

REPORT TO GENERAL PLAN 2040 STEERING COMMITTEE

Subject: Infrastructure Element Policies

EXECUTIVE SUMMARY

The purpose of the Infrastructure Element is to ensure that local water, sewer, drainage, energy, telecommunication, and solid waste facilities are well planned, maintained, resilient, and contribute to environmental quality. The Steering Committee reviewed an “audit” of the existing (General Plan 2020) Infrastructure Element policies on July 10, 2019. Staff has incorporated the Committee’s comments into a revised set of policies and programs for General Plan 2040. The proposed policies are attached to this Memo.

REPORT

Background

Infrastructure is considered an “optional” element of the General Plan. The element was added in 2004 and provides guidance on capital improvements and utilities, street maintenance and landscaping (including street trees and lighting), water and wastewater, storm drainage, and telecommunication facilities. Because many of the services addressed by this element are provided by other agencies (Marin Municipal Water District, Las Gallinas Valley Sanitary District, etc.), many of the policies focus on interagency coordination and partnerships.

The Steering Committee addressed infrastructure at its July 2019 meeting. Among the comments made by Committee members were:

- Need to plan for sea level rise and climate adaptation
- Cost implications of our policy choices need to be understood
- Green streets sound good but how much do they cost?

In addition, a number of Committee members provided written comments on staff’s “audit” of the infrastructure policies in General Plan 2020.

The proposed policies reflect Steering Committee discussion and feedback, recommendations from recent plans (including the Climate Change Action Plan), communication with service providers, and the outcome of the policy audit completed by staff. The new policies place a greater focus on resilience and climate adaptation. There are also new types of infrastructure covered, such as fiber optic cabling and

wireless facilities. In addition, a few of the policies in this element are being moved to other parts of the General Plan. For example, street trees were covered as an Infrastructure topic in General Plan 2020 but will be covered in the Community Design and Conservation Elements in General Plan 2040. At the same time, policies on solid waste disposal and recycling have been moved into the Infrastructure element (they were previously in the Sustainability Element).

Policies

The proposed Infrastructure Element goal, policies, and programs are included on the following pages. Policies on capital improvements planning, deferred maintenance, and infrastructure financing have been carried forward with minor edits. New policies on sustainable design and climate change resilience have been added. Policies on street maintenance, water, wastewater, storm drainage, and recycled water have been carried forward, although the content has been edited and reorganized. New policies on the reliability of the energy grid, back-up energy provision, and utility-related hazards have been added. Policies on technology also have been edited or added—these focus on two topic areas: (a) the use of technology to improve the efficiency of existing utilities (e.g., “smart city” concepts) and (b) the development of the infrastructure needed to support that technology, such as fiber optics and wireless facilities.

Attachments

Two attachments follow this report:

- (A) The first attachment presents the “clean” set of proposed Infrastructure Element policies and actions to be included in General Plan 2040. In the Plan itself, this information will be presented alongside maps, data, and narrative about existing and future infrastructure conditions and issues.
- (B) The second attachment presents the proposed Infrastructure Element policies side by side with the 2020 General Plan policies. This facilitates a comparison of how the proposed policies are changing, and what content is new vs being carried forward. The second attachment also includes a column where Steering Committee members may comment. A Word version of this document will be provided.

GOAL I-1: INFRASTRUCTURE RELIABILITY

Provide reliable, cost-effective, well-maintained, safe and resilient infrastructure.

Water, sewer, storm drainage, energy and telecommunication systems will be managed to sustain high-quality service delivery, while protecting the environment and responding to the challenges of a changing climate. Advances in technology will improve service quality, efficiency, security, and sustainability. Assets will be prudently managed to ensure that funding is provided for capital, operating, and maintenance costs. There will be a high level of communication and coordination between service providers.

POLICY I-1: CAPITAL INVESTMENT

Provide for ongoing, preventative maintenance of infrastructure and timely replacement, repair, and upgrading of City equipment.

