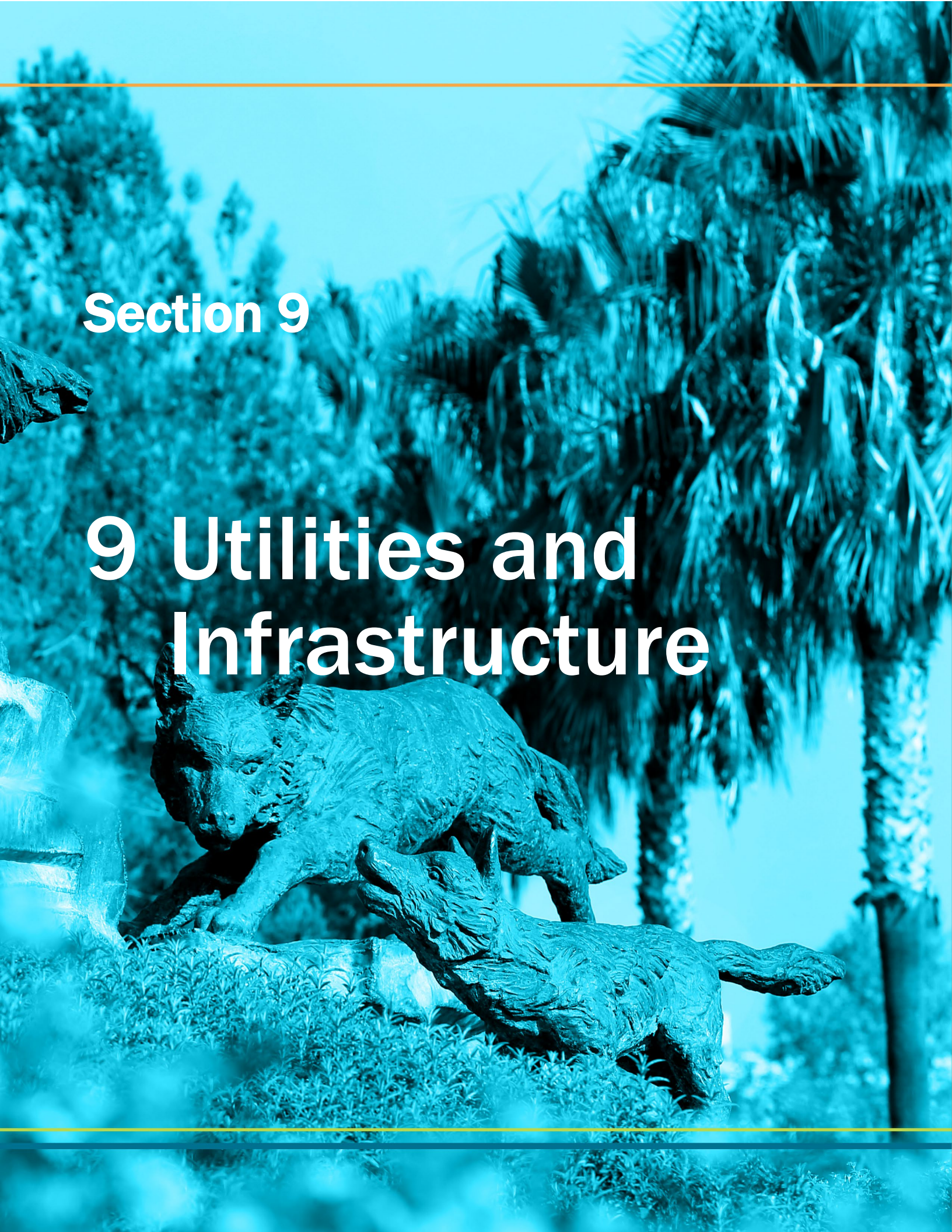

Section 9

9 Utilities and Infrastructure


SAN BERNARDINO

Introduction

San Bernardino provides a host of utility services for San Bernardino residents, business, and visitors that are designed to protect the health, safety, and welfare of the community. Among others, San Bernardino needs clean water, sanitation services, energy, waste collection, and communication services to thrive. The efficiency with which these basic services operate affects our quality of life. Moreover, these utilities are also important in protecting us from natural and human-caused flooding and fire hazards.

Planning for utilities and infrastructure, including water pipelines, sewage systems, and power grids for a 60-square-mile community is under the purview of the City, County, and other regulatory agencies. Though private enterprise builds this multi-billion-dollar system of infrastructure, the City ensures that its design, construction, operation, and maintenance adhere to City engineering standards. The City is also responsible for ensuring that periodic investments are made to maintain the serviceability of the utility infrastructure.

The Utilities and Infrastructure Element incorporates strategies to ensure the City has a plan in place to provide clean water, sanitation services, energy, waste collection, and communication services.

Sterling Natural Resources Center

Regulatory Framework

The regulatory framework for utility and infrastructure planning within a general plan is in California Government Code § 65302(b)(1) and supporting statutes. This element is a strategy for addressing infrastructure needs for the provision of water, sewage, storm drainage, energy, communications, and other related topics. While the element is not mandated by state law, the City's General Plan includes this topic as an elective element due to the fundamental way that utility infrastructure and services impact quality of life.

Organization Framework

The Utilities and Infrastructure Element outlines the City's long-term strategy for developing, operating, and managing utility infrastructure and services within San Bernardino. The element specifically addresses:

- Wastewater, including the collection, transfer, processing, and recycling of wastewater.
- Water Resources, including the supply, quality, transmission, and reclamation of water for land uses in San Bernardino.
- Storm Drains, including the major county and local flood control facilities for land uses in San Bernardino.
- Energy Resources, including the generation, storage, use, and conservation of conventional and alternative resources.
- Telecommunications and other communication technology for residential, business, and government uses.

