

This section addresses aesthetics, including natural scenic resources such as waterways, open space areas, and prominent visual features, scenic highways and corridors, and light and glare. This section provides a discussion of concepts and terminology, the environmental setting, the regulatory framework, an impact analysis, and where applicable, mitigation measures.

This section was prepared based on several reconnaissance-level site visits to the Plan area conducted between Summer 2016 and Spring 2018, a review of aerial and street-level photographs of the Plan area, and a review of various existing reports, including the Sonoma County General Plan and General Plan EIR (2007). Additional sources of information included the California Department of Transportation's (Caltrans) Designated Scenic Route map for Sonoma County.

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

CONCEPTS AND TERMINOLOGY

The aesthetic value of an area is a measure of its visual character and quality, combined with the viewer response to the area (Federal Highway Administration 1983). Scenic quality can best be described as the overall impression that an individual viewer retains after driving through, walking through, or flying over an area (U.S. Bureau of Land Management 1980). Viewer response is a combination of viewer exposure and viewer sensitivity. Viewer exposure is a function of the number of viewers, number of views seen, distance of the viewers, and viewing duration. Viewer sensitivity relates to the extent of the public's concern for a particular viewshed as viewed from a public viewpoint. These terms and criteria are described in detail below.

Visual Character. Natural and artificial landscape features contribute to the visual character of an area or view. Visual character is influenced by geologic, hydrologic, botanical, wildlife, recreational, and urban features. Urban features include those associated with landscape settlements and development, including roads, utilities, structures, earthworks, and the results of other human activities. The perception of visual character can vary significantly seasonally, even hourly, as weather, light, shadow, and elements that compose the viewshed change. The basic components used to describe visual character for most visual assessments are the elements of form, line, color, and texture of the landscape features (U.S. Forest Service 1974; Federal Highway Administration 1983). The appearance of the landscape is described in terms of the dominance of each of these components.

Visual Quality. Visual quality is evaluated using the well-established approach to visual analysis adopted by the Federal Highway Administration, employing the concepts of vividness, intactness, and unity (Federal Highway Administration 1983), which are described below.

- Vividness is the visual power or memorability of landscape components as they combine in striking and distinctive visual patterns.
- Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well-kept urban and rural landscapes, and in natural settings.
- Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape.

3.1 AESTHETICS AND VISUAL RESOURCES

Visual quality is evaluated based on the relative degree of vividness, intactness, and unity, as modified by visual sensitivity. High-quality views are highly vivid, relatively intact, and exhibit a high degree of visual unity. Low-quality views lack vividness, are not visually intact, and possess a low degree of visual unity.

Viewer Exposure and Sensitivity. The measure of the quality of a view must be tempered by the overall sensitivity of the viewer. Viewer sensitivity or concern is based on the visibility of resources in the landscape, proximity of viewers to the visual resource, elevation of viewers relative to the visual resource, frequency and duration of views, number of viewers, and type and expectations of individuals and viewer groups.

According to the County's Visual Assessment Guidelines, visual sensitivity of a project site should be given a rating of low, moderate, high, or maximum using the following characteristics:

- *Low:* The site is within an urban land use designation and has no land use or zoning designations protecting scenic resources. The project vicinity is characterized by urban development or the site is surrounded by urban zoning designations and has no historic character and is not a gateway to a community. The project site terrain has visible slopes less than 20 percent and is not on a prominent ridgeline and has no significant natural vegetation of aesthetic value to the surrounding community.
- *Moderate:* The site or portion thereof is within a rural land use designation or an urban designation that does not meet the criteria above for low sensitivity, but the site has no land use or zoning designations protecting scenic resources. The project vicinity is characterized by rural or urban development but may include historic resources or be considered a gateway to a community. This category includes building or construction sites with visible slopes less than 30 percent or where there are significant natural features of aesthetic value that is visible from public roads or public use areas (i.e. parks, trails etc.).
- *High:* The site or any portion thereof is within a land use or zoning designation protecting scenic or natural resources, such as General Plan designated scenic landscape units, coastal zone, community separators, or scenic corridors. The site vicinity is generally characterized by the natural setting and forms a scenic backdrop for the community or scenic corridor. This category includes building and construction areas within the SR designation located on prominent hilltops, visible slopes less than 40 percent or where there are significant natural features of aesthetic value that are visible from public roads or public use areas (i.e. parks, trails etc.). This category also includes building or construction sites on prominent ridgelines that may not be designated as scenic resources but are visible from a designated scenic corridor.
- *Maximum:* The site or any portion thereof is within a land use or zoning designation protecting scenic resources, such as General Plan designated scenic landscape units, coastal zone, community separators, or scenic corridors. The site vicinity is generally characterized by the natural setting and forms a scenic backdrop for a designated scenic corridor. This category includes building or construction sites within the scenic resource designation on or near prominent ridgelines, visible slopes greater than 40 percent or where there are significant natural features of aesthetic value that are visible from a designated scenic corridor.

Public Viewing Points. Public viewing points in the Plan area or with views that may be affected by the Plan area include public roads, Larson Park, and Maxwell Farms Regional Park.

Visual Dominance. According to the County's Visual Assessment Guidelines, the visual dominance of a project is determined by comparing the contrast of the following elements or characteristics of the project with its surroundings and giving a rating of inevident, subordinate, co-dominant, or dominant:

- Form: shape, geometry, complexity
- Line: the edge of the shape, boldness, complexity of silhouette, orientation
- Color: reflectivity, hue (actual color), value (dark or light)
- Texture: surface characteristics, randomness, grain (fine or coarse)
- Night Lighting

Based on the criteria above, visual dominance is given a rating of inevident, subordinate, co-dominant, or dominant using the following characteristics:

- *Dominant*: Project elements are strong – they stand out against the setting and attract attention away from the surrounding landscape. Form, line, color, texture, and night lighting contrast with existing elements in the surrounding landscape.
- *Co-Dominant*: Project elements are moderate – they can be prominent within the setting, but attract attention equally with other landscape features. Form, line, color, texture, and night lighting are compatible with their surroundings.
- *Subordinate*: Project is minimally visible from public view. Element contrasts are weak – they can be seen but do not attract attention. Project generally repeats the form, line, color, texture, and night lighting of its surroundings.
- *Inevident*: Project is generally not visible from public view because of intervening natural land forms or vegetation.

Scenic Highway Corridor. The area outside of a highway right-of-way that is generally visible to persons traveling on the highway.

Scenic Highway/Scenic Route. A highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and human-made scenic resources and access or direct views to areas or scenes of exceptional beauty (including those of historic or cultural interest). Scenic highways are designated by the State.

View Corridor. A view corridor is a highway, road, trail, or other linear feature that offers travelers a vista of scenic areas within a city or county.

3.1.1 ENVIRONMENTAL SETTING

REGIONAL SCENIC RESOURCES

Visual characteristics of Sonoma County range from the flat valley floors where vineyards dominate the landscape to the mountain ranges in the northwest and eastern portions of the county. Redwood forests and the coastal mountain range are prominent in the west. Rolling foothills and grazing lands form the visual landscape in the southern portion of the county. However, a significant characteristic of the quality of Sonoma County's scenic environment is the interface of small rural communities and the natural landscape.

The Sonoma Valley area includes the Mayacama Mountains, which provide a backdrop to the valley and the agricultural areas bordering the valley.

PROJECT AREA

The Springs Specific Plan area (Plan area) is defined as the approximately 180-acre area in the southeastern portion of Sonoma County, as shown on Figure 2.0-2. The Springs is an unincorporated community located in central Sonoma Valley immediately north of the City of Sonoma. The Springs includes portions of the unincorporated communities of Agua Caliente, Feters Hot Springs, and Boyes Hot Springs. The Plan area is bounded by Agua Caliente Road at the north and Verano Avenue at the south and is bisected by the Highway 12 commercial corridor.

The 'L'-shaped Plan area has several distinct settings: the 1.6-mile stretch of mixed use along Highway 12 corridor that forms the vertical stroke of the 'L', the residential neighborhoods just east and west of the highway, and the residential area that forms the base of the 'L' to the east along Donald and Harley Streets. Agua Caliente Creek crosses the Plan area south of Encinas Lane.

The project's regional location is shown in Figure 2.0-1. Figure 2.0-2 shows the Sonoma County limits, nearby City limits, nearby County parks, and the Plan area.

The Plan area currently includes the following uses, as identified by the Sonoma County Assessor's office: 78.5 acres of single-family residential, 21.6 acres of multi-family residential (including duplexes through fourplexes), 15.74 acres of commercial, 2.77 acres of office, 1.47 acres of industrial, 3.35 acres of mixed use, and 3.59 acres of public uses and 15.6 acres of vacant land. Figure 2.0-3 shows an aerial view of the Plan area.

The 180-acre area includes all of the land area within the Plan area boundary, including all taxable and non-taxable parcels, the on-site local roadway right-of-way, and the on-site Highway 12 right-of-way. The Plan area is relatively flat at an elevation of approximately 110 to 185 feet above sea level. The area's terrain generally slopes gently down from east to west.

As noted above, public viewing points include public roads, public trails, and public parks. Other public gathering places may be considered on a case-by-case basis. Designated public viewpoints are not located in the Plan area; however, the Plan area does include or is adjacent to various public areas which offer public views, including Larson Park, Maxwell Park, and public roads including but not limited to, Highway 12, Valetti Drive, Depot Road, Lichtenberg Avenue, Boyes Boulevard, Thomson Avenue, and Donald Street.

STATE SCENIC HIGHWAYS

The State of California has officially designated two Scenic Highways in Sonoma County that have a total length of approximately 40 miles. The criteria for official designation and eligibility includes the scenic quality of the landscape, how much of the natural landscape can be seen by travelers, and the extent to which development intrudes upon the traveler's enjoyment of the view.

The officially designated Scenic Highways are Highway 116, from Highway 1 to the Sebastopol city limit, and Highway 12, from Danielli Avenue east of Santa Rosa to London Way north of Agua Caliente Road. Both Scenic Highways are located outside the Plan area.

COUNTY SCENIC RESOURCE DESIGNATIONS

Sonoma County has designated three categories of Scenic Resources: Scenic Landscape Units, which include numerous natural features that are highly scenic and of special significance, Community Separators, and an extensive network of Scenic Corridors. The Plan area does not include lands designated as Scenic Landscape Units or as Community Separators (Sonoma County General Plan 2020, Figures OSRC-1 and OSRC-5i).

