capacity in the LAVWMA export pipeline. This option must be approved by the voters of Livermore through a subsequent ballot measure.

- (d) Other options as may be developed that are more cost effective and/or environmentally superior.
- P5. All new development shall demonstrate to the City that the downstream sanitary sewer system is adequately sized and has sufficient capacity to accommodate anticipated sewage flows. If the downstream mains are found to be inadequate, the developer shall provide additional facilities to accept the additional sewage expected to be generated by the development.
- P6. Structures with plumbing that are located within City limits shall connect to the public wastewater collection system, unless topography, or distance from the public sewer system indicate a need for an exemption.
- P7. Major sewer collection and transmission systems shall be carefully planned where they cross a seismic fault. They shall cross at right angles, or nearly so, be accessible for rapid repair, and be provided with safety features such as automatic switches, expansion joints and sufficient drop between manholes to accommodate vertical displacement across faults. Other equipment shall be provided to ensure minimal adverse impact on adjacent and surrounding areas and to facilitate restoration of service in the event of fault displacement.
- P8. Sewer collection and transmission systems shall be designed and constructed in such a manner as to minimize potential inflow and infiltration.
- P9. The criteria used to design the sanitary sewer system shall be in the master plan prepared for sewer as well as the guidelines for facilities planning, including reliance on gravity drainage to minimize pumping to the extent feasible and basing pipe size on the wet weather flow required per the master plan prepared for sewer.
- P10. All new development projects shall be responsible for construction of a sanitary sewer collection and conveyance system as part of the Citywide infrastructure plan. This system shall be designed to serve developments within the approved

General Plan only and shall not be extended to serve uses outside of the Urban Area.

- P11. The sanitary sewer system shall be designed and constructed in such a manner as to minimize potential environmental impacts.
- P12. The City of Livermore shall pursue the implementation of Water Reclamation Plant capacity improvements necessary to accommodate the peak hour wet weather flows anticipated under buildout of the General Plan.

#### Actions

- A1. Prepare a master plan for sewer and update as needed, to identify current deficiencies and quantify needs based on development patterns established in the General Plan. Identify necessary improvements and establish priorities for these improvements. Issues should include:
  - (a) Identify the most reliable and cost effective disposal options.
  - (b) Comprehensive analysis of the overall collection system.
  - (c) Evaluation of feasibility of alternative rehabilitation techniques.
  - (d) Infiltration and inflow (I/I) analysis and effective ways to minimize I/I.
  - (e) Water conservation measures.
- A2. Improvements that increase the capacity of the City's Water Reclamation Plant shall undergo environmental analysis pursuant to the California Environmental Quality Act, and shall, at a minimum, consider heights limits in proximity to the Municipal Airport, effects on the underlying water aquifer, effects on special status wildlife habitat, and effects of secondarily treated effluent on the San Francisco Bay and Arroyo Las Positas.
- A3. In areas of high water table, construction materials and techniques shall be used so as to minimize potential inflow and infiltration. Such techniques may include use of water pipelines that have joint designs capable of withstanding higher pres-

sure than standard sewer pipes, using plastic pipe with welded joints, or other pipe types approved by the City.

- A4. Enforce the City code requiring all properties with plumbing, located within 200 feet of wastewater sewer, to connect to the public sewer system.
- A5. Sewer mains proposed to be constructed parallel to and within creek corridors shall be located within a dedicated easement along the outer boundary of the corridor to avoid impacting creek habitat.
- A6. Design of the sewer collection system shall seek to minimize crossings of wetlands or creeks. Sewer mains that cross existing or proposed creeks should be located at road crossing, use sewer bridges to span the creek at crossing where possible (depending on depth of grade), or go under the creek.
- A7. Installation of the sanitary sewer system should occur concurrent with construction of new roadways to maximize efficiency and minimize disturbance due to construction activity.
- A8. Sections of impermeable backfill (“trench dams”) should be constructed across sewer trenches at the boundaries of preferential flow paths to prevent groundwater flows within the preferential flow paths from being diverted along the alignment of the sewer path.
- A9. The City shall utilize sanitary sewer connection fees collected from new development and elsewhere within the City to construct necessary improvements to the City’s trunk sewer mains (as identified in the latest master plan prepared for sewer) in order to accommodate anticipated cumulative development.

## **Objective INF-2.2 Enforce City wastewater regulations**

### Policies

- P1. Restaurants and others that discharge grease into the wastewater treatment system shall be required to reduce impacts through individual or collective pretreatment

facilities that retain wastewater long enough to permit solids to settle and oil and grease to separate.

- P2. Regulations related to the discharge of mud and silt into the wastewater treatment system shall be enforced.

#### Actions

- A1. Enforce current requirements for industrial and commercial users to install pre-treatment facilities to reduce the loading of toxic and conventional pollutants to the Livermore Water Reclamation Plant.
- A2. Conduct outreach and education to industrial and commercial users to implement pollution prevention techniques to reduce pollutant loading as much as possible.

### **III. STORM WATER COLLECTION**

#### ***A. Background Information***

##### **Creeks and Arroyos**

The existing storm drainage system consists mostly of underground pipes and local creeks. These facilities carry runoff water within the drainage basin to nearby flood control channels and arroyos.

The Livermore Valley drains in a westerly direction to the Arroyo de la Laguna, then to Alameda Creek, near Sunol. The Alameda Creek basin drains an area primarily east of the Coast Range to San Francisco Bay through Niles Canyon. The Livermore Valley watershed has four major drainage watersheds, each drained by a major channel: Arroyo del Valle, Arroyo Mocho, Arroyo Las Positas and Altamont Creek.

The Zone 7 Water Agency is responsible for flood control and/or stream management of some portions of Arroyo Las Positas, relocated Arroyo Las Positas, Altamont Creek, a por-

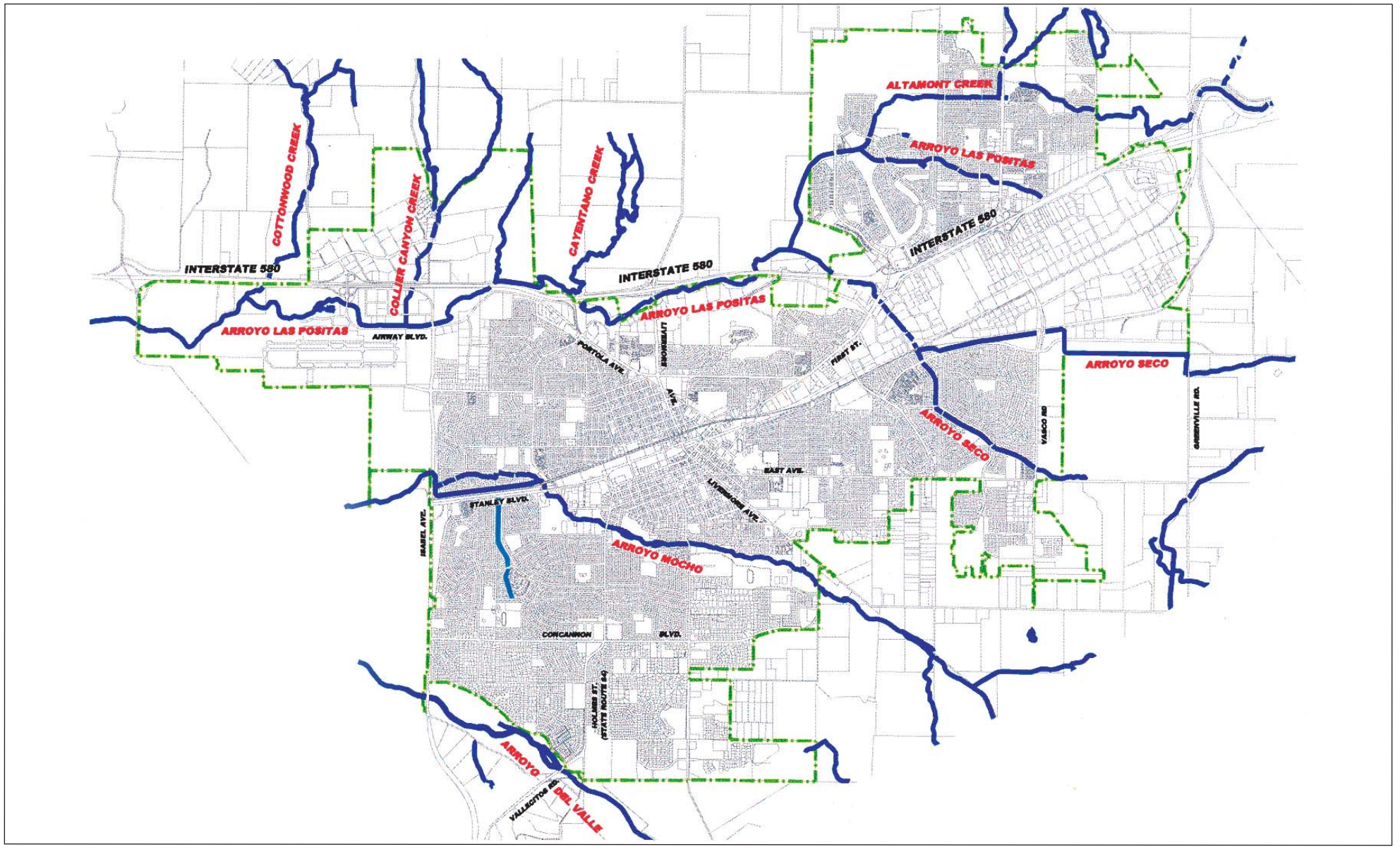
tion of Arroyo Mocho, Arroyo Seco, and Collier Canyon Creek, within the City of Livermore.