Program I-1A: Capital Improvement Programming. *Maintain a multi-year Capital Improvement Plan (CIP) covering City owned and operated infrastructure and public facilities. Encourage other local service providers to seek City input as they prepare CIPs.*

Program I-1B: Funding for Maintenance and Capital Costs. *Consider ways to improve the reliability of maintenance funding, such as establishing a reserve fund or voter-approved parcel taxes and special assessments. Identify potential funding sources for unmet and anticipated future capital project needs, such as grants, bond measures, and impact fees.*

POLICY I-2: ADEQUACY OF CITY INFRASTRUCTURE AND SERVICES

As part of the development review process, require applicants to demonstrate that their projects can be adequately served by the City's infrastructure. All new infrastructure shall be planned and designed to meet the engineering standards of the City and various local service providers.

See also Policy LU-2 (requires proposed development to demonstrate the adequacy of infrastructure capacity before approval)

Program I-2A: Long-Term Planning. *Continue to use the CIP to analyze and respond to local capital facility needs.*

Program I-2B: Engineering Standards. *Require new development to comply with the subdivision standards in the San Rafael Municipal Code, as well as relevant Marin County and utility district engineering standards.*

Program I-2C: Impact Fees. *Continue to collect impact fees and use other funding mechanisms to ensure that new development pays its fair share of providing/upgrading services associated with that development.*

POLICY I-3: PUBLIC INVOLVEMENT IN INFRASTRUCTURE PLANNING

Encourage public participation in the planning and design of infrastructure projects, including City projects and projects proposed by other public agencies and private parties.

Program I-3A: Design Review. *Require design review for public projects with the potential for visual impacts.*

Program I-3B: CIP Process. *Continue to solicit public input in the City's CIP process, including web-based and social media applications that facilitate community feedback.*

POLICY I-4: SUSTAINABLE DESIGN

Plan, design, and operate infrastructure to minimize non-renewable energy and resource consumption, improve environmental quality, promote social equity, and reduce greenhouse gas emissions. An evaluation of costs and benefits must be a factor in all improvements.

Program I-4A: Public Space Improvements. *Seek opportunities to improve environmental quality in the design of streets and public spaces. For example, public space improvements present an opportunity to retain stormwater through groundwater infiltration and subsurface water storage.*

POLICY I-5: INFRASTRUCTURE TECHNOLOGY

Encourage the use of technology to improve service efficiency and environmental quality.

POLICY I-6: CLIMATE CHANGE IMPACTS

Incorporate sea level rise forecasts in the planning and design of local infrastructure projects.

See also Policy EH-2.3 on Infrastructure Resilience and Program EH-1.3A on Critical Public Facilities

Program I-6A: Guidance Document. *Prepare a guidance document for incorporating sea level rise into the City's capital planning process.*

Program I-6B: Coordination with Service Providers. *Coordinate with water, sewer, drainage, energy, solid waste, and telecommunication service providers, as well as local regulatory agencies, to prepare a plan for retrofitting critical infrastructure for rising sea levels.*

POLICY I-7: STREET MAINTENANCE

Provide effective, efficient street and sidewalk repair, street sweeping, and street lighting programs.

Program I-7A: Pavement Management. *Continue the Pavement Management Program to prioritize resurfacing projects.*

Program I-7B: Street Sweeping. *Continue to maintain a street sweeping program. Work with neighborhoods on ways to improve street sweeping efficiency and to publicize street sweeping programs. Investigate alternative funding sources for street sweeping.*

Program I-7C: Sidewalk Repair. Continue to implement a cost-sharing program for Sidewalk Repair with local homeowners that is consistent with the State Streets and Highway Code, property owner interest, and funding availability.

Program I-7D: Street Lighting Program. Continue the Street Lighting Program. Street lighting should balance multiple objectives, including energy efficiency, reduced costs, resilience, and protection of dark skies.

POLICY I-8: POTABLE WATER SUPPLY AND DELIVERY

Work with Marin Municipal Water District to meet projected water demand, encourage water conservation, and ensure the reliability and safety of the water supply, treatment and distribution system.

Program I-8B: Urban Water Management Plan. Support MMWD efforts to regularly update and implement an Urban Water Management Plan.

Program I-8B: Water Supplies. Monitor efforts by the MMWD to implement conservation standards and expand the local water supply to meet long-term needs. If desalination facilities are proposed along the bayfront in the future, ensure adequate review of environmental, design and economic issues.

