Cover art by Dyett & Bhatia.
Environmental and social systems are essential components of Downtown Santa Rosa’s future as a sustainable, healthy, and environmentally friendly hub with a high quality of life. These systems include adequate public services that give everyone the chance to learn, feel safe, and support daily functions; protections from environmental hazards and risks; and preservation of Downtown Santa Rosa’s unique biodiversity and natural features. This chapter’s goals and policies emphasize careful stewardship of these resources and services to ensure that the Downtown Station Area continues to be an attractive place to live, work and play.
PUBLIC SAFETY SERVICES

Public safety services rooted in community-based approaches help to ensure neighborhoods remain safe, engaged, and ready to respond in the event of an emergency. This section describes goals and policies for adequate police and fire services in the Downtown Station Area.

POLICE SERVICES

The Santa Rosa Police Department (SRPD) is responsible for the protection of life and property within the city and provides a variety of law enforcement services and programs. The Police Department and Fire Station are both located in the Public Safety Building at 965 Sonoma Avenue. The police and fire stations are also operates a sub-station facility fronting Courthouse Square. The average police response time in 2018 was 6:28 minutes. Sampling from the League of California Cities shows 6-8 minutes as an acceptable range. Beyond providing excellent police services, the City of Santa Rosa can continue to ensure public safety and reduce crime through a variety of community-based approaches in partnership with other social service organizations. As more people live, work, and visit the Downtown Station Area, the DSASP seeks to ensure adequate police services commensurate with this growth.

Planning techniques can also support feelings of safety and well-being. One method, Crime Prevention Through Environmental Design (CPTED), suggests designing for natural surveillance through means such as locating windows to overlook sidewalks and parking lots, increasing pedestrian and bicycle traffic, and selectively installing fencing, landscaping, or lighting to control access. Watchful residents and active streets can create places that feel safer and less isolated, which can serve as a factor in deterring criminal activity.

FIRE SERVICES

Adequate response to fire emergencies is essential in a city like Santa Rosa that frequently faces fire threats. Fire protection and emergency services in the Downtown Station Area are the responsibility of the Santa Rosa Fire Department (SRFD), which operates in 10 fire stations across the city. The Fire Department is working to meet the City General Plan’s goal of the first resource arrival within 5 minutes of dispatch 90% of the time. The Insurance Services Office (ISO) reviews the fire protection resources within communities and provides a Community Fire Protection Rating. In 2016, SRFD received an Insurance Services Office (ISO) rating of 1, the highest level of protection.

According to the SRFD, the Downtown Station Area already has the highest demand for calls for service based on population density, and more staff will be needed to serve an increased population. The DSASP also considers the impact of taller building on fire services: ISO standards call for a ladder truck within 2.5 miles of urban areas containing buildings three or more stories in height. Currently, Fire Station 1 and Fire Station 2 have ladder trucks. A planned new facility to replace Fire Station 1 (the Public Safety Building) could accommodate additional staff and equipment needed to support Downtown Santa Rosa’s future needs.
GOALS AND POLICIES

GOAL PSS-1: Responsive police and fire services that ensure a high level of public safety.

POLICIES

PSS-1.1 Ensure appropriate staffing and equipment levels proportionate to population and activity level in order to maintain a safe and livable environment downtown.

PSS-1.2 Partner with the Downtown Community Benefit District, neighborhood associations, and other groups to prioritize safety in public spaces, including the Prince Memorial Greenway, the Downtown SMART Station, and the Downtown Transit Mall.

PSS-1.3 Require that new development adequately addresses public safety considerations in building design and site planning.

PSS-1.4 Monitor the pace of development, and as warranted, relocate Engine Company No. 8 to a new site in the vicinity of Sebastopol Road. Explore the feasibility of acquiring the historic Fitzgerald Building site on Roberts Avenue as a multi-use site for both a Fire Station and neighborhood community facility.

(For additional policies related to safety and security in public spaces, please see Goal MOB-2 in Chapter 3, Mobility and the standards and guidelines in Chapter 4, Urban Design and Civic Spaces).

SCHOOLS

The majority of the Downtown Station Area is served by the Santa Rosa City School District (SRCSD), which includes Luther Burbank Elementary School, Santa Rosa Middle School, and Kid Street Learning Center. There are two private schools, New Horizon School, and Stuart Preparatory School. A small part of the Downtown Station Area south of SR 12 is served by the Roseland School District. One preschool, Storybook Village Preschool at 28 Maxwell Court, and one day care center, Burbank Head Start, at 203 South A Street are within Downtown Santa Rosa. Santa Rosa Junior College, a public community college offering more than 100 majors, is just a few blocks north of the Downtown Station Area.