The County's Scenic Corridor network threads throughout the unincorporated area, offering a diversity of viewsheds to travelers. They include State Highways 1, 12, 37, 101, 116, 121, and 128 as well as County roadways. In the Plan area, Highway 12 is a designated scenic corridor (Sonoma County General Plan 2020, Figures OSRC-1 and OSRC-5i).

PLAN AREA VISUAL SENSITIVITY

Based on the County's Visual Assessment Guidelines, while the majority of the Plan area is developed with or designated for urban uses, the presence of the Scenic Corridor designation along the Highway 12 corridor results in the Plan area having a visual sensitivity rating of High. The County's Visual Assessment Guidelines are described in Section 3.1.2, Regulatory Framework.

LIGHT AND GLARE

During the day, sunlight reflecting from structures is a primary source of glare, while nighttime light and glare can be divided into both stationary and mobile sources. Stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and streetlights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination. This ambient light environment can be accentuated during periods of low clouds or fog.

The existing developed areas within the Springs are the main source of daytime and nighttime light and glare. Additionally, existing residences surrounding the Plan area contribute to the light and glare environment in the project vicinity. These areas and their associated human activities (inclusive of vehicular traffic) characterize the existing light and glare environment present during daytime and nighttime hours in the urbanized portions of the Plan area.

Highway 12, which bisects the project site in a northwest-southeast direction, is also a notable source of existing daytime glare and nighttime lighting. Glare results from vehicle windshields and paint, whereas nighttime lighting is generated by vehicle headlights.

Sources of glare in urbanized portions of the Plan area come from light reflecting off surfaces, including glass, and certain siding and paving materials.

3.1.2 REGULATORY SETTING

FEDERAL

There are no Federal regulations that apply to the proposed project related to visual resources in the study area.

STATE

California Scenic Highway Program

The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code. A list of California's scenic highways and map showing their locations may be obtained from the Caltrans Scenic Highway Coordinators.

If a route is not included on a list of highways eligible for scenic highway designation in the Streets and Highways Code Section 263 et seq., it must be added before it can be considered for official designation. A highway may be designated scenic depending on the extent of the natural landscape that can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

LOCAL

Sonoma County General Plan

The Sonoma County General Plan contains the following goals, objectives, and policies that are relevant to aesthetics and visual resources:

OPEN SPACE & RESOURCE CONSERVATION ELEMENT

GOAL OSRC-1: Preserve the visual identities of communities by maintaining open space areas between cities and communities.

Objective OSRC-1.1: Preserve important open space areas in the Community Separators shown on Figures OSRC-5a through OSRC-5i of the Open Space and Resource Conservation Element.

Objective OSRC-1.2: Retain a rural character and promote low intensities of development in Community Separators. Avoid their inclusion in City Urban Growth Boundaries or Spheres of Influence. Avoid their inclusion within Urbans Service Areas for unincorporated communities.

Objective OSRC-1.3: Preserve existing groundwater recharge and stormwater detention areas within Community Separators.

Objective OSRC-1.4: Preserve existing specimen trees and tree stands within Community Separators.

Policy OSRC-1a: Avoid amendments to increase residential density in Community Separators, since these densities were established based upon the policies set forth in other elements of this plan as well as the open space, separation and visual considerations identified in this section. The integrity of Community Separators cannot be maintained at densities in excess of one unit per ten acres. However, under no circumstances shall this policy be used to justify an increase in density from that designated on the land use map.

Policy OSRC-1b: Avoid commercial or industrial uses in Community Separators other than those that are permitted by the agricultural or resource land use categories.

Policy OSRC-1c: Require development within Community Separators to be clustered and limited in scale and intensity.

Policy OSRC-1f: Unless there are existing design guidelines that have been adopted for the affected area, require that new structures within Community Separators meet the following criteria:

- (1) Site and design structures to take maximum advantage of existing topography and vegetation in order to substantially screen them from view from public roads.
- (2) Minimize cuts and fills on hills and ridges.
- (3) Minimize the removal of trees and other mature vegetation; avoid removal of specimen trees, tree groupings, and windbreaks.
- (4) Where existing topography and vegetation would not screen structures from view from public roads, install landscaping consisting of native vegetation in natural groupings that fits with the character of the area in order to substantially screen structures from view. Screening with native, fire retardant plants may be required.
- (5) Design structures to use building materials and color schemes that blend with the natural landscape and vegetation.
- (6) To the extent feasible, cluster structures on each parcel within existing built areas, and near existing natural features such as tree groupings.
- (7) Utilities are underground where economically practical.
- (8) On hills and ridges, avoid structures that project above the silhouette of the hill or ridge against the sky as viewed from public roads, and substantially screen driveways from view where practical.
- (9) Minimize impervious surfaces and encourage groundwater recharge with effective design features and materials that allow stormwater infiltration and detention.

This policy does not apply to farmworker housing or agricultural accessory structures, such as barns, proposed on parcels in the Diverse Agriculture, Land Extensive Agriculture, Land Intensive Agriculture, and Resources and Rural Development land use categories, and on parcels in the Rural Residential land use category with Agriculture and Residential (AR) Zoning, if their use does not require a use permit in the Zoning Code. If compliance with these standards would make a parcel unbuildable, site structures where minimum visual impacts would result.

Exempt telecommunication facilities if they meet the siting and design criteria of the Scenic Resources (SR) Zoning District.

GOAL OSRC-2: Retain the largely open, scenic character of important Scenic Landscape Units.

Objective OSRC-2.1: Retain a rural, scenic character in Scenic Landscape Units with very low intensities of development. Avoid their inclusion within spheres of influence for public service providers.

Objective OSRC-2.2: Protect the ridges and crests of prominent hills in Scenic Landscape Units from the silhouetting of structures against the skyline.

Objective OSRC-2.2: Protect hills and ridges in Scenic Landscape Units from cuts and fills.

Policy OSRC-4a: Require that all new development projects, County projects, and signage utilize light fixtures that shield the light source so that light is cast downward and that are

no more than the minimum height and power necessary to adequately light the proposed use.

GOAL OSRC-3: Identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County's tourism economy.

Objective OSRC-3.1: Designate the Scenic Corridors on Figures OSRC-5a through OSRC-5i along roadways that cross highly scenic areas, provide visual links to major recreation areas, give access to historic areas, or serve as scenic entranceways to cities.

Objective OSRC-3.2: Provide guidelines so future land uses, development and roadway construction are compatible with the preservation of scenic values along designated Scenic Corridors.

GOAL OSRC-4: Preserve and maintain views of the night time skies and visual character of urban, rural and natural areas, while allowing for nighttime lighting levels appropriate to the use and location.

Objective OSRC-4.1: Maintain night time lighting levels at the minimum necessary to provide for security and safety of the use and users to preserve night time skies and the night time character of urban, rural and natural areas.

Objective OSRC-4.2: Ensure that night time lighting levels for new development are designed to minimize light spillage offsite or upward into the sky.

Policy OSRC-4a: Require that all new development projects, County projects, and signage utilize light fixtures that shield the light source so that light is cast downward and that are no more than the minimum height and power necessary to adequately light the proposed use.

Policy OSRC-4b: Prohibit continuous all night exterior lighting in rural areas, unless it is demonstrated to the decision making body that such lighting is necessary for security or operational purposes or that it is necessary for agricultural production or processing on a seasonal basis. Where lighting is necessary for the above purposes, minimize glare onto adjacent properties and into the night sky.

Policy OSRC-4c: Discourage light levels that are in excess of industry and State standards.

GOAL OSRC-5: Retain and enhance the unique character of each of the County's unincorporated communities, while accommodating projected growth and housing needs.

Objective OSRC-5.1: Develop Urban Design Guidelines on a community by community basis to achieve the following: compatibility with and connections to surrounding development; community interaction and pedestrian activity; attractive public views; safe and comfortable infrastructure and streetscape improvements for bikes and pedestrians; increased public safety.

Objective OSRC-5.2: Establish community character as a primary criterion for review of projects in Urban Service Areas.

Policy OSRC-5a: Develop Urban Design Guidelines appropriate for each Urban Service Area in unincorporated Sonoma County that reflect the character of the community.

Policy OSRC-5b: Use the following general urban design principles until Urban Design Guidelines specific to each Urban Service Area are adopted.

- (1) Promotion of pedestrian and/or bicycle use.
- (2) Compatibility with adjacent development.
- (3) Incorporation of important historical and natural resources.
- (4) Complementary parking out of view of the streetscape.
- (5) Opportunities for social interaction with other community members.
- (6) Promotion of visible access to buildings and use areas.
- (7) Appropriate lighting levels.

GOAL OSRC-6: Preserve the unique rural and natural character of Sonoma County for residents, businesses, visitors and future generations.

Objective OSRC-6.1: Develop Rural Character Design Guidelines to achieve the following: preservation of existing site features contributing to rural character; siting of buildings and development features to blend in with the surrounding landscape; and allowance for rural design features in rural areas.

Objective OSRC-6.2: Establish Rural Character as a primary criterion for review of discretionary projects, but not including administrative design review for single family homes on existing lots outside of Urban Service Areas.

Policy OSRC-6a: Develop design guidelines for discretionary projects in rural areas, but not including administrative design review for single family homes on existing lots, that protect and reflect the rural character of Sonoma County. Use the following general design principles until these Design Guidelines are adopted, while assuring that Design Guidelines for agricultural support uses on agricultural lands are consistent with Policy AR-9h of the Agricultural Resources Element.

- (1) New structures blend into the surrounding landscape, rather than stand out.
- (2) Landscaping is included and is designed to blend in with the character of the area.
- (3) Paved areas are minimized and allow for informal parking areas.
- (4) Adequate space is provided for natural site amenities.
- (5) Exterior lighting and signage is minimized.

GOAL OSRC-8: Protect and enhance Riparian Corridors and functions along streams, balancing the need for agricultural production, urban development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, flood control, bank stabilization, and other riparian functions and values.

Objective OSRC-8.1: Designate all streams shown on USGS 7.5 minute quadrangle topographic maps as of March 18, 2003, as Riparian Corridors and establish streamside conservation areas along these designated corridors.

Objective OSRC-8.2: Provide standards for land use and development in streamside conservation areas that protect riparian vegetation, water resources and habitat values while considering the needs of residents, agriculture, businesses and other land users.

3.1 AESTHETICS AND VISUAL RESOURCES

Objective OSRC-8.3: Recognize and protect riparian functions and values of undesignated streams during review of discretionary projects.