There are areas where flood control improvements are required, specifically along four sections of Arroyo Las Positas and one section of Arroyo Mocho. The sections along Arroyo Las Positas include Altamont Creek to Heather Lane, Kitty Hawk Road to Airway Boulevard, I-580 to Kitty Hawk Road, and east of Airway Boulevard to El Charro Road. The section along Arroyo Mocho is between Concannon Boulevard and Stanley Boulevard. Recommended management measures for these sections were identified in the Arroyo Mocho and Arroyo Las Positas Management Plan completed for the City in December 2000 by Philip Williams and Associates. Planned flood control improvements are expected to address flooding concerns through stabilization measures and controlled sediment transport and deposition. Implementation of the improvements recommended for Arroyo Las Positas would alleviate recurring flooding at the Las Positas Golf Course. Improvements to the Altamont Creek, east of Laughlin Road and north of I-580 are anticipated as development occurs in this area.

### **Storm Drain Collection System**

The City of Livermore's storm drain system, shown in Figure 7-2, consists of more than 200 miles of pipeline, ranging in size from 8 to 66 inches in diameter. Most of the drainage reaches are relatively short due to the proximity of many major channels. A few new detention basins, constructed with the development of new subdivisions within Livermore, were established to maintain runoff levels to predevelopment levels and mitigate impacts to sensitive species.

The City's 1995 Storm Drainage Master Plan identified a large number of capacity-related deficiencies in the existing storm drainage system. However, many of the deficiencies were attributable to the adoption of more demanding design criteria since the time the storm drains were originally built. In most cases, the system handles typical rainfall events well. A new Storm Drainage Master Plan will be prepared to identify future system improvement requirements.



- CREEK OR ARROYO
- STORM DRAIN CHANNEL
- - - - - CITY LIMITS

FIGURE 7 - 2

## STORM DRAIN SYSTEM

### **Storm Water Pollution Control**

The City of Livermore protects the surface water from pollution by ensuring that storm water discharges comply with San Francisco Bay Regional Water Quality Control Board (RWQCB) permit requirements, establishing non-point source pollution control measures as required by federal and State law. Storm water pollution prevention measures for new development projects, such as swales, retention ponds, erosion, and sedimentation control, are incorporated in the planning, design, construction, and operation of projects with the potential to create pollutants in storm water runoff.

In Alameda County, a countywide storm water program has been established to provide guidance to cities with respect to establishing programs to implement the Clean Water Act requirements. The main goal of the program is to reduce the amount of pollution in storm water runoff. New development planning guidelines are intended to design mechanisms which prevent pollutants such as soil, petroleum products, pesticides, litter and construction materials, for example, from entering the storm drain system. In the future, the City of Livermore will have to abide by stricter requirements for stormwater runoff created by new and redevelopment projects. New, more stringent requirements were incorporated into the City's permit from the Regional Water Quality Control Board (RWQCB). As of mid-February 2003, the new requirements were imposed on commercial, industrial and residential developments that create one acre or more of new impervious surfaces. This includes new roadway projects and redevelopment projects which create one acre or more of impervious surface. After 2006, the size threshold triggering the need for storm water treatment controls will decrease to 10,000 square feet of impervious surface. The fiscal impact of these new requirements will be significant in areas where land is unavailable to provide on-site stormwater treatment.

*B. Goals, Objectives, Policies, and Actions*

**Goal INF-3    Collect, store and dispose of stormwater in ways that are safe, sanitary, environmentally acceptable and financially sound while maintaining the highest standards required to enhance the quality of life for existing and future residents.**

**Objective INF-3.1    Plan, manage and develop the City’s stormwater collection system in a logical, timely and appropriate manner.**

Policies

- P1.    Design local storm drainage improvements to carry appropriate design-year flows resulting from build out of the General Plan.

Actions

- A1.    Complete a new master plan for storm drainage facilities and update as needed, in order to accurately evaluate the storm drainage flows and determine appropriate facility improvements consistent with the General Plan.
- A2.    Prioritize storm drainage improvements recommended in the storm drainage master plan and implement the projects through the City’s Capital Improvement Program.

**Objective INF-3.2    Encourage coordination between land use planning, site design and stormwater pollution control.**

Policies

- P1.    All new development projects shall be responsible for constructing a stormwater collection system and contributing stormwater collection fees to construct additional necessary facilities. These fees include the City storm drain fees as well as Zone 7 regional storm drainage fees.

- P2. Criteria used to design the stormwater system shall be in the master plan prepared for storm drainage.
- P3. The City shall take all necessary measures to regulate runoff from urban uses to protect the quality of surface and ground-waters and other resources from detrimental conditions.
- P4. Installation of stormwater collection systems should occur concurrently with construction of new roadways to maximize efficiency.

#### Actions

- A1. Revise the Subdivision Ordinance and other Municipal Code sections to reduce the creation of impermeable surfaces in new development. Examples of strategies to reach this goal might include:
  - (a) Requiring the use of vegetative swales (biofilters).
  - (b) Requiring detention/infiltration basins.
- A2. Existing property owners shall be encouraged, or required as appropriate, to reduce stormwater runoff by reducing impermeable surfaces.

**Objective INF-3.3 Maintain creeks and arroyos in as natural a state as possible, while maintaining the health and safety of residents, providing flood control, preserving habitat and providing recreational use.**

#### Policies

- P1. Stream modifications should only be allowed for development in order to better contain flood flows, re-route stormwater to restore creek conveyance capacity and enhance groundwater recharge, stabilize creek beds and banks and control erosion, remove sediment and debris, provide public access for maintenance and emergency vehicles, provide for trails and recreational facilities, restore creek natural habitat and wetlands areas and provide for water filtration.

- P2. Any stream modifications and flood control structure improvements shall be done in accordance with appropriate engineering design, resource agency approvals, and current environmental restoration best management practices.
- P3. Recreational opportunities adjacent to the arroyos and creeks shall be incorporated where possible. Primarily bikeways and trails shall be located adjacent to the arroyo and creek corridors as outlined in a master plan prepared for bikeways and trails.
- P4. Arroyos shall not be channelized (i.e. converted to a trapezoidal form) or concrete lined. Modifications should only be allowed for public safety reasons. Flood control improvements such as capacity enhancement shall be done in accordance with appropriate engineering design and current environmental best practices.
- P5. New development shall be required to incorporate appropriate measures to minimize the impacts of stormwater runoff to local creeks and channels.

#### Actions

- A1. Educational opportunities regarding habitat and natural resources on local creeks and arroyos may be provided, as appropriate.
- A2. The City will work cooperatively with the parks districts, various County and private groups and organizations as appropriate to determine the site specific design criteria and conditions of acceptance as well as the long-term ownership and maintenance responsibilities. Expertise, long-term maintenance capability, acceptability of the improvements, type of facility, use, primary purpose of facility are among the factors that shall be used to evaluate agency, group or organization responsibility.
- A3. The City shall continue to cooperate with Zone 7 to improve and maintain the flood control system.

