



INTRODUCTION

City development is dependent on a complicated network of public facilities and services. Each type of service has a unique set of constraints and must adapt to growth and change differently. Various public agencies are responsible for providing needed services.

Napa residents expect the City to provide them with clean, safe and aesthetically pleasing neighborhoods, shopping areas and public facilities in their urban environment. The basic public services of police and fire protection, sanitary sewers, drinking water, streets, and storm drainage are often taken for granted. These "basic" services account for nearly 75 percent of the City's annual budget. Given declining revenue, simply ensuring that current levels of service are maintained during the coming years will be difficult.

Residents also expect more than "basic" services from their city, including social programs and leisure activities for families with children, teens, and the elderly. Many of these programs are provided jointly by the City, the County of Napa, the Napa Valley Unified School District (NVUSD), and other local public agencies. These joint efforts have helped the community realize how important intergovernmental coordination of programs and services can be in meeting service demands. For example, the City's Community Resources Department works closely with both NVUSD and Napa Community College to offer a wide range of joint programs that benefit the entire community. These types of joint programs are likely to become even more important in meeting future public facility and service needs.

This chapter summarizes the community services provided to residents, businesses, and visitors. In most cases, the services are provided by the City of Napa at service levels which have been established based on the need to protect public health and safety or to enhance the livability of the city. The issues addressed in this chapter include:

- Community Services - General
- Public Safety and Emergency Services - General
- Responsive Police Services
- Responsive Fire Services

- Proactive Fire Services
- Emergency Medical Services
- Schools
- Water Supply
- Wastewater
- Storm Drainage
- Solid Waste Collection and Disposal

Transportation facilities are discussed separately in Chapter 3; parks and recreational facilities are discussed in Chapter 5.

Major Community Services Objectives

- *A full service city providing a high level of basic services.*
- *A community services system responsive to a broad spectrum of the population.*
- *A multi-generational education system that promotes individual self esteem.*

COMMUNITY SERVICES - GENERAL

Modern development requires a wide range of publicly-provided services, such as water, sewer, storm drainage, and garbage collection. The City of Napa directly provides many of these services. The General Plan seeks to provide for the logical and efficient expansion of these services as new development occurs, and also addresses existing deficiencies.

In the past, federal and state grants paid for some improvements and expansions of City facilities, but the availability of these funds has dwindled. New development is therefore generally responsible for providing for the extensions of the services it requires.

Facilities not only have to be constructed, but they require ongoing maintenance and operation. The policies in this section seek to provide for funding of new facilities and services as new development occurs, and to consider how the ongoing maintenance and operations of these facilities will be funded to ensure that operational levels do not decline.

GOAL CS-1 To ensure the timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of existing and future city residents.

POLICIES

- CS-1.1 The City shall plan and build infrastructure improvements that will: (1) accommodate growth demands without lowering levels of service; (2) support central city revitalization efforts; and (3) provide aesthetic enhancements to the city's major gateways and scenic corridors.
- CS-1.2 Where new development requires the construction of new public facilities, the new development shall fund its fair share of the construction of those facilities. The City shall require dedication of land within newly developing areas for required public facilities, as allowed by law.
- CS-1.3 The City shall ensure through the development review process that adequate public facilities and services are available to serve new development.
- CS-1.4 The City shall require, to the extent legally possible, that new development pays the cost of providing new public facilities and services and/or the costs for upgrading of all existing facilities that it uses, based on the demand for these facilities attributable to the new development; exceptions may be made when new development generates significant public benefits (e.g., low-income housing, significant primary wage earner employment) and when alternative sources of funding can be identified to offset foregone revenues.
- CS-1.5 The City shall seek broad-based funding sources for public facilities and services that benefit both current and future residents of the city.
- CS-1.6 The City shall establish a feasible five-year Capital Improvement Program (CIP) that gives high priority to projects identified as needed in the General Plan. The City shall also give high priority to projects that will reduce or eliminate existing deficiencies in the city's public facilities system.

CS-1.7 The City shall require that all new development meet adopted service levels for public facilities as established in the General Plan.

IMPLEMENTATION PROGRAMS

- CS-1.A The City shall prepare a Capital Improvement Program to address the City's existing and projected public facility needs.
 Responsibility: Public Works Department
 City Manager
 City Council
 Time Frame: Every two years
- CS-1.B The City shall review and update its development fees to provide for the service levels set out in this General Plan.
 Responsibility: Finance Department
 City Council
 Time Frame: Annually

PUBLIC SAFETY AND EMERGENCY SERVICES - GENERAL

Public safety involves protection from a wide range of hazards, from urban crime to natural disasters. This section discusses Napa's readiness to cope with crime, medical emergencies, fire suppression and major natural and manmade hazards and provides policies and implementation measures to maintain and, where necessary, improve this readiness.

The City of Napa Police and Fire Departments are the local agencies primarily responsible for public safety. Over 100,000 times each year, residents and visitors call the City's dispatch center to report problems and request police, fire, medical, and other aid.

The services provided by the Police and Fire departments can be classified into two basic categories: responsive and proactive services.

Responsive Services: Police or fire personnel reacting to an emergency call for service and responding to an incident within an established, critical, time frame.

Proactive Services: Preventive programs, and activities that attempt to address the social or physical conditions that result in calls for service. Public safety can be improved by education and other proactive measures, reducing the need for responsive services.

The Police and Fire Departments have established a level of service objective of a five-minute maximum response time for emergency calls.

Disaster response and hazardous materials are addressed in Chapter 8, Health and Safety.

GOAL CS-2 To ensure community order and public safety in Napa.

POLICIES

- CS-2.1 The City shall provide services and personnel necessary to maintain community order and public safety.
- CS-2.2 The City shall endeavor to maintain a police and fire force sufficiently staffed and deployed to strive to provide a five-minute maximum response time to any call involving an immediate danger of loss of life or serious injury (response time means from the time the call is received in dispatch to the time the first emergency unit is on the scene).