Program I-8C: Water Pressure and Storage. Work with MMWD to ensure that water pressure and storage remains adequate for fire-fighting, and to implement standards for new development that ensure adequate water flow.

POLICY I-9: WASTEWATER FACILITIES

Ensure that wastewater collection, treatment and disposal infrastructure is regularly maintained and meets projected needs. Improvements should be programmed to meet state and federal standards, respond to sea level rise and seismic hazards, repair and replace aging or leaking pipes, and protect environmental quality.

Program I-9A: Coordination of Services. Work with the Central Marin Sanitation Agency and San Rafael Sanitation District to determine the scope and cost of needed improvements and secure the funding needed to maintain high-quality wastewater collection and treatment facilities.

POLICY I-10: STORM DRAINAGE FACILITIES

Continue to monitor and pursue improvements to the storm drainage system, including programs to reduce flooding, improve water quality, and respond to climate-related changes.

Program I-10A: Replacement of Aging Facilities. Pursue the replacement of older drainage facilities such as corrugated metal pipes with more durable and resilient materials.

Program I-10B: Silt Removal. Continue to remove accumulated silt from City maintained drainageways and ponds.

Program I-10C: Creek Management. Periodically dredge and maintain creeks that are subject to tidal influence and siltation, including San Rafael Creek, Mahon Creek, Irwin Creek, and Gallinas Creek. Implement maintenance and restoration projects to mitigate the effects of urban runoff on these creeks, reduce flood hazards, and improve water quality and habitat value.

See the Conservation Element for “Green Infrastructure” policies that emphasize storm drainage systems designed to resemble natural systems.

POLICY I-11: RECYCLED WATER

Encourage additional wastewater recycling by the Las Gallinas Valley Sanitary District and the Central Marin Sanitation Agency.

Program I-11A: CMSA Capacity Expansion. Support implementation of the CMSA/ MMWD Recycled Water Study recommendations, enabling increased use of recycled water and reduced potable water demand.

Program I-11B: Las Gallinas Expansion Project. Support completion of the Recycled Water Expansion Project and continued expansion of recycled water capacity.

POLICY I-12: ENERGY RELIABILITY

Work with local energy service providers and other public agencies to ensure the safety and reliability of the local power grid and ensure rapid restoration in the event service is interrupted.

Program I-12A: Backup Energy Provision. Evaluate backup energy provisions for critical public facilities and wireless infrastructure and upgrade as needed. Encourage the use of fuel cell and solar generator backups rather than gasoline-powered generators.

POLICY I-13: UTILITY UNDERGROUNDING

Continue to pursue undergrounding of overhead utility lines, as well as maintenance and replacement programs to reduce wildfire hazards.

Policy I-13a: Funding for Undergrounding. Explore funding opportunities and financing mechanisms to accelerate the undergrounding of utilities, including Rule 20A and B funds, private funding, and assessment districts.

Policy I-13b: Prioritizing of Undergrounding Projects. Develop a process for prioritizing utility undergrounding projects. Among the factors to be considered are aesthetics, visibility, fire hazard benefits, and vulnerability to flooding and sea level rise.

Policy I-13c: Public Information. Provide additional information to the public on the costs of undergrounding projects, and the options for funding.

POLICY I-14: TECHNOLOGY INFRASTRUCTURE

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

Program I-14A: Technology Improvement Plan. *Develop and maintain a multi-year plan for funding and prioritizing major City technology projects.*

Program I-14B: Wireless Facilities. *As needed, prepare standards and guidelines for the design and installation of wireless communication facilities that protect community aesthetics and safety, educate the general public, and guide staff and decision-makers in the review of applications. The visual impacts of such facilities should be minimized.*

POLICY I-15: TELECOMMUNICATION IMPROVEMENTS

Ensure that residents, schools, businesses and organizations have access to reliable, modern and cost-effective telecommunications. A variety of network options, including fiber optics and wireless, should be encouraged and expanded throughout the city.

Program I-15A: Fiber Optic Infrastructure. *Continue to encourage and permit the expansion of fiber optics infrastructure from the existing "backbone" conduit along the SMART line to potential "last mile" customers along the corridor.*

Program I-15B: Service Providers. *Work with telecommunication service providers to improve access to state-of-the-art systems and services.*

See the Community Design Element for policies to mitigate the visual effects of antennae and collocate new telecommunication facilities.