- A4. The City shall work with other agencies to determine the appropriate ownership and long-term maintenance responsibilities for each creek and arroyo property or easement.

#### **IV. PUBLIC UTILITIES**

This section discusses the utilities needed to support build out of the land uses identified in the Land Use Element of the General Plan while maintaining and improving existing levels and service standards for the City's residents. This section establishes goals and policies that address the provision of electricity, natural gas, telecommunications, and solid waste services necessary to maintain the quality of life of existing and future Livermore residents.

##### ***A. Background Information***

##### **Electricity**

The Pacific Gas and Electric Company (PG&E) provides electricity within the Livermore area. Most of Livermore's electric power is delivered via a 230-kilovolt (kV) transmission line running between the Contra Costa Power Plant near Antioch and the Newark Substation. The power is then distributed to local substations, which reduce the power to a lower voltage so it can be passed on to consumers. PG&E operates several 69-kV electrical substations within and in the vicinity of Livermore, including the Livermore Substation near Stanley Boulevard/First Street, the Las Positas Substation near First Street/I-580, and the Vasco Substation south of I-580/east of Vasco Road. The Livermore Substation supplies electricity to customers in the Central Livermore area. The Las Positas Substation serves customers in the City of Livermore and surrounding unincorporated areas of Alameda County. The Vasco Substation serves customers in the area east of Vasco Road.

As of 2003, electrical demand throughout the Tri-Valley region is more than 98 percent of the area's existing electrical system capacity on an average daily basis. In October 2001, the California Public Utilities Commission approved PG&E's Tri-Valley 2002 Capacity Increase Project. The Certificate of Public Convenience and Necessity included the authorization for

the following new electrical substations in North Livermore and Dublin, along with associated transmission lines:

- ◆ Construction of two new distribution substations; one in Dublin, named Doolan Canyon, scheduled to be completed in June 2005, and another in North Livermore named Cayetano, at the intersection of May School Road and North Livermore Avenue, and scheduled to be completed in December of 2003.
- ◆ Installation of 7.9 miles of 230-kV overhead double-circuit transmission line in PG&E's existing vacant easement to serve the Dublin and North Livermore Substations.
- ◆ Construction of approximately 10 miles of new 230-kV double-circuit transmission line in PG&E's existing vacant easement from the Contra Costa-Newark 230-kV line southeast to the Tesla Substation connecting the Dublin and North Livermore substations directly to the Tesla Substation.
- ◆ Upgrading the Vineyard Substation in Pleasanton.

As of March 2003, the timing of the development of the Cayetano North Livermore substation was not defined. At this time, PG&E was monitoring loads and conducting peak load studies to determine approximately when electricity demand in the Tri-Valley region will exceed capacity. Based on 2002 peak load, PG&E anticipated that the construction of the Cayetano North Livermore substation will be completed in December 2003 to avoid exceeding the electricity capacity in the Tri-Valley region.

### **Natural Gas**

PG&E has several natural gas pipelines that traverse the East County area, and five oil pipelines that traverse the northeastern portion of Alameda County. The City of Livermore is supplied natural gas via three main pipelines. A 24-inch natural gas pipeline main traverses the City of Livermore from southwest to northeast. A 36-inch and a 22-inch natural gas pipeline main enters the Planning Area north of Vasco Road and extends south until approximately Tesla Road before heading west through the City. PG&E also maintains six natural gas regulator stations within the City of Livermore that reduces gas pressure prior to urban use distribution.

### **Alternative Forms of Energy**

Several alternative energy sources generated near Livermore also provide energy to Livermore. The Altamont Landfill, operated by Waste Management and located just outside Livermore, captures landfill gases to generate 6,600 kW of energy for all on-site operations, as well as approximately 6,000 homes in the area.

The Altamont Pass, which includes a number of separate wind energy projects, developed, owned, and managed by various companies, is one of California's major wind energy resource areas. PG&E is the primary purchaser and user of this energy. The annual energy output for year 1998 was estimated at 637 million kilowatt hours. Two new projects, with a total capacity of 136.6 kW, are currently proposed and are anticipated to begin operation in 2004 or later.

### **Telecommunications and Cable Services**

SBC Pacific Bell (SBC) provides residential and commercial telephone service within the Livermore area. SBC also provides or hosts a variety of other telecommunications services, such as Digital Subscriber Lines (DSL), Internet Service Provider (ISP), web hosting, virtual private networking, and wireless/cellular and paging services.

The California Public Utilities Commission requires that SBC anticipate and serve new growth. To meet this requirement, SBC continually upgrades its facilities and infrastructure, adding new facilities and technology to remain in conformance with California Public Utilities Commission tariffs and regulations and to serve customer demand in the City. SBC has indicated to the City of Livermore that it is nearing capacity for additional phone service.

Cable services within the City of Livermore are provided by Comcast Corporation. In November of 2002, Comcast merged with AT&T Cable Services. Comcast has a franchise agreement with the City for cable communication services, including television. During the past three to five years, the Planning Area has undergone cable infrastructure upgrades associated with the installation and use of fiber optics. Some of the cable communication services offered by Comcast include digital cable, high-speed internet connection, and digital phone lines.

*B. Goals, Objectives, Policies, and Actions*

<b>Goal INF-4 Provide utilities in ways that are safe, environmentally acceptable and financially sound.</b>
--

**Objective INF-4.1 Facilitate the development and maintenance of all utilities at the appropriate levels of service to accommodate the City's projected growth.**

Policy

- P1. The City shall ensure that utilities, including electricity, natural gas, telecommunications, and cable, are available or can be provided to serve the projected population within the City in a manner which is fiscally and environmentally responsible, aesthetically acceptable to the community, and safe for residents. However, the ultimate responsibility for ensuring that the utilities are available to support new development rests on the sponsor of proposed projects.

Action

- A1. Assess the adequacy of public utilities in existing developed areas, and support needed improvements to service developing portions of the City.

**Objective INF-4.2 Provide reliable utility service in a way that balances the public's need and Livermore's natural environment.**

Policies

- P1. The energy-efficiency of proposed development shall be considered when land use and development review decisions are made.
- P2. Process permits and approvals for utility expansions in a fair and timely manner in accordance with the expansion of new development.

- P3. The City's design review shall consider solar access, siting structures to maximize natural heating and cooling, and landscaping to aid passive cooling protection from prevailing winds and maximize year-round solar access.
- P4. Require the placement of personal wireless communication facilities in a manner that minimizes the adverse impacts on adjacent land uses. New freestanding facility towers and structures should only be considered when no feasible alternative exists or when visual intrusion would be less than that associated with placement on an existing structure or building.

Action

- A1. Review proposed utility projects to ensure their compatibility with surrounding land uses.

## V. POLICE SERVICE

### *A. Background Information*

The Livermore Police Department (LPD) operates one station, located in the Civic Center at 1110 South Livermore Avenue. Figure 7-3 identifies the Civic Center and other public facilities. As of May 2003, the department has a total paid staff of 170, as well as five unpaid reserve officers. As of May 2003, the police department includes 97 sworn officers, along with 73 administrative and support staff. In 2002, this number of officers served a population of roughly 76,700, at a ratio of 1.14 officers per thousand population. The LPD divides Livermore into five areas, or beats, that are regularly patrolled by officers.

Response times within the City limits are divided according to the priority of the call, with Priority One calls being the most urgent, and Priority Three calls being least urgent. Priority One calls include Officer needs assistance, any serious crime in progress, any serious crime which has just occurred, any reported serious injury accident or any crime that has resulted in a citizen detaining a suspect with violence potential. Priority Two calls include any

non-serious crime in progress, any non-serious crime that has just occurred or a notice for officers to Be On the Look Out (BOLOs). Priority Three calls include incidents that generally do not require immediate police presence to prevent potential citizen injury, loss of property or escape of violators. Priorities four, five and six are not time sensitive, and therefore, not presented here.

The LPD does not respond to calls outside of the City limits unless requested to do so by another agency. The area surrounding Livermore is in the jurisdiction of the Alameda County Sheriff's Department and the California Highway Patrol. The Department assists these agencies occasionally at their request. The LPD has a holding facility at police department headquarters, but does not house prisoners there for extended periods. LPD prisoners are booked at Santa Rita Jail in Dublin.