Relationship to Other Elements

The Utilities and Infrastructure Element is an elective element. The element is closely linked to several other elements, including Land Use, Economic Development, Housing, and Safety among others. Any new land use or development will need to be served with adequate utilities, which allow businesses and residents to thrive. This element is also implemented by various City strategic plans, including the urban water management plan, sewer system plans, and various master plans for water, sewer, drainage, and other infrastructure.

Achieving the Vision

Provision of an adequate utility infrastructure system is essential to the City's public health and welfare as well as to the local economy. The Utilities and Infrastructure Element helps to implement the City's Vision to create and sustain opportunities for the future. As San Bernardino continues to develop, the City will need to maintain and expand utilities to meet the needs of residents and business. With adequate infrastructure in place to support new development, San Bernardino can become a premiere place to live and work.

Constructing and maintaining the serviceability of the City's utility infrastructure is costly. Over the next five years, the City will expend $150 million to maintain these assets. To maintain the City's investment in infrastructure requires steady, significant, and stable funding; capital improvement plans across a range of infrastructure systems; and the methodical prioritization and timing of improvements based on the useful life of infrastructure and the highest return on investment.

This Utilities and Infrastructure Element, as implemented through master plans prepared by the City and County, is intended to facilitate the development and maintenance of utility infrastructure as follows:

- A sewer system that utilizes state-of-the-art technology to effectively treat effluent and reduce environmental hazards.
- A flood control system that protects residents from hazards and helps to recharge groundwater resources.
- A water infrastructure system that provides clean and healthy water for a range of potable and nonpotable uses.
- A diversified energy portfolio that helps supply the City's power needs and become more energy resilient.
- A telecommunication system that provides choices for residents, business, students, and other stakeholders.

The following provides the planning context, goals, and policies to achieve the City's vision as articulated in the 2050 General Plan.

Planning Context

As a full-service utility provider, San Bernardino provides water, wastewater, storm drainage, energy, and other utility services to support the needs of the community. These services and the planning context in which they are provided are detailed as follows:

Wastewater Collection and Treatment

San Bernardino's wastewater collection and treatment system is intended to protect public health, keep the natural environment safe and clean, and accommodate the needs of the community. Wastewater collection services are provided by two water utilities described below and mapped in **Figure UI-1**.

San Bernardino Municipal Water Department (SBMWD)

The sewer system consists of 500 miles of pipelines, 15 lift stations, 12 siphons, more than 38,000 connections, 8,200 maintenance holes, and two wastewater treatment plants. The collection system is 95 percent vitrified clay pipe. The SBMWD collection system sends sewer to the Water Reclamation Plant, a 33- mgd secondary treatment facility. After treatment, effluent is conveyed to the Rapid Infiltration and Extraction (RIX) facility in Colton, where the effluent undergoes final treatment before being discharged to the Santa Ana River.

East Valley Water District (EVWD)

The sewer system consists of 215 miles of pipelines, 4,400 sewer manholes, 7 siphons, 5 diversion structures, and one wastewater treatment facility in San Bernardino. The EVWD collection system sends sewer to the Sterling Natural Resources Center (SNRC), a $250 million advanced wastewater treatment facility built in 2023. The SNRC watewater treatment facility can treat up to 8 mgd of wastewater for recharge into the Bunker Hill Groundwater Basin.

Septic Service

The City of San Bernardino planning area has limited areas that rely on onsite wastewater treatment services, known as septic systems. These include portions of the Verdemont area, Arrowhead Farms, Muscoy, and scattered areas throughout the community. These areas also have ongoing septic-sewer conversion projects, whereby septic systems are being replaced with direct access to City sewer lines.