Policy OSRC-8f: Develop and/or adopt, where appropriate, revised streamside specific standards, guidelines, and/or best management practices that provide for protection of Riparian Corridors by watershed, stream, or other geographic areas. Once adopted, the revised standards would replace the standards that are in effect at the time.

Sonoma County Visual Assessment Guidelines

The County's Visual Assessment Guidelines are an administrative procedure which provide guidance for the assessment of visual impacts on the preparation of Initial Studies and Environmental Impact Reports. To analyze the visual effects of a specific project the following procedures should be followed:

1. Determine viewpoints and characterize environmental setting;
2. Prepare photos to illustrate visual impacts;
3. Characterize the site's sensitivity (Low, Moderate, High, and Maximum);
4. Determine visual dominance (Dominant, Co-Dominant, Subordinate, and Inevident);
5. Determine significance of visual impacts based on an assessment of the project site's sensitivity and the project's visual dominance; and
6. Mitigation measures.

The assessment herein addresses items 1 (see Section 3.1.1), 3 (see Section 3.1.1), 4 (see Impact 3.1-1), 5 (see Impact 3.1-1), and 6 (see Impact 3.1-1). The guidance provided for Item 2, photos to illustrate visual impacts, addresses individual development projects and was determined by County staff to not be applicable to the Specific Plan.

The County's Visual Assessment Guidelines identify characteristics used to determine visual sensitivity of a project site as summarized in Table 3.1-1.

TABLE 3.1-1: VISUAL ASSESSMENT GUIDELINES - SITE SENSITIVITY RATINGS AND CHARACTERISTICS

<i>SENSITIVITY</i>	<i>CHARACTERISTICS</i>
Low	The site is within an urban land use designation and has no land use or zoning designations protecting scenic resources. The project vicinity is characterized by urban development or the site is surrounded by urban zoning designations and has no historic character and is not a gateway to a community. The project site terrain has visible slopes less than 20 percent and is not on a prominent ridgeline and has no significant natural vegetation of aesthetic value to the surrounding community.
Moderate	The site or portion thereof is within a rural land use designation or an urban designation that does not meet the criteria above for low sensitivity, but the site has no land use or zoning designations protecting scenic resources. The project vicinity is characterized by rural or urban development but may include historic resources or be considered a gateway to a community. This category includes building or construction sites with visible slopes less than 30 percent or where there is significant natural features of aesthetic value that is visible from public roads or public use areas (i.e. parks, trails etc.).
High	The site or any portion thereof is within a land use or zoning designation protecting scenic or natural resources, such as General Plan designated scenic landscape units, coastal zone, community separators, or scenic corridors. The site vicinity is generally characterized by the natural setting and forms a scenic backdrop for the

<i>SENSITIVITY</i>	<i>CHARACTERISTICS</i>
	community or scenic corridor. This category includes building and construction areas within the SR designation located on prominent hilltops, visible slopes less than 40 percent or where there are significant natural features of aesthetic value that are visible from public roads or public use areas (i.e. parks, trails etc.). This category also includes building or construction sites on prominent ridgelines that may not be designated as scenic resources but are visible from a designated scenic corridor.
Maximum	The site or any portion thereof is within a land use or zoning designation protecting scenic resources, such as General Plan designated scenic landscape units, coastal zone, community separators, or scenic corridors. The site vicinity is generally characterized by the natural setting and forms a scenic backdrop for a designated scenic corridor. This category includes building or construction sites within the scenic resource designation on or near prominent ridgelines, visible slopes greater than 40 percent or where there are significant natural features of aesthetic value that are visible from a designated scenic corridor.

SOURCE: SONOMA COUNTY VISUAL ASSESSMENT GUIDELINES, 2019

The County’s Visual Assessment Guidelines identify characteristics used to determine the visual dominance of a project, as identified by Table 3.1-2.

TABLE 3.1-2: VISUAL ASSESSMENT GUIDELINES – VISUAL DOMINANCE RATINGS AND CHARACTERISTICS

<i>DOMINANCE</i>	<i>CHARACTERISTICS</i>
Dominant	Project elements are strong – they stand out against the setting and attract attention away from the surrounding landscape. Form, line, color, texture, and night lighting contrast with existing elements in the surrounding landscape.
Co-Dominant	Project elements are moderate – they can be prominent within the setting, but attract attention equally with other landscape features. Form, line, color, texture, and night lighting are compatible with their surroundings.
Subordinate	Project is minimally visible from public view. Element contrasts are weak – they can be seen but do not attract attention. Project generally repeats the form, line, color, texture, and night lighting of its surroundings.
Inevident	Project is generally not visible from public view because of intervening natural land forms or vegetation.

SOURCE: SONOMA COUNTY VISUAL ASSESSMENT GUIDELINES, 2019

Sonoma County Code

The Sonoma County Code includes requirements for design review, use permits, and other discretionary project entitlements. The following regulations allow for mitigation of visual impacts through the environmental review process.

SCENIC RESOURCES COMBINING DISTRICT

The Scenic Resources (SR) combining district is intended to preserve the visual character and scenic resources of lands in the county and to implement the provisions of Sections 2.1, 2.2 and 2.3 of the general plan open space element. The SR combining district addresses development criteria for land zoned as Community Separators, Scenic Landscape Units, and Scenic Corridors, and for telecommunications facilities in the SR district.

There are no lands zoned as Community Separators or Scenic Landscape Units within the Plan area, as discussed below. While Highway 12 is designated a Scenic Corridor, the SR combining district applies only to sections of the Highway 12 corridor located outside the Urban Service Area. The entire Plan area is located within the Urban Service Area, therefore the regulations for Scenic Corridors do not apply to the planning area.

Community Separators

County Ordinance No. 6170 requires voter approval for a revision or amendment to the boundaries or land use designations and densities of the Community Separators as designated in the existing *General Plan Open Space Element*. The Plan area does not include any lands designated as Community Separators.

Scenic Landscape Units

The Zoning Code also includes standards for the development within Scenic Landscape Units. These development standards also reduce the visibility of permitted development in order to maintain the natural appearance of the landscape as much as possible. The Plan area does not include any lands designated as Scenic Landscape units.

Scenic Corridors

The County's protective measures for the Scenic Corridors rely on Sonoma County zoning regulations to control the visual impact of development, primarily through the use of the Scenic Resources (SR) overlay zoning district and the design review process. Highway 12 through the Plan area is designated a Scenic Corridor. The SR combining district establishes a setback of 30 percent of the lot depth up to a maximum of 200 feet from the centerline of the road. Within this setback area, development is prohibited with certain exceptions. As previously described, these setback requirements do not apply to areas like the Springs Plan Area which lie within an Urban Service Area. In Scenic Corridors the design review process requires that all non-exempt development be reviewed by the planning director or an appointed design review committee to assure that it meets certain visual and design standards.

DESIGN REVIEW – DEVELOPMENT STANDARDS

Section 26-82-030, Design Review Development Standards, establishes regulations for development, including building orientation, street and parking design, screening, parking lot lighting, site design, and architectural compatibility. The Zoning Code specifically regulates lighting for parking lots where a design review application is required, for appurtenant signs, and for projects within three Local Area Development Guidelines areas. In addition to the zoning code's general design standards, the county-wide design guidelines provide design standards for site planning, circulation, parking, landscape architecture, building design, signs, and outdoor lighting.

LOCAL AREA GUIDELINES - THE 1994 SPRINGS HIGHWAY 12 DESIGN GUIDELINES

Section 26-90-110 of the code references Sonoma County's local area development guidelines. The 1994 Highway 12 Design Guidelines apply to any parcel with frontage on Highway 12 from its intersection at Verano Avenue, north, to its intersection at Agua Caliente Road, and as shown in the Zoning Database as being within the Local Guidelines combining zone.

The stated purpose of the 1994 Highway 12 Design Guidelines is to provide a vision and a design vocabulary that will lead to the beautification of the Corridor, through public and private efforts. The vocabulary aims to be flexible, nurturing eclectic expressions without stifling creativity. The guidelines are intended as a supplement to the existing Sonoma County-wide ordinances, standards, and guidelines. The

Design Guidelines include design criteria for private development to ensure the consistency of each individual project with the overall character of the Corridor. The Guidelines language is permissive and is thus considered a set of recommendations rather than requirements.

It is noted that the 1994 Highway 12 Design Guidelines would be superseded if the proposed Specific Plan Design Guidelines are adopted.

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on aesthetics if it will:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The County's Visual Assessment Guidelines establish the following methodology and thresholds for the determination of visual impact significance:

- a. Establishing the level of visual sensitivity of the site using the criteria discussed in Table 1 (see Table 3.1-1).
- b. Characterizing the visual dominance of the project by comparing the project's form, line, color, texture, and lighting against that of the surrounding area as described in Table 2 (see Table 3.1-2).
- c. Determining significance of the visual impact by comparing site sensitivity with visual dominance of the project in accordance with Table 3 (see Table 3.1-3).

TABLE 3.1-3: VISUAL ASSESSMENT GUIDELINES - THRESHOLDS OF SIGNIFICANCE FOR VISUAL IMPACT ANALYSIS

<i>SENSITIVITY</i>	<i>DOMINANT</i>	<i>CO-DOMINANT</i>	<i>SUBORDINATE</i>	<i>INEVIDENT</i>
Maximum	Significant	Significant	Significant	Less than significant
High	Significant	Significant	Less than significant	Less than significant
Moderate	Significant	Less than significant	Less than significant	Less than significant
Low	Less than significant	Less than significant	Less than significant	Less than significant

SOURCE: SONOMA COUNTY VISUAL ASSESSMENT GUIDELINES, 2019

IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Project implementation would result in a substantial adverse effect on a scenic vista, or could substantially degrade the existing visual character of the site and its surroundings (Significant and Unavoidable)

VIEWPOINTS AND VISUAL SETTING

The Plan area contains various public roads which are considered public viewpoints. These public roads are located throughout the Plan area including, but not limited to: Highway 12, Vailetti Drive, Depot Road, Lichtenberg Avenue, Boyes Boulevard, Thomson Avenue, and Donald Street. The views from these existing public roadways varies from roadway to roadway. Along Highway 12 and along roadways adjacent to Highway 12, the view can generally be described as developed with urban uses. Views from public roads in the developed portions of the Plan area include buildings one to three stories in height, roadways, and public improvements (such as fencing, retaining walls, sidewalks, etc.). Along roadways further from Highway 12, such as portions of Donald Street, views can generally be described as residential, but with a greater proportion of views including natural features. At the eastern end of Donald Street along the eastern Plan area boundary, views east of the Plan area include rolling hillsides, grassy fields, and some rural residential uses. The Plan area is also visible from Maxwell Farms Regional Park and Larson Park.