According to the 2018 SRSCD Enrollment Projection Study, the School District experienced a decline in student enrollment from school year 2000/2001 to 2017/2018, and the student enrollment of the School District is projected to continue to decline through school year 2027/2028. The recently adjusted student generation rate used in this study was 0.25 students per housing unit for multifamily attached units. This student generation rate estimates that 1,750 students would result from new development in the Downtown Station Area, an additional 450 students more than the population considered as part of the 2007 DSASP. Based on current enrollment, projected enrollments and capacity for SRCSD, there is adequate capacity to support new student growth in existing schools.

LIBRARIES

The Central Branch of the Sonoma County Library has provided library services to the citizens of Santa Rosa since 1859. It was the fourteenth public library established in the state and received a grant from the Carnegie Foundation to build on the corner of Fourth and E Streets in 1904. In addition to usual library offerings, the Downtown Branch also provides services and programs including a children’s room, computers with internet, discussion groups, and more. An upgrade to the Central Branch has been anticipated for some time, and the DSASP envisions the new facility as one of several catalyst projects with a potential housing component, or as part of a larger community-oriented facility.

SCHOOLS AND LIBRARIES

Educational services are important components of civic life. This section discusses goals and policies for the Downtown Station Area’s schools and libraries.
GOALS AND POLICIES

GOAL PSS-2: Accessible educational and library facilities that contribute to a high quality of life in the Downtown Station Area.

POLICIES

PSS-2.1 Work closely with the Santa Rosa City School Districts to ensure the future student population of the Downtown Station Area can be accommodated adequately in public schools. Support the development of new school facilities downtown to accommodate students of all ages.

PSS-2.2 Support the Sonoma County Library in their planning efforts to either renovate the Central Library branch in its current location or develop a new facility at an alternative site within the Downtown Station Area.

PSS-2.3 Coordinate with Santa Rosa Junior College on new development, programming, and facilities that bolster its mission and contribute to downtown commerce, culture, and living.

PUBLIC UTILITIES

Public utilities ensure people can meet their basic needs. This section includes goals and policies that ensure utilities are sufficient for the current and future population's needs.

SEWER SYSTEM

Sewage generated from residential, commercial and industrial uses within the city is collected and transported to the Laguna Subregional Wastewater Treatment Plant (WTP) for treatment and disposal. The three sewer trunk mains serving the Downtown Station Area are Benton, Downtown, and Crosstown.

The Sanitary Sewer Management Plan (SSMP) identifies recommended Capital Improvements for trunk mains. The SSMP recommends replacement of portions of Crosstown trunk, as well as analysis of several sewer mains within the Downtown Station Area, including those at A Street and 1st Street, Maxwell Court, Trowbridge Street up to and through the SMART station area, Sebastopol Road under US 101 to Sebastopol Avenue, and Sonoma Avenue from E Street to Brookwood Avenue. These improvements are shown in Map PSS-1 and described in Table PSS-1. No upgrades are recommended for the Downtown and Benton trunks within the Downtown Station Area. There is no immediate need to improve the sewer infrastructure beyond which has already been planned and outlined in the SSMP.

WATER SYSTEM

The majority of the City’s potable water supply is derived from the Russian River watershed and is delivered under contractual agreement by the Sonoma County Water Agency (SCWA). The City maintains and operates 20 water pump stations and one well treatment facility for delivery of water and to maintain system pressure. Twenty-four water storage tanks are located throughout the City’s water distribution system. Within the Downtown Station Area, most residential neighborhoods are served by 6- to 10-inch mains. Most of the water distribution in the Downtown Station Area is supplied by a network of 12-inch lines running east west and connected in the north south direction.

The 2015 Urban Water Master Plan and 2014 Final Water Master Plan Update both call for increased recycled irrigation water use in order to reduce potable water demand. While there are currently no active recycled water lines in the

The Sonoma County Library-Central Branch has plans to renovate or expand.
Upsize approximately 1,500' of 6" to 8" (Maxwell Court)

Upsize approximately 1,600' of 12" to 15" (Trowbridge Street)

Upsize approximately 1,200' of 6" to 8" (A St & 1st St)

Upsize approximately 2,500' of 12" to 15" (Brookwood to E St)
Figure ES-11: Water Supply and Distribution Network

- 6 inch pipe
- 8 inch pipe
- 10 inch pipe
- 12-16 inch pipe
- Planned 12 inch pipe
- 18 inch Urban Re-use Main
- SCWA Aqueduct

Map PSS-2: Water System

- SMART Train
- Planning Area

Legend:
- 0-250, 250-500, 500-1000, 1000-2000 FEET

Map shows distribution of water supply and distribution network with various pipe sizes and planned infrastructure.
Downtown Station Area, there is an 18-inch urban re-use water main along the north side of Santa Rosa Creek from Santa Rosa Avenue to Pierson Street. Ultimately this will connect to the functioning system fed from the recycled water pond near the Utilities Field Operation building on Stony Point Road. Additionally, the 6- and 8-inch water mains in the Maxwell Court area will be upsized to 12 inches. These improvements are shown in Map PSS-2 and described in Table PSS-1.