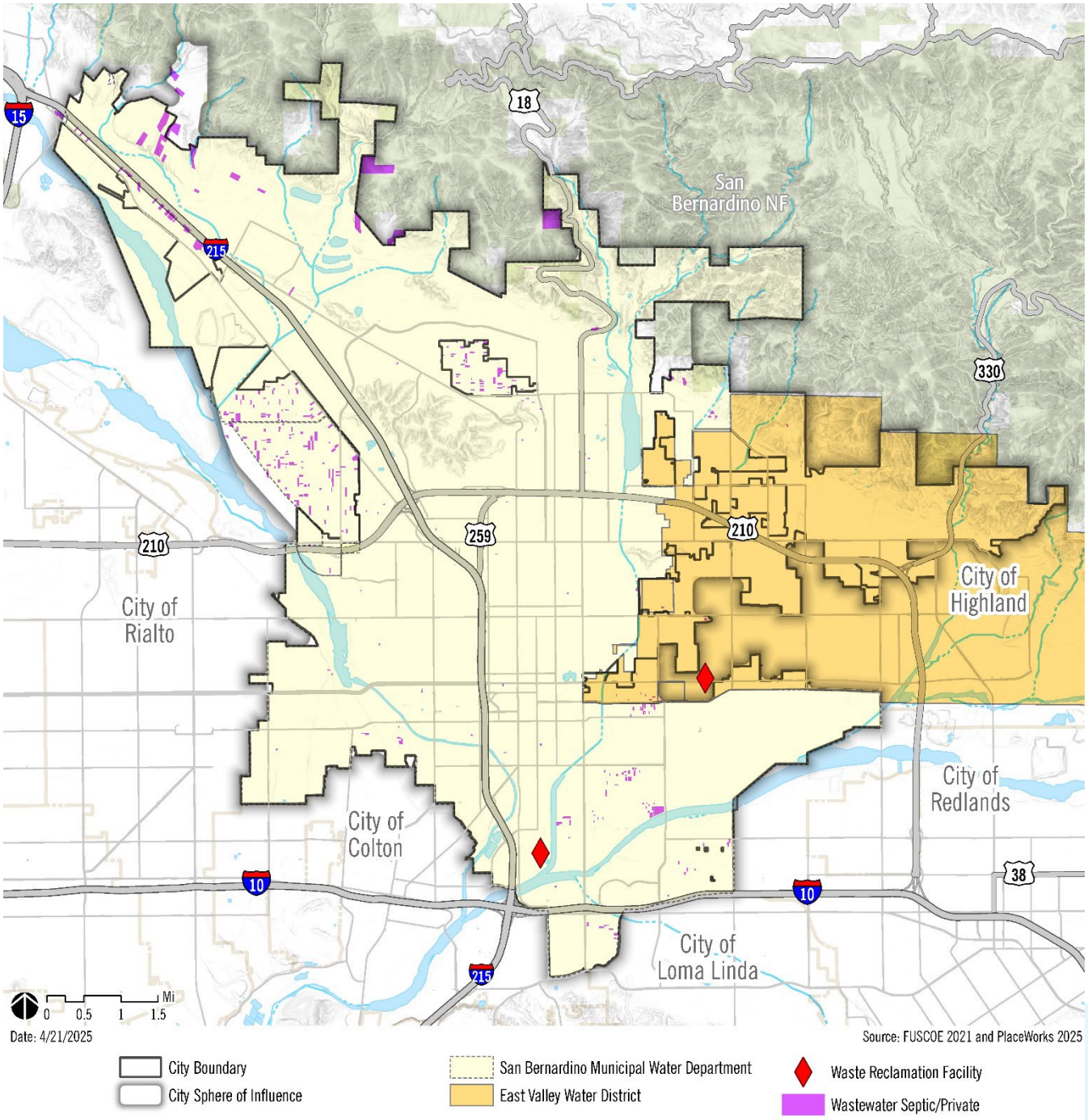

Figure UI-1. Wastewater Services

Goal UI-9.1 Wastewater Service

Provide a system of wastewater collection and treatment facilities that will adequately convey and treat wastewater generated by existing and future development in the City's service area.

Policies

9.1.1 **Wastewater Infrastructure**. Provide wastewater collection and treatment facilities that are adequate to support development, meet usage and reclamation objectives, and maximize cost efficiency.

9.1.2 **Infrastructure Management**. Provide for the timely maintenance, renovation, replacement, and expansion of wastewater collection and treatment facilities to eliminate service deficiencies.

9.1.3 **Master Plan Evaluation**. Monitor flows and evaluate the City's Sewer and Wastewater Reclamation Master Plans to determine the collection and treatment facilities needed to serve present and future growth in the City.

9.1.4 **Wastewater Connection Requirement**. Prior to City approval of any new or substantially rehabilitated development project, the project must:

- Connect to a master planned sanitary sewer system consistent with City "Sewer Policy and Procedures."
- Connect to interim facilities sufficient for present, short term needs only if permitted by the City; or
- Provide on-site wastewater treatment facilities that comply with the City and RWQCB requirements

9.1.5 **Industrial Pre-treatment.** Monitor businesses to prevent contaminated wastewater flow. Enforce industrial pre-treatment standards and source control to prevent materials prohibited by Federal and State regulations from entering the wastewater system.

9.1.6 **Wastewater Treatment Operations.** Operate the wastewater collection and treatment system in a manner that minimizes sewer overflows, complies with NPDES permit provisions, and minimizes infiltration.

Water Supply and Infrastructure

San Bernardino is tasked with providing high quality water while addressing a myriad of local, state, and federal requirements. To address these complex issues, water agencies have to consider ways to manage the full life cycle of water — delivery, use, and reclamation of water, wastewater, and stormwater.

Water Supplies

Domestic water service to the City of San Bernardino and its sphere of influence (SOI) is provided by the San Bernardino Municipal Water Department (SBMWD) and the East Valley Water District (EVWD). The SBMWD delivers 13 billion gallons of water per year or 40,000 acre-feet of water to customers. The EVWD delivers 17,000 acre-feet annually, which is equal to approximately 5.5 billion gallons per year.

The SBMWD and the EVWD receive groundwater from the Bunker Hill Groundwater Basin. The basin is replenished by local rainfall and stream flow from rain and snowmelt from the San Gabriel and San Bernardino Mountains. The Santa Ana River, Mill Creek, and Lytle Creek contribute 60 percent of the total recharge to the aquifer. The basin is also replenished by percolation of water diverted to spreading grounds at the base of the San Bernardino Mountains.

While groundwater continues to be the principal source of water supply for the CIty, the State Water Project (SWP) also provides up to 100,000 acre-feet of water per year for the broader San Bernardino region. As an SWP contractor, the San Bernardino Valley Municipal Water District (SB Valley) receives SWP water throught the SWP system and distributes it via two feeder lines through San Bernardino to more than 20 local public and private water suppliers in the basin. This helps to augment water supplies when needed.

The SBWMD, EVWD, and SB Valley are working together to augment local water supplies through a Regional Recycled Water System project. The City's two water reclamation facilities currently produce more high quality recycled water than can be used for domestic or nondomestic purposes in basin area. Upon completion, recyled water pipelines will connect from the SNRC and SBMWD's recylced water system, the Tertiary Treatment System (TTS), to the recently constructed Weaver Basin, allowing recycled water to be discharged into the Bunker Hill Groundwater Basin.

Water Infrastructure

Providing a regular supply of healthful water would not be possible without supporting infrastructure to pump the water, treat the water at appropriate facilities, and distribute water to customers. There are three primary water agencies serving the community.

San Bernardino Municipal Water Department

SBMWD receives its water supply from an underground aquifer called Bunker Hill Groundwater Basin. SBMWD does not use recycled water, although a recycled water line is being developed to supply recharge basins adjacent to the City. SBMWD's water infrastructure is extensive, consisting of 700 miles of pipelines, 51 groundwater wells, 44 storage reservoirs, and water treatment facilities. The City delivers water through 19 pressure zones to reach 45,000 connections, including commercial and industrial uses.

East Valley Water District

EVWD relies upon local groundwater pumped from wells, imported water from the State Water Project, and local surface water from the Santa Ana River to meet its current water demands. EVWD produces approximately 6 MGD of recycled water for basin replenishment at the Weaver Basins. EVWD's water infrastructure consists of approximately 300 miles of pipelines, 21 groundwater wells, 18 storage reservoirs, and one treatment plant. The District delivers water through 6 pressure zones to reach 23,000 service customers, primarily residential. The District also has water treatment facilities.

