

## Introduction

The Infrastructure Element addresses the planning, provision and maintenance of public buildings, landscaping, roads, drainage, telecommunications, water and power systems, and other facilities in the City of San Rafael. The prosperity of San Rafael is in part founded upon an adequately sized and well-maintained infrastructure.

The City of San Rafael is committed to maintaining and modernizing the City's facilities through ongoing planning and investment. The City will also continue to address issues such as functional and technological adequacy, accessibility for the disabled, and changing needs of San Rafael residents. An adequate and well-planned system of infrastructure facilities is one of the primary prerequisites for a city's development. The planning, construction and management of complex infrastructure facilities and networks is essential to the well-being of the City.

San Rafael owns and maintains many buildings that house its public safety and administrative activities. The City also owns and operates a variety of facilities and buildings to meet the recreational and cultural needs of its residents. In addition, San Rafael is responsible for maintaining and managing facilities located in the public right-of-way, including street surfaces, signals, curbs, gutters, sidewalks, street trees, landscape medians and entryways, signs, and streetlights.

Construction of new facilities and maintenance of existing facilities are managed through the City's Capital Improvements Program (CIP). The CIP is a major element of the City's budget, and includes projects that have been evaluated and prioritized through the City's interdepartmental review process. The CIP lists expected new facilities as well as facility improvements and repairs: the list includes fully funded projects as well as projects where funding is not yet available. As part of the City's budget, the CIP is updated on a bi-annual basis. The list of CIP projects identifies funding priorities. These priorities change in response to the amount of funds available. Sources of funding include the City's General Fund, Gas Tax Fund, Storm Water Fund, State and regional grants, and private donations.

Through evaluation of facilities, regular maintenance, and planning for additional facilities to meet community needs, San Rafael is committed to having the best infrastructure the community can afford. For example, the City's building condition surveys identify seismic-safety and maintenance needs for public safety-related facilities. While periodic State budget issues affected the City's ability to adequately fund facility maintenance, the long-term goal of the City is to have an infrastructure to match the community's needs, and to establish a disciplined funding program for regular maintenance of these public facilities.

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## GOAL 19: SOUND INFRASTRUCTURE

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**It is the goal of San Rafael to have well planned, well-maintained and adequate infrastructure, public buildings, and landscaping.** *In order to ensure the quality of infrastructure expected by the San Rafael community, public buildings, streets and sidewalks, landscape medians, and storm drains receive rehabilitation or replacement as needed, as well as continued maintenance. Prudent management and planning of resources is designed to allocate sufficient money to fund the construction and maintenance required.*

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**I-1. Capital Improvements Maintenance and Replacement.** Provide for ongoing, preventative maintenance of infrastructure facilities and timely replacement of City equipment.

**I-1a. Capital Improvement Programming.** Plan for the improvement of public facilities and infrastructure through maintenance of a multi-year capital improvement program.

Responsibility: Public Works, Management Services,

Economic Development, Community Services

Timeframe: Ongoing

Resources: Capital Improvement Program

**I-1b. Public Input.** Continue to improve public input into the City's CIP process. Consider ways to utilize the City's website to list funded or proposed capital improvements.

Responsibility: Public Works

Timeframe: Ongoing

Resources: Staff Time

**I-1c. "Sinking Fund."** Establish a 'sinking' fund to finance maintenance of the City's infrastructure.

Responsibility: Management Services, Public Works

Timeframe: Long Term

Resources: Staff Time, (charges to departments),

Tax, General Fund, Assessment District

**I-2. Adequacy of City**

**Infrastructure and Services.**

Assure that development can be adequately served by the City's infrastructure and that new facilities are well planned and well designed.

**I-2a. Long-term needs.** Continue to use the CIP as a tool to conduct comprehensive analyses of long-term infrastructure needs, including new facilities and maintenance.

Responsibility: Public Works

Timeframe: Ongoing

Resources: Staff Time

### Capital Improvement Program (CIP)

The multiyear scheduling of public physical improvements. The scheduling is based on studies of fiscal resources available and the choice of specific improvements to be constructed for a period of five to six years into the future. The purposes of the CIP are:

- Identify present and future needs for physical improvements in the City.
- Identify the potential costs of requested improvements.
- Identify possible sources of revenue to pay for the requested improvements.
- Provide the City Council a procedure for setting priorities among requested improvements.
- Promote coordination of construction programs among public agencies and private interests.
- Provide an effective tool for implementing the General Plan.

The CIP is included in the *City of San Rafael Program Budget*, available in the Public Library and the City Clerk's Office.