The proposed increased population densities associated with the DSASP will be adequately served by existing infrastructure and planned Capital Improvement Projects. Outside of the Maxwell Court area and planned system upgrades, no improvements are necessary to support the increased densities proposed in the DSASP.

**STORMWATER SYSTEM**

The City’s stormwater system conveys runoff from developed areas into creeks to protect against flood hazards or erosion. Runoff is collected and disposed of through an integrated system of curbside gutters, underground pipelines, drainage ditches, and creeks. The main drainage conduit within the Downtown Station Area is the Santa Rosa Creek. Santa Rosa Creek runs east to west through the Downtown Station Area, going under City Hall in a 108-inch Box Culvert from E Street to Santa Rosa Avenue where it enters the Prince Memorial Greenway, a revitalized area of the creek that removed the trapezoidal, concrete lined channel and restored it to a natural condition with vegetation, walkways and reinforced earthen banks. Matanzas Creek connects to Santa Rosa Creek under City Hall. Long term planning currently calls for relocation of the City offices, removal of the box culvert and subsequent restoration of the confluence of these creeks to a natural condition, including vegetation, bank stabilization, bike paths and community areas.

Development of the Downtown Station Area is not expected to have a significant increase in stormwater runoff. Outside of planned system upgrades, no improvements are necessary to support the increased densities proposed. Current regulations require that new development and redevelopment implement on-site stormwater treatments and hydromodifications which should result in a lower runoff factor for the area. New projects will also need to comply with the City’s Low Impact Development (LID) standards, such as vegetated bio-swales, pervious paving and other types of vegetated on-site detention.

**WASTE SYSTEM**

In 2017, the City conducted a competitive procurement process to select a new hauler for garbage, recycling, and organics collection, and awarded Recology Sonoma Marin (Recology) an exclusive franchise agreement for provision of these services within the City. Part of the agreement specifies diversion requirements that are required to be met based on franchised waste.

In 2019, the City adopted the Zero Waste Master Plan, sets a new goal to reduce landfill disposal to less than one (1) pound per person per day of franchised waste and achieve at least 75% diversion of franchised waste from landfill disposal by 2030. Programs and policies in this plan to further divert waste include a single-use plastics ban; mandatory participation in recycling and composting programs; a Construction and Demolition (C&D) Ordinance Update, targeted technical assistance and education, and a Zero Waste culture change, which includes zero waste event requirements, among other programs.
### Table PSS-1: Utilities System Improvements

#### Sewer System: Main Improvements

<table>
<thead>
<tr>
<th>Area Description</th>
<th>$/Foot</th>
<th>Length (ft)</th>
<th>Cost ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Street &amp; 1st Street: Upsize from 6” main to 8” main</td>
<td>156</td>
<td>1,200</td>
<td>0.19</td>
</tr>
<tr>
<td>Maxwell Court: upsize from 6” main to 8” main</td>
<td>156</td>
<td>1,500</td>
<td>0.23</td>
</tr>
<tr>
<td>Trowbridge Street up to and through SMART station area: upsize 12” main to 15” main</td>
<td>229</td>
<td>1,600</td>
<td>0.37</td>
</tr>
<tr>
<td>Sebastopol Road under US 101 to Sebastopol Avenue: upsize 12” main to 15” main</td>
<td>229</td>
<td>3,500</td>
<td>0.80</td>
</tr>
<tr>
<td>Sonoma Avenue – E Street to Brockwood Ave: upsize 12” main to 15” main</td>
<td>229</td>
<td>2,500</td>
<td>0.57</td>
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</table>