Muscoy Mutual Water Company

Muscoy Mutual Water Company (MMWC), established in 1891, serves the unincorporated community of Muscoy in the western most part of San Bernardino's planning area. MMWC infrastructure includes approximately 1,500 connections (primarily residential) with 5 groundwater wells, 2 storage reservoirs, and miles of pipeline. MMWC also is rated with a maximum treatment capacity. The Devore Mutual Company, located just northwest of the City, does not serve customers within the City of San Bernadino's planning area.

Water agencies that supply potable water to San Bernardino and its planning area are mapped on **Figure UI-2**.

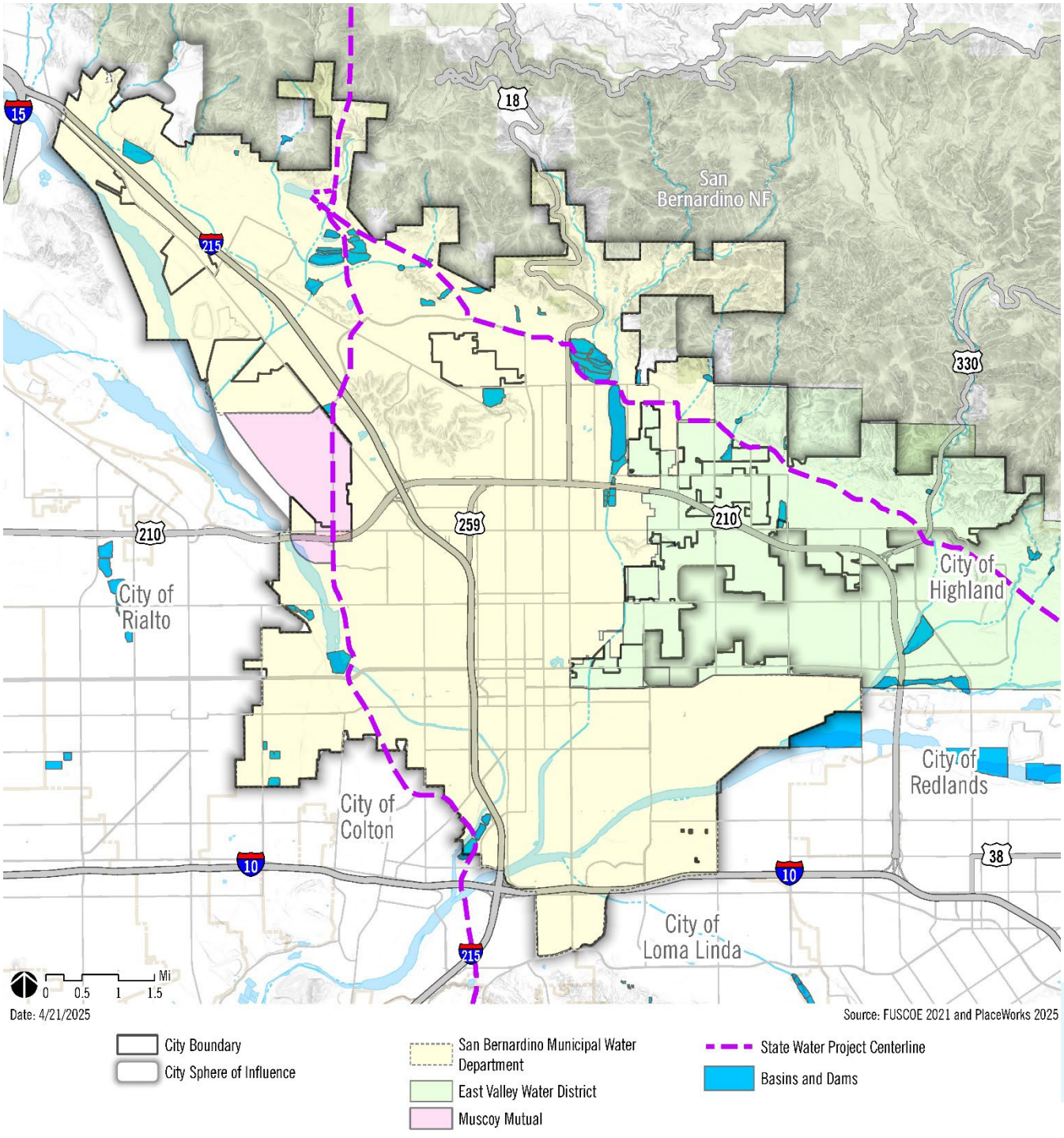

Figure UI-2. Water Infrastructure

Water Supply Resiliency

Managing the City's resources to ensure a resilient water supply requires not only infrastructure, but a broader perspective on watershed management. The Santa Ana River Watershed spans more than 850 square miles in San Bernardino and Riverside counties. This highly connected system of surface water (streams and creeks), groundwater basins, varied terrain, and supporting infrastructure. This watershed supplies water for communities, natural habitat, and plant and animal species that inhabit the region as well.

The San Bernardino Basin Area, which includes the Bunker Hill Groundwater Basin, is adjudicated. In 1969, a court issued a ruling or adjudication that defined the allowable amount of water that each water agency could legally extract and how the basin should be managed to maintain its balance. Every year, the region's Watermaster determines the safe yield of water that can be extracted from the basin by monitoring extractions and surface levels of water.

Ensuring a sustainable supply of water requires attention to a range of supporting activities, including but not limited to:

- Conserving water supplies by implementing local and regional strategies to conserve water and reduce the unnecessary waste
- Augmenting water supply by building infrastructure to replenish the aquifer from the daily extraction of water
- Protecting water quality by testing and treating groundwater as needed to ensure a supply of potable water

Multiple agencies are involved in achieving these objectives. The SBVMWD plays a lead role through its Watershed Connect program, a regional infrastructure program to achieve water supply reliability. They also prepare urban water management plans for member cities. The Santa Ana Watershed Project Authority supports long-term water planning and coordinates multi-agency agreements. The County Flood Control District also manages stormwater runoff.