### **Community Programs**

LPD's mission statement reflects the department's goal of being "leaders in law enforcement through community partnerships." The department seeks to form both formal and informal relationships with community members in order to learn what their specific concerns are. LPD operates a number of community programs designed to prevent and intervene in criminal activity in Livermore. Many of the programs focus on children and are implemented through Livermore schools. Some of these programs include:

- ◆ Drug Abuse Resistance Education (D.A.R.E.), which is aimed at both fifth and seventh graders and teaches children decision-making skills and information on the consequences of drug and alcohol abuse.
- ◆ Police Activities League (PAL), which is an after-school activities program for sixth to eighth graders, run in conjunction with the Livermore Amador Parks and Recreation District and the Livermore Valley Joint Unified School District.
- ◆ Every 15 Minutes, a program created by a nationwide nonprofit organization, in which local law enforcement agencies including the police and fire departments participate in a detailed re-enactment of a fatal drunk driving accident. The second of these re-enactments was presented to high school juniors and seniors at Livermore and Granada High Schools on April 24 and 25, 2002.

- ◆ School Resource Officers, or SRO's, are assigned to both high schools and all four middle schools in Livermore. These officers perform any necessary law enforcement duties on the campus and act as a resource for students, teachers, and administrators.
- ◆ On-site counseling services provided by Horizons Family Counseling.

Some of the other community programs LPD coordinates are a Neighborhood Watch program, bicycle safety and car seat safety courses, a Citizen's Police Academy, a youth academy and residential and business consultations aimed at preventing crime.

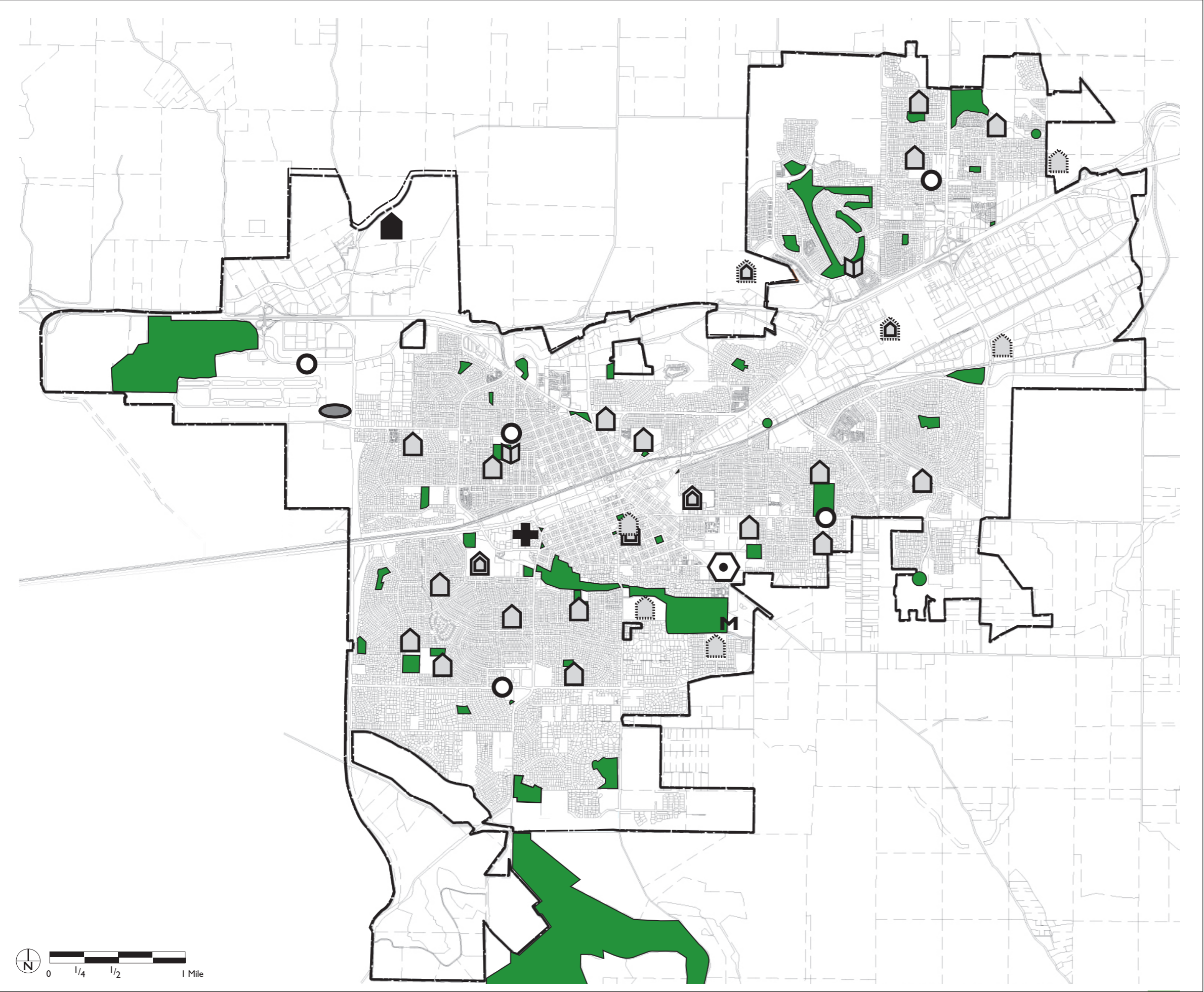
### **Crime in Livermore**

For record-keeping purposes, the Livermore Police Department (LPD) divides crimes into three types according to their severity, as established by the Federal Bureau of Investigation. Part I crimes include serious threats to health or property, such as homicide, rape, robbery, aggravated assault, auto theft, and arson. In 2002, the last complete year for which statistics are available, 2,230 Part I crimes were reported in Livermore. The majority of these, 1,378 incidents, or 62 percent, were cases of larceny. Part II crimes, which include, but are not limited to, less serious threats to health or property, such as simple assault, child abuse, drunk driving, narcotics violations and vandalism, accounted for 3,583 of the crimes reported to the police department. The most common Part II crimes reported were vandalism, drunk driving, simple assault, and narcotics violations. Part III crimes include less urgent offenses such as domestic disturbances, juvenile runaways and missing persons reports. Part III activities also include routine police business such as response to false alarms, investigation of suspicious activity, or conducting field interviews. 13,931 Part III calls were reported in 2002, 4,882 of which were false alarms, followed by 2,542 field interviews and 3,731 reports of suspicious activity.

The number of calls reported in all categories increased from 2000 to 2001, then remained almost level from 2001 to 2002. Since 2000, reported Part I crimes in Livermore have increased by 30 percent, Part II crimes by 23 percent, and Part III crimes by 30 percent. In general, increases and decreases in crime in Livermore over the past decade have tended to follow national trends, and the LPD does not attribute the increase over the past two years to any specific local cause.