**I-2b. Diversified Funding.** Seek diversified funding sources in addition to the City’s various funds.

Responsibility: All Departments  
Timeframe: Ongoing  
Resources: State and Federal Funds, Grants, Partnerships, Mitigation Fees, Partnerships.

See also LU-2a (Development Review)

**Sinking Fund**

A sinking fund is a fund set up to put money aside for a future project. It is used to accumulate resources (annual additions and earnings) needed to retire the long-term bond issues at maturity.

**I-3. Availability of Utilities.**  
Promote the availability of reliable and reasonably priced utilities necessary for businesses and residences to prosper.

**I-3a. Capacity Management.** Work with the Central Marin Sanitation Agency and San Rafael Sanitation District to ensure completion of a Capacity Management Alternative Study to determine the scope of needed improvements, costs, and expected benefits to avoid excess of water treatment capacity.

Responsibility: Public Works  
Timeframe: Ongoing  
Resources: Staff Time

**I-3b. Water Supply Impacts.** Work with Marin Municipal Water District to meet the projected water demand and to ensure reduction of existing and projected water supply impacts.

Responsibility: Public Works  
Timeframe: Ongoing  
Resources: Staff Time

See LU-2a (Development Review).

**I-4. Utility Undergrounding.**  
Continue to pursue the undergrounding of overhead utility lines.

**I-4a. Funding Undergrounding Utilities.** Seek funding opportunities to underground utilities. Sources include PG&E’s dedicated underground funding (“Rule 20A/20B”), private funding, and assessment districts.

Responsibility: Public Works  
Timeframe: Ongoing  
Resources: Staff Time, Assessment District

**I-4b. Prioritizing Undergrounding Utilities.** Consider prioritization of utility undergrounding along corridor or gateways identified in Exhibits 17 (San Rafael Community Design) and Exhibit 18 (Central San Rafael Community Design).

Responsibility: Public Works  
Timeframe: Ongoing  
Resources: Utility Funds

**I-4c. Neighborhood Efforts.** Provide information about funding options for undergrounding utilities. Assist neighborhoods with self-help efforts to fund undergrounding of utility lines.

Responsibility: Public Works  
Timeframe: Ongoing  
Resources: Assessment District

## I-5. Public Involvement.

To the extent appropriate, continue to encourage public participation in the conceptual design and funding of major City building projects, such as public buildings and landscaping.

**I-5a. Design Review.** Involve the community in the planning and design of major public facilities. As public improvements, City projects are subject to the appropriate level of design review.

Responsibility: Public Works, Community Development, Community Services

Timeframe: Ongoing

Resources: Staff Time, Capital Improvements Program

## Street Maintenance and Landscaping

The City is responsible for maintaining 331 lane miles of street surfaces, 42 miles of landscaped street medians, and 50,000 street trees. These responsibilities include repairs, right-of-way, and streetlights. In order to prioritize and schedule street maintenance, the City uses a Pavement Management System for a more cost-efficient way of maximizing resources. In addition to the 'hardscape', San Rafael maintains landscaping, including, for example, the medians along Andersen Drive and Freitas Parkway, and the entryways in Downtown and in North San Rafael. The City's street trees are a valuable resource that add character to neighborhoods and commercial areas, control temperatures and reduce air pollution.

## I-6. Street Maintenance.

Maintain and modify where appropriate existing levels of street and sidewalk repair, street sweeping, and street lighting.

**I-6a. Pavement Management.** Continue the Pavement Management Program to allocate funds and prioritize street resurfacing projects.

Responsibility: Public Works

Timeframe: Ongoing

Resources: Gas Tax

**I-6b. Street Sweeping.** Continue to maintain a program for adequate street sweeping. Work with neighborhoods on ways to improve the efficiency of street sweeping, and to publicize street sweeping programs. Investigate alternative funding sources for street sweeping.

Responsibility: Public Works

Timeframe: Ongoing

Resources: Staff Time

**I-6c. Sidewalk Repair.** Develop a sidewalk repair program consistent with applicable State law and as local conditions warrant.

Responsibility: Public Works, City Attorney

Timeframe: Short Term

Funding: Staff Time

**I-6d. Street Lighting Program.** Continue the Street Lighting Program to allocate funds and plan for needed street lights and repairs.

Responsibility: Public Works

Timeframe: Ongoing

Resources: Joint Powers Agreement, Staff Time

See C-27b (Prioritizing Pedestrian Improvements).

## I-7. Landscape Maintenance.

Provide for low maintenance entryway landscaping. Give priority to maintenance of landscaping along the City's most heavily traveled roadways and gateways as shown on Exhibits 17 (San Rafael Community Design) and Exhibit 18 (Central San Rafael Community Design).