The City of San Bernardino continues to serve as a liaison and partner with each of these water agencies to ensure a resilient water supply.

Goal UI-9.2 Resilient Water Supply

A resilient water supply that is supported by clean groundwater basins, clean drinking water, water resource conservation, and expanded use of recycled water and basin recharge.

Policies

9.2.1 **Water Supply.** The City shall continue to exercise and protect its adjudicated surface and ground water rights and entitlements in perpetuity and seek opportunities, if needed, to augment water supplies.

9.2.2 **Recharge Opportunities**. Work with the San Bernardino Valley Municipal Water District to expand water storage capacity through enhanced basin recharge and projects that divert recycled water to recharge basins.

9.2.3 **Groundwater Quality**. Require that development not degrade surface or groundwater, especially in areas with high groundwater tables or highly permeable soils; mitigate degradation that may have already occurred.

9.2.4 **Partnerships**. Continue to work with local and regional partners to ensure that a comprehensive and effective approach is undertaken to manage the region's water resources and achieve a resilient water supply.

9.2.5 **Drinking Water Quality**. Ensure that drinking water supplied to consumers in San Bernardino meets all local, state, and federal standards; monitor and test the City's water supply for emerging drinking water constituents.

9.2.6 **Water Conservation.** Continue to encourage water conservation through water demand management programs, public and private landscape requirements, building codes, rate structures, and public education.

9.2.7 **Recycled Water Use.** Explore and pursue opportunities, if cost effective, to expand recycled water use, such as:

- Groundwater basin replenishment
- Commercial and industrial processes
- Golf courses, landscaping, greenways, etc.
- Other uses that are safe and cost effective.

Goal UI-9.3 Water Infrastructure

Provide for a system of water transmission, distribution, storage, and treatment facilities that meet present and future water demands in a timely and cost-effective manner.

Policies

9.3.1 **Water Infrastructure.** Provide water distribution, storage, and treatment facilities that are adequate to meet current demand, support the needs of future development, and maximize cost efficiency.

9.3.2 **Infrastructure Management**. Provide for the timely maintenance, renovation, replacement, and expansion of water supply, distribution, storage systems, and treatment facilities as necessary.

9.3.3 **Master Plan Evaluation**. Monitor the demands on the potable and non-potable water system and, as necessary, manage existing and new development to mitigate impacts and/or facilitate improvements.

9.3.4 **Infrastructure Timing.** Require adequate water supply, transmission, distribution, storage, and treatment facilities are in place prior to issuance of building permits or certificates of occupancy for new development.

9.3.5 **Sphere of Influence**. For development in the City's sphere of influence, request the County to disapprove any project that cannot be served with adequate public water distribution and treatment facilities.

9.3.6 **Water Hook-up Preference.** Require new water hook-ups, to comply with available domestic water supply; grant priority for service to proposed developments that include housing affordable to lower-income households.

9.3.7 **Emergency Water Supply**. Maintain adequate water supply during emergencies through intertie agreements with neighboring water agencies, backup generation at critical facilities, and other precautions that will ensure sufficient water supply is available during emergencies.

Storm Drain and Flood Control Facilities

San Bernardino's planning area is 70 square miles, much of which is paved and does not allow water to soak into the ground. When it rains, thousands of gallons of water, as well as trash, oil, and other pollutants (often termed urban runoff), travel through storm drains. Unlike sewage, which goes to treatment plants, polluted urban runoff flows untreated through the City's storm drain system and directly into channels, rivers, and eventually the ocean. Controlling runoff becomes especially challenging during flood events.

Addressing urban water pollution is the reason for the enactment of the federal Clean Water Act, which established the National Pollution Discharge Elimination System (NPDES) permit program. The Clean Water Act requires that cities "effectively prohibit non-stormwater discharges into the storm sewers" and "require controls to reduce the discharge of pollutants to the maximum extent practicable." Cities are now required to obtain NPDES permits to discharge stormwater into the storm drains and must implement best management practices to prevent illegal discharges to storm drains and runoff from construction sites, restaurants, industrial uses, etc.

Storm drain infrastructure is also needed to control urban flooding. Flooding is also a very real issue given the City's location at the base of mountain canyons, streams, and rivers. Flood control facilities in the City include channels, storm drains, streets, natural drainage courses, basins, and levees. Storm drains and flood control facilities are administered by four entities: City of San Bernardino, San Bernardino County Flood Control District, Army Corps of Engineers, and the San Bernardino International Airport.

To prevent flooding of San Bernardino and the associated damages to public infrastructure and personal property, the capacity of the storm drain system must consistently be evaluated for deficiencies or needed repairs. Storm drains, levees, and channels must also be regularly cleaned and maintained. San Bernardino maintains a robust capital improvement plan so that repairs to the City's storm drains and flood control can be scheduled on a regular basis.

Figure UI-3 shows the location of the primary storm drains and flood control facilities in San Bernardino.