#### Sewer System: Crosstown Trunk Improvements

<table>
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<tr>
<th>Project ID</th>
<th>Priority</th>
<th>Group Description Upstream</th>
<th>Upstream Manhole</th>
<th>Downstream Manhole</th>
<th>Length (ft)</th>
<th>Cost ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTTS-10</td>
<td>2</td>
<td>Brookwood Ave to Brown St upsize aged trunk main in same alignment</td>
<td>II2819MH008</td>
<td>II2817MH005</td>
<td>3,400</td>
<td>1.9</td>
</tr>
<tr>
<td>CTTS-11</td>
<td>2</td>
<td>Brown St to Chestnut St upsize aged trunk main in same alignment</td>
<td>II2817MH005</td>
<td>II2816MH030</td>
<td>3,400</td>
<td>1.9</td>
</tr>
<tr>
<td>CTTS-12</td>
<td>2</td>
<td>Chestnut St to Roberts Ave upsize aged trunk main in same alignment</td>
<td>II2816MH030</td>
<td>II2816MH032</td>
<td>740</td>
<td>0.4</td>
</tr>
<tr>
<td>CTTS-13</td>
<td>2</td>
<td>Iowa St to Apple Creek upsize aged trunk main in same alignment</td>
<td>II2816MH039</td>
<td>II2720MH063</td>
<td>2,100</td>
<td>1.2</td>
</tr>
<tr>
<td>CTTS-14</td>
<td>2</td>
<td>Rusch Ct to Amador Dr upsize aged trunk main in same alignment</td>
<td>II2719MH005</td>
<td>II2719MH007</td>
<td>1,100</td>
<td>0.6</td>
</tr>
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#### Water System: Recommended Fire Flow Improvements

<table>
<thead>
<tr>
<th>Area Description</th>
<th>$/Foot</th>
<th>Length (ft)</th>
<th>Cost ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upsize the 6” main in Maxwell Court to 12” from the 12” main in Cleveland Avenue to the 8” main in N Dutton (including portion under SMART Right of Way)</td>
<td>250</td>
<td>1,000</td>
<td>0.25</td>
</tr>
<tr>
<td>Upsize the 8” and 6” mains in Maxwell Drive to 12” from the 12” main in College Avenue to proposed 12” main in Maxwell Ct.</td>
<td>250</td>
<td>1,200</td>
<td>0.3</td>
</tr>
</tbody>
</table>

GOALS AND POLICIES

GOAL PSS-3: Adequate utility infrastructure and waste management services to support housing and employment growth.

POLICIES

PSS-3.1 Implement the program of water and sewer improvements outlined in Table PSS-1.

PSS-3.2 Explore a range of financing strategies to fund and maintain public service and infrastructure improvements, including tax increment financing, bonds, assessment districts, grants, development impact fees, and investment of public funds.

(See Chapter 6, Implementation and Financing for a discussion of funding sources).

PSS-3.3 Require that all development provide its fair share of funding for necessary improvements to public services and utilities in the Downtown Station Area.

PSS-3.4 Work with PG&E and other public agencies to underground existing overhead utility lines.

PSS-3.5 Evaluate options for creating a broadband system and providing wireless internet throughout the Downtown Station Area, either as a municipal enterprise or through cooperation or partnership with a private, competitive provider.

PSS-3.6 Promote the use of rainwater harvesting systems in all types of development.

PSS-3.7 Encourage the regular maintenance of stormwater facilities on private property, including inlets and conduits, in order to reduce the occurrence of localized flooding during heavy storms.

PSS-3.8 Work with residents, developers, and businesses in the Downtown Station Area to meet or exceed the 75 percent waste diversion goal established in the Zero Waste Master Plan.

NOISE

In an urban environment, noise from everyday human activity is expected, but excessive noise can detract from quality of life and even have harmful effects on health. Noises vary in their scope and volume, ranging from individual occurrences such as leaf blowers, to the intermittent disturbances of overhead aircraft, to the fairly constant noise generated by traffic.

Major sources of noise in Downtown Santa Rosa are largely transportation-related, including freeway traffic on US 101 and SR 12; streets with higher traffic volumes such as Third Street, College Avenue, and Santa Rosa Avenue; and SMART train operation. Noise is also generated from areas associated with commercial and industrial facilities, such as in Maxwell Court or along Sebastopol Avenue.

Land use noise compatibility within Santa Rosa is established by the City’s General Plan and Municipal Code, which impose noise standards based on land use and time of day, as well as limits the location of potentially noise-generating land uses. The intent is to reduce potential nuisances and attenuate impacts on noise-sensitive land uses, such as residential areas, daycare, hospitals, churches, and other establishments. Map PSS-3 shows these projected noise contours within the Downtown Station Area.

To address these potential conflicts, the DSASP includes policies to reduce impacts from increased transportation noise, integrate noise attenuation in sensitive areas, establish feasible noise limits for mixed-use areas, and incorporate other noise-reducing techniques to ensure the Downtown Station Area can accommodate increased activity in a pleasant environment.
GOALS AND POLICIES

GOAL PSS-4: A pleasant, healthy sound environment conducive to living and working.