POLICY I-16: REDUCING LANDFILLED WASTE DISPOSAL

Reduce landfilled waste disposal and related greenhouse gas emissions by reducing material consumption; increasing recycling, resource recovery, and composting; and encouraging the use of recyclable goods and materials.

Program I-16A: Waste Reduction. *Implement waste reduction programs consistent with the San Rafael Climate Change Action Plan and Zero Waste Goal. These include partnerships with Zero Waste Marin, Marin Sanitary Service, and other organizations; promotion of home composting; requirements for construction and demolition debris recycling; increased monitoring of waste diversion targets; waste audits; and additional infrastructure for removal of recoverable materials from the waste stream.*

Program I-16B: Recyclable Waste Receptacles. *Support efforts by Marin Sanitary to install waste receptacles for recyclables in areas of heavy pedestrian traffic.*

Program I-16C: Recycling. *Expand recycling facilities and programs for apartments and non-residential buildings, consistent with State law and Marin Sanitary programs.*

Program I-16D: Construction and Demolition Waste. *Continue to implement programs requiring recycling of construction and demolition debris. Encourage the reuse of recycled building materials in future projects.*

Program I-16E: Recycling Education. Encourage Marin Sanitary to continue its recycling education programs and to expand awareness of “reduce, reuse, and recycle” principles among all residents and employees. Programs to promote reuse and repair of consumer goods rather than landfill disposal should also be supported.

Program I-16F: Waste Reduction Programs. Continue efforts to reduce electronic waste, increase composting, and ensure proper disposal of household hazardous waste.

Draft Infrastructure Element, 10/31/19

| Proposed 2040 Plan | Origin of statement (2020 Plan, etc.) | Steering Committee Comments |
|---|--|--|
| <p>Goal I-1: INFRASTRUCTURE RELIABILITY</p> <p>Provide reliable, cost-effective, well-maintained, safe and resilient infrastructure. <i>Water, sewer, storm drainage, energy and telecommunication systems will be managed to sustain high-quality service delivery, while protecting the environment and responding to the challenges of a changing climate. Advances in technology will improve service quality, efficiency, security, and sustainability. Assets will be prudently managed to ensure that funding is provided for capital, operating, and maintenance costs. There will be a high level of communication and coordination between service providers.</i></p> | <p>GOAL 19: SOUND INFRASTRUCTURE</p> <p>It is the goal of San Rafael to have well planned, well-maintained and adequate infrastructure, public buildings, and landscaping. <i>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</i></p> | |
| <p>POLICY I-1: Capital Investment</p> <p>Provide for ongoing, preventative maintenance of infrastructure and timely replacement, repair, and upgrading of City equipment.</p> | <p>Policy I-1: Capital Improvements Maintenance and Replacement</p> <p>Provide for ongoing, preventative maintenance of infrastructure facilities and timely replacement of City equipment.</p> | |
| <p>Program I-1A: Capital Improvement Programming. <i>Maintain a multi-year Capital Improvement Plan (CIP) covering City owned and operated infrastructure and public facilities. Encourage other local service providers to seek City input as they prepare CIPs.</i></p> | <p>Program I-1a: Capital Improvement Programming. <i>Plan for the improvement of public facilities and infrastructure through maintenance of a multi-year capital improvement program.</i></p> | |
| <p>Program I-1B: Funding for Maintenance and Capital Costs. <i>Consider ways to improve the reliability of maintenance funding, such as establishing a reserve fund or voter-approved parcel taxes and special assessments. Identify potential funding sources for unmet and anticipated future capital project needs, such as grants, bond measures, and impact fees.</i></p> | <p>Program I-1c: “Sinking Fund.” <i>Establish a ‘sinking’ fund to finance maintenance of the City’s infrastructure.</i></p> <p>Program I-2b: Diversified Funding. <i>Seek diversified funding sources in addition to the City’s various funds.</i></p> | <p>Former Program 1-1b has been moved under the Policy about public involvement.</p> |