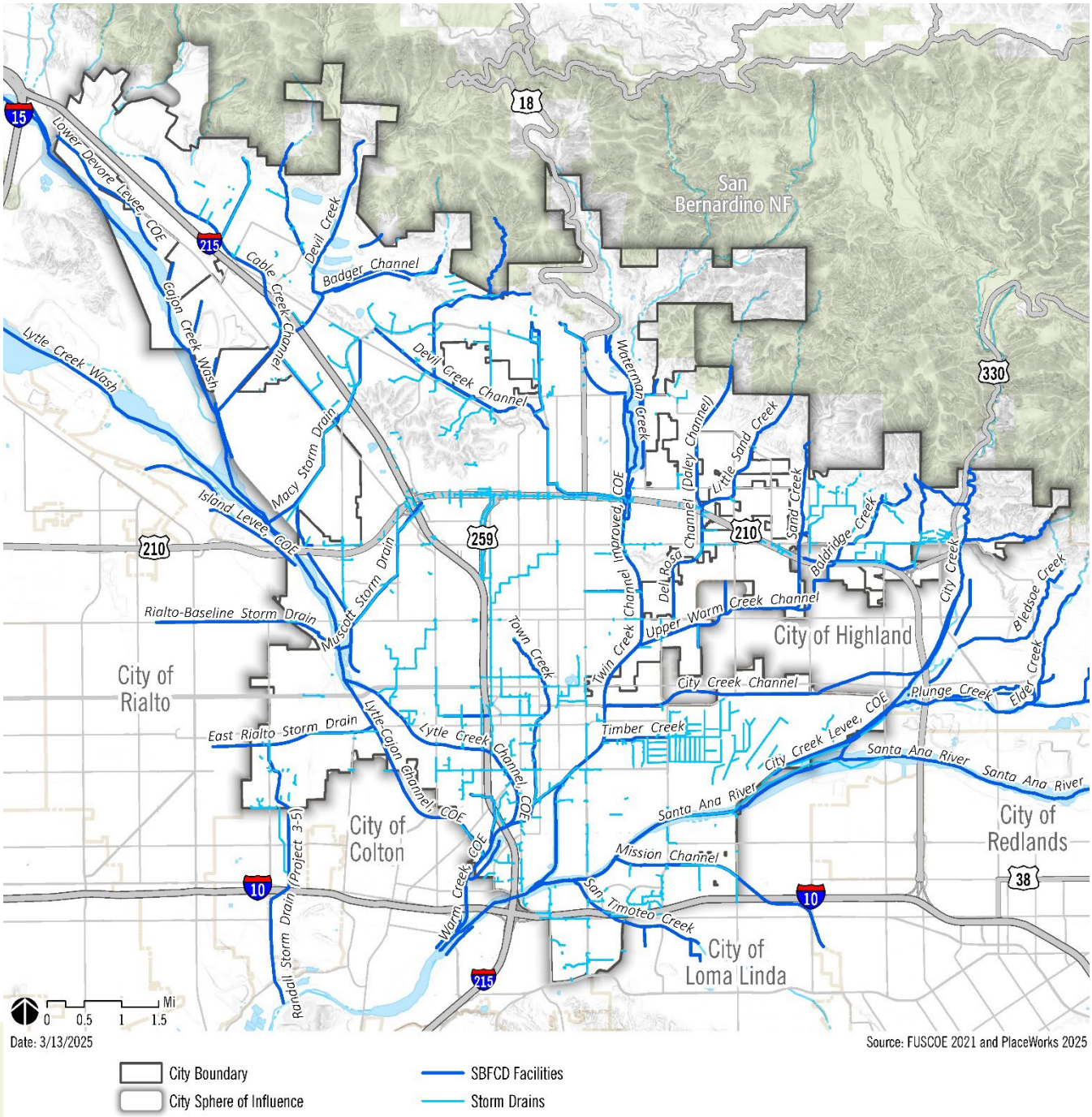

Figure UI-3. Drainage Infrastructure

Goal UI-9.4 Storm Drain and Flood Control

Provision and financing of orderly, well-planned, and sufficient storm drain and flood control facilities that meet the needs of existing and future residents and business in San Bernardino.

Policies

9.4.1 **Drainage Infrastructure**. Ensure that adequate storm drainage and flood control facilities are provided and regularly maintained in a timely manner to protect people and property from flooding hazards.

9.4.2 **Infrastructure Management**. Provide for the timely maintenance, renovation, replacement, and expansion of storm drain and flood control facilities to eliminate existing or future service deficiencies and protect property and development from flooding.

9.4.3 **Infrastructure Timing.** Require adequate storm drain and flood control facilities to be in place prior to the issuance of certificates of occupancy. Where infeasible, the Mayor and City Council may permit interim facilities to meet present and short-term future needs.

9.4.4 **Flood Control Project Design**. Design and implement flood control projects and improvements that maintain the integrity of riparian and other habitats, minimize disturbance of natural water bodies or drainage systems, and provide multiple benefits.

9.4.5 **Urban Runoff Reduction**. Implement a urban runoff reduction program that is consistent with regional and federal requirements, which includes requiring Best Management Practices (BMPs) and stormwater pollution prevention plans (SWPPPs) in qualified projects.

9.4.6 **Stormwater Infiltration**. Explore and consider opportunities for the responsible use of stormwater infiltration techniques (e.g., permeable pavements, landscaping, and so forth) that allow for the natural filtering of pollutants without sacrificing water quality.

Energy Resources

San Bernardino relies on a mix of renewable and fossil-fuel-based energy resources (electricity, geothermal, natural gas, and oil). The City's electricity resources are on a path to be sourced from carbon neutral and renewable resources by 2045, with expanded energy storage capacity, allowing for more dependable supply. These energy sources are discussed below and illustrated on **Figure UI-4**.

Electricity and Natural Gas

Electrical service in San Bernardino is provided solely by the Southern California Edison Company (SCE). SCE owns, operates, and maintains both above ground and underground facilities in the planning area. Most of SCE's facilities are in the street right-of-way. There are currently no widespread alternate generation sources of electricity in San Bernardino. SCE will extend electrical service into unserved areas pursuant to SCE's current rules and rates.

San Bernardino Unified School District and Renewable Energy Plan

The San Bernardino City Unified School District is actively transitioning to 100 percent renewable energy by 2027, providing savings of $60 million dollars over 30 years. These include new net zero facilities where feasible.

The State of California requires that at least 60 percent of the electricity retail sales be served by renewable resources by 2030 and that 100 percent of the State's electricity come from renewable and carbon-free resources by 2045. This transition requires changes at many levels, including homes and businesses. Renewable energy technologies continue to evolve. SCE supports electrification and clean fuels, including natural gas and hydrogen.