The 'L'-shaped Plan area has several distinct settings: the 1.6-mile stretch of mixed use Highway 12 corridor that forms the vertical stroke of the 'L', the residential neighborhoods just east and west of the highway, and the residential area that forms the base of the 'L' to the east along Donald and Harley Streets. The area's terrain generally slopes gently down from east to west. Properties on the west of the highway in many areas sit lower than the highway, and those on the east often sit above the highway. The highway corridor's character taken as a whole is suburban. Commercial, residential, and light industrial uses front the highway. The highway alignment is predominantly straight with three widely spaced bends. The visual character transitions gradually at each stretch between the bends.

Highway 12 is most consistently residential in character between Agua Caliente Road and Rancho Drive with single and multi-family residences, the Sonoma Charter School, and a fire station. A steep hillside abuts the highway south of Sunnyside Avenue. Additionally, the area in the vicinity of Boyes Boulevard has a community-commercial orientation, with several businesses and the Post Office centrally located. Further south, there are a range of commercial land uses with some residential parcels mixed in. The residential neighborhoods at the base of the 'L' accessed along Donald and Harley Streets exist visually as enclaves of low density development that are separate from the Highway 12 corridor. Most homes are single story with low pitched gable roofs. The area includes primarily single family housing except for a few large parcels, including a small vineyard, a convalescent hospital, and a bed and breakfast, at the eastern end of this area. There are mature trees throughout these neighborhoods.

SITE SENSITIVITY

While Sonoma County contains numerous areas and viewsheds with relatively high scenic value, there are no officially designated "scenic vista" points in Sonoma County. The County's General Plan does established three types of scenic resources that signify important areas of the County that warrant protection of scenic values: Community Separators, Scenic Landscape Units, and Scenic Corridors. These three types of scenic resources are discussed in detail below as they relate to the Plan area.

Community Separators were created as an open space category in the County's first General Plan. The purpose is to avoid urban sprawl and corridor-style urbanization, in which there is little distinction between communities, by keeping some land areas open or otherwise retaining a rural character. The closest Community Separator to the Plan area is located in Glen Ellen / Agua Caliente. This Separator contains approximately 1,400 acres between Glen Ellen and Agua Caliente / Boyes Hot Springs along Highway 12 and is approximately ½ mile from the plan area. Due to the distance and location of this Community Separator outside of the Plan area, future development allowed under the Project would not substantially adversely affect this area.

Scenic Landscape Units include natural features within Sonoma County that are scenic and of special significance. These landscapes have little capacity to absorb development without affecting scenic value. Fifteen Scenic Landscape Units are designated in the existing General Plan to protect the scenic quality of these areas. The closest Scenic Landscape Units to the Plan area include the Mayacama Mountains to the east and the Sonoma Mountains to the west, both of which provide a backdrop to the valley and the agricultural areas bordering the valley. Due to the location of these Scenic Landscape Units outside of the Plan area, future development allowed under the Project would not substantially adversely affect these areas.

Sonoma County has also designated an extensive network of roadways as Scenic Corridors. This network threads throughout unincorporated areas offering a diversity of viewsheds to travelers. The Scenic Corridors within or near the Plan area include Highway 12, which runs through the Plan area, and Arnold Drive, which is located west of the Plan area. Areas with this designation are considered by the County's Visual Assessment Guidelines to be at least "High" for visual sensitivity and may be considered "Maximum" sensitivity, depending upon consideration of additional factors.

Areas with a "High" sensitivity rating are those that meet the following criteria:

- The site or any portion thereof is within a land use or zoning designation protecting scenic or natural resources, such as General Plan designated scenic landscape units, coastal zone, community separators, or scenic corridors;
- The site vicinity is generally characterized by the natural setting and forms a scenic backdrop for the community or scenic corridor;
- This category includes building and construction areas within the SR designation located on prominent hilltops, visible slopes less than 40 percent or where there are significant natural features of aesthetic value that are visible from public roads or public use areas (i.e. parks, trails etc.); and
- This category also includes building or construction sites on prominent ridgelines that may not be designated as scenic resources but are visible from a designated scenic corridor.

The Plan Area is predominantly urbanized, is not a scenic natural setting and does not include potential development on prominent hillsides, or ridgetops with scenic natural areas. As discussed above however, because portions of the Plan area are in a designated scenic corridor the visual sensitivity of the Specific Plan is considered to be High.

PROJECT VISUAL DOMINANCE

The Sonoma County General Plan 2020 Draft EIR includes extensive and detailed information regarding the visual characteristics and scenic resources of the County and the County's General Plan Planning Area,

3.1 AESTHETICS AND VISUAL RESOURCES

which includes the Plan area. The information, findings, and analysis contained in the Sonoma County General Plan 2020 Draft EIR, and specifically, Chapter 4.11, Visual Resources, are hereby incorporated by reference into this EIR.

The proposed Specific Plan includes a Design Guidelines chapter (Chapter 4) that establishes the aesthetic vision for architecture, building character, land massing, site design, streetscape, lighting, signage, and landscape standards within the Plan area. The purpose of the Guidelines is to ensure consistency of design across a wide range of uses within the Plan area. Furthermore, development standards included within the Specific Plan regulate building intensity and separation, façade design, massing, height, and setback requirements. Design Guidelines included within the Specific Plan provide guidance for the development of well-designed projects that are compatible with adjacent land uses, while continuing to advance residential opportunities, economic vitality and job growth in the County.

To assess the visual dominance of the project, the County Visual Assessment Guidelines call for comparing the contrast of the following elements or characteristics of the project with its surroundings and giving a rating of inevent, subordinate, co-dominant, or dominant:

- Form: shape, geometry, complexity
- Line: the edge of the shape, boldness, complexity of silhouette, orientation
- Color: reflectivity, hue (actual color), value (dark or light)
- Texture: surface characteristics, randomness, grain (fine or coarse)
- Night Lighting

Buildout of the Project would allow for development to occur in areas that are currently either disturbed or developed. The majority of development which would be permitted under the Project would include redevelopment of sites with existing development, retrofitting of existing buildings, and infill development on parcels that are mostly surrounded by development. Depending on the location, new development could result in changes to the skyline throughout the Plan area. For example, as shown in Table 2.0-3 in Chapter 2.0, Project Description, building heights of 35 to 40 feet would be permitted throughout the Plan area, including along Highway 12. All existing zoning districts in the Plan area have a 35 foot height limit so the Project would potentially allow buildings up to 5 feet higher than current maximums. Buildings of this size and located along Highway 12, a public viewpoint, may modify or interfere with views of distant hillsides to the east.

Development allowed under the Project could result in increased development along the Highway 12 corridor which is identified as being a County designated Scenic Corridor. Highway 12 is the only highway corridor through the Plan area bisecting the Specific Plan east and west. The dominant visual features along Highway 12 through the Plan area include existing development that occurs through a majority of the corridor. The hillside and open agricultural lands west and east of the Plan area are secondary visual features visible from the Plan area and Highway 12. Some future development allowed under the Project would be located on infill parcels which are vacant or underutilized. These infill parcels could be developed with structures up to 40 feet tall, which could alter views of distant natural features from adjacent and nearby public viewpoints.

The Visual Assessment Guidelines define a “Dominant” level of visual dominance for projects with strong visual elements that stand out against the setting and attract attention away from the surrounding landscape. The Guidelines identify that a “Co-dominant” rating is most appropriate for projects with moderate visual elements that can be prominent within the setting, but attract attention equally with other landscape features. Implementation of the Plan would support maintenance of existing visual

characteristics through the application of design guidelines, including those stating that “colors and materials must harmonize well with the styles of the Springs Community and the natural scenic backdrop.” This and other guidelines in the plan, as discussed below, would generally limit the visual dominance of new construction. However, existing buildings in the Springs reflect a variety of colors and styles and development supported by the Plan and would accommodate buildings with dominant elements, such as bold colors, murals, and distinctive design features. The Design Guidelines include II.A.5 which supports creative, innovative design and architecture and encourage use of color, as described on p. 4-19 of the Design Guidelines. In terms of the County’s Visual Assessment Guidelines, development supported by the project could include dominant features that attract attention in comparison with the existing visual landscape in the Plan area.

CONCLUSION

The implementation of the Specific Plan, including policies in the Land Use Chapter and the Design Guidelines (listed below), the goals, policies, and objectives of the General Plan (listed in Section 3.1.2, Regulatory Setting), and the County’s Zoning Code requirements (summarized in Section 3.1.2, Regulatory Setting), would ensure that impacts are reduced to the greatest extent feasible. Specifically, the Land Use Chapter of the Specific Plan includes Policies SLU-1b, SLU-1c, SLU-1m, SLU-3e, SLU-3j, and SLU-3k, which generally require and/or encourage that future development be compatible with the character of the Springs, include open space or other public spaces, and integrate with the surrounding environment. Additionally, the proposed Design Guidelines include various provisions related to building scale and design, surrounding land uses, public spaces, landscaping, and fences. These proposed policies and guidelines would ensure that future development and redevelopment projects would integrate into the surrounding environment.

The proposed Project includes Design Guidelines and policies which promote consistency of each individual project with the overall character of the Highway 12 corridor. For example, the proposed Design Guidelines note that development should blend with, preserve, and incorporate existing natural features, including creeks, mature trees, and riparian habitat, into the site design. The Guidelines also ensure that new and renovated buildings are designed to enhance the built environment, complement the surrounding uses, and harmonize well with the few iconic buildings that remain in the Springs. Future development would be subject to these proposed Design Guidelines and Specific Plan policies through the Design Review process.

As noted above, the Plan area is largely urbanized and developed. The Project would allow for an increase in intensity and density of the existing land uses than currently allowed. Development would occur on either vacant, infill parcels, or on parcels where redevelopment potential exists. Future development could result in densification of urban uses throughout the Plan area, including along the Highway 12 corridor and local roads that provide public viewpoints. As described above, future development and design review processes would ensure that future uses are pedestrian scale, blend with the existing built environment, and connect to existing and future open space and public space.