POLICIES

PSS-4.1 Collaborate with Caltrans, SMART, and other responsible agencies to develop and implement strategies to address noise impacts from permanent sources such as freeways and rail lines.

PSS-4.2 Require residential and other noise-sensitive land uses to meet interior noise standards. If windows must be closed 100 percent of the time to achieve this standard, a fresh air ventilation system must be utilized. For projects within the 60-65 dBA contour shown on Map PSS-3, standard dual pane windows are acceptable to meet the standard, consistent with the California Building Code. For projects where ambient noise conditions exceed 65dBA as shown on Map PSS-3, require an acoustical study to demonstrate that interior noise standards can be met.

PSS-4.3 Update Table 3-5 of the Noise Ordinance to establish appropriate and feasible limits for the Maker Mixed Use District.

PSS-4.4 Require that new and refurbished public parks, plazas, and green spaces and include design and spatial elements to reduce ambient noise levels. This requirement does not apply to pedestrian and bicycle trails.

PSS-4.5 New commercial uses that create noise, fumes, light, or odors shall be designed to minimize any impacts on adjacent sensitive uses. These commercial uses shall provide adequate ventilation within the structures that house them so that doors and windows are not left open for the purpose of ventilation resulting in nuisance emissions.

PSS-4.6 Adopt a “right to do business” ordinance that protects the ability of existing business owners, such as bars, nightclubs, or established light industrial businesses, to continue to operate their businesses as new sensitive uses are introduced in mixed use areas.

PSS-4.7 Require developers to mitigate noise exposure to sensitive receptors from construction activities. Mitigation may include a combination of techniques that reduce noise generated at the source, increase the noise insulation at the receptor, or increase the noise attenuation as noise travels from the source to the receptor (e.g. through the incorporation of barriers).

PSS-4.8 Reduce vibration impacts associated with construction activities by requiring construction contractors to implement measures to help reduce vibration levels at nearby sensitive receptors. Measures to reduce vibration levels include, but are not limited to, the following:

- Operating heavy equipment as far as practical from residential uses;
- Using smaller bulldozers (operating weight less than 20,000 pounds) when grading must occur within approximately 50 feet of residential uses or other vibration sensitive uses; and
- Using quiet pile driving technology (such as predrilling piles, using sonic or vibrancy pile drivers, or using more than one pile driver to shorten the total duration of pile driving).
HEALTHY ENVIRONMENT

While Downtown Santa Rosa generally enjoys good environmental health, its industrial history, geographic location, and transportation patterns can potentially impact its air, land, and water quality. This section provides goals and policies that reduce the causes and effects of polluting factors to create a sustainable and livable urban environment.

HAZARDOUS MATERIALS

Santa Rosa’s history of industrial development has resulted in the presence of materials that are hazardous to environmental or human health. Much of the current contamination is associated with leaking underground fuel tanks (LUFTs), especially older tanks placed in the 1970s and 1980s. These tanks, found at older service stations, automotive repair or maintenance yards, utility plants, cement factories, and even restaurants, may leak petrochemicals, oil, or grease. While most of these sites are closed, a few remain in the Roberts Road area/industrial areas south of SR 12, Park Street Cleaners near Imwalle, at the corner of Santa Rosa and Sonoma avenues, and at the Western Farm Center at West Eighth Street. All of these sites may be subject to use restrictions or warrant additional studies and clean up prior to development. Project-specific investigations will be necessary for projects on or adjacent to these sites to ensure that potential health risks are fully addressed.

In addition to LUFT hazards, lead-based paint and asbestos may be present in older buildings. Hazardous materials and wastes are extensively regulated by federal, State, regional, and local agencies and provide protections for the community and workers on sites with identified hazardous materials issues.

While hazards and hazardous materials would not preclude development of a project, the cost of remediation as part of site redevelopment would be a significant initial cost if the land purchase were for an “as-is” condition. Funds for remediation could include grants and financing tools such as enhanced infrastructure financing districts. These financing tools are discussed in further detail in Chapter 6, Implementation and Financing Strategies.

AIR QUALITY

Air quality in Santa Rosa is influenced by local terrain and ocean breezes from the south and southwest that travel through the Petaluma and Cotati Valleys. These breezes provide relatively clean air to Santa Rosa. The air quality in Santa Rosa has generally improved since the 1980s and 1990s, when data collection began. In 2003, Santa Rosa exceeded federal standards in ozone. Federal standards for PM2.5 and state standards for PM10 were exceeded in 2006.