Natural gas is provided by Southern California Gas Company. The Gas Company owns, operates, and maintains numerous underground gas lines in most of the public streets, including high-pressure transmission lines. San Bernardino does not have natural gas fields or wells in the community. Extension of service is based on the initiation of a service contract whose policies and extension rules are on file with the California Public Utilities Commission.

The City of San Bernardino does not have widespread alternatives to natural gas. Transitioning to carbon-free, renewable energy will likely require fuel switching from natural gas appliances to all-electric appliances, for the most part, and ensuring existing and new buildings are energy efficient and have capacity for this change. Alternative energy systems, such as solar, will also be needed.

Alternative Fuels

San Bernardino continues to encourage investments in alternative and renewable clean fuel technologies, including solar, fuel cells, and hydroelectricity in an effort to diversify its overall energy portfolio and reduce dependence on carbon-based fuel sources.

Fuel Cell Technology

Fuel cell technology refers to the process of using a chemical reaction between fuel and oxygen to convert chemical energy into electrical power without combustion and the associated air pollution. Fuel cell technology has proven applications for transportation, industrial, commercial, residential buildings, and long-term energy storage. The City is in partnership for the operation of a 1.4-megawatt biofuel cell project at its Water Reclamation Plant, and CSUSB has built a 1.4 MW molten carbonate fuel-cell power facility at the campus's plant. Other small-scale fuel-cell projects have been built in the City.

Wastewater Reclamation Facility, BioFuel Cell Technology

Solar Energy

Solar energy is increasingly being explored in San Bernardino. CSUSB has four solar photovoltaic (PV) systems that convert light into clean electricity. Three buildings were equipped with rooftop PVs. In addition, CSUSB's 3.5-acre ground solar field produces enough electricity to power more than 100 homes daily. Other large-scale solar fields have been built at Kohl's San Bernardino, Yaamava Hotel, and Patton Hospital among others. In addition, the SBCUSD has pledged to transition to 100 percent renewable energy at all district facilities by 2024. These are just a few examples of the gradual expansion of solar energy opportunities in San Bernardino.

Hydroelectric Power

San Bernardino is developing capacity for hydroelectricity. The Devil's Canyon hydroelectric plant, built in 1972 to tap the power of the California Aqueduct, produces 276 MW of electricity. Since then, the City has built three hydroelectric stations to generate power—Waterman, Lytle Creek, and City Creek Turnouts. The City, San Bernardino MWD, and San Bernardino Valley MWD are also jointly involved in acquiring seven hydroelectric facilities along the Santa Ana River and the State Water Project from SoCal Edison to further assist in diversifying the City's energy portfolio.

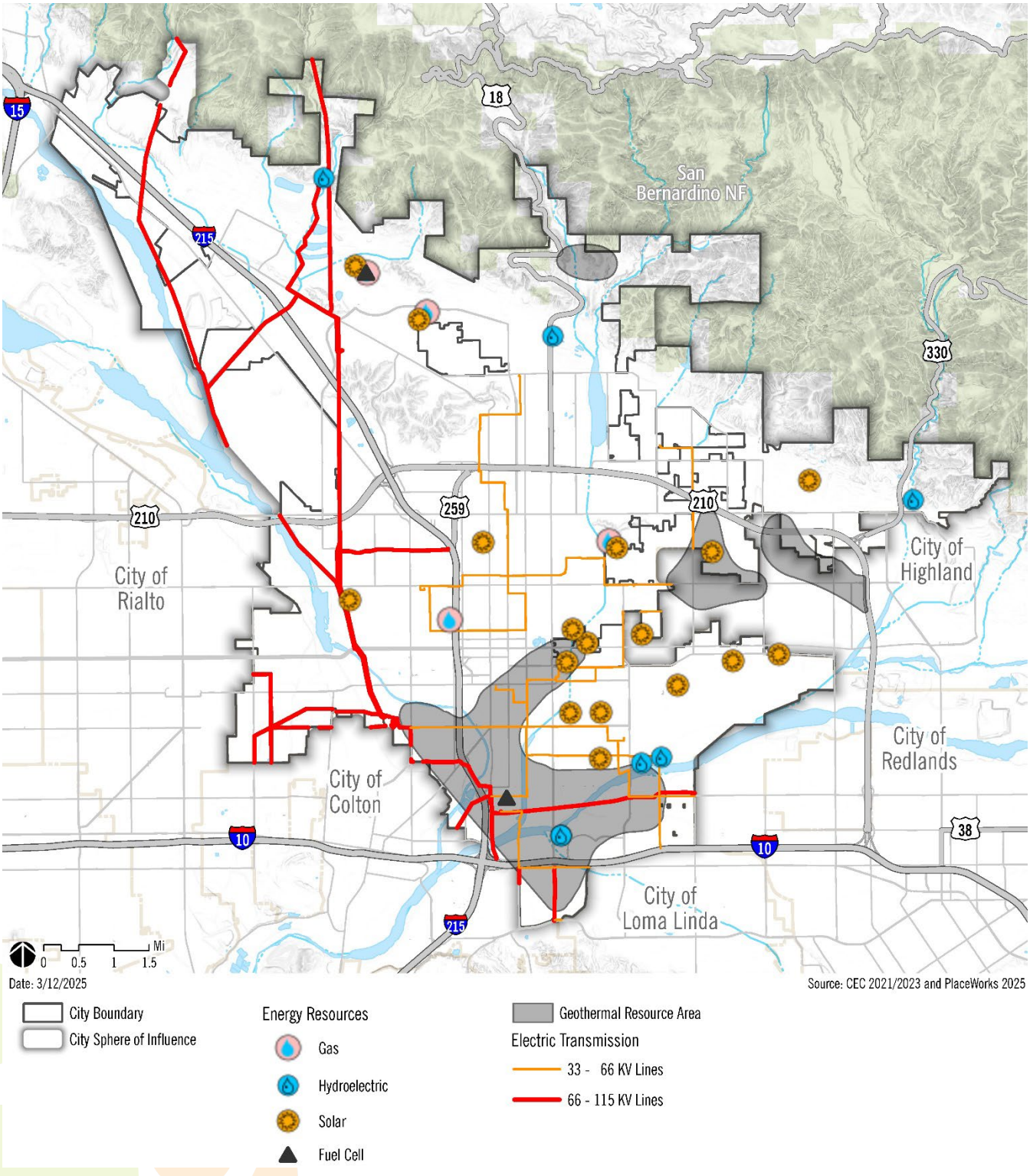

Figure UI-4. Energy Resources

Goal UI-9.5: Energy Resiliency

A diversified portfolio of traditional and renewable energy resources that provides long-term, stable, cost-effective, and sustainable energy for San Bernardino.