Based on the analysis of the Specific Plan based on County’s Visual Assessment Guidelines, the Specific Plan would have a High rating for visual sensitivity and a Co-dominant rating for visual dominance. Based on this combination of ratings, according to the County’s Visual Assessment Guidelines, the Specific Plan would generate a significant impact to this topic area. Therefore, the Specific Plan is required to implement mitigation. The discussion below identifies the mitigation recommended by the Visual Assessment Guidelines in italics and discusses how the Specific Plan implements the recommendation:

3.1 AESTHETICS AND VISUAL RESOURCES

- *Limit the extent of grading, tree removal, amount of cuts and fills, length of roadways, height of retaining walls and areas for building envelopes.* It is noted that no new roadways are proposed in the Specific Plan, therefore, the recommendation to limit roadways is not applicable. The Specific Plan includes Measure AES-1 which requires development and infrastructure projects to limit the extent of grading, tree removal, amount of cuts and fills, height of retaining walls, and areas for building envelopes.
- *Conservation easements may be appropriate to protect viewsheds and sensitive visual resources.* Views along the Highway 12 corridor, a scenic corridor, will be changed by development under the Specific Plan. The Specific Plan includes Measure AES-1 to ensure that future projects identify viewsheds and sensitive visual resources and ensure that development retains views of these resources to the extent feasible.
- *Building envelopes may need to be adjusted or moved back to avoid the most visible locations and/or reduced in size to protect vegetation that may screen the structures. Structures could be limited in their size or height to reduce bulk and contrast.* The Specific Plan includes design measures to ensure that development is pedestrian-scale, oriented toward the street, is directly accessible from the public sidewalk, with maximum setbacks of 20 feet, and provides a continuous frontage along the street. The maximum setback and continuous frontage requirements reduce the potential to move back or adjust building envelopes to avoid the most visible locations or reduce size to ensure that vegetation would screen structures from views. This street- and pedestrian-oriented approach is consistent with the Specific Plan's guiding principles of promoting the Specific Plan area as a mixed-use Downtown that serves the larger Springs community. Section II, Building Character, of the Design Guidelines chapter encourages variations in wall planes to create a sense of depth, requires new buildings to reflect the traditional widths in the area of 25- to 30-foot wide buildings by dividing larger buildings into smaller components to give the appearance of a series of smaller buildings, and requires three-story buildings to step back the third story; these measures reduce the bulk of the building and visual contrast with existing views.
- *Color and texture of building materials should be consistent with the surrounding environment. Non-reflective surfaces and darker colors should be utilized to avoid glare and contrast.* Section II, paragraph C, of the Design Guidelines addresses building color and materials, requiring colors and materials to harmonize well with the styles of the Springs community and the natural scenic backdrop. It is recognized that buildings in the Springs area reflect a variety of colors and styles and that restrictions to a neutral palette or dark colors would not reflect the colors and style of the community, so the Specific Plan accommodates a range of colors that harmonize with the area harmonize well with the styles of the Springs community and the natural scenic backdrop. The Design Guidelines prohibit the use of excessively reflective building materials, including mirrored glass.
- *Require screening vegetation and landscape plans subject to Design Review.* Section III, Site Design, of the Design Guidelines chapter requires parking areas to be visually screened and requires service areas to be located to the rear of the building, screened from public view, consolidated in one area, and incorporated into the design of the building, to the extent feasible.
- *Require exterior lighting plans subject to Design Review. Exterior lighting shall be low mounted, downward casting and fully shielded to prevent glare. Lighting shall not wash out structures or any portions of the site. Light fixtures shall not be located at the periphery of the property and*

shall not spill over onto adjacent properties or into the sky. Flood lights are not permitted. Parking lot fixtures should be limited in height (20-feet). All parking lot and/or street light fixtures shall use full cut-off fixtures. Lighting shall shut off automatically after closing and security lighting shall be motion-sensor activated. The Design Guidelines chapter of the Specific Plan establishes exterior lighting requirements in Section VI. Development projects in the Specific Plan area are required to use full cutoff light fixtures for all exterior lighting, with lighting directed downward and not resulting in glare, spill-over lighting onto any adjacent property, or illumination of the night sky. Outdoor lighting must be pedestrian-scale. Accent lighting is required to be subtle, indirect, directed downward, and have the light source concealed from view.

- *Lighting plans should be designed to meet the appropriate Lighting Zone standards from Title 24 effective October 2005 (LZ1 for dark areas, LZ2 for rural, LZ3 for urban).* Development is required to comply with the most recent Title 24 standards. Part 1, Section 10-114, of Title 24 establishes outdoor lighting zones and requirements similar to those found in the 2005 version of Title 24. These requirements apply to all development projects.

The Specific Plan includes design guidelines that will be applied through design review to ensure future development is visually compatible with the Springs area, including design of buildings to reduce bulk, use of color consistent with the community, and use of high quality materials. Measure AES-1, further requires development projects to limit the extent of site disturbance, reduce building envelopes, make building colors and textures consistent with the surrounding environment, require screen vegetation and landscape plans prior to design review, require exterior lighting plans to be subject to design review, reduce the impact from exterior lighting, and provide for energy efficient lighting. While Specific Plan requirements reduce visual impacts and incorporate measures to reduce and minimize impacts as recommended by the Visual Assessment Guidelines, the project has the potential to modify views along the scenic corridor and introduce dominant and co-dominant features into an area with a High visual sensitivity. The impact would be **significant and unavoidable**.

SPECIFIC PLAN POLICIES AND DESIGN GUIDELINES REQUIREMENTS THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Land Use Chapter

Policy SLU-1b: Ensure that new and redeveloped buildings are compatible with the traditional architectural character of the Springs in terms of scale, height, and design. Development projects must also integrate well with surrounding development.

Policy SLU-1c: Ensure that all development projects be designed to contribute to a visually rich, pedestrian-friendly streetscape by providing architectural interest at the street level and pedestrian-oriented amenities, such as awnings, planters, benches, etc.

Policy SLU-1m: Require the adaptive reuse of historic and architecturally significant buildings rather than demolition.

Policy SLU-3e: Require that community open space include shade, seating, greenery, and other amenities that encourage public use and make the Springs an inviting, walkable community.

Policy SLU-3j: Encourage developments to restore adjacent creeks and feature them in the project design.

Policy SLU-3k: Require that plazas, parklets, outdoor seating areas, and other community spaces, are well-designed and constructed of high-quality, durable materials to ensure that these spaces remain attractive and functional for years to come.

Design Guidelines Chapter

Building Character – Design

Objective 1: Ensure that new and renovated buildings are designed to enhance the built environment, complement the surrounding uses, and harmonize well with the few iconic buildings that remain in the Springs.

Objective 2: Create an attractive and inviting pedestrian-oriented environment featuring well-designed buildings, active storefronts, and a pedestrian scale.

- 1. Harmonize with Iconic Architecture. The architectural style of new and renovated buildings must harmonize well with the iconic architecture found in The Springs. Iconic architectural styles of The Springs include Mission Revival, Mid-Century Modern, and Vernacular Commercial.*
- 2. Complement Surrounding Uses. New and renovated buildings must be designed to complement the surrounding environment and fit well with adjoining development.*
- 3. Four-sided Architecture. Buildings must be designed to be aesthetically pleasing from all angles. All sides of new and renovated buildings shall exhibit high quality design, variations in massing and wall planes, and architectural features and detailing. Blank, featureless walls are not permitted.*
- 4. Pedestrian Scale Design. All new development must be designed to achieve a pedestrian scale.*
- 5. Building Base, Body, Roof. The design of new and renovated commercial structures should include a well differentiated base, body, and roof.*
- 6. Variations in wall plane (modulation). The design shall create variations in wall surfaces to create varied massing, a sense of depth, and a pedestrian scale. This can typically be addressed through the use of recesses, or by setting a portion of the wall back, or by projecting a section of the wall forward a distance of at least one foot.*
- 7. Building Width. New development must be designed to contribute to a traditional rhythm along the street frontage of 25- to 30-foot-wide buildings. Wider buildings must be architecturally divided into smaller components to give the appearance of a series of smaller buildings. Vertical variations in the wall plane (projections and recesses), along with architectural elements such as pilasters, can be used to create smaller bays.*
- 8. Three-Story Buildings. The third story of any building that fronts onto a public street must be stepped back at least twelve feet (12') from the lower floor footprint. If there*

are multiple buildings proposed on a site, three-story buildings should be placed farther from the street than single or two-story buildings to provide a gradient in height from the street to the interior of the project site. The third story façade may include railings to allow for the outdoor use of the recessed area. The use of horizontal detailing (e.g. stringcourse, frieze, etc.) to demarcate floor levels on the exterior of the building is encouraged.

Site Design: Colors and Materials

1. *General Concepts*
 - a. *Colors and materials should respect the architectural style of the building.*
 - b. *Colors and materials must harmonize well with the styles of the Springs community and the natural scenic backdrop.*
 - c. *Colors and materials should be used in an authentic manner, reinforcing the architectural style and overall development concept.*
 - d. *A well-coordinated palette of colors must be used to tie building elements together.*
 - e. *The color palette must complement the type of exterior materials used.*
 - f. *The materials and colors used for additions and renovations to existing structures should complement the original building architecture and color scheme.*
 - g. *Franchise uses shall use alternative color schemes when determined by the County that their standard color scheme would not be complementary to the Springs community.*
3. *Materials.*
 - a. *Buildings must use high-quality, durable materials that retain their appearance over time and convey a sense of permanence and richness.*
 - b. *Buildings shall incorporate a combination of materials to provide relief and texture, and break up wall surfaces.*
 - c. *Changes in exterior materials shall not occur at exterior corners, but should be wrapped around the corner to give the material depth and appearance of a structural function.*
 - d. *Use of excessively reflective building materials, including mirrored glass, is not permitted.*

Site Design: Pedestrian Circulation

5. *Connect to Creeks. Where new non-residential development occurs adjacent to creeks, pedestrian access must be provided to allow pedestrian views of the creek and should include a shaded seating area for public viewing and enjoyment.*

3.1 AESTHETICS AND VISUAL RESOURCES

Site Design: Parking

6. *Screening of Parking Areas*
 - a. *A three-foot high fence, wall, or other visual barrier (raised planter, benches, etc.) must be provided in combination with landscaping to screen and separate parked vehicles from the street.*
 - b. *Walls and fences must include architectural detailing designed to complement the development and greater Springs community.*
 - c. *The buffer should be designed to provide for stormwater retention.*