| Proposed 2040 Plan | Origin of statement (2020 Plan, etc.) | Comments |
|---|---|--|
| <p>Policy I-2: Adequacy of City Infrastructure and Services As part of the development review process, require applicants to demonstrate that their projects can be adequately served by the City’s infrastructure. All new infrastructure shall be planned and designed to meet the engineering standards of the City and various local service providers. <i>See also Policy LU-2 (requires proposed development to demonstrate the adequacy of infrastructure capacity before approval)</i></p> | <p>Policy 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.</p> | |
| <p>Program I-2A: Long-Term Planning. Continue to use the CIP to analyze and respond to local capital facility needs.</p> | <p>Program 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.</p> | |
| <p>Program I-2B: Engineering Standards. Require new development to comply with the subdivision standards in the San Rafael Municipal Code, as well as relevant Marin County and utility district engineering standards.</p> | | New |
| <p>Program I-2C: Impact Fees. Continue to collect impact fees and use other funding mechanisms to ensure that new development pays its fair share of providing/ upgrading services associated with that development.</p> | | New |
| | | Policy I-3 and Programs I-3a and I-3b from GP 2020 have been merged into other policies, as they cover topics addressed later in the chapter (water, sewer). |
| <p>Policy I-3: Public Involvement in Infrastructure Planning Encourage public participation in the planning and design of infrastructure projects, including City projects and projects proposed by other public agencies and private parties.</p> | <p>Policy 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.</p> | |
| <p>Program I-3A: Design Review. Require design review for public projects with the potential for visual impacts.</p> | <p>Program 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.</p> | |

| Proposed 2040 Plan | Origin of statement (2020 Plan, etc.) | Comments |
|---|--|--|
| <i>Program I-3B: CIP Process. Continue to solicit public input in the City's CIP process, including web-based and social media applications that facilitate community feedback.</i> | <i>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</i> | |
| <p>Policy I-4: Sustainable Design Plan, design, and operate infrastructure to minimize non-renewable energy and resource consumption, improve environmental quality, promote social equity, and reduce greenhouse gas emissions. An evaluation of costs and benefits must be a factor in all improvements.</p> | | New |
| <p><i>Program I-4A: Public Space Improvements. Seek opportunities to improve environmental quality in the design of streets and public spaces. For example, public space improvements provide an opportunity to retain stormwater through groundwater infiltration and subsurface water storage.</i></p> | | New |
| <p>Policy I-5: Infrastructure Technology Encourage the use of technology to improve service efficiency and environmental quality.</p> | | New |
| <p>Policy I-6: Climate Change Impacts Incorporate sea level rise forecasts in the planning and design of local infrastructure projects. <i>See also Policy EH-2.3 on Infrastructure Resilience and Program EH-1.3A on Critical Public Facilities</i></p> | | From Climate Change Action Plan (CCAP) |
| <p><i>Program I-6A: Guidance Document. Prepare a guidance document for incorporating sea level rise into the City's capital planning process.</i></p> | | CCAP Program SA-C4b |
| <p><i>Program I-6B: Coordination with Service Providers. Coordinate with water, sewer, drainage, energy, solid waste, and telecommunication service providers, as well as local regulatory agencies, to prepare a plan for retrofitting critical infrastructure for rising sea levels.</i></p> | | CCAP Program CCAP SA-4c |