FIGURE 7 - 3

PUBLIC SERVICES

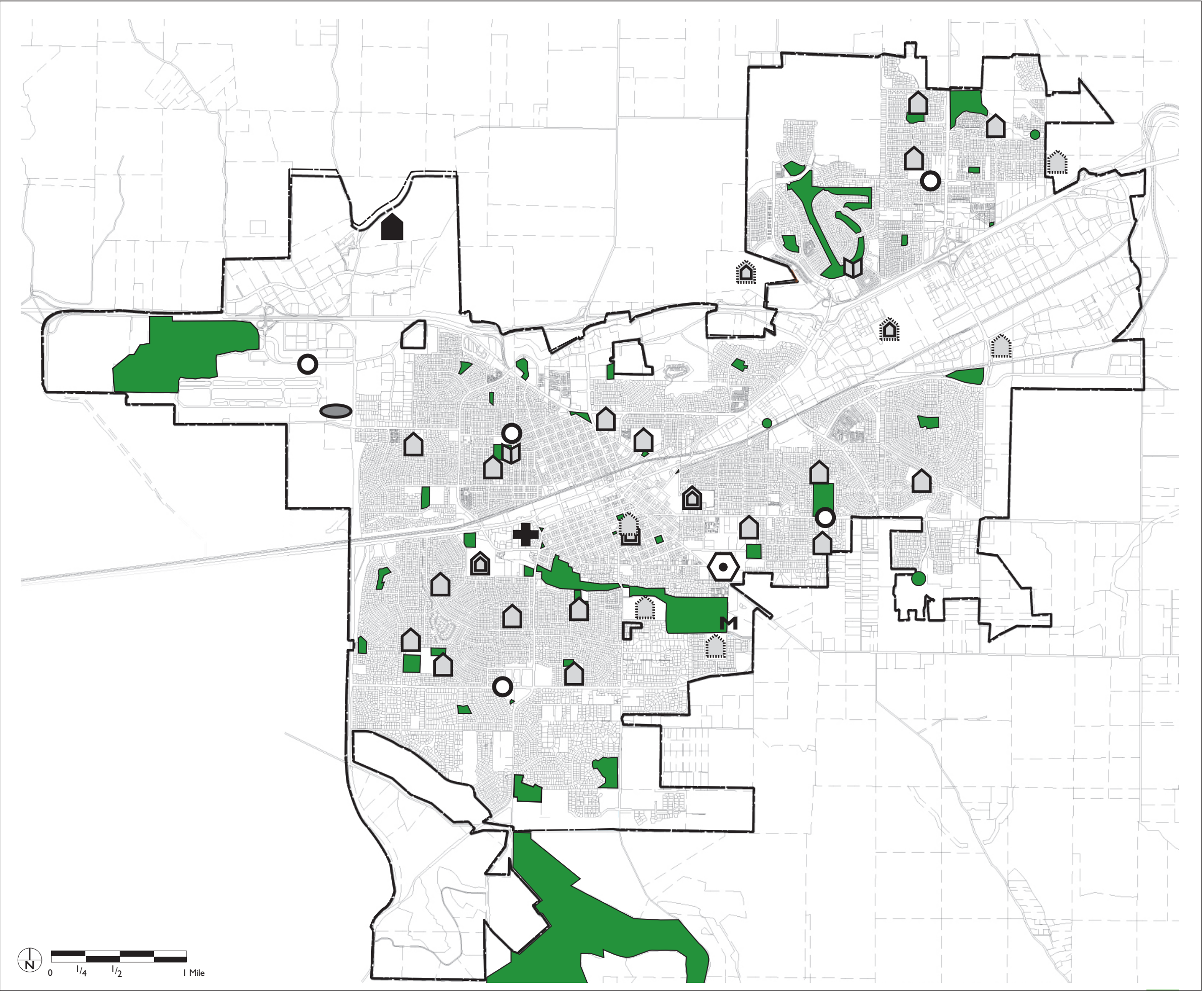


- City Limit Line
- Civic Center:  
City Hall  
Police Station  
Main Library
- Fire Station
- Las Positas  
Community College
- Valley Memorial Hospital
- Library
- Water Reclamation Plant
- City Maintenance Facility
- Elementary/Middle  
School
- High School
- Potential Future  
Elementary/Middle School
- Potential Future High School
- Open Space Areas (e.g., parks,  
golf courses, agriculture,  
senesitive habitats, etc.)

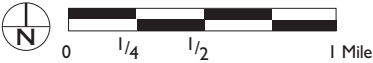
Source: City of Livermore, LVJUSD, LARPD, Thomas Brothers

FIGURE 7 - 3

PUBLIC SERVICES



- City Limit Line
- Civic Center:  
City Hall  
Police Station  
Main Library
- Fire Station
- Las Positas  
Community College
- Valley Memorial Hospital
- Library
- Water Reclamation Plant
- City Maintenance Facility
- Elementary/Middle  
School
- High School
- Potential Future  
Elementary/Middle School
- Potential Future High School
- Open Space Areas (e.g., parks,  
golf courses, agriculture,  
senestive habitates, etc.)



Source: City of Livermore, LVJUSD, LARPD, Thomas Brothers

*B. B. Goals, Objectives, Policies, and Actions*

<b>Goal INF-5</b> Maintain a safe environment in Livermore through enforcement of the law, prevention of crime and the function of partnerships with the community.
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**Objective INF-5.1** Promote coordination between land use planning and law enforcement.

Policies

- P1. Major land use development proposals shall be reviewed for site design criteria and other law enforcement concerns.
- P2. The City shall request notification from the County of development projects within the unincorporated part of the Planning Area that could call for law enforcement services from the City.
- P3. It is the policy of the City to review annual LPD staffing levels and development trends to determine whether additional police staffing or facilities are needed.

**Objective INF-5.2** Maintain and improve law enforcement and crime prevention services to keep pace with Livermore's changing population.

Policies

- P1. Information on crime prevention should continue to be disseminated to the community.
- P2. Livermore's crime rates and types of crime should continue to be monitored to determine the most appropriate methods to target and reduce crime in the City.

### Actions

- A1. Maintain adequate crime prevention programs to serve Livermore's existing population as well as any future growth.
- A2. Maintain crime prevention programs that reach out to a variety of Livermore's residents, including seniors, students, and business owners.

## **VI. URBAN FIRE PROTECTION**

This section addresses urban fire service issues. Wildland fires are addressed in the Public Safety Element.

### ***A. Background Information***

Livermore is served by the Livermore-Pleasanton Fire Department (LPFD). The Livermore and Pleasanton Fire Departments consolidated through a joint powers authority in 1996, in order to provide more efficient and effective service to the two communities. The LPFD budget is divided between the cities of Livermore and Pleasanton through a cost-sharing plan that enables each City to pay its fair share of the department's operating expenses. Each City builds and maintains its own fire stations and purchases and maintains its own light-duty vehicles and fire apparatus.

In addition, the Lawrence Livermore National Laboratory (LLNL) has its own fire department on-site. The LPFD has mutual aid agreements with both the LLNL fire department and the Alameda County Fire Department.

The LPFD maintains 10 stations and one training center. The training center, headquarters, and five of the stations are located in Pleasanton. An additional five stations, are located in Livermore. Their locations are listed in Table 7-1, and shown on Figure 7-3.

As of May 2003, the LPFD had a total staff of 128, including one fire chief, one fire deputy chief, four division chiefs, including one training chief officer, one fire administration manager, one emergency medical services disaster preparedness manager, one disaster preparedness coordinator, one information systems manager, one fire marshal, one assistant fire marshal, one hazardous materials coordinator, two hazardous materials inspectors, four fire prevention inspectors, four office support staff, 30 fire captains, 30 fire engineers, and 45 firefighters.

TABLE 7-1 FIRE STATION LOCATIONS IN LIVERMORE

Facility	Location
Headquarters	3560 Nevada Street, Pleasanton
Station #6	4550 East Ave.
Station #7	951 Rincon
Station #8	5756 Scenic Ave.
Station #9	1919 Cordoba St.
Station #10	330 Airway Blvd.

The department operates a total of 52 vehicles. These include ten staff and command vehicles; 10 fire prevention vehicles; 11 Type I fire engines (the “classic” fire engine, with a minimum 1,000 gallon per minute pump, 400 gallon water tank, and 20-foot ladder); four Type III vehicles (a large four-wheel drive engine for wildland fires, with a minimum 120 gpm pump and 300 gallon water tank) and eight Type IV vehicles (similar to a large pickup truck, also for use in wildland fires, with a minimum 50 gpm pump and 200 gallon water tank); two ladder engines; and seven utility vehicles, such as rescue vehicles and a volunteer van.

### *B. Goals, Objectives, Policies, and Actions*

<p><b>Goal INF-6 Minimize loss of life and property from fires, medical emergencies and public emergencies.</b></p>
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**Objective INF-6.1 Plan for ongoing management and development of fire protection services.**

Policies

- P1. The City shall continue to participate in the joint powers authority agreement governing the consolidated Livermore-Pleasanton Fire Department.
- P2. The City shall continue to provide fire fighting equipment, facilities and manpower sufficient to assure:
  - (a) quick response to all calls by the “first due” company
  - (b) availability of additional companies for serious fires in high value areas
  - (c) capability for handling simultaneous fires
  - (d) a water system capable of sustaining prerequisite fire flow at all times.
- P3. The City shall maintain its mutual aid agreements with both Lawrence Livermore National Laboratory and Alameda County in order to provide adequate fire protection to unincorporated parts of the Planning Area.
- P4. The City will continuously strive to improve performance and efficiency in the Fire Department.
- P5. It is the policy of the City to review annual LPFD staffing levels and development trends to determine whether additional fire staffing or facilities are needed.

Action

- A1. Expand cooperation between the Fire Department and the Community Development Department, Public Services Department, and California Water Service Company regarding the effects of planned water system improvements on fire flows.