Santa Rosa may also face air quality threats from wildfire smoke. More frequent and intense wildfires are a growing public health problem in California, contributing to reduced air quality for people living near or downwind of fire. Health problems related to wildfire smoke exposure can be as mild as eye and respiratory tract irritation and as serious as worsening of heart and lung disease, including asthma, and even premature death. One of the main components of smoke is particulate matter (PM2.5), which is a regulated air pollutant, the association between PM2.5 and heart and lung health effects is well documented.

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may cause or increase mortality or serious illness or that may pose a present or potential hazard to human health. Diesel exhaust (DPM) from trucks and cars is the predominant TAC in urban air. In winter, smoke from residential wood combustion can be a source of TACs when cold stagnant air traps smoke near the ground. Emissions of TACs in and around the Downtown Station Area are also generated from mobile sources, including vehicle travel along US 101 and SR 12. Sensitive populations and land uses, such as residential uses, hospitals, senior living facilities, and schools, are better located at a distance from TAC sources. Air filtration systems can help to mitigate the impacts of TACs. Map PSS-4 shows the properties that are within proximity to roadways that create a significant amount of TAC and where air filtration mitigation is required.

National and state ambient air quality standards were developed with the intent to protect groups who are particularly susceptible from the adverse impacts of air pollution, known as sensitive receptors. At the regional level, the Bay Area Air Quality Management District (BAAQMD) is responsible for establishing and enforcing regional and local air quality rules and regulations regarding ambient air quality standards. Future development under the DSASP may be subject to one or more of BAAQMD’s best management practices, depending on the
specific components of the individual project. Some of these measures include alternative fueled (e.g., biodiesel, electric) and EPA-approved construction equipment; local building material sourcing; recycling construction waste; managing dust; and purchasing mitigation credits for construction emissions.

In addition to implementing General Plan policies related to air quality, the DSASP requires any projects that locate sensitive receptors, such as residences, schools, daycares, or nursing and retirement homes within the high risk zones identified near TACs to include indoor air filtration systems or other design and landscaping techniques that reduce health impacts to standard levels.

GOALS AND POLICIES

GOAL PSS-5: Healthy air and water quality and a safe, livable urban environment.

POLICIES

PSS-5.1 Facilitate remediation of contaminated soil, surface water, and groundwater within the Downtown Station Area and pursue funding for cleanup, including grants and financing tools such as enhanced infrastructure financing districts.

PSS-5.2 Require projects that would locate sensitive receptors such as residences, schools, daycares, or nursing and retirement homes within the elevated risk zones identified on Map PSS-4 within 100 feet of unremediated hazardous materials case sites or stationary sources of TACs, or within 300 feet of gas stations or perc dry cleaners, to reduce health risks to required levels by either:

- Installing indoor air filtration systems with a minimum efficiency reporting value of 12 or better; or
- Incorporating appropriate measures into the project to meet required standards, as demonstrated through a human health risk assessment completed by a certified professional.

PSS-5.3 Require new large commercial or light industrial projects to develop and implement a plan to minimize truck idling in order to reduce diesel particulate emissions.

PSS-5.4 Ensure that development projects within the Downtown Station Area require their contractors, as a condition of contract, to reduce construction-related emissions through the implementation of Bay Area Air Quality Management District (BAAQMD) recommended best practices for mitigating construction-related emissions.

PSS-5.5 Require that proponents of projects proposed within 1,000 feet of sensitive receptors such as homes, schools, hospitals, and nursing homes consider mass diesel emissions, project phasing, distance to sensitive receptors, and earth-moving quantities among other factors, and consult with BAAQMD regarding the need for construction-phase human health risk assessment.

The BoDean asphalt plant site will undergo remediation.
Map PSS-4: Stationary and Roadway Sources

- **Required Buffer from SR 12**
- **Required Buffer from US 101**
- **Ambient Risks**
  - Stationary Sources Exceeding BAAQMD Threshold
  - Superior Supplies Inc., 1,000 Foot Buffer
  - BoDean Inc., 1,000 Foot Buffer
- **Roadway**
  - Downtown Station Area, Specific Plan, 1,000 Foot Buffer
- **Park**
- **SMART Rail**
- **Undercrossing**

Source: BAAQMD, 2012/2020; City of Santa Rosa, 2018; Dyett & Bhatia, 2020
BIOLOGICAL RESOURCES

Downtown Santa Rosa possesses a remarkable level of biodiversity for an urban area. Its natural habitats, varied vegetation and greenery, and other environmental resources contribute to its sense of place and role as an important ecosystem. The following section describes Downtown’s vegetation, wildlife, and creek network and includes policies to protect and enhance these features.