| Proposed 2040 Plan | Origin of statement (2020 Plan, etc.) | Comments |
|--|---|---|
| <p>Policy I-7: Street Maintenance Provide efficient, effective street and sidewalk repair, street sweeping, and street lighting programs.</p> | <p>Policy I-6: Street Maintenance Maintain and modify where appropriate existing levels of street and sidewalk repair, street sweeping, and street lighting.</p> | |
| <p>Program I-7A: Pavement Management. Continue the Pavement Management Program to prioritize street resurfacing projects.</p> | <p>Program I-6a: Pavement Management. Continue the Pavement Management Program to allocate funds and prioritize street resurfacing projects.</p> | |
| <p>Program I-7B: Street Sweeping. Continue to maintain a street sweeping program. Work with neighborhoods on ways to improve street sweeping efficiency and to publicize street sweeping programs. Investigate alternative funding sources for street sweeping.</p> | <p>Program 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.</p> | |
| <p>Program I-7C: Sidewalk Repair. Continue to implement a cost-sharing program for Sidewalk Repair with local homeowners that is consistent with the State Streets and Highway Code, property owner interest, and funding availability.</p> | <p>Program I-6c: Sidewalk Repair. Develop a sidewalk repair program consistent with applicable State law and as local conditions warrant.</p> | |
| <p>Program I-7D: Street Lighting Program. Continue the Street Lighting Program. Street lighting should balance multiple objectives, including energy efficiency, reduced costs, resilience, and protection of dark skies.</p> | <p>Program I-6d: Street Lighting Program. Continue the Street Lighting Program to allocate funds and plan for needed street lights and repairs.</p> | |
| | | <p><i>Policies I-7 (landscaping) and I-8 (street trees) and related programs from the GP 2020 Infrastructure Element have been moved to the Community Design Element.</i></p> |
| <p>Policy I-8: Potable Water Supply and Delivery Work with Marin Municipal Water District to meet projected water demand, encourage water conservation, and ensure the reliability and safety of the water supply, treatment and distribution system.</p> | <p>Policy I-9: Water Supplies Encourage Marin Municipal Water District to develop cost effective strategies for adequate long-term water supplies.</p> | |

| Proposed 2040 Plan | Origin of statement (2020 Plan, etc.) | Comments |
|---|---|-----------------------|
| <i>Program I-8A: Urban Water Management Plan. Support MMWD efforts to regularly update and implement an Urban Water Management Plan.</i> | | New |
| <i>Program I-8B: Water Supplies. Monitor efforts by the MMWD to implement conservation standards and expand the local water supply to meet long-term needs. If desalination facilities are proposed along the bayfront in the future, ensure adequate review of environmental, design, and economic issues.</i> | <i>Program 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.</i> <i>Program 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.</i> | I-3b and I-9a merged |
| <i>Program I-8C: Water Pressure and Storage. Work with MMWD to ensure that water pressure and storage remains adequate for fire-fighting, and to implement standards for new development that ensure adequate water flow.</i> | | New, state law |
| Policy I-9: Wastewater Facilities Ensure that wastewater collection, treatment and disposal infrastructure is regularly maintained and meets projected needs. Improvements should be programmed to meet state and federal standards, respond to sea level rise and seismic hazards, repair and replace aging or leaking pipes, and protect environmental quality. | Policy 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>Program I-9A: Coordination of Services. Work with the Central Marin Sanitation Agency and San Rafael Sanitation District to determine the scope and cost of needed improvements and secure the funding needed to maintain high-quality wastewater collection and treatment facilities.</i> | <i>Program I-10a: Coordination of Services. Participate in coordination efforts between responsible agencies providing sewer facilities.</i> <i>Program 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.</i> | I-10a and I-3a merged |

| Proposed 2040 Plan | Origin of statement (2020 Plan, etc.) | Comments |
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| <p>Policy I-10: Storm Drainage Facilities Continue to monitor and pursue improvements to the storm drainage system, including programs to reduce flooding, improve water quality, and respond to climate-related changes.</p> | <p>Policy I-11: Improvements to Drainage Facilities Continue to monitor and pursue as appropriate improvements to areas with insufficient drainage.</p> | |
| <p>Program I-10A: Replacement of Aging Facilities. Pursue the replacement of older drainage facilities such as corrugated metal pipes with more durable and resilient materials.</p> | <p>Program I-11a: Pipe Replacement. Pursue the replacement of the City’s older corrugated metal drainage pipe system with a more durable material.</p> | |
| <p>Program I-10B: Silt Removal. Continue to remove accumulated silt from City maintained drainageways and ponds.</p> | <p>Program I-11b: Silt Removal. Continue to remove accumulated silts from city maintained drainageways and ponds.</p> | |
| <p>Program I-10C: Creek Management. Periodically dredge and maintain creeks that are subject to tidal influence and siltation, including San Rafael Creek, Mahon Creek, Irwin Creek, and Gallinas Creek. Implement maintenance and restoration projects to mitigate the effects of urban runoff on these creeks, reduce flood hazards, and improve water quality and habitat value.</p> <p>See the Conservation Element for “Green Infrastructure” policies that emphasize storm drainage systems designed to resemble natural systems.</p> | <p>Program 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.</p> | |
| <p>Policy I-11: Recycled Water Encourage additional wastewater recycling by the Las Gallinas Valley Sanitary District and the Central Marin Sanitation Agency.</p> | <p>Policy 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.</p> | |
| <p>Program I-11A: CMSA Capacity Expansion. Support implementation of the CMSA/ MMWD Recycled Water Study recommendations, enabling increased use of recycled water and reduced potable water demand.</p> | | New |
| <p>Program I-11B: Las Gallinas Expansion Project. Support completion of the Recycled Water Expansion Project and continued expansion of recycled water capacity.</p> | | New |