RESPONSIVE POLICE SERVICES

Responsive services are what most citizens consider "typical" services provided by police and fire departments; usually these are the services obtained when 911 is dialed. This incident-response form of service requires prioritization of calls according to the seriousness of the incident and the availability and proximity of appropriately trained and equipped personnel. A "level of service" is established by assigning a critical time frame for response to each type of incident depending on the degree of life and safety risk involved. This method of providing public safety services requires that police and fire departments expand the numbers of staff, equipment and possibly the number of stations in proportion to the increase in calls for service.

In the past, this approach to providing services met the needs of the community; however, a growing population, changes in population characteristics, income levels, and housing conditions have increased the demand for responsive services. Diminished sources of revenue have limited the City's ability to fund police and fire services so that existing levels of service can be maintained. Public safety departments recognize the need to examine the manner in which services are rendered and to address

some of the problems and issues generating these calls in order to maintain acceptable levels of service for the community.

The Napa Police Department has found that the bulk of the calls (approximately 80 percent) involves less severe crimes and disputes that are not life threatening. Dispatching sworn officers to routine requests-for-service causes a "drain" on personnel and equipment, and could jeopardize the department's ability to respond effectively to potentially life threatening calls.

The Police Department continues to explore alternative methods for addressing the lower priority requests so that resources are effectively applied to maintain service level objectives. Calls will continue to be prioritized according to severity, with the life threatening calls receiving the highest priority. Sworn officers will continue to be dispatched to these calls. The practice of assigning lower priority calls to Community Service Officers, light duty, and retired officers is likely to continue or be expanded.

GOAL CS-3 To maintain an adequate police force to ensure a safe and secure community.

POLICIES

- CS-3.1 The City shall continue a priority system for calls for service to ensure availability of sworn officers to respond to life safety incidents while allowing Community Service Officers to respond to lower priority needs. The City shall explore the availability of other personnel resources to assist with lower priority matters.
- CS-3.2 The City shall continue to provide training programs for both sworn officers and other staff to maintain a level of personnel resources capable of responding to future call volumes.
- CS-3.3 The City shall continue efficient mobilization of trained personnel to prioritized incidents, using new equipment and technology when available.

PROACTIVE POLICE SERVICES

Typically, citizens are familiar with the crime prevention, personal safety, and drug awareness programs offered through the schools and other organizations. Few people are aware of the role that public safety personnel play in

addressing many potential problems before they occur. Proactive services are important in reducing the public's exposure to risk, in decreasing number of emergency response calls and in making the most effective use of highly trained public safety personnel.

The traditional incident-response system does not address the social or "root" issues causing the calls for service. Based on their analysis of call volumes, the Police Department has recognized that certain calls might be prevented through programs that increase community awareness and participation in solving problems before they become calls for service. The Department is exploring, and when possible is implementing, alternative approaches to providing police services that emphasize community education and involvement. Prevention and early intervention programs, focused enforcement, and resource sharing among City departments and outside agencies are intended to more efficiently direct police resources to the problems that cause calls for service. Examples of these alternative approaches include Neighborhood Watch, Cadet and other youth programs, and the Neighborhood Improvement Program. Continued planning and support for these programs are needed in order to balance future community safety needs with potential funding limitations.

GOAL To reduce and prevent crime through
CS-4 the use of community-oriented
 education and involvement programs.

POLICIES

- CS-4.1 The City shall provide training and support for community-oriented educational and involvement programs and services. The City shall assist in expanding the city's Neighborhood Watch and Neighborhood Improvement programs to encompass all areas of the city desiring to participate.
- CS-4.2 The City shall continue programs such as Ride Along, Cadets, Youth Services/ Diversion Program, and Drug Awareness and Resistance Education (DARE) to increase youth awareness of and involvement in police operations.
- CS-4.3 The City shall continue to direct services and outreach programs toward youths in the community.
- CS-4.4 The City shall continue its problem-solving approach to law enforcement in an effort to reduce calls for service.

IMPLEMENTATION PROGRAMS

- CS-4.A The City shall identify needed changes in current law and/or local ordinances, or create new ones to help carry out crime prevention strategies.
 Responsibility: Police Department
 Time Frame: Annually
- CS-4.B The City shall establish inter-department and inter-agency cooperative efforts in the development review and neighborhood improvement process.
 Responsibility: City Manager;
 Neighborhood Improvement Team;
 Police Department
 Community Resources Department
 Time Frame: Ongoing
- CS-4.C The City shall prepare an issue/action matrix to guide neighborhoods in developing plans for Neighborhood Improvement programs.
 Responsibility: City Manager;
 Community Resources Department;
 Police Department
 Time Frame: FY 99-03
- CS-4.D The City shall continue its outreach to "kids-at-risk", both through direct programs and cooperative efforts with other agencies and nonprofit organizations.
 Responsibility: Police Department;
 Community Resources Department
 Time Frame: Ongoing

RESPONSIVE FIRE SERVICES

The Napa Fire Department's (NFD) primary responsibility is to provide 24-hour emergency response for Fire, Emergency Medical, Specialized Rescue, and Hazardous Materials. Napa currently maintains a high service level for emergency response. The City's first priority is to get personnel to the scene of an emergency in time to save lives and reduce property damage, and minimize the impact on the environment.

The city is geographically divided into three north-south quadrants by the Napa River and Highway 29. Topography west of the highway and east of the river contributes to longer response times in parts of those areas. Generally, the City's water system does not deliver adequate pressure for firefighting to sites over 300 feet in elevation.

For purposes of providing fire insurance to communities, the Insurance Service Office (ISO) grades a community's fire defenses on a scale of one (excellent) to ten (poor). ISO evaluates water supply, department operations, fire safety control, and communication. The ISO rates the City of Napa at three/nine as of 2005.

In the past, the department's primary responsibility was fire suppression; however, in recent years, the Fire Department has increasingly responded to medical emergencies and other types of calls described above. A review of the most recent calls for service shows that fire suppression services account for 3 percent of NFD's call volume, while medical emergencies account for 68 percent, service calls 11 percent, good intent 9 percent, false calls 6 percent, hazardous condition 3 percent. Emergency medical services issues are described more fully in the next section of this chapter.