Vegetation and Wildlife

The majority of the Downtown Station Area is developed and urban landscape vegetation is the dominant vegetation type. This urban landscape consists of ornamental trees, shrubs, and lawn. Trees observed in the Downtown Station Area include coast redwood (Sequoia sempervirens), Monterey pine (Pinus radiata), maples (Acer spp.), California black oak (Quercus kelloggi), coast live oak (Quercus agrifolia), valley oak (Quercus lobate) and willows (Salix spp.).

Ruderal vegetation, characterized by non-native grasses and forbs, occurs along the railroad grade, in the old rail yard, and on patches of industrial properties that serve as habitat to several species.

Severally federally listed wildlife species have a moderate or high likelihood of occurring in the Downtown Station Area. These include: Central California Coast steelhead (Oncorhynchus mykiss), California Coastal chinook salmon (Oncorhynchus tshawytscha), Townsend’s western big-eared bat (Corynorhinus townsendii townsendii), Yuma myotis bat (Myotis yumanensis) and Allen’s hummingbird (Selasphorus sasin).

Trees and landscaping represent an inherent value to the environment and quality of life Downtown. The DSASP includes several policies to bolster green spaces and natural resources downtown, including native tree planting, green landscaping and infrastructure, and stewardship of the natural elements of the public realm.

Creek Network

Santa Rosa Creek and Mantanzas Creek run through the Downtown Station Area. The creeks are channelized and contain some limited riparian vegetation and woodlands including willows (Salix spp.), cottonwood (Populus spp.), bigleaf maple (Acer macrophyllum), California buckeye (Aesculus californica), California bay (Umbellularia californica), and box elder (Acer negundo var. californicum). Riparian plant communities provide habitat, and the creek serves as an important movement corridor for wildlife. West of Pierson Street, Santa Rosa Creek includes maturing trees that provide shade to migrating steelhead trout and various resident wildlife species.

Recognizing its role as an important ecological and recreational resource, the Santa Rosa Creeks Master Plan has guided significant creek improvements, such as habitat preservation and enhancement, restoration projects, and improvements as part of the Prince Memorial Greenway. The General Plan and Creeks Master Plan include guidelines for creekside development, including flood control, setback restrictions, building orientation, and recreational enhancements. The DSASP builds on creek preservation and enhancement efforts and includes a creek daylighting recommendation as part of redevelopment of the City Hall Complex.
GOALS AND POLICIES

GOAL PSS-6: Thriving trees, creeks, and natural resources that contribute to a distinctive sense of place.

POLICIES

PSS-6.1 Preserve and enhance biological and riparian resources throughout the Downtown Station Area.

PSS-6.2 Encourage both public and private entities to plant of native or locally-adapted street trees and landscaping as well as the installation of green infrastructure, including living walls, rain gardens, permeable pavement, and green roofs, as development occurs.

(See also the Environmental Sustainability Guidelines included in Chapter 4, Urban Design and Civic Spaces).

PSS-6.3 Support community tree planting programs, tree care, and the stewardship of green spaces in the public realm to complement and augment City efforts.

PSS-6.4 Recognize the environmental, economic, and social value of trees and continue to regulate the removal of trees within the Downtown Station Area, consistent with the Tree Preservation Ordinance.

PSS-6.5 Study the feasibility of daylighting Santa Rosa Creek and Matanzas Creek as part of any plans for redevelopment of the City Hall complex.

NATURAL HAZARDS

Cities in the Sonoma region are particularly vulnerable to hazards such as earthquakes, wildland fires and power outages, and increasing temperatures, and more. Proper planning for hazard mitigation, recovery, and adaptation is an essential part of a resilient and sustainable Downtown. This section describes natural hazards that may affect the Downtown Station Area and includes policies to guide Downtown’s response to future emergencies.

NATURAL HAZARD RISKS

Earthquakes

The Downtown Station Area is located in a seismically active area and has experienced significant earthquake damage in the past from the 1906 San Francisco Earthquake and 1969 Santa Rosa Earthquake. Though risk of fault rupture is low, ground shaking from nearby faults (shown in Map PSS-5) could result in structural damage and loss of life. The California Building Code, Local Hazard Mitigation Plan (LHMP) and General Plan help to protect new development from risks pertaining to soil instability, seismic activity, and other geologic hazards.

Flooding

While there are no flood hazard risks within the Downtown Station Area, localized flooding has been known to occur at the intersection of Roberts Avenue and Sebastopol Road. As climate change leads to future distributions in precipitation patterns, with high-intensity storms becoming the norm, flash flood or similar events may become more likely in the future. Risk of flooding and water pollution is minimized through the implementation of stormwater management practices consistent with the Santa Rosa General Plan and the Santa Rosa Storm Water Management Plan.