Site Design - Service Areas

1. *General Requirements. Equipment, utilities, trash collection, etc. shall be, to the extent feasible:*
 - a. *Located to the rear of buildings*
 - b. *Screened from public view by wall or enclosure*
 - c. *Consolidated in one area*
 - d. *Incorporated into the design of the building*
2. *Screening*
 - a. *Walls and enclosures must be architecturally compatible in design, color, and material with the primary building and must be carefully integrated into the overall project design.*
 - b. *Walls and enclosures must be constructed of durable materials and designed to adequately conceal its contents.*
 - c. *Walls and enclosures must be integrated into the overall site design to provide for ease of access and to minimize visual impacts.*
 - d. *Landscaping should be provided to enhance the appearance of walls and enclosures.*
 - e. *Trash enclosures must be covered and provided with adequate access for trash collection trucks.*
 - f. *Project plans must include the location, design, and materials of screening elements for all service equipment and utility areas.*
 - g. *Cyclone fencing shall not be used for screening.*
3. *Roof-top equipment. Roof-top equipment shall be concealed from public view. Architectural elements used to screen equipment shall be well integrated with the building's architecture and designed to present a unified appearance.*
4. *Electrical Equipment. Equipment such as transformers, shall be located to minimize its visual impact and be screened from view whenever possible.*

5. *Loading Area. Uses requiring the loading and unloading of merchandise should provide adequate space on site for this purpose. Loading docks should be located at the rear of buildings.*

Site Design: Public Spaces

4. *Incorporate Nature. Development should blend with, preserve, and incorporate existing natural features, including creeks, mature trees, and riparian habitat, into the site design.*

Landscaping and Fences

1. *In General. A generous amount of landscaping should be used to enhance and define public and private spaces.*
 - a. *Landscaping should consist of a combination of trees, shrubs, and ground cover in a variety of sizes, as appropriate.*
 - b. *Native plants adopted to the local climate, soil and hydrology should be used generously to reduce the need for irrigation. Nonnative ornamentals may be used as color accents and in planters and pots.*
 - c. *Landscaping should be extended vertically onto walls through the use of climbing plants, espaliered trees and shrubs, wall and window planters, and roof gardens.*
2. *Riparian Areas. Only native riparian vegetation shall be used in or adjacent to a riparian corridor (see Sonoma County Zoning Code, Article 65).*
3. *Safety. Landscaping should be designed to allow natural surveillance of pedestrian areas.*
4. *Fences. Fences and walls shall not be placed along the Highway 12 non-residential frontage, unless required for the screening of parking areas. Fences, wall, hedges, and similar barriers shall not be more than 3 feet in height and shall be consistent with the requirements of the Sonoma County Zoning Code.*

Exterior Lighting

1. *Compatible Design. Light fixtures shall be architecturally compatible with the associated development.*
2. *Full Cutoff Light Fixtures. All exterior lighting shall be designed and positioned to direct light downward and shall not result in glare or spill-over lighting onto any adjacent property or into the night sky. Only full cutoff light fixtures shall be used.*
3. *Pedestrian-scale light fixtures. All exterior lighting shall be pedestrian-scale. Pedestrian-scale light fixtures are lower in height than standard fixtures and spaced closer together.*
 - a. *Bollard light fixtures should be no more than three feet in height.*
 - b. *Ornamental post light fixtures should not exceed 12 feet in height.*

3.1 AESTHETICS AND VISUAL RESOURCES

4. *Accent Lighting.* Subtle, indirect light must be used when illuminating architectural elements, landscape features, building entrances, fountains, and public art. Accent lighting must be cast downward and the light source must be concealed from view.

Measure AES-1: Development and infrastructure projects shall:

- *Be designed to limit the extent of grading, tree removal, amount of cuts and fills, and areas for building envelopes where necessary to maintain scenic views or avoid sensitive visual resources, to the extent feasible given that the Specific Plan has been developed to ensure community- and pedestrian-oriented development with specific design requirements, including maximum building setbacks and continuous frontage requirements.*
- *Identify any scenic viewsheds and sensitive visual resources. Sites shall maintain scenic viewsheds and sensitive visual resources to the extent feasible, recognizing that the Design Guidelines require pedestrian-oriented measures, including maximum building setbacks and continuous frontage requirements, that may reduce scenic viewsheds or adversely affect sensitive visual resources.*
- *Color and texture of building materials should be consistent with the surrounding environment. Non-reflective surfaces and darker colors should be utilized to avoid glare and contrast.*
- *Require screening vegetation and landscape plans subject to Design Review.*
- *Exterior lighting shall be low mounted, downward casting and fully shielded to prevent glare. Lighting shall not wash out structures or any portions of the site. Light fixtures shall not be located at the periphery of the property and shall not spill over onto adjacent properties or into the sky. Flood lights are not permitted. Lighting shall shut off automatically after closing and security lighting shall be motion-sensor activated.*
- *Lighting plans should be designed to meet the appropriate Lighting Zone standards from Title 24 effective October 2005 (LZ1 for dark areas, LZ2 for rural, LZ3 for urban).*

Impact 3.1-2: Project implementation could result in substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway (No Impact)

As described previously, the officially designated Scenic Highways in Sonoma County are Highway 116, from Highway 1 to the Sebastopol city limit, and Highway 12, from Danielli Avenue east of Santa Rosa to London Way near Agua Caliente. The termination of the designated scenic portion of Highway 12 is located near the northern boundary of the Plan area. Because the Plan area is not located within a state scenic highway, implementation of the Project would not result in substantial damage to scenic resources within a state scenic highway. Therefore, the Project would have **no impact** to scenic resources within a state scenic highway.

Impact 3.1-3: Project implementation could result in the creation of new sources of nighttime lighting and daytime glare which would adversely affect day or nighttime views in the area (Less than Significant)

The primary sources of daytime glare are generally sunlight reflecting from structures and other reflective surfaces and windows. Implementation of the Project would introduce new sources of daytime glare into previously undeveloped areas of the Plan area. Daytime glare impacts would be most severe in areas that

have been previously undisturbed, and in areas that receive a high level of daily viewership, such as the Highway 12 corridor that bisects the Plan area.

The primary sources of nighttime lighting are generally from exterior building lights, street lights, and vehicle headlights. Exterior lighting around commercial and industrial areas may be present throughout the night to facilitate extended employee work hours, ensure worker safety, and to provide security lighting around structures and facilities. Nighttime lighting impacts would be most severe in areas that do not currently experience high levels of nighttime lighting. Increased nighttime lighting can reduce visibility of the night sky, resulting in fewer stars being visible and generally detracting from the quality of life in the area.

The Specific Plan includes Design Guidelines for exterior lighting that would reduce potential adverse impacts associated with light and glare. The exterior lighting guidelines require the use of light shielding fixtures. The building character guidelines prohibit the use of reflective or mirrored glass in order to reduce glare. Future development within the Plan area is also subject to design review and approval.

Implementation of the Design Guidelines in the Specific Plan would ensure that project lighting features do not result in light spillage onto adjacent properties and do not significantly impact views of the night sky. Adherence to the design requirements, and the subsequent design review of future projects within the Plan area, would ensure that excessively reflective building materials are not used, and that the proposed project would not result in significant impacts related to daytime glare. As such, through implementation of the Specific Plan's Design Guidelines, including those identified below, the County can ensure that adverse impacts associated with daytime glare and nighttime lighting are reduced to a **less than significant** level.

SPECIFIC PLAN DESIGN GUIDELINES REQUIREMENTS THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Design Guidelines - Building Character: Color and Materials

3. *Materials*

- d. *Use of excessively reflective building materials, including mirrored glass, is not permitted.*

Design Guidelines – Sidewalk Amenities

9. *Street Lights.*

- a. *Pedestrian-scale street lights should be provided at regular intervals along each roadway.*
- b. *A traditional luminaire with a decorative post must be used.*
- c. *The streetlights must have a full-cutoff optical design.*

Design Guidelines – Exterior Lighting

Objective 1: Provide exterior lighting that is designed to enhance the ambiance of the environment and increase pedestrian comfort and safety.

Objective 2: Preserve the dark sky and avoid the spillover of light and glare onto adjacent properties and residences.

1. *Compatible Design. Light fixtures shall be architecturally compatible with the associated development and complement the traditional theme of the Springs.*
2. *Full Cutoff Light Fixtures. All exterior lighting shall be designed and positioned to direct light downward and shall not result in glare or spill-over lighting onto any adjacent property or into the night sky. Only full cutoff light fixtures shall be used.*
3. *Pedestrian-scale light fixtures. All exterior lighting shall be pedestrian-scale. Pedestrian-scale light fixtures are lower in height than standard fixtures and spaced closer together.*
 - a. *Bollard light fixtures should be no more than three feet in height.*
 - b. *Ornamental post light fixtures should not exceed 12 feet in height.*
4. *Accent Lighting. Subtle, indirect light must be used when illuminating architectural elements, landscape features, building entrances, fountains, and public art. Accent lighting must be cast downward and the light source must be concealed from view.*
5. *Walkways and Outdoor Seating. All walkways and outdoor seating areas should be illuminated with pedestrian-scale light fixtures to provide for the comfort and safety of pedestrians.*
6. *Lighting for Signs. Goose neck lamps are encouraged to illuminate storefront signboards.*

This section describes the regional air quality, current attainment status of the air basin, local sensitive receptors, emission sources, and impacts that are likely to result from project implementation. The analysis contained in this section addresses air quality impacts associated with the future development of the Springs Specific Plan area to urban uses, as described in Chapter 2.0, Project Description.

This section is based in part on the following technical studies: Air Quality and Land Use Handbook: A Community Health Perspective (California Air Resources Board [CARB], 2005), *California Environmental Quality Act Air Quality Guidelines* (Bay Area Air Quality Management District [BAAQMD], 2017), and *Plan Bay Area 2040* (Metropolitan Transportation Commission, 2017).

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: California Department of Transportation (July 2018). This comment is addressed within this section.

The Greenhouse Gases and Energy analysis is located in Chapter 3.7 of this document.

3.2.1 ENVIRONMENTAL SETTING

ACRONYMS

BAAQMD	Bay Area Air Quality Management District
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CO	Carbon monoxide
FCAA	Federal Clean Air Act
MTC	Metropolitan Transportation Commission
NAAQS	National Ambient Air Quality Standards
NO₂	Nitrogen dioxide
O₃	Ozone
Pb	Lead
PM	Particulate matter (including PM ₁₀ – respirable particulate matter, and PM _{2.5} , fine particulate matter)
PPM	Parts per million
SO₂	Sulfur dioxide
TAC	Toxic Air Contaminant
U.S. EPA	United States Environmental Protection Agency
µg/m³	Micrograms per Cubic Meter

SAN FRANCISCO BAY AREA AIR BASIN

The Springs Specific Plan area (Specific Plan area) is defined as the approximately 180-acre area in the southeastern portion of Sonoma County, as shown in Figures 2.0-1 and 2.0-2. The Springs is an unincorporated community located in central Sonoma Valley immediately north of the City of Sonoma. The Springs includes portions of the unincorporated communities of Agua Caliente, Fetters Hot Springs,

and Boyes Hot Springs. The Springs Specific Plan area is bounded by Agua Caliente Road at the north and Verano Avenue at the south and is bisected by the Highway 12 commercial corridor.