Policies

9.5.1 **Public Facility and Infrastructure Energy Use**. As cost feasible, maximize energy efficiency without reducing public safety or service levels by incorporating proven energy advancements in City facilities and infrastructure:

- Street infrastructure such as lighting, signals, etc.
- Buildings and facilities, both interior and exterior.
- City fleet, public transit, and trains
- Water, sewer, and other infrastructure.

9.5.2 **Energy efficient building design**. Encourage and require, to the extent applicable, the incorporation of best practices in the design and operation of buildings. Examples include:

- Passive and active solar and wind design concepts.
- Cool roofs, green roofs, and rooftop gardens.
- Energy efficiency internal building components.

9.5.3 **Renewable Energy Systems in New Development**. Increase the installation of on-site renewable energy systems, battery storage, and micro-grids in projects encourage buildings to install such systems.

9.5.4 **Solar Energy**. Continue to support and facilitate the expansion of solar energy projects on residential units, nonresidential, and public facilities through incentives, development codes, and public education.

9.5.5 **Alternative Energy Generation**. Diversify the City's energy portfolio through the development of alternative energy technologies that include, but are not limited to:

- Methane recovery from landfills and fuel cells.
- Energy generation at wastewater treatment plants.
- Hydroelectricity from water infrastructure turnouts.
- Geothermal energy at City facilities where feasible.

Communications

Telecommunication is defined as communication through audio, video, and data from one point to another. Since telecommunications include voice, data, and image transmission, communication also includes telephones, fiber optics (data), and television among others. The pandemic in 2020 underscored the importance of having a high-functioning communication network throughout San Bernardino to both conduct personal and business communications.

According to the City's Broadband Master Plan, the City is well served with fiber optic technology and has access to broadband. Unserved areas are primarily at the northern periphery near the national forest. The City also has robust cell service coverage from major cell providers such as ATT, Verizon, and T-Mobile. The City's municipal code contains guidelines for siting, aiming to minimize adverse impacts, encourage non-residential locations, joint use of sites, and height limitations.

As the center of San Bernardino Valley, the City of San Bernardino will soon be home to a $125 million Valley Communications Center. The center will facilitate cross-agency collaboration between the Sheriff-Coroner, Office of Emergency Services, County Fire, Consolidated Fire Agencies, Inland Counties Emergency Medical Agency, Radio Management Facility, and Building Services. The facility will have a communications tower to support radio communication.

Goal UI-9.6 Utility Infrastructure

Ensure an adequate, safe, and orderly supply of electricity, natural gas, and communication infrastructure is available to support existing and future land uses within the City on a project level.

Policies

9.6.1 **Project Development Approval.** Require that approval for new development, expansions, and reuses be contingent on the availability of adequate electricity, natural gas, and communications.

9.6.2 **Capacity Expansion**. Require improvements to the existing street light system, electricity or natural systems, or telecommunications necessitated by a new development proposal be funded by that development.

9.6.3 **Interagency Consultation**. Work with all public utilities providers to ensure that adequate electricity, natural gas, and communication facilities are available to meet the demands of the city, including new developments.

9.6.4 **Underground Utilities**. Require undergrounding of on-site utilities (such as gas, electricity, communications) and connections to facilities, unless infeasible due to significant environmental, topography, or cost constraints.

9.6.5 **Public Street Lighting**. Provide adequate illumination of all streets, alleys (under special conditions), and public areas; upgrade areas that are deficient and maintain lighting fixtures in good working order.

9.6.6 **Communication Services**. Provide for the development of telecommunications systems, including cable, fiber optics, for entertainment, education, culture, information access, and similar purposes citywide.

9.6.7 **Utility Equipment**. Require that utility boxes, aboveground equipment, and utility entrances are at the rear or side of the building and do not interfere with the effective use of sidewalks and streets.

Goal UI-9.7: Infrastructure Financing

Provision and financing of orderly, well-planned, and sufficient infrastructure that meets the needs of existing and future residents and business in San Bernardino.

Policies

9.7.1 **Infrastructure Plan**. Require all development proposals to have feasible plans for supplying the infrastructure and services to support the needs of their project in a timely manner, as determined by the City Engineer.

9.7.2 **Fair Share Costs.** Require developers to bear the cost of improving wastewater collection and treatment facilities; water supply transmission, distribution, storage, and treatment facilities; and storm drain and flood control facilities as necessitated by their proposed project.

9.7.3 **Adequacy of Fees**. Collect adequate fees and charges to fund the operation/maintenance of existing infrastructure and facilities and to construct new infrastructure and facilities as needed.

9.7.4 **Periodic Fee Review**. Review utility, capacity, and infrastructure fees as well as development, acquisition of service, and service charges to ensure that sufficient revenue is collected to fund the operation/maintenance of existing facilities and to construct new facilities.

9.7.5 **Public Infrastructure Support**. Provide public funding for the development, expansion, and/or upgrading of public utilities and infrastructure when improvements will provide substantial public benefit to the community.

9.7.6 **Assessment Districts**. Allow formation of community facilities districts and/or benefit assessment districts in which beneficiaries of infrastructure improvements pay a fair pro rata share of the costs of the improvements.

9.7.7 **Infrastructure Resiliency**. Ensure that the City's water, wastewater, storm drain, and energy infrastructure system is designed, improved, and upgraded as needed to mitigate damage from potential hazards.