Underserved Areas

There are areas within the City's RUL that are currently underserved, due to the location of existing fire stations, substandard access roads and limited water supply. Some of these areas are developed and others are designated in this plan for future development.

Policies related to fire hazards are also included in Chapter 8, Health and Safety.

**GOAL To provide emergency fire
CS-5 suppression services to protect
life and property within the City.**

POLICIES

- CS-5.1 The City shall maintain adequate personnel and equipment necessary to provide fire suppression services for the City of Napa.
- CS-5.2 The City shall continue to provide personnel training to maintain optimum preparedness for emergency response.
- CS-5.3 The City shall maintain and upgrade

equipment as needed to continue efficient mobilization of trained personnel to life safety incidents.

- CS-5.4 The City shall provide for adequate emergency vehicle access and public egress in new development.
- CS-5.5 The City shall provide for well-designed and standardized address systems to facilitate efficient emergency response.
- CS-5.6 The City shall provide for an adequate fire flow system throughout the community, to meet the fire flow requirements of the California Fire Code.
- CS-5.7 The City shall continue to require built-in fire protection using automatic fire sprinklers, Class A roofing, fire-resistant building materials, and similar measures.
- CS-5.8 The City shall continue to maintain mutual and/or automatic aid agreements with CalFire, the County of Napa, and other local agencies.

IMPLEMENTATION PROGRAMS

- CS-5.A The City Water Department shall inspect all fire hydrants for operational readiness on a biannual basis to include repair and/or replacement of all defective hydrants; check fire flow and install street hydrant markers where necessary. The City shall include a maintenance and repair component for city fire hydrants within the City of Napa Capital Improvement Program.

Responsibility: Public Works Department
Time Frame: Ongoing

- CS-5.B The City shall continue to review and adjust the Fire and Paramedic Development Fee to ensure the construction and equipping of future facilities.

Responsibility: Fire Department;
City Council
Time Frame: Ongoing

- CS-5.C The City shall maintain a Fire Services Master Plan that establishes a citywide mid range plan for providing fire suppression services, defining areas of mutual aid/automatic aid and other jurisdictional responsibilities. The Fire Services Master Plan shall include the

following:

- a. Standards for acceptable levels of risk (e.g., response time to emergencies for all land use designations and geographic areas within the RUL.
- b. A location study to recommend sites for future fire station(s). The location study should consider alternative and/or separate methods of providing response services for both fire and medical emergencies to determine the most appropriate location for future fire stations. The 2007 Master Plan supported the City's purchase of land for Fire Station No. 5 in 2008 on the western portion of the City. The plan identifies a potential need for a sixth station depending on future development in the south west portion of the City. This will require further study.
- c. Funding mechanisms for land acquisition, construction, equipping and staffing for future fire stations. Construction and staffing of Fire Station 5 is a key program to address response times in the Browns Valley and adjacent services areas.

Responsibility: Fire Department
 Time Frame: When FS 5 is operational

- d. Re-evaluate appropriate fire/emergency medical response times in a future General Plan update.

Responsibility: Fire Department
 Time Frame: When General Plan is comprehensively updated.

PROACTIVE FIRE AND CODE ENFORCEMENT SERVICES

A significant function of the Fire Department involves fire prevention and education. The Fire Department historically has provided educational materials and programs within the school system and community groups. In addition to these community outreach programs, the Fire Department reviews new development applications and building permits to ensure that fire protection and access requirements are included in new construction. Prevention staff and engine companies perform regular inspections of schools, assembly uses; multifamily residential, hotels, motels, resorts, and commercial and industrial occupancies to ensure that fire

safe conditions are maintained. These proactive responsibilities are an important part of fire services and are cost-effective methods of reducing public risk and the number and severity of emergency calls.

The Community Development Department includes a Code Enforcement Division which is considered a proactive element of the public safety and emergency services. This division handles complaints and code violations that do not present an immediate threat to life and are generally not part of the routine enforcement activities of the Police or Fire Departments.

The primary function of the Code Enforcement Division is to respond to code complaints which involve general nuisances (e.g., abandoned/ inoperable vehicles, high vegetation or storage practices that create fire hazards, unauthorized or hazardous businesses). The Code Enforcement Division is best described as a clearinghouse for the active enforcement of the City's Municipal Code; early enforcement of routine codes can reduce the public's exposure to risk and prevent emergency incidents that require Police or Fire responses.

The Code Enforcement Division is an integral member of multi agency resource teams that may be established periodically to work with residents and lend assistance and advice on the general codes that can be enforced within a residential neighborhood to help improve the quality of life and to address typical issues that lead to successful neighborhood improvement.

GOAL CS-6 To prevent fires and maintain safe neighborhood conditions through the use of community-oriented educational and involvement programs.

POLICIES

- CS-6.1 The City shall minimize potential property damage, injuries, and loss of life due to fire through fire prevention practices and ongoing educational and public involvement programs.
- CS-6.2 In areas with inadequate fire flows, including those above 300-feet in elevation, the City shall require new development to incorporate design alternatives that will provide the necessary fire flows for both building fire sprinklers and fire hydrants.
- CS-6.3 The City shall continue to improve the availability and clarity of fire standards and

promote early consultation between the development community and fire prevention staff to ensure that fire protection concerns are considered during project design.

- CS-6.4 The City shall analyze the most common causes of fire within the city and focus fire prevention training exercises and community outreach programs accordingly.
- CS-6.5 The City shall continue to provide fire safety demonstrations and presentations at public and private schools, civic and social organizations and other public gatherings. Where possible, the city shall establish an annual schedule for such events.
- CS-6.6 The City shall maintain the current required annual inspection program for commercial, industrial, assembly occupancies, institutional, multi-family residential, educational and vacation rentals. . Engine companies will make an effort to inspect non-required inspections of all businesses in the City every 2 to 5 years. and office spaces within the city limits based on hazard classification.
- CS-6.7 The City shall continue to participate in and support the Napa Communities Firewise Foundation in their efforts to inform, educate and prepare individuals from the effects of wildfire.
- CS-6.8 The City, as the need arises and funding permits, should initiate the use of a multi agency resource team working with neighborhood groups to improve and clean up neighborhoods.
- CS-6.9 The City shall continue to provide staffing and support for code enforcement as means of reducing citizen exposure to risk and improving the general conditions of neighborhoods. The City shall continue to conduct code enforcement primarily on a complaint basis, and shall formalize the process for response and prioritization of complaints

IMPLEMENTATION PROGRAMS

- CS-6.A The City shall continue the process of coordinating code enforcement with affected departments.