The Specific Plan area is located within the San Francisco Bay Area Air Basin (Air Basin), which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

Climate, Topography, and Air Pollution Potential

The Air Basin is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Plan Area itself is located within the central portion of an inland valley (Sonoma Valley), at an average elevation of 82 feet above sea level. Nearby mountains, such as Moon Mountain and Sonoma Mountain, are located northeast and northwest of the Plan Area, respectively.

The climate of the Air Basin, including the Plan Area, is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern portion of the Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below to the surface because of the northwesterly flow produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold-water band resulting in condensation and the presence of fog and stratus clouds along the Northern California coast.

In the winter, the Pacific high-pressure cell weakens and shifts southward resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.

HIGH PRESSURE CELL

During the summer, the large-scale meteorological condition that dominates the West Coast is a semi-permanent high-pressure cell centered over the northeastern portion of the Pacific Ocean. This high-pressure cell keeps storms from affecting the California coast. Hence, the Air Basin experiences little precipitation in the summer months. Winds tend to blow on shore out of the north/northwest.

The steady northwesterly flow induces upwelling of cold water from below. This upwelling produces a band of cold water off the California coast. When air approaches the California coast, already cool and moisture-laden from its long journey over the Pacific, it is further cooled as it crosses this bank of cold water. This cooling often produces condensation resulting in a high incidence of fog and stratus clouds along the Northern California coast in the summer, including within the Plan Area.

Generally, in the winter, the Pacific high-pressure cell weakens and shifts southward, winds tend to flow offshore, upwelling ceases, and storms occur. During the winter rainy periods, inversions (layers of warmer air over colder air; see below) are weak or nonexistent, winds are usually moderate, and air pollution potential is low. The Pacific high-pressure cell does periodically become dominant, bringing strong inversions, light winds, and high pollution potential.

TOPOGRAPHY

The topography of the Air Basin is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays. This complex terrain, especially the higher elevations, distorts the normal wind flow patterns in the Air Basin. The greatest distortion occurs when low-level inversions are present and the air beneath the inversion flows independently of air above the inversion, a condition that is common in the summer time.

The only major break in California's Coast Range occurs in the Air Basin. Here the Coast Range splits into western and eastern ranges. Between the two ranges lies San Francisco Bay. The gap in the western coast range is known as the Golden Gate, and the gap in the eastern coast range is the Carquinez Strait. These gaps allow air to pass into and out of the Air Basin (including the Plan Area) and the Central Valley.

WIND PATTERNS

During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose when it meets the East Bay hills.

Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno gap. For example, the average wind speed at San Francisco International Airport in July is about 17 knots (from 3 p.m. to 4 p.m.), compared with only 7 knots at San Jose and less than 6 knots at the Farallon Islands.

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. If the inversion is low and strong, and hence stable, the flow of the sea breeze will be inhibited and stagnant conditions are likely to result.

In the winter, the Air Basin frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the Air Basin. Although the Plan Area is protected from some of these stormy conditions, being located somewhat inland from the coast, stormy conditions and strong winds are not uncommon within the Plan Area during winter.

TEMPERATURE

Summertime temperatures in the Air Basin are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold ocean bottom water along the coast. On summer afternoons the temperatures at the coast can be 35°F cooler than temperatures 15 to 20 miles inland. At night this contrast usually decreases

3.2 AIR QUALITY

to less than 10°. Since the Plan Area is located somewhat inland from the coast, temperatures within the Plan Area tend to be significantly warmer in the summer compared with those areas directly adjacent to the coast.

In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.

PRECIPITATION

The Air Basin is characterized by moderately wet winters and dry summers. Winter rains account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the Air Basin to another even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys.

During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing are usually high, and thus pollution levels tend to be low. However, frequent dry periods do occur during the winter where mixing and ventilation are low and pollutant levels build up.

AIR POLLUTION POTENTIAL

The potential for high pollutant concentrations developing at a given location depends upon the quantity of pollutants emitted into the atmosphere in the surrounding area or upwind, and the ability of the atmosphere to disperse the contaminated air. The topographic and climatological factors discussed above influence the atmospheric pollution potential of an area. Atmospheric pollution potential, as the term is used here, is independent of the location of emission sources and is instead a function of factors described below.

Wind Circulation

Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak, namely, commute traffic (early morning) and wood burning appliances (nighttime). The problem can be compounded in valleys, when weak flows carry the pollutants upvalley during the day, and cold air drainage flows move the air mass downvalley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthy levels.

An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). The highest air pollutant concentrations in the Air Basin generally occur during inversions.

There are two types of inversions that occur regularly in the Air Basin. One is more common in the summer and fall, while the other is most common during the winter. The frequent occurrence of elevated temperature inversions in summer and fall months acts to cap the mixing depth, limiting the depth of air available for dilution. Elevated inversions are caused by subsiding air from the subtropical high-pressure zone, and from the cool marine air layer that is drawn into the Air Basin by the heated low-pressure region in the Central Valley.

The inversions typical of winter, called radiation inversions, are formed as heat quickly radiates from the earth's surface after sunset, causing the air in contact with it to rapidly cool. Radiation inversions are strongest on clear, low-wind, cold winter nights, allowing the build-up of such pollutants as carbon monoxide and particulate matter. When wind speeds are low, there is little mechanical turbulence to mix the air, resulting in a layer of warm air over a layer of cooler air next to the ground. Mixing depths under these conditions can be as shallow as 50 to 100 meters, particularly in rural areas. Urban areas usually have deeper minimum mixing layers because of heat island effects and increased surface roughness. During radiation inversions, downwind transport is slow, the mixing depths are shallow, and turbulence is minimal, all factors which contribute to ozone formation.

Although each type of inversion is most common during a specific season, either inversion mechanism can occur at any time of the year. Sometimes both occur simultaneously. Moreover, the characteristics of an inversion often change throughout the course of a day. The terrain of the Air Basin also induces significant variations among subregions.

Solar Radiation

The frequency of hot, sunny days during the summer months in the Air Basin is another important factor that affects air pollution potential. It is at the higher temperatures that ozone is formed. In the presence of ultraviolet sunlight and warm temperatures, reactive organic gases and oxides of nitrogen react to form secondary photochemical pollutants, including ozone. Because temperatures in many of the Air Basin inland valleys are so much higher than near the coast, the inland areas are especially prone to photochemical air pollution.

In late fall and winter, solar angles are low, resulting in insufficient ultraviolet light and warming of the atmosphere to drive the photochemical reactions. Ozone concentrations do not reach significant levels in the Air Basin during these seasons.

Sheltered Terrain

The hills and mountains in the Air Basin, including those near the Plan Area, contribute to the high pollution potential of some areas. During the day, or at night during windy conditions, areas in the lee sides of mountains are sheltered from the prevailing winds, thereby reducing turbulence and downwind transport. At night, when wind speeds are low, the upper atmospheric layers are often decoupled from the surface layers during radiation conditions. Where elevated terrain is present, it will tend to block pollutant transport in that direction. Elevated terrain also can create a recirculation pattern by inducing upvalley air flows during the day and reverse downvalley flows during the night, allowing little inflow of fresh air.

The areas having the highest air pollution potential tend to be those that experience the highest temperatures in the summer and the lowest temperatures in the winter. The coastal areas are exposed to the prevailing marine air, creating cooler temperatures in the summer, warmer temperatures in winter, and stratus clouds all year. The inland valleys, such as the area that makes up the Plan Area, are sheltered from the marine air and experience hotter summers and colder winters. Thus, the topography of the inland valleys creates conditions conducive to higher air pollution potential.

Pollution Potential Related to Emissions

Although air pollution potential is strongly influenced by climate and topography, the air pollution that occurs in a location also depends upon the amount of air pollutant emissions in the surrounding area or transported from more distant places. Air pollutant emissions generally are highest in areas that have high population densities, high motor vehicle use, and/or industrialization. These contaminants created by

photochemical processes in the atmosphere, such as ozone, may result in high concentrations many miles downwind from the sources of their precursor chemicals.

Sonoma Valley Climatological Subregion

There are 11 climatological subregions within the Air Basin. The Specific Plan area is located within the Sonoma Valley subregion. It is separated from the Napa Valley subregion to the east and from the Cotati and Petaluma Valley subregions to the west by mountains. The Sonoma Valley is long and narrow, approximately 5 miles wide at its southern end and less than a mile wide at the northern end.

The strongest upvalley winds occur in the afternoon during the summer and the strongest downvalley winds occur during clear, calm winter nights. Prevailing winds follow the axis of the valley, northwest/southeast, while some upslope flow during the day and downslope flow during the night occurs near the base of the mountains. Summer average maximum temperatures are usually in the high-80's, and summer minimums are around 50 degrees. Winter maximums are in the high-50's to the mid-60's, with minimums ranging from the mid-30's to low-40's.

The air pollution potential of the Sonoma Valley could be high if there were significant sources of pollution nearby. Prevailing winds can transport local and nonlocally generated pollutants northward into the narrow valley, which often traps and concentrates the pollutants under stable conditions. The local upslope and downslope flows set up by the surrounding mountains may also recirculate pollutants.

However, local sources of air pollution are minor. With the exception of some processing of agricultural goods, such as wine and cheese manufacturing, there is little industry in this valley. Increases in motor vehicle emissions and woodsmoke emissions from stoves and fireplaces may increase pollution as the valley grows in population and as a tourist attraction.

CRITERIA POLLUTANTS

All criteria pollutants can have human health and environmental effects at certain concentrations. The United States Environmental Protection Agency (EPA) uses six "criteria pollutants" as indicators of air quality, and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). In addition, the California Air Resources Board (CARB) sets California Ambient Air Quality Standards (CAAQS) for the same six pollutants. Each criteria pollutant is described below. California law does not require that the CAAQS be met by a specified date as is the case with NAAQS. Rather, California Law only requires incremental progress be made toward attainment of the CAAQS.