**Objective INF-6.2 Promote coordination between land use planning and fire protection.**

Policies

- P1. Major land use development proposals in fire hazard areas shall be reviewed for site design criteria and appropriate preventive and self-protective measures.
- P2. The City shall request notification from the County of development projects within the unincorporated part of the Planning Area that could call for fire protection services from the City.
- P3. Future stations should be located on sites of at least 5/8 to 3/4 acre in size. This allows adequate on-site parking and turn-around and storage space for equipment. A somewhat larger site is desirable if a central office, multi-purpose community meeting room, training center, maintenance yard or fire prevention bureau is to be included as a part of the station.

Action

- A1. Continue to monitor traffic conditions and development in Livermore to determine if any fire stations need to be relocated, or if there is a need for a new station(s).

**Objective INF-6.3 Enforce codes related to fire protection.**

Policies

- P1. The City shall continue to cooperate with State, County and LLNL fire protection agencies.
- P2. The City shall build and require roadways that are adequate in terms of width, radius, and grade to facilitate access by City fire-fighting apparatus, while considering maintenance of Livermore's character.

- P3. The City shall work to reduce demand for public fire protection services through emphasis on fire prevention education and on fire protection measures for private and public structures.

Action

- A1. Maintain a regular program of fire inspection for commercial, industrial buildings, multi-family and apartment complexes.

## VII. SCHOOLS

### *A. Background Information*

The City of Livermore is served by the Livermore Valley Joint Unified School District (LVJUSD). LVJUSD covers a 240-square-mile area including the City of Livermore and parts of the Planning Area. The District includes twelve elementary schools serving students from kindergarten through fifth grade, four middle schools serving students from sixth to eighth grade, and two comprehensive high schools and three alternative high schools serving students from ninth to twelfth grade. These schools and their locations are listed in Table 7-2. District enrollment records indicate that a total of 13,978 students were enrolled in LVJUSD during the 2002/2003 school year. Total capacity in District schools was 15,567. The District does not calculate capacity for alternative programs such as continuing education and the alternative high schools. While the District was not overcrowded in 2002, the remaining capacity of existing facilities was likely to be filled as enrollment continued to grow, and will likely be exceeded within 3 to 10 years. According to these projections, elementary school capacities would be exceeded by 2006, middle school capacity by 2010, and high school capacity will be reached in 2004. In 2002, East Avenue Middle school was already over capacity, and Mendenhall Middle School was anticipated to reach capacity by 2004. Livermore High School is anticipated to exceed capacity in the 2003-2004 school year, and Granada High School will serve projected enrollment until 2005-2006.

TABLE 7-2: SCHOOL LOCATIONS, CAPACITY, AND ENROLLMENT

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School	Location	2002/2003 Capacity	2002/2003 Enrollment
<b>Elementary</b>			
Almond Elementary	1401 Almond Avenue	610	552
Altamont Creek Elementary	6500 Garaventa Ranch Rd	674	559
Arroyo Mocho Elementary	1040 Florence Road	674	614
Arroyo Seco Elementary	5280 Irene Way	680	581
Croce Elementary	5650 Scenic Avenue	784	701
Jackson Elementary	554 Jackson Avenue	586	478
Marylin Elementary	800 Marylin Avenue	540	465
Michell Elementary	1001 Elaine Avenue	576	406
Portola Elementary	2451 Portola Avenue	574	499
Rancho Las Positas Elementary	401 East Jack London Blvd	610	594
Smith Elementary	391 Ontario Drive	544	476
Sunset Elementary	1671 Frankfurt Drive	650	570
<b>Middle Schools</b>			
Christensen Middle School	5757 Haggin Oaks Avenue	977	676
East Middle School	3951 East Avenue	837	869
Junction Middle School	298 Junction Avenue	1,055	873
Mendenhall Middle School	1701 El Pedro Drive	952	886
<b>High Schools</b>			
Granada High School	400 Wall Street	2,242	1,860
Livermore High School	600 Maple Street	2,062	1,995
<b>Alternative Programs</b>			
Vineyard School, grades 1-12	543 Sonoma Avenue	--*	153
Del Valle Continuation High School	2253 Fifth Street	--	87
Phoenix Continuation High School	2253 Fifth Street	--	85

\* LVJUSD does not calculate capacity for its alternative programs.

As of 2003, LVJUSD is planning several modernization and expansion projects to provide additional capacity over the next ten years, which will add capacity for 2,750 students. A new elementary school in South Livermore is scheduled to open in approximately 2005-2006, and the District is planning to open a second new elementary school somewhere in Livermore in 2009-2010. While capacity will not be added to any existing middle schools, a new middle school may open in 2010-2011. The location of this school has not yet been determined. At the high school level, the District is planning to add capacity for 570 students to Granada High School to accommodate enrollment through approximately 2012. Additionally, a new high school is determined to more than likely be needed to serve long-term enrollment increases unless other alternative high school arrangements were found.

The only source of funding for capital improvements to serve new students in the District is developer fees. Statutory fees are determined by the State Allocation Board and are adjusted for inflation every two years. In January 2002, the State increased statutory fees from \$2.05 to \$2.14 per square foot for residential development and from \$0.33 to \$0.34 per square foot for commercial development.

The fees levied on a new development are intended to fund the facilities needed to provide schooling for the children that will be living in that development. While “new children in new homes” constitute the majority of the increased enrollment in the District, recently the number of “new children in old homes” has increased as young families move into less expensive older housing stock. New children in old homes present a challenge to the District because there are no funding mechanisms in place to support these students.

The City’s ability to plan for school facilities is limited to some degree by State law. Public school districts are not required to follow local General Plans, and State legislation limits the ability of local governments to condition the approval of new development on the availability of school facilities. However, school districts are required to present potential school sites to the Planning Commission. Further, local zoning requires a Conditional Use Permit for non-public school facilities located in non-Education zoned areas. While classroom facilities are exempt from local zoning regulations, and issuance of a building permit is exempt from local control, some local control is maintained; for example, through application of local codes concerning access, grading and flood control.

*B. Goals, Objectives, Policies, and Actions*

<b>Goal INF-7 Provide education facilities sufficient to meet the demands of existing and new development.</b>
--

**Objective INF-7.1 Assist the Livermore Valley Joint Unified School District in developing new school facilities to serve Livermore's current and future population.**

Policies

- P1. To the extent allowed by State law, the City shall ensure that school facilities to serve new development are available concurrently with need.
- P2. The City will collaborate with the Livermore Valley Joint Unified School District to ensure the provision of educational facilities sufficient for the existing and anticipated K-12 population.
- P3. The City shall support efforts to expand State funding of the public school system, as long as it is not to the detriment of municipal funding.
- P4. The City shall support School District efforts to develop a technical high school.

Action

- A1. Work with the School District to develop a process that can provide timely information about new development and its impact on school capacity.

**Objective INF-7.2 Coordinate land use planning with the school facility planning function of the Livermore Valley Unified School District.**

Policies

- P1. The City shall give the School District the opportunity to review proposed residential developments and make recommendations based on school-child projections, existing school capacity, access, traffic issues, need for additional facilities and other such factors in order to assist the City in acting on the proposal.

- P2. The City shall consider the comments of the School District concerning availability of educational facilities before approving new residential development.

Actions

- A1. Inform the School District of upcoming development to allow the School District the opportunity to acquire school sites before new public or private development occurs.
- A2. Assist the School District in tracking changes in student generation rates.

**Objective INF-7.3 Work with the Livermore Joint Unified School District to identify appropriate locations for schools and means of school expansion in order to prevent negative impacts on the health, safety and welfare of students.**

Policies

- P1. Elementary schools should be located centrally to the student populations they will serve. Sites shall serve areas bounded by major streets so that children do not have to cross such streets to get to school.
- P2. Elementary school sites should be located away from major streets to avoid vehicular noise and traffic hazards which interfere with the educational process.
- P3. Wherever possible, school sites should be integrated with recreation parks and community recreation/non-motorized transit corridors to permit recreational experiences as part of the educational process and to allow pedestrian and bicycle access.
- P4. Intermediate and high schools should be located centrally to the student populations they will serve. Sites shall have access to collector or major streets to permit access by pedestrians, bicycles and public transit with a minimal impact on surrounding residential areas.

- P5. The City shall work with the School District to identify potential future school sites.
- P6. The City recognizes that the School District has the final authority to determine appropriate locations for future school sites.
- P7. If the School District cannot identify an appropriate future high school site within the urban growth boundary, the City shall support the efforts of the School District to seek a high school site outside the urban growth boundary, in accordance with the North Livermore Urban Growth Boundary Initiative (NLUGBI).