Responsibility: City Manager
Time Frame: Ongoing

CS-6.B The City shall develop Fire Department Development Guidelines for typical residential, commercial and industrial development.

Responsibility: Fire Department
Time Frame: FY 11-12

EMERGENCY MEDICAL SERVICES

The Fire Department is a critical part of the city’s emergency medical system. A 1977 ballot measure authorized both a tax levy and an expansion of the Fire Department’s role to provide paramedic service. The Fire Department must provide trained personnel and specialized equipment so that units are prepared to effectively respond to emergency medical calls.

In order to maintain maximum preparedness to react to emergency medical calls all Fire Department operations personnel are trained and equipped at a minimum of emergency medical technician level which enables them to provide basic life support. All engine companies are staffed with Paramedics (Advanced Life Support) and the Fire Department aerial ladder truck is staffed with Emergency Medical Technicians who are capable of providing Basic Life Support. Medical studies show that lack of blood and oxygen to the brain between 4 and 6 minutes causes severe brain damage and may result in death; therefore, in responding to a medical emergency (e.g., heart attack, seizure, stroke) it is critical to have emergency medical treatment administered as soon as possible.

GOAL To provide emergency medical services adequate to meet the call demands within the city.

CS-7

POLICIES

- CS-7.1 The City shall maintain personnel and equipment necessary to provide medical emergency response services for the city of Napa.
- CS-7.2 The City shall maintain personnel to seek to provide a maximum response time of five minutes to any call involving an immediate danger of loss of life as a result of a medical emergency.
Community Development Dept for Code Enforcement
- CS-7.3 The City shall equip staff with state-of-the-art

medical and rescue equipment as needed to meet demands for emergency medical services.

- CS-7.4 The City shall continue to maintain certification and provide continuing education for firefighters to function as emergency medical technicians or paramedic.
- CS-7.5 The City shall explore additional medical service funding, including insurance company reimbursement, patient transport capability, and other sources, to help address the costs of providing emergency medical services.

SCHOOLS

The Napa Valley Unified School District (NVUSD) is the primary provider of kindergarten through twelfth grade education in Napa. The NVUSD is affected by population growth since, by law, it must accommodate all school-aged children.

There are also private elementary schools and a small number of other private facilities operated by churches and other organizations that offer kindergarten through high school curriculums. Justin Siena High School, located at the northwest corner of Trower and Solano Avenue, is a large private Catholic high school.

Long-term school facilities planning for the NVUSD is conducted primarily by school district staff, the NVUSD Board of Education, and the State Department of Education. District-wide school-aged population projections are calculated by the school district and the School Board addresses projected facility needs to respond to forecast enrollment changes. In addition, each individual school prepares grade level enrollment forecasts which help determine future needs of the school. Some of the issues that make this forecasting difficult include School Board policies related to maximum classroom size, open enrollment and teacher/pupil ratios.

The City of Napa's relationship to facilities planning for the NVUSD involves coordination with proposed physical improvements and ongoing referrals of subdivision maps by the City to the District Office for comments.

School Service Standards

School enrollment changes result from both new development within the city, unincorporated county areas within the district, and other factors independent of development (e.g., changes in household sizes, changes in age of the population, population migration trends, number of students attending private schools). The

increased demand will likely be addressed by a combination of relocatables, permanent structures (e.g., new schools), and use of leased facilities.

Most NVUSD schools are operating near capacity, and some primary grade classroom sizes are over the District-prescribed teacher/student ratio. To address this issue, in December 1990 the Board of Education appointed 28 community members to serve on a School Facilities Task Force (SFTF). The SFTF was asked to examine the need to modernize existing facilities and plan for new student enrollments through 2005. The SFTF found that there are serious potential shortages in future classroom space needs as well as need for physical improvements to existing classrooms to meet today's basic health and safety standards.

The SFTF concluded that many district facilities require reconstruction to address basic health and safety concerns. In addition, existing facilities need modernization to address the technological demands of current teaching strategies. A local bond election recommended by the Task Force to pay for these upgrades passed in 1996.

GOAL To provide for the educational needs of all Napa residents.

CS-8

POLICIES

- CS-8.1 The City shall work cooperatively with the Napa Valley Unified School District in monitoring housing, population, and school enrollment trends and in planning for future school facility needs.
- CS-8.2 The City shall work cooperatively with the Napa Valley Unified School District to use existing school facilities for non-school-related and child care activities.
- CS-8.3 The City shall support enactment of state legislation to finance the construction and maintenance of schools.

WATER SYSTEM

The primary responsibility of the City of Napa's Water Division (NWD) is to provide water customers within the City's water service boundary with a reliable supply of water safe for consumption and other domestic, industrial and commercial uses. The division's policy is to provide water on a demand-response basis and to plan for a water

system that will meet the city's long-term growth needs.

Water System Service Area

The NWD provides water service within an area generally coinciding with the RUL. A limited number of customers outside the RUL also purchase city water. Currently, about 10 percent of all City water customers are in this second group, with the largest outside customer base located northeast of the RUL in the Vichy/Silverado Country Club area. Southwest of the RUL, the independent Congress Valley Water District (CVWD) contracts with the City of Napa to supply water and maintain its system. The CVWD is scheduled to be dissolved and its system purchased by the City in 2017.

The City's service area boundary encompasses an area much larger than the system can currently serve. Water service for the unincorporated area south of the city is provided by the City of American Canyon. To the north, the Cities of Yountville, St. Helena, and Calistoga provide water to customers within their service areas.