| Proposed 2040 Plan | Origin of statement (2020 Plan, etc.) | Comments |
|---|---|-----------------------------------|
| <p>Policy I-12: Energy Reliability Work with local energy service providers and other public agencies to ensure the safety and reliability of the local power grid and ensure rapid restoration in the event service is interrupted.</p> | | New, from LHMP |
| <p>Program I-12A: Backup Energy Provision. Evaluate backup energy provisions for critical public facilities and wireless infrastructure and upgrade as needed. Encourage the use of fuel cell and solar generator backups, rather than gasoline-powered generators.</p> | <p>Program SU-14I: Backup Energy Provision. Evaluate backup energy provisions for critical city facilities and upgrade as needed. Encourage the use of alternatives, such as fuel cell and solar generator backups, to the sustained use of gasoline-powered generators.</p> | Moved from Sustainability Element |
| <p>Policy I-13: Utility Undergrounding Continue to pursue undergrounding of overhead utility lines, as well as maintenance and replacement programs to reduce wildfire hazards.</p> | <p>Policy I-4: Utility Undergrounding Continue to pursue the undergrounding of overhead utility lines.</p> | |
| <p>Policy I-13a: Funding for Undergrounding. Explore funding opportunities and financing mechanisms to accelerate the undergrounding of utilities, including Rule 20A and B funds, private funding, and assessment districts.</p> | <p>Program 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.</p> | |
| <p>Policy I-13b: Prioritizing of Undergrounding Projects. Develop a process for prioritizing utility undergrounding projects. Among the factors to be considered are aesthetics, visibility, fire hazard benefits, and vulnerability to flooding and sea level rise.</p> | <p>Program 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).</p> | |
| <p>Policy I-13c: Public Information. Provide additional information to the public on the costs of undergrounding projects, and the options for funding.</p> | <p>Program I-4c: Neighborhood Efforts. Provide information about funding options for undergrounding utilities. Assist neighborhoods with self-help efforts to fund undergrounding of utility lines.</p> | |
| <p>Policy I-14: Technology Infrastructure Invest in upgrading the City’s technology infrastructure and improving public access to City services.</p> | <p>Policy I-14: City Technology Invest in upgrading the City’s technology infrastructure and improving public access to City services.</p> | |
| <p>Program I-14A: Technology Improvement Plan. Develop and maintain a multi-year plan for funding and prioritizing major City technology projects.</p> | <p>Program I-14A: Technology Improvements. Implement and update the City’s Information Technology Plan.</p> | |

| Proposed 2040 Plan | Origin of statement (2020 Plan, etc.) | Comments |
|---|---|-----------------------------------|
| <p>Program I-14B: Wireless Facilities. <i>As needed, prepare standards and guidelines for the design and installation of wireless communication facilities that protect community aesthetics and safety, educate the general public, and guide staff and decision-makers in the review of applications. The visual impacts of such facilities should be minimized.</i></p> | | New |
| <p>Policy I-15: Telecommunication Improvements Ensure that residents, schools, businesses and organizations have access to reliable, modern and cost-effective telecommunications. A variety of network options, including fiber optics and wireless, should be encouraged and expanded throughout the city.</p> | <p>Policy I-15: Telecommunication Improvements Ensure that residents, schools, businesses and organizations have access to reliable, modern and cost-effective telecommunications.</p> | |
| <p>Program I-15A: Fiber Optic Infrastructure. <i>Continue to encourage and permit the expansion of fiber optics infrastructure from the existing “backbone” conduit along the SMART line to potential “last mile” customers along the corridor.</i></p> | | New |
| <p>Program I-15B: Service Providers. <i>Work with telecommunication service providers to improve access to state-of-the-art systems and services.</i></p> <p><i>See the Community Design Element for policies to mitigate the visual effects of antennae and collocate new telecommunication facilities</i></p> | <p>Program I-15a: Marin Telecommunications Agency. <i>Coordinate with the County to upgrade telecommunications infrastructure in accordance with the Marin Telecommunications Agency or any successor agency.</i></p> | |
| <p>Policy I-16: Reducing Landfilled Waste Disposal Reduce landfilled waste disposal and related greenhouse gas emissions by reducing material consumption; increasing recycling, resource recovery, and composting; and encouraging the use of recyclable goods and materials.</p> | <p>Policy SU-10: Zero Waste Reduce material consumption and waste generation, increase resource re-use and composting of organic waste, and recycle to significantly reduce and ultimately eliminate landfill disposal.</p> | Moved from Sustainability Element |