Action

- A1. As part of General Plan Land Use Amendment considerations, identify the general type of additional school facilities necessary to support the proposed land use.

## VIII. SOLID WASTE

This section describes the City's solid waste collection and disposal system. It includes a discussion of the public and private responsibilities for solid waste, as well as the regulatory context of solid waste.

### *A. Background Information*

#### **Public and Private Responsibilities for Solid Waste**

In Alameda County, responsibility for the collection and disposal of solid waste is held jointly by the Alameda County Waste Management Authority and local jurisdictions. The Alameda County Waste Management Authority operates under a joint exercise of powers agreement among the County of Alameda, each of the fourteen cities within the county, and two sanitary districts that also provide refuse collection services. Funding for the Authority

is derived from waste import mitigation fees and disposal fees at the Altamont, Vasco Road and Tri-Cities landfill sites.

Pursuant to California Law, the Authority is responsible for the preparation of Alameda County's Integrated Waste Management Plan and Hazardous Waste Management Plan and provides support and assistance to its member agencies in the implementation of those plans. The Authority also manages a long-range program for development of solid waste facilities and offers a wide variety of programs in the areas of waste reduction, market development, technical assistance and public education.

In August of 2002, the City of Livermore entered into a 7-year franchise agreement with Waste Management of Alameda County, Inc. (Waste Management) with three one-year options to extend, for the exclusive right to collect, transport, or process and dispose of solid waste, recyclable materials, and compostable materials in the City. As a part of this agreement, Waste Management provides all single-family residents with a refuse cart, a recycling cart, and a green waste cart. Waste Management also provides weekly service for refuse, recycling, and green waste.

Waste Management's recycling program includes:

- ◆ Three on-call clean up events for residents per year.
- ◆ Bulky item collection for residential customers for an additional fee.
- ◆ Weekly curbside collection of used motor oil for residential customers.
- ◆ An annual electronic-waste collection event for residents.
- ◆ Collection of abandoned waste and unmarked shopping carts in the public right-of-way.
- ◆ Advertising for an annual community garage sale event.
- ◆ A six-month pilot food waste program for 500 residential customers and 60 commercial businesses, starting November 2002.

Currently, Waste Management transports solid waste from Livermore to the Republic Services Vasco Road, LLC Landfill for disposal. The Republic/Vasco Road Landfill is designated as a Class III disposal site that permits the disposal of municipal solid waste, with separate disposal areas required for asbestos and auto-shredder waste. The Republic/Vasco Road landfill also has areas designated for recycling construction and demolition debris, green waste, wood, concrete, bricks, and a residential recyclable materials area. In 2002, Waste Management hauled approximately 81,000 tons of solid waste to the Vasco Landfill from Livermore.

### **Waste Reduction and Recycling Regulations**

In an effort to reduce the amount of solid waste sent to landfills, the California Integrated Waste Management Act (CIWMA), Assembly Bill 939, was enacted in 1989. Under the Act, all city and county governments are given increased responsibility to reduce the amount of waste being landfilled and increase the recycling of waste. Local governments are required to establish Integrated Waste Management Plans. In 1995, the CIWMA mandated a 25 percent reduction in the amount of solid waste being landfilled, which then increased to 50 percent by the year 2000. Cities and counties failing to meet these goals may be fined as much as \$10,000 per day by the State of California.

The Department of Conservation, Division of Recycling administers the California Beverage Container Recycling and Litter Reduction Act enacted in 1986. The primary goal of this Act is to achieve and maintain high recycling rates for each beverage container type, e.g., aluminum, glass and plastic. The Division provides a number of services to achieve these goals, including enforcement, auditing, grant funding, technical assistance and education.

In 1990, Alameda County voters approved the Alameda County Waste Reduction and Recycling Initiative (Measure D) with the goal of diverting 75 percent of solid waste from landfills. Measure D also created the Alameda County Source Reduction and Recycling Board, which is responsible for programs in the areas of waste reduction, recycled product procurement, market development and grants to non-profit organizations. Funding for the Recycling Board is derived from a disposal surcharge at landfills. Measure D applies a surcharge at the Altamont and Vasco Road landfills, which funds both the Recycling Board and

source reduction and recycling programs for local jurisdictions. The Measure D fee is usually increased annually. Effective January 1, 2002, the fee was \$6.59/ton.

The Waste Management Authority and Recycling Board operate as an integrated Agency, which is committed to achieving a 75 percent and above diversion goal and promoting sustainable consumption and disposal patterns.

### **Construction and Demolition Materials Recycling Program**

In July 1997, the Vasco Road Sanitary Landfill began accepting construction and demolition materials for diversion. In 2002, 143,209 tons (including greenwaste) of construction and demolition materials had been diverted from the landfill; 39,811 tons, or 28 percent of these diversions were from Livermore. The City of Livermore adopted a Construction and Demolition Debris Ordinance in June 2002, which became effective August 1, 2002. This ordinance is expected to increase the amount of construction and demolition waste being diverted from the landfill, as it allows for competitive hauling of construction and demolition debris. As of March 2003, information was not available as to the efficacy of the ordinance.

### ***B. Goals, Objectives, Policies, and Actions***

**Goal INF-8    Collect, store, transport, recycle and dispose of solid waste in ways that are safe, sanitary and environmentally acceptable.**

**Objective INF-8.1    Promote the recovery of recyclable materials and energy from solid waste generated within Livermore.**

#### Policies

- P1.    The City will seek to meet or exceed State requirements with regard to waste diversion and recycling.
- P2.    The City shall seek to meet the Alameda County Measure D waste diversion goal.

- P3. Livermore's businesses shall be encouraged to expand their recycling efforts and to reduce packaging.

Actions

- A1. Implement source reduction and recycling programs to minimize waste at the point of manufacture or use.
- A2. Seek ways to incorporate on-site storage facilities for recycled materials as buildings are improved, altered or expanded.
- A3. Work with the Livermore Area Recreation and Parks District to expand recycling of glass and aluminum at LARPD facilities.

**Objective INF-8.2 Reduce the amount of solid waste that must be recycled or disposed.**

Actions

- A1. Encourage the purchase and use of post-consumer recycled content products and other recycled materials in all City operations.
- A2. Seek ways to implement State requirements for recycled container enclosures for new, altered, or expanded facilities.
- A3. Encourage LVJUSD participation in reuse and recycling programs.
- A4. In all City operations, encourage the development of procedures and purchase of equipment that result in recycling products rather than sending them to the landfill.

## IX. COMMUNITY HEALTH FACILITIES

### *A. Background Information*

Livermore is served by two main medical facilities, both operated by ValleyCare Health System: ValleyCare Medical Center in Pleasanton and Valley Memorial in Livermore. ValleyCare Medical Center provides a 24-hour emergency room, an intensive care unit (ICU), a critical care unit (CCU) and offers surgery rooms, a maternity ward, a neo-natal intensive care unit, pediatric medicine, outpatient surgery, in-patient physical therapy and radiation therapy facilities, a skilled nursing facility, and preventative health and wellness programs.

Valley Memorial, located on East Stanley Boulevard in Livermore, is a private, not-for-profit facility. Valley Memorial houses a 30-bed in-patient skilled nursing facility, usually used for short term recuperation, a 12-bed geriatric psychiatric unit, along with outpatient services such as urgent care, a laboratory, radiology facilities, physical therapy facilities; electrocardiogram (EKG) and electroencephalogram (EEG) equipment. Valley Memorial also provides health and wellness programs, cardiac and pulmonary rehabilitation programs, diabetes education, and weight reduction assistance.

In addition to these existing facilities, both ValleyCare and Kaiser Permanente have new projects underway in Livermore as of May 2003. ValleyCare has proposed to return the hospital's administrative offices from Pleasanton to 1133 Stanley Boulevard in Downtown Livermore, adding 65,000 plus square feet of medical office space, and including a 66,500-square foot wellness center. This facility will be called the Valley Care Medical Plaza. Outpatient services such as urgent care, outpatient surgery, outpatient laboratories, diagnostic imaging and occupational health services will move from Valley Memorial to the Valley Care Medical Plaza. The Medical Plaza is scheduled to open in June 2003. Kaiser Permanente has also begun construction of a 72,000 square foot medical facility on Las Positas Road that will house adult and pediatric medicine, women's health, optometry and optical sales, a pharmacy, dermatology, an allergy lab, and imaging services. The facility is scheduled to open by winter 2004.