Storage and Delivery

Treated water flows primarily from the Jameson and Hennessey Treatment Plants through the City's transmission pipelines into distribution reservoirs and tanks located near the city's water customers. The distribution system pipelines draw from the storage facilities, which provide a buffer for hourly variations in demand. The city's peak water demand occurs in the summer, when an average of 14 to 20 million gallons a day are used. Winter water demand averages approximately 6 to 8 million gallons a day.

The distribution system is divided into separate areas called "pressure zones" which are numbered one through five (one being the lowest altitude, five the highest). Regulation in these zones is very difficult, and water pressures reach extremes across the zones. Even zone 1 (downtown area) is not without its problems due to the age of the distribution system and low elevation of the zone's historic water supply. Ultimately, a storage tank at a higher elevation and infrastructure repair and replacement will be needed to achieve an acceptable pressure in the downtown area.

Conservation

During the 1986 through 1992 drought, Napa had to purchase 6,500 acre-feet of water for three consecutive years from the Yuba County Water Agency in order to

supplement the City's supply. Even with those purchases, the City instituted voluntary and mandatory conservation programs during that period. In 1989, 1990, and 1992, the City instituted voluntary programs targeting a 10 percent reduction in consumption and achieved an 11 percent, 11.5 percent, and 24 percent reduction for those three years, respectively. In 1991, the City instituted a mandatory conservation program seeking a 20 percent reduction in water consumption and achieving a 33 percent reduction.

Prior to the drought, Napa's peak annual demand had been 14,400 acre-feet. With mandatory rationing, demand dropped to 9,800 acre feet. Following repeal of City drought restrictions, demand rose to approximately 12,200 acre-feet per year in 1993 and 1994.

In response to the 1987-92 drought, the following conservation policies were implemented:

- Mandatory use of ultra low-flow toilets in all new construction.
- Toilet retrofit program, which offsets the water demand created from new development by replacement of high water using fixtures in existing homes. This ordinance requires all new construction to use low-flow toilets and that four existing homes must be retrofitted with low-flow plumbing fixtures for each new single family home built (condominiums, apartments and commercial developments are calculated at different rates).
- Xeriscape standards. All projects requiring City-approved landscape plans must install drought tolerant landscaping in accordance with state law (AB 325).

Sources and Demand

Napa's current water demands are met by three sources: Milliken Reservoir, Lake Hennessey, and water purchased under contract from the State Water Project and delivered through the North Bay Aqueduct system (NBA). The three sources can be used separately or collectively to supply the system with water as needed. In years when reservoirs are nearly full and rainfall is normal, Napa's supplies are currently adequate to meet demands. During periods of multi-year droughts, however, customers must be asked to reduce usage. In addition, the City needs water supplies to accommodate projected growth.

Some measures which have been explored jointly by the Napa Sanitation District and the City Water Division include greater use of reclaimed water and incentive programs for use of water conservation measures within new developments above and beyond the currently

mandated programs.

During multi-year droughts the city's existing water supply is insufficient to meet the needs of the city in the event that there is a drought cutback in State Water Project allocation. As indicated in the *Water System Optimization and Master Plan* (Adopted 11/97), this will become less problematic in the future because the City's water entitlements from the State Water Project (SWP) are growing significantly faster than projected growth in water demand in the City's water service area. Based on the City's current contract the 1996 entitlement of 6,200 acre-feet will grow to 18,800 acre-feet by the year 2021 (its ultimate SWP entitlement). This will provide a surplus in most years and the ability to absorb large cutbacks in dry years. For the purposes of long range analysis, the *Water System Optimization and Master Plan* assumes a 50 percent reduction in SWP deliveries and a reduction in water demand of 20 percent during dry years to reflect the City's drought demand management measures.

At the current entitlement schedule, there will remain a remote possibility that a cutback in SWP allocations could result in a water deficit up until the year 2012. Based on past drought experience, the impact of this deficit is public inconvenience and minor loss of irrigated landscape. Entitlement amounts will increase by 2012 to a point where allocation surpluses, combined with proven conservation practices, would ensure adequate water supply even with an SWP allocation reduction resulting from drought.

Environmental standards for the Sacramento River Delta, along with minimum flow requirements for endangered species imposed on the State Water Project, may also occasionally affect the predictability of water quantities received from the State Water Project.

The City is pursuing a SWP contract modification that will accelerate allocations to bring the 2012 horizon to the present. *2004 Note: In 1998, the City secured accelerated State entitlements and the City has sufficient water to meet demands under average rainfall conditions and during drought conditions through year 2020.*

The City's water distribution system also has insufficient short-term storage capability to address current and projected needs. To address the current and long-term water supply needs of the community, the City's *Water System Optimization and Master Plan* (January/February 1996) includes goals, policies and implementation measures, along with the environmental analysis, to address the current and long-term water system needs for the city.

Policies related to water quality are also included in Chapter 7, Natural Resources

GOAL To ensure adequate, reliable, and safe water supplies to the community, even through drought periods of similar intensity as the 1986-1992 drought.

POLICIES

CS-9.1 The City shall continue to implement water conservation programs that show promise of saving significant amounts of water at a reasonable cost.

CS-9.2 The City shall acquire or develop additional water supplies that would be available during drought periods to offset the shortages anticipated from existing supplies.