**I-7a. City Landscaping.** Encourage partnerships with neighborhood and civic organizations to maintain and improve the City's landscaped areas.

Responsibility: Public Works

Timeframe: Ongoing

Resources: Staff Time, Donations, Volunteers

See CD-8a (Gateways) and I-8c (Street Tree Maintenance).

## I-8. Street Trees.

Create street tree planting and maintenance programs and encourage the use of large canopy trees where appropriate in order to control temperature, improve air quality, control wind, define neighborhoods, and improve street appearance.

**I-8a Street Tree Program.** Develop a comprehensive citywide street tree planting, maintenance, replacement, diversification, wood utilization and tree waste-recycling program. The citywide street tree program should consider the use of large canopy trees where the planting areas and locations make such trees feasible and appropriate. Include coordination and communication with PG&E regarding tree maintenance in relation to power lines. Utilize volunteers to the extent feasible in creating a street tree inventory.

Responsibility: Public Works

Timeframe: Long Term

Resources: Staff Time, Partnerships, Grants, Volunteers

**I-8b. Street Trees for New Development.** Require street trees at frequent spacing in all new developments and property upgrades, and consider mitigation for tree removal by planting street trees in locations other than the project site. Continue replacing trees that have aggressive root systems affecting vehicular and pedestrian travel.

Responsibility: Public Works

Timeframe: Short Term

Resources: Contributions

**I-8c. Street Tree Maintenance.** Seek diversified funding sources for street tree maintenance and replacement.

Responsibility: Public Works

Timeframe: Short Term

Resources: Staff Time

**I-8d. Landscape Maintenance Next to Sidewalks.**

Revise City ordinances to require maintenance of private landscaping which encroaches onto the City right-of-way and sidewalks.

Responsibility: Public Works

Timeframe: Short Term

Resources: Staff Time

See I-6c (Sidewalk Repair).



Street trees add to the beauty and character of neighborhoods.

## Water and Wastewater Infrastructure

Marin Municipal Water District, a public utility governed by an elected Board, provides water service generally to all eastern Marin cities south of Novato. District facilities include six area reservoirs, two water treatment plants, storage tanks, pumps and lines.

The primary source of water for the District is rainfall stored in area reservoirs. The District also maintains a line inter-tie with the North Marin Water District for Russian River water. Area rainfall water sources are limited by water reservoir storage capacity. The total current capacity of the Water District is approximately 80,000 acre-feet. Seventy-five percent of the water used within the District is from local reservoirs, while the other twenty-five percent comes from the Russian River in Sonoma County.

Usage of potable and recycled water within the MMWD was an average of 27,560 acre-feet annually for the years 2004 to 2014. The watershed is currently managed for an operational yield of 28,500 acre-feet per year. MMWD has contracts for water from the Russian River to meet shortfalls in supply. However, use of additional Russian River water is limited by pipeline capacity and environmental concerns. To respond to anticipated supply deficits, MMWD is continuing its efforts to increase water conservation, is exploring additional opportunities to partner on water recycling with the Las Gallinas Valley Sanitary District and is designing and evaluating a possible desalination plant to increase supply.

Wastewater treatment in the part of San Rafael south of Puerto Suello is handled by two entities: Central Marin Sanitation Agency and the San Rafael Sanitation District. The Central Marin Sanitation Agency serves the southern half of San Rafael and the Ross Valley, which includes essentially all of Corte Madera, Larkspur, Greenbrae, San Anselmo and Fairfax. The Agency owns and operates the sewage treatment plant, which provides modified secondary treatment, a deep-water sewer outfall line, and three transport lines from San Rafael, Larkspur and San Quentin.

The San Rafael Sanitation District covers the portion of San Rafael south of Puerto Suello hill to the southerly city limit and adjacent unincorporated neighborhoods. The District owns and operates 32 pump stations and nine miles of force mains. Of the pump stations, 12 are considered to be major with sizeable tributary service areas, and 20 are minor. The District owns and maintains all of the 124 miles of gravity flow sewer mains in the District, although there are also some private sewer mains. Sewer laterals (lines between the sewer main and individual homes) are the responsibility of property owners.

The Las Gallinas Valley Sanitary District provides sewage collection and treatment in San Rafael north of Puerto Suello Hill and in adjacent unincorporated areas. The District serves all northern City areas, and the unincorporated neighborhoods of Lucas Valley, Marinwood, and Santa Venetia. The District provides all treatment and transport facilities, which include the treatment plant, about 300 acres of ponds and land irrigation areas, pump stations, force mains and gravity flow sewer mains. Sewer laterals are privately owned.