Low-income and uninsured populations in Livermore are served by the Valley Community Health Centers. The Valley Community Health Center in Livermore provides routine medical care for all age groups, including immunizations. This facility is funded largely by Alameda County, which has primary governmental responsibility for the provision of public health care in Livermore. Additional funding for Valley Community Health Centers comes from City governments, state and federal agencies, and grants from foundations. The Valley Community Health Center in Livermore has experienced recent decreases in service: during the fall of 2001, it was only open sporadically, and closed completely during December, January and February 2002. As of the end of June, 2002, the center increased its hours of operation from one half-day per week to half-days Monday through Friday.

In addition to this routine care, specialized services for low-income individuals are offered in Pleasanton. Valley Community Health Centers for Women, Infants and Children offers family planning education; gynecology and obstetrics for teens and adult women; and pregnancy testing. Another Valley Care Health Center provides mental health services, including drug and alcohol abuse recovery services, smoking cessation education, and counseling for individuals and families. The Valley Mental Health Center, a non-profit facility in Pleasanton not affiliated with the Valley Community Health Centers, provides psychiatric care for adults and children, including psychotherapy, medication, education and behavior management.

***B. Goals, Objectives, Policies, and Actions***

<b>Goal INF-9 The City shall support access to health care in Livermore.</b>
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**Objective INF-9.1 Facilitate access to health care for all Livermore residents.**

Policy

- P1. The City shall support and encourage the construction of healthcare facilities adequate to meet the needs of all residents and employees in Livermore.

## **X. CHILD CARE**

### ***A. Background Information***

Child care in Livermore is available through either professional day care centers, or through care providers who work out of their homes. In 2002, a total of 4,192 spaces are available in child care facilities in Livermore. Two-thirds of these, 2,763, are in private child care centers, and the remaining one-third, 1,429, are in home-based facilities. During 2001, overall need for child care in the Tri-Valley area decreased slightly.

In addition to private center- or home-based care providers, the Livermore Area Recreation and Park District operates child care programs for preschoolers, elementary and middle school students through cooperative arrangements with the Livermore Valley Joint Unified School District and the City of Livermore. LARPD offers parent-participation pre-school for children six months to six years old at several park facilities and elementary schools in the City. Elementary school students are eligible to participate in the Extended Student Services (ESS) and Kid's Zone programs, which are open five days per week, year-round. These programs offer learning activities in areas such as art, music, science, language, crafts, and outdoor play. Over 800 students participated in the ESS and Kid's Zone programs during 2001, including 134 children from low-income homes. For middle school students, LARPD has recently implemented the TeenNRG PAL program. This program is held from 2:30 to 6:00 pm five days per week at all four middle schools in Livermore. The program offers a healthy snack, recreational activities, and one hour of mandatory homework time. Over 150 students participated in the program in 2001.

The highest demand for child care in Livermore, as in the Tri-Valley area as a whole, is for spaces for children five to ten years old. There are approximately 2,150 spaces needed for five-to-ten-year-olds in Livermore, and slightly less than that number of spaces is available. For two-to-five-year-olds, the only age group in Livermore in which the supply of child care spaces exceeds the demand, there are about 1,550 spaces available, and about 1,450 of those are filled. For children under two years old, there are only 500 spaces available, but there is demand for over 700 spaces.

Almost 20 percent of parents interviewed by Child Care Links reported that they were unable to find child care due to prohibitive costs. Other reasons parents were unable to find care included a lack of vacancies (17 percent), inability to find a care provider with a suitable schedule (14 percent), and facilities that were unacceptable (13 percent).

In 2002, average weekly costs of care in Livermore vary by the neighborhood the facility is located in, as well as by the age of the child. For home-based facilities, the average weekly cost for care for a child under two years old is \$160.00. For children ages two through five, the weekly cost averages \$143.00, and for children five to ten, the cost is \$102.00. In child care centers, costs are higher for infant care, with weekly costs averaging \$220.00. However, child care centers cost roughly the same as home-based facilities for two- to five-year-olds, at \$151.00, and centers are less expensive sources of care for five- to ten-year olds, at \$78.00 average cost per week. Average weekly costs for home-based child care in Livermore are slightly higher than the Tri-Valley averages, while center-based costs in Livermore are below the cost of care in Dublin and Pleasanton.

***B. Goals, Objectives, Policies, and Actions***

<p><b>Goal INF-10 Ensure an adequate range and supply of childcare services to meet the needs of all Livermore residents.</b></p>
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**Objective INF-10.1 Plan for needed childcare facilities when considering new development.**

Policies

- P1. The City shall continue to assist LARPD in providing after-school and extended daycare programs year round through before and after school care and day camps in the summer and during holidays and vacations.
- P2. The City shall consider the impact of development on the supply of childcare.

### Actions

- A1. Triennially, concurrent with the development of each three-year Housing Implementation Program, assess the impact of development on the provision of child-care services.
- A2. Study the options for providing childcare including, but not limited to, providing on-site or off-site facilities, in-lieu fees to provide facilities and/or supplement childcare provider training, or other measures to address supply, affordability, or quality of childcare.

**Objective INF-10.2 Combine childcare facilities with other services and amenities in order to improve access and availability.**

### Policies

- P1. The City shall encourage the siting of child care and other care facilities in areas with compatible land use and character, and shall encourage such facilities to be located near employment centers, homes, schools, community centers, recreation facilities, and transit hubs.
- P2. The City shall support the establishment of childcare centers at or near commercial and light industrial districts in order to enhance Livermore's attractiveness as a business destination.

### Actions

- A1. Partner with LVJUSD and civic organizations to use schools as community centers to provide a range of services, including childcare.
- A2. Study feasibility of an impact fee for the development of childcare facilities on the project site or payment of an in-lieu fee.

## **XI. LIBRARIES**

### ***A. Background Information***

The Livermore Public Library was established in 1878, and has been a full department of the City government since 1979. Today Livermore is served by three libraries: the main library located in the Civic Center complex, and two branch libraries in the Springtown and Rincon areas. Each of these libraries contributes to the Library department's stated mission – "The Livermore Public Library encourages the development of lifelong interest in reading and learning by providing materials and services of popular interest, emphasizing and encouraging reading by children, supplementing the educational needs of the community and furnishing timely, accurate information."

In 2003, the main library, located at 1000 South Livermore Avenue, is open seven days a week for a total of 63 hours. The main library will be relocated to 1188 South Livermore Avenue in early 2004. As of May 2003, the Rincon branch library, located at 725 Rincon Avenue, is open six days a week for a total of 43 hours, and the Springtown branch library, located at 998 Bluebell Drive, is open six days a week for a total of 43 hours.

In addition to making physical and electronic media available, the library provides a variety of other services to the community, including free computers with Internet access, Internet classes, lecture series, art exhibitions, and a passport application service. The Internet in particular is one of the major use items in the department. The library also provides space for free tax assistance, legal advice services, meeting rooms, and a community bulletin board.

Use of the library has been steadily increasing over the past ten years, growing by approximately six to seven percent each year. Between 60 and 70 percent of Livermore residents are "registered borrowers" at the library, which means they have used the library at least once in the past two years. Moreover, the library department's average circulation rate of 10 items per capita each year is well above the national median rate for libraries of its size, which generally circulate about 6.5 items per capita each year.

A new main library, part of Livermore's new Civic Center, was under construction in 2003 and will consist of 52,000 square feet and will house an adult library, children's library, periodical reading room, story time/craft room, teen center, computer training lab, a community meeting room, three quiet study rooms, a public-use computer lab, and a small café and bookstore, in addition to storage space and administrative offices. Twenty million dollars in funding for the construction of this facility was approved by Livermore voters as part of Measure L, passed in March 1999. Groundbreaking on the site took place in February 2002, and the library is expected to open in fall 2003.

*B. Goals, Objectives, Policies, and Actions*

<b>Goal INF-11 Provide sufficient library service to meet the information, cultural and educational needs of the population of Livermore.</b>
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**Objective INF-11.1 Continue City support of the Livermore Public Library.**

Actions

- A1. Maintain or expand City funding of library operations as the City budget allows.
- A2. Expand library services for areas north of I-580, including the construction of a larger library branch.