Water Supply options include:

- a. Acceleration of entitlements from the SWP through contract modification
- b. Pursuing transfer agreements with other State Water Contractors pursuant to the provisions of the Monterey Agreement
- c. Participation in SWP water banking program
- d. Participation in the SWP Drought Year Projects such as the American Basin Conjunctive Use Project and the Supplemental Water Purchase Program

CS-9.3 The City of Napa shall determine the firm yield available from existing and future SWP water supply sources and shall monitor and, if necessary, limit growth (new water system hook-ups) in order to guarantee drought year water supplies to existing and proposed development. Growth shall be monitored and, if necessary, limited as follows:

- 1) The City shall not issue any building permits or similar ministerial entitlements for proposed structures that would increase net potable water consumption in the City or its service area in the absence of a letter from the Department of Public Works, stating that approval of the permit or other entitlement will not adversely affect the City's ability to adequately serve the public health and safety needs of all of its water customers during drought conditions.
- 2) In addition, when conducting environmental review for proposed

development projects requiring General Plan amendments, specific plans, use permits, tentative subdivision maps, or similar discretionary approvals, the City shall include within the environmental document, information assessing whether the City and its water suppliers are likely to have sufficient water supplies to adequately serve the proposed development and all other City water customers during drought conditions. In approving any such discretionary project, the City shall require, as a mitigation measure and condition of approval, that the applicant(s) may not receive a final subdivision map or, in the absence of the need for such a map, may not receive building permits or similar ministerial entitlements in the absence of a letter from the Department of Public Works stating that approval of the map, permit or other ministerial entitlement will not adversely affect the City's ability to adequately serve the health and safety needs of all of its water customers during drought conditions and that there will be sufficient water to serve the basic health, hygiene, and fire suppression needs of the community.

When contracts are modified or are executed with the SWP to secure additional reliable water supply for drought years, or other dependable and adequate sources are guaranteed, the requirement to limit growth in the manner described above can be suspended.

(Note: On December 15, 1998 the contract with the State DWR was approved, increasing the City's water allocation from the NBA.)

- CS-9.4 The City shall implement the "Water System Optimization and Master Plan" (adopted 11/97) which refines policies and implementation programs for efficient water supply, storage, and delivery for projected demand to the year 2020.
- CS-9.5 . The City shall evaluate the feasibility and pursue the efficient use of reclaimed wastewater in appropriate locations to offset the demand for potable water supplies.
- CS-9.6 . The City shall promote voluntarily conservation efforts to conserve water to a reasonable extent during multi-year droughts

to avoid inordinate expenditures for new water supplies.

- CS-9.7 . The City shall work cooperatively with other agencies having similar needs to identify water supply options that could have mutual benefit and consider entering into joint powers agreements to develop and manage a candidate project.
- CS-9.8 . The City shall encourage state and federal agencies to cooperatively establish programs and projects that will enable the State Water Project to meet its contractual obligations to the city predictably and reliably.
- CS-9.9 . The City shall monitor the State Water Contract and work with other agencies to ensure continued and increased reliable water supply deliveries from the State Water Project.
- CS-9.10 . The City shall seek to control urban development in the city's Water Service Area beyond the RUL. To this end, the City shall continue applying Policy Resolution #7 (Outside Water Service Policy) as an effective means of limiting and preventing urban development beyond the city's RUL.

IMPLEMENTATION PROGRAMS

- CS-9.A The City shall implement the policies, programs, and long-range capital improvement plan according to the schedule adopted in the *Water System Optimization and Master Plan*.

Responsibility: Public Works Department
Time Frame: FY 99-03

WASTEWATER

The Napa Sanitation District (NSD) provides customers within its service boundary with wastewater disposal and strives to maintain a wastewater disposal system that will meet Napa's long-term urban growth needs. The NSD does not have the authority to regulate growth, but rather responds to it by planning its system to accommodate anticipated future needs.

Treatment Facilities

NSD wastewater treatment facilities consist of two plants. The Imola plant has a daily capacity of 8 million gallons per day using a primary treatment process. The Soscol plant has a hydraulic capacity of 15.4 million gallons per

day. Presently, the Soscol plant is operating near (and sometimes during wet weather, over) capacity. Both the Imola and Soscol treatment plants have inadequate solids handling facilities and treatment capacity. These problems have been addressed as part of the Soscol plant phase II improvements recommended in NSD's 1990 *Wastewater Master Plan*.

NSD has begun to implement various phases of its Master Plan program, which is designed to ensure the district will be able to supply adequate wastewater treatment capacity through 2012. The *Wastewater Master Plan* provides for upgrading the Soscol treatment plant and replacing or rehabilitating aging sanitary sewer mains. The plan also includes expenditures of \$13 million for trunk lines and \$2 million for pump station expansion. These improvements will allow NSD to produce a higher quality reclaimed water, shut down the aging Imola treatment plant, eliminate objectionable odors from the treatment ponds during the winter, and reduce the amount of storm water intrusion into the system during wet weather. When planned improvements are completed, NSD's capacity will meet the area's projected residential, commercial, and industrial growth demands through 2012. Additional improvements could extend the District's capacity through 2020.

Sludge Disposal and Water Reclamation

Dewatered sludge generated at the NSD's Imola Plant is either beneficially reused or disposed of at various landfill sites. Most of the sludge generated at the Soscol facility since 1966 has been stored in the plant's oxidation ponds. The District's master Plan calls for removal of the accumulated sludge and future processing of sludge as it is generated.

From November through April, treated water is released into the Napa River. Constant testing is performed on the water to ensure it meets Regional Water Quality Control Board (RWQCB) standards. From May through October, when discharge to the river is prohibited, wastewater is stored in the District's oxidation pods for winter discharge, with a portion being reclaimed for irrigation.

Although water reclamation is not cost effective, the "beneficial reuse" of reclaimed water does provide significant environmental benefits. NSD's goal is to double the amount of annual inflow it reclaims to 50 percent. Reclaiming half of NSD's annual inflow would make 3,500 acre feet of reclaimed water available each year for uses in and around the city. NSD continues to seek users for its reclaimed water.

The City is considering using reclaimed wastewater at the Kennedy Park golf course by the late 1990s. The NSD

proposes extending a pipeline for use of this water north along Soscol to Imola Avenue, making reclaimed wastewater accessible to public agencies and private businesses. The Stanly Ranch property could also consider using reclaimed wastewater.

GOAL To ensure adequate wastewater collection and treatment and the safe disposal of wastes.