Fire

Santa Rosa is one of several California communities that has been heavily impacted by wildfire, especially in 2017 and 2019. These major fire years prompted emergency evacuations and were responsible for the loss of homes, damage to public services and facilities, and major economic losses in and around Santa Rosa. Climate change has extended California’s fire season and encouraged the spread of wildfire beyond the rural and heavily vegetated areas.
that were once widely considered to be most vulnerable. Though the Downtown Station Area is not located in a high-risk wildfire area, the DSASP’s emphasis on intensification of downtown residential development may ultimately help reduce development pressure within areas of high fire risk. The adopted Local Hazard Mitigation Plan (LHMP) addresses wild and urban fire risk for the City and identifies several policies designed to reduce fire risk.

Santa Rosa’s primary energy provider, Pacific Gas and Electric Company (PG&E), has implemented Public Safety Power Shutoffs (PSPS), which are preeminent power shutoffs in high-risk fire areas during potentially dangerous weather conditions. PSPS events are intended to reduce wildfire risks, but power outages can pose additional safety hazards. These can include strains on emergency and medical services, especially for vulnerable communities; mobility and circulation concerns as traffic lights go out of service; and other disruptions to daily living.

**Rising Average Daily Temperatures**

Future climate projections and scenarios anticipate that climate change may have significant effects on California’s precipitation, temperature, and weather patterns. These rising temperatures can increase likelihood and severity of wildfires. As a developed urban area, the Downtown Station Area may also face “heat island” effects. A “heat island” describes built-up areas that are hotter than nearby rural areas. On a hot, sunny summer day, roof and pavement surface temperatures can be 50–90°F (27–50°C) hotter than the air, while shaded or moist surfaces remain close to air temperatures. These surface urban heat islands can affect communities by increasing summertime peak energy demand, air conditioning costs, air pollution and greenhouse gas emissions, heat related illness and mortality, and water quality. Landscaping, tree planting, and selection of appropriate building materials can mitigate the effects of heat islands.

**EMERGENCY RESPONSE**

The City of Santa Rosa has a robust emergency preparedness, response, and recovery strategy. The Emergency Operations Plan (EOP) is the ultimate authority for coordinating response and recovery operations in the City of Santa Rosa and identifies the City’s emergency planning, organization, response policies, and procedures. The EOP also addresses integration and coordination with other governmental levels when required. The EOP is flexible enough to use in all emergencies and will facilitate response and short-term recovery.

In case of emergency, the City of Santa Rosa has identified several evacuation travel routes in the Downtown Station Area, including College Avenue; Third Street, Brookwood Avenue and West Third Street; Mendocino Avenue; and US 101 and SR 12. The City uses multiple notification and warning systems to make sure emergency alerts are delivered to the people who need the information, including systems that work during cell tower or power outages. These include an emergency alert system, SoCo Alert, Wireless Emergency Alert, Nixle (distributed by police and fire systems), local radio and television, and Hi/Lo evacuation sirens.

As the potential for power shut offs increases with wildfire threat, various options for ensuring emergency power at critical facilities will be evaluated. Microgrids and backup generators that operate autonomously from main power grids could be provided at key facilities like community centers, senior centers, police and fire departments, senior centers, sewer lifts, and others. Expansion of solar energy capture and storage could reduce Santa Rosa’s carbon emissions while creating alternative emergency power supplies.

Neighborhood-level emergency response and resilience plans are also recommended to provide safe and efficient evacuation alternatives. These plans would serve as a supplement to other operational and regulatory requirements that are in place within the City of Santa Rosa.
GOALS AND POLICIES

GOAL PSS-7: Effective emergency response and protection from hazards.

POLICIES

PSS-7.1 Minimize the potential for loss of life, injury, property damage, and economic and social disruptions from natural and human-made hazards.

PSS-7.2 Reduce heat island effect through preservation and enhancement of existing tree canopy as well as site planning and selection of landscape and hardscape materials.

PSS-7.3 Provide information on major evacuation routes and notification systems used for emergency alerts to downtown residents and businesses.

PSS-7.4 Evaluate options for ensuring emergency power at critical and community facilities, including microgrids, solar capture and storage, distributed energy, and back up generators. Consider the ability to reduce utility costs and carbon emissions in the assessment.

PSS-7.5 Create neighborhood-level plans to improve initial emergency response, subsequent recovery, and ongoing self-sufficiency within the Downtown Station Area.