Wastewater from the Las Gallinas Valley Sanitary District is given additional treatment by Marin Municipal Water District (MMWD) and piped through a circulation system

separate from that of potable water to irrigate parks and landscaping throughout North San Rafael.

The CMSD has a dry weather treatment capacity of 10 million gallons per day (mgd), and current flows of 8 mgd. The plant's wet weather capacity is between 90 and 125 mgd, depending on tidal conditions. Current wet weather flows vary with storm events, with a maximum flow reaching 107 mgd in recent years. Projected development through 2020 would increase wastewater flows by about 12 percent, or by 1 mgd during dry weather and 13 mgd during wet weather. Both increases are within the plant's current capacity, but the CMSA is currently studying ways to reduce wet weather flows and/or increase treatment capacity.

The LGVSD has a dry weather capacity of 2.92 mgd and flows currently are measured at 2.2 mgd. The district has capacity for the equivalent of 4,500 additional dwelling units, which is well within projected growth.

See the Air and Water Quality Element for policies and programs related to the City's stormwater infrastructure.

### I-9. Water Supplies.

Encourage Marin Municipal Water District to develop cost effective strategies for adequate long-term water supplies.

**I-9a. Water Supplies.** Monitor efforts by the MMWD to expand the local water supply to meet long-term needs. In addition to environmental review, request adequate review of economic impacts. Ensure adequate review of environmental, design and economic issues related to a potential desalination plant.

Responsibility: Community Development

Timeframe: Ongoing

Resources: Staff Time

### I-10. Sewer Facilities.

Existing and future development needs should be coordinated with responsible districts and agencies to assure that facility expansion and/or improvement meets Federal and State standards and occurs in a timely fashion.

**I-10a. Coordination of Services.** Participate in coordination efforts between responsible agencies providing sewer facilities.

Responsibility: Public Works

Timeframe: Ongoing

Resources: Staff Time

See also LU-2a (Development Review).

## I-11. Improvements to Drainage Facilities.

Continue to monitor and pursue as appropriate improvements to areas with insufficient drainage.

**I-11a. Pipe Replacement.** Pursue the replacement of the City's older corrugated metal drainage pipe system with a more durable material.

Responsibility: Public Works

Timeframe: Ongoing

Resources: Fees (Clean Water Fund)

**I-11b. Silt Removal.** Continue to remove accumulated silts from city maintained drainageways and ponds.

Responsibility: Public Works

Timeframe: Ongoing

Resources: Fees (Clean Water Fund), Staff

Time, Assessment District

See CON-6a (Municipal Code Compliance) and CON-8b (Tree Retention).

**I-11c. Mahon Creek.** Develop a Creek Management Plan for the periodic dredging and maintenance of Mahon Creek from B Street to Highway 101. Continue the implementation of the Master Plan for Proposed Drainage Improvements within the San Rafael Basin, Final Implementation Plan as funding becomes available. Explore other feasible and cost-effective solutions to minimize or divert drainage to reduce periodic flooding on Mahon Creek.

Responsibility: Public Works

Timeframe: Ongoing

Resources: Staff Time

See S-18 (Storm Drainage Improvements and S-19a (Incremental Flood Control Improvements).

## I-12. Cost Effective Services. (Deleted per Amendment on 12/5/16)

### **I-12a. Consolidation of Services. (Deleted per Amendment on 12/5/16)**

## I-13. Wastewater Treatment and Reuse.

Encourage additional water recycling at Las Gallinas Valley Sanitary District and encourage the Central Marin Sanitation Agency to investigate recycling and reuse of its treated wastewater.

See SU-5e (Water Recycling).



## Telecommunications

Telecommunications are undergoing rapid technological changes. Through assessment of information technology needs and available resources, the City seeks to remain current with the demands for effective, reliable telecommunication infrastructure.

### I-14. City Technology.

Invest in upgrading the City's technology infrastructure and improving public access to City services.

**I-14a. Technology Improvements.** Implement and update the City's Information Technology Plan.

Responsibility: Management Services (Information Services Committee)

Timeframe: Ongoing

Resources: Staff Time, Grants, Fees

### I-15. Telecommunication Improvements.

Ensure that residents, schools, businesses and organizations have access to reliable, modern and cost-effective telecommunications.

**I-15a. Marin Telecommunications Agency.** Coordinate with the County to upgrade telecommunications infrastructure in accordance with the Marin Telecommunications Agency or any successor agency.

Responsibility: Management Services, Public Works

Timeframe: Ongoing

Resources: Staff Time\

See S-29a (Involvement with Marin Emergency Radio Authority).

**I-15b. Telecommunication Ordinance. (Deleted on Amendment 12/5/16)**

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