CS-10

POLICIES

- CS-10.1 The City shall promote reduced wastewater system demand through efficient water use by:
- a. Requiring water-conserving design and equipment in new construction
 - b. Encouraging retrofitting with water-conserving devices
- CS-10.2 The City shall support continued efforts by the Napa Sanitation District to promote the use of reclaimed wastewater.
- CS-10.3 The City shall coordinate development review with the Napa Sanitation District to ensure that adequate wastewater collection, treatment, and disposal facilities can be provided by the District by requiring that all new applicants for development secure a "will-serve" letter from the NSD if the District notifies the City that a critical capacity situation exists.

Where a critical capacity situation does exist, the City shall not issue, in the absence of a will-serve letter from the NSD, any building permits or similar ministerial entitlements for proposed structures that would increase net demand on NSD treatment capacity. In addition, when conducting environmental review for proposed development projects requiring General Plan amendments, specific plans, use permits, tentative subdivision maps, or similar discretionary approvals, the City shall include within the environmental document, information assessing whether NSD is likely to have sufficient capacity to serve the proposed development.

In approving any such discretionary project, the City shall require, as a mitigation measure and condition of approval, that the applicant(s) shall obtain the necessary will-serve letters

from NSD prior to receiving approval of a final subdivision map, or in the absence of a need for a final subdivision map, prior to receiving approval of any required building permits or similar ministerial approvals.

STORM DRAINAGE

The city of Napa's storm drainage system consists of a network of open ditches, culverts, and underground pipes of various sizes and capacities, many of which are maintained by the Public Works Department. The City's primary objective in relation to the drainage system is to reduce the risk of flooding, and potential loss of life and property damage from flooding

The City also seeks to reduce pollutant discharge from urban runoff into natural water bodies using best management practices (BMP). Urban areas create more runoff than natural settings or agriculture because the soil is covered by impermeable surfaces such as roads, driveways and roofs, which prevent the water from soaking into the ground. In addition, urban uses result in auto wastes, lawn pesticides, fertilizers, and other chemicals being carried into urban runoff. As a result of the 1987 amendments to the federal Clean Water Act, urban areas throughout the country are required to reduce or eliminate pollutant discharge into storm-water. In the case of small cities (i.e., those under 100,000 population), management of storm-water discharge into conveyance systems is encouraged, but not yet required.

Storm Drainage System

The city's existing storm drainage system service area covers approximately 22 square miles. Drainage collection in the city's subbasins operates on a gravity system, facilitating storm-water runoff from low-lying or poorly graded areas into natural drainage channels. Runoff water enters the system through ditches or from street storm drains. The runoff is channeled through ditches, culverts, and buried pipes until it is discharged into a natural channel (i.e., the Napa River or of one of its tributaries). The tributary creeks are typically maintained in their natural state as open channels, providing a low level of water filtration and wildlife habitat. When slope stabilization is required due to severe erosion, improvements are based on review from the California Department of Fish and Game.

Inadequate drainage systems can result in flooding when more surface water runoff arrives at a local watershed than the system is designed to handle. Typically, as urban development increases so does runoff, requiring excess

water to be channeled through engineered systems. This problem is exacerbated when development occurs in upstream areas, as the increased runoff generated in these areas will eventually converge downstream, further impacting existing systems. If larger ditches, channels, and pipes are not constructed to accommodate the larger runoff volumes, flooding will result in the lower areas.

Storm Drainage Service Standards

Drainage systems are sized based on anticipated runoff during storm events. Factors considered in predicting runoff include anticipated storm duration and intensity, general site topography, and site development intensity (i.e., percent of paved or covered surfaces). Underground storm drainage pipes in the city's residential areas are designed to carry 10-year to 25-year storms depending on the drainage area and location of the facility. Commercial and high value districts are required to design storm drainage systems in the public right-of-way sufficient to accommodate a 25-year storm. All bridges are required to be designed for a 100-year storm. Underground storm drainage pipes are normally installed in the public right-of-way. When this is impractical, the pipes are installed in storm drainage easements dedicated to the city.

The City designs drainage improvements according to subbasins. The City has ranked the subbasins on a scale relative to the system's ideal design capacity, with the ranking reflecting the least capable segment in a particular subbasin. Generally, the ranking reflects the ability of the pipes or ditches at the lowest end of the drainage system to handle all the runoff from the watershed arriving at that point.

Napa's current *Stormwater Drainage Master Plan* was prepared in 1960 and is outdated. Unlike gas taxes earmarked for street improvements, until recently, there were no funding sources exclusively earmarked for storm drainage, either for construction of new systems or maintenance of existing ones. The City Council has now adopted (mid-1996) a Stormwater System Service Fee.

Recently enacted federal stormwater regulations require that management of stormwater runoff address the water quality impacts associated with the runoff.

Note: National Pollution Discharge Elimination System (NPDES) requirements apply to Napa in 2004

Creek Capacity

Another component in the overall storm drainage system includes the creeks and open channels within the city. The City of Napa currently does not have jurisdictional or maintenance responsibilities for most creeks and channels

within the city limits. The County Flood Control District has easements over portions of creeks and channels within the city (i.e., Tulocay Creek, Salvador Channel) which entitles them to enter and maintain portions of these drainage channels; however, the Flood Control District is currently unable to fund maintenance contracts. The Flood Control District is in the process of adopting a Maintenance and Watershed Management Assessment District to fund their maintenance of creeks and open channels.

In order to provide greater channel capacity and remove debris and obstructions from some of these channels, the City and the County have coordinated cleanup efforts with the Department of Fish and Game and adjacent property owners. These efforts have been irregular and marginally successful due primarily to expense.

Napa River Capacity

Based on a 1995 Army Corps of Engineers *Flood Control Report*, the Napa River currently has the capacity to carry a 10-year storm. Because of the city’s geographic location at the mouth of the valley’s watershed and because the Napa River slows, bends and narrows drastically at the Oxbow near downtown, during extended periods of heavy rainfall in the up-valley reaches of the watershed, the city is subject to flooding in areas on the east and west sides of the Napa River from Trancas Street south to the Stanly Ranch. Flood conditions create the need to evacuate residents within the flood plain area and can sever emergency services between the west and east sides of the Napa River.