| Proposed 2040 Plan | Origin of statement (2020 Plan, etc.) | Comments |
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| <p>Program I-16A: Waste Reduction. Implement waste reduction programs consistent with the San Rafael Climate Change Action Plan and Zero Waste Goal. These include partnerships with Zero Waste Marin, Marin Sanitary Service, and other organizations; promotion of home composting; requirements for construction and demolition debris recycling; increased monitoring of waste diversion targets; waste audits; and additional infrastructure for removal of recoverable materials from the waste stream.</p> | <p>Program SU-10a: Zero Waste. Implement and monitor the progress of actions contained in the Zero Waste Goal and Zero Waste Strategic Plan.</p> <p>Program SU-10b: Home Composting. Develop a program to assist and educate residents in home-composting.</p> <p>Program SU-10c: Community Composting. Create a community-scale composting program for food and green waste.</p> | <p>Moved from Sustainability Element, also incorporates CCAP Programs WR-C1 through C-6</p> |
| <p>Program I-16B: Recyclable Waste Receptacles. Support efforts by Marin Sanitary to install waste receptacles for recyclables in areas of heavy pedestrian traffic.</p> | <p>Program SU-10f: Recyclable Waste Receptacles. Support efforts by Marin Sanitary to install recyclable waste receptacles in heavy pedestrian areas to encourage recycling of plastics, glass, etc.</p> | <p>Moved from Sustainability Element</p> |
| <p>Program I-16C: Recycling. Expand recycling facilities and programs for apartments and non-residential buildings, consistent with State law and Marin Sanitary programs.</p> | <p>Program SU-10e: Recycling. Encourage efforts to promote recycling, such as encouraging businesses to recycle building and other materials, promoting composting by restaurants, institutions and residences, and supporting Marin Conservation Corps' work to promote recycling.</p> <p>Program SU-10g: Recycling for Apartments and Nonresidential Buildings. Encourage recycling facilities and programs for apartment and nonresidential buildings. Consider the cost and benefits of expanding recycling facilities and programs for apartment and nonresidential buildings.</p> | <p>Moved from Sustainability Element</p> |
| <p>Program I-16D: Construction and Demolition Waste. Continue to implement programs requiring recycling of construction and demolition debris. Encourage the reuse of recycled building materials in future projects.</p> | <p>Program SU-10h: Demolition Waste. Study ways to actively encourage greater recycling and reuse of demolition waste.</p> | <p>Moved from Sustainability Element</p> |

| Proposed 2040 Plan | Origin of statement (2020 Plan, etc.) | Comments |
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| <p>Program I-16E: Recycling Education. Encourage Marin Sanitary to continue its recycling education programs and to expand awareness of “reduce, reuse, and recycle” principles among all residents and employees. Programs to promote reuse and repair of consumer goods rather than landfill disposal should also be supported.</p> | <p>Program SU-10i: Recycling Education. Encourage Marin Sanitary to continue its recycling education programs, and to reach out to those not aware of the “reduce, reuse and recycle” techniques.</p> | <p>Moved from Sustainability Element</p> |
| <p>Program I-16F: Waste Reduction Programs. Continue efforts to reduce electronic waste, increase composting, and ensure proper disposal of household hazardous waste.</p> | | <p>New</p> |