The side effect of the rising river at flood stages is localized flooding within the city. The Napa River reaches a stage of being unable to accept any runoff from the urbanized parts of the city and causes the storm drainage to backup into the neighborhoods, and especially in the areas between Silverado Trail and Main Street and Lincoln and Sousa Lane.

In an effort to correct the flooding problems, the City has been actively involved in the preparation and design of a Flood Control Project. The “Flooding” section in Chapter 8, Health and Safety, discusses this project in greater detail.

GOAL To develop and maintain a safe, attractive and environmentally sensitive drainage system for handling runoff due to seasonal rainstorms.

CS-11

POLICIES

CS-11.1 The City shall address needed long-term

improvements for the drainage system.

- CS-11.2 The City shall continue to collect a Storm Water System Service Fee for needed storm drainage improvements and maintenance.
- CS-11.3 The City shall plan and build storm improvements within funding limits.
- CS-11.4 The City shall investigate the potential for establishing an impact fee to help accommodate the effects of additional runoff from new development.
- CS-11.5 The City shall develop stormwater management programs to reduce water borne pollution discharges to the maximum extent practicable.
- CS-11.6 The City shall require new development to obtain all necessary NPDES permits as required by federal law.
- CS-11.7 The City shall require all new development to implement feasible best management practices (BMP) in the design of stormwater systems.
- CS-11.8 The City shall require all projects in the floodplain to comply with applicable federal, state and local regulations.
- CS-11.9 The City shall work with the California Department of Fish and Game and Napa County Resource Conservation District to develop an acceptable and appropriate homeowners' stewardship program aimed at reducing flooding along creek and river side properties.

IMPLEMENTATION PROGRAMS

CS-11.A The City shall prepare a *Storm Drainage Master Plan*. The scope of the Master Plan should include:

Hydrologic Information and Recommendations

1. Documentation of existing facilities and conditions
2. Development and adoption of standard methodologies for future system design
3. Production of a Storm Drainage Base map with estimated design flow at critical points
4. Hydraulic analysis of the City system
5. Identification of problem areas and

prioritization of improvements (projects completed as funding permits)

Water Quality Evaluation and Recommendations

1. Documentation of current and anticipated regulations
2. Runoff water quality management program including the following components:
 - a) Existing City Programs, including Stormwater Service Fee, SWPPP and NOI requirements for projects over 5 acres, street sweeping, drain stenciling, pesticide certification for employees, implementation of erosion control measures
 - b) Five year schedule and costs for implementation
 - c) Refinement of General Plan policy implementation programs as needed
 - d) Pursuit of funding for water quality education programs
 - e) Identification of standards for erosion control design and implementation
 - f) Bioengineer bank stabilization projects in cooperation with the Flood Control District
 - g) Identification of small development standards for trash enclosures and other sources of runoff contamination

Responsibility: Public Works Department
Time Frame: FY 00-05

SOLID WASTE COLLECTION AND DISPOSAL

The city of Napa lies within Napa County's Garbage Zone 1. This zone administers collection of all solid waste in Napa County south of the city of Yountville.. In August 1993, Napa County, through a Joint Powers Agreement with the cities of Vallejo and Napa, formed the South Napa Waste Management Authority (SNWMA) to deal with the impending closure of the American Canyon Landfill. Since its formation, SNWMA has considered and rejected a number of possible sites in-lieu of local sites. Other sites were also rejected by referendum.

In lieu of using local sites, SNWMA constructed a solid waste transfer station two miles south of the city at 889 Devlin Road. The transfer station began operations in April 1995 and serves the same geographic area previously serviced by the American Canyon Landfill. The SNWMA has contracted with Regional Disposal Company to haul

the solid waste by rail to the Roosevelt Regional Landfill in the State of Washington.

Solid Waste Reduction and Recycling

In 1989, the State Legislature passed Assembly Bill 939 (AB 939) which instituted California's first statewide Integrated Waste Management Plan. AB 939 put the burden of solid waste disposal and diversion on California's cities and counties. With 1990 as the base year, cities were required to divert 25 percent of their waste streams from landfills by 1995. This was to be accomplished through source reduction, recycling, and composting programs. By 2000, AB 939 requires 50 percent of municipal waste streams to be diverted.

In 1991, the City adopted a *Source Reduction and Recycling Element* (SRRE) and a *Household Hazardous Waste Element* (HHWE) to guide local efforts in reducing the amounts and types of waste disposed in landfills. This is accomplished through a variety of programs and services offered throughout the city including residential curbside recycling, yard waste composting, drop-off and buy-back center recycling and commercial sector recycling. Safe disposal opportunities for household hazardous wastes are provided through local drop off centers and periodic collection events. These services are promoted through an ongoing, city wide awareness effort which includes distribution of flyers and brochures, assistance with onsite business "waste audits" and media outreach through local newspapers, radio and cable television.

Solid Waste Service Standards

The City's solid waste service standards are set through its participation in the SNWMA and requirements of AB 939. The City's policy is to maintain a service standard that will ensure safe, regular disposal of all commercial, industrial, and household waste while diverting 50 percent or more of the city's total waste stream by 2000.

The City's SRRE includes a contingency plan if the AB 939 50 percent waste reduction requirement is determined to be unachievable with current waste reduction and recycling procedures. This contingency measure is the use of a Materials Recovery Facility for recovery of recyclable materials from the waste stream.

GOAL CS-12 To provide for safe and environmentally sound municipal waste reduction and recycling programs that will allow the City to attain the requirements of AB 939.

POLICIES

- CS-12.1 The City shall provide ongoing waste reduction and recycling public awareness and education programs.
- CS-12.2 The City shall continue to monitor its *Source Reduction and Recycling Element* (SRRE) and *Household Hazardous Waste Element* (HHWE) to ensure that the City is meeting its waste reduction goals.

IMPLEMENTATION PROGRAMS

- CS-12.A The City shall evaluate the current program and consider construction of a Materials Recovery Facility if the waste diversion goals are not being realized as projected in the *Source Reduction and Recycling Element*.

Responsibility: Public Works Department
Time Frame: FY 99-03