The ambient air quality standards for the six criteria pollutants (as shown in Table 3.2-1) are set to protect public health and the environment within an adequate margin of safety (as provided under Section 109 of the Federal Clean Air Act). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants, and form the scientific basis for new and revised ambient air quality standards. Principal characteristics and possible health and environmental effects from exposure to the six primary criteria pollutants generated by the project are discussed below.

Ozone (O₃) is a photochemical oxidant and the major component of smog. While ozone in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of ozone at ground level are a major health and environmental concern. Ozone is not emitted directly into the air but is formed through complex chemical reactions between precursor

emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) in the presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak ozone levels occur typically during the warmer times of the year. Both VOCs and NO_x are emitted by transportation and industrial sources. VOCs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents.

The reactivity of ozone causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of ozone not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to ozone for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. Environmental Protection Agency 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. Environmental Protection Agency 2019b). The average background level of ozone in the California and Nevada is approximately 48.3 parts per billion, which represents approximately 77 percent of the total ozone in the western region of the U.S. (NASA, 2015).

In addition to human health effect, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O₃ can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

Ozone concentrations tend to be highest in summer and lowest in winter. In 2019, the highest daily average ozone concentration at the highest site in Sonoma County were 44 parts per billion (on February 26, 2019) (California Air Resources Board, 2019a). According to the California Air Resources Board (CARB) Almanac, ozone concentrations in Sonoma County have on average steadily decreased from when monitoring began in Sonoma County (in 1975).

Carbon monoxide (CO) is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects (California Air Resources Board, 2019c). Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects to ambient CO (California Air Resources Board, 2019d).

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Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (U.S. EPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels increases the risk of such incidences.

CO concentrations tend to be highest in fall and winter and lowest in spring and summer. In 2019, the highest daily average CO concentration at the highest site in Sonoma County was 585 parts per billion (on October 25, 2019) (California Air Resources Board, 2019a). Over the long-term, CO concentrations have decreased throughout the United States, including the Sonoma County region. On a wider scale, average concentrations of CO in the western portion of the United States (in California and Nevada, also known as the West region, as defined by the U.S. EPA) have reduced from an average of approximately 333 parts per billion in 2000 to approximately 132 parts per billion in 2017 (U.S. EPA, 2018).

Nitrogen dioxide (NO₂) is a brownish, highly reactive gas that is present in all urban atmospheres. The main effect of increased NO₂ is the increased likelihood of respiratory problems. Under ambient conditions, NO₂ can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O₃) and acid rain, and may affect both terrestrial and aquatic ecosystems. Longer exposures to elevated concentrations of NO₂ may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO₂.

The major mechanism for the formation of NO₂ in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NOx). NOx plays a major role, together with VOCs, in the atmospheric reactions that produce ozone. NOx forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

NO₂ concentrations tend to be highest in winter and lowest in summer. In 2019, the highest daily average NO₂ concentration at the highest site in Sonoma County was 14 parts per billion (on January 4, 2019) (California Air Resources Board, 2019a). Over the long-term, nitrogen dioxide concentrations have generally been decreasing throughout the United States, including the Sonoma County region (U.S. EPA, 2018). Average concentrations of NO₂ in California and Nevada as a whole (i.e. the West region, as defined by the U.S. EPA) have reduced from approximately 69 parts per billion in 2000 to approximately 48 parts per billion in 2017, (U.S. EPA, 2018). The most recent forecast from the California Air Resources Board suggests that NOx concentrations in the Air Basin have decreased and will continue to decrease over time, from an average of approximately 591 tons per day in 2000 and 272 tons per day in 2015 to 176 tons per day in 2035 (California Air Resources Board, 2014b).

Sulfur dioxide (SO₂) is one of the multiple gaseous oxidized sulfur species and is formed during the combustion of fuels containing sulfur, primarily coal and oil. The largest anthropogenic source of SO₂ emissions in the U.S. is fossil fuel combustion at electric utilities and other industrial facilities. SO₂ is also emitted from certain manufacturing processes and mobile sources, including locomotives, large ships, and construction equipment.

SO₂ affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO₂ is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. Ambient SO₂ results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Short-term exposure to ambient SO₂ has been associated with various adverse health effects. Multiple human clinical studies, epidemiological studies, and toxicological studies support a causal relationship between short-term exposure to ambient SO₂ and respiratory morbidity. The observed health effects include decreased lung function, respiratory symptoms, and increased emergency department visits and hospitalizations for all respiratory causes. These studies further suggest that people with asthma are potentially susceptible or vulnerable to these health effects. In addition, SO₂ reacts with other air pollutants to form sulfate particles, which are constituents of fine particulate matter (PM_{2.5}). Inhalation exposure to PM_{2.5} has been associated with various cardiovascular and respiratory health effects (U.S. EPA, 2017). Increased ambient SO₂ levels would lead to increased risk of such effects.

SO₂ emissions that lead to high concentrations of SO₂ in the air generally also lead to the formation of other sulfur oxides (SO_x). SO₂ can react with other compounds in the atmosphere to form small particles. These particles contribute to particulate matter (PM) pollution. Small particles may penetrate deeply into the lungs and in sufficient quantity can contribute to health problems.

The CARB maintains no monitoring sites for SO₂ in Sonoma County. However, in 2019, the highest daily average SO₂ concentrations at the highest site in the Air Basin was 24 parts per billion (on January 30, 2019) (California Air Resources Board, 2019a). Over the long-term, nitrogen dioxide concentrations have decreased throughout the United States, including within Sonoma County (U.S. EPA, 2018). Average concentrations of SO₂ have reduced from approximately 17.6 parts per billion in 2000 to approximately 6.2 parts per billion in 2017 at monitoring sites in California and Nevada (i.e. the West region, as defined by the U.S. EPA) (U.S. EPA, 2018).

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO₂ and VOCs are also considered particulate matter. PM is generally categorized based on the diameter of the particulate matter: PM₁₀ is particulate matter 10 micrometers or less in diameter (known as respirable particulate matter), and PM_{2.5} is particulate matter 2.5 micrometers or less in diameter (known as fine particulate matter).

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO₂) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution have even health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed.

Respirable particulate matter (PM₁₀) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by

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themselves, or in combination with other gases. Particulate matter is caused primarily by dust from grading and excavation activities, from agricultural activities (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM₁₀ causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

Fine particulate matter (PM_{2.5}) consists of fine particles, which are less than 2.5 microns in size. Similar to PM₁₀, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM₁₀, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the U.S. EPA created new Federal air quality standards for PM_{2.5}.

The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children. Particulate matter also impacts soils and damages materials, and is a major cause of visibility impairment.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in PM_{2.5} results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017b). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM₁₀ and PM_{2.5} can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. Environmental Protection Agency 2019c).

PM concentrations tend to be highest in winter and spring and lowest in summer. In 2019, the highest daily average PM₁₀ concentrations at the highest site in Sonoma County was 28.0 ug/m³ (on October 28.0), respectively (California Air Resources Board, 2019a). The most recent forecast from the California Air Resources Board estimates that that PM_{2.5} concentrations in the San Francisco Bay Area Air Basin have decreased from historical levels, reducing from a maximum annual average of 14.2 tons/day in 2001 to 10.1 tons per day in 2011 (California Air Resources Board, 2014).

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Once taken into the body, lead distributes throughout the body in the blood and is accumulated in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

Lead is persistent in the environment and can be added to soils and sediments through deposition from sources of lead air pollution. Other sources of lead to ecosystems include direct discharge of waste streams to water bodies and mining. Elevated lead in the environment can result in decreased growth and reproductive rates in plants and animals, and neurological effects in vertebrates.

Lead exposure is typically associated with industrial sources; major sources of lead in the air are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations of lead are usually found near lead smelters. As a result of the U.S. EPA’s regulatory efforts, including the removal of lead from motor vehicle gasoline, levels of lead in the air decreased by 98 percent between 1980 and 2014 (U.S. EPA, 2019d). Based on this reduction of lead in the air over this period, and since most new developments do not generate an increase in lead exposure, the health impacts of ambient lead levels are not typically monitored by the California Air Resources Board.

AMBIENT AIR QUALITY STANDARDS

Both the U.S. EPA and the CARB have established ambient air quality standards for common pollutants (i.e. the “criteria pollutants”, which are the first set of pollutants recognized by the U.S. EPA as needing standards on a national level). These ambient air quality standards represent safe levels of contaminants that avoid specific adverse health effects associated with each pollutant. Each pollutant is measured over several standardized timeframes (called the averaging times), which provide a standard to compare monitored levels of pollutants to the federal and state standards. Each criteria pollutant has more than one average time – for example, the state ambient air quality standard for ozone is monitored over both a 1-hour and 8-hour periods.

The federal and California state ambient air quality standards are summarized in Table 3.2-1 for important pollutants. The federal and state ambient standards were developed independently, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone, PM_{2.5}, and PM₁₀.

TABLE 3.2-1: FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

POLLUTANT	AVERAGING TIME	FEDERAL PRIMARY STANDARD	STATE STANDARD
Ozone	1-Hour	--	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.03 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	0.03 ppm	--
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM ₁₀	Annual	--	20 ug/m ³
	24-Hour	150 ug/m ³	50 ug/m ³
PM _{2.5}	Annual	12 ug/m ³	12 ug/m ³
	24-Hour	35 ug/m ³	--
Lead	30-Day Avg.	--	1.5 ug/m ³
	3-Month Avg.	0.15 ug/m ³	--

NOTES: PPM = PARTS PER MILLION, µG/M³ = MICROGRAMS PER CUBIC METER

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2019E.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

3.2 AIR QUALITY

Existing air quality concerns within the project area are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to TACs, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles which account for 70 percent of the ozone in the region. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

Attainment Status

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An “attainment” designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A “nonattainment” designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An “unclassified” designation signifies that the data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, CO, and NO₂ as “does not meet the primary standards,” “cannot be classified,” or “better than national standards.” For SO₂, areas are designated as “does not meet the primary standards,” “does not meet the secondary standards,” “cannot be classified,” or “better than national standards.” However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

Sonoma County has a state designation of Nonattainment for ozone, PM₁₀, and PM_{2.5} and is either Unclassified or Attainment for all other criteria pollutants. The County has a national designation of Nonattainment for ozone and PM_{2.5}. The County is designated either attainment or Unclassified for the remaining national standards. Table 3.2-2 presents the state and national attainment statuses for Sonoma County.

TABLE 3.2-2: STATE AND NATIONAL ATTAINMENT STATUS

<i>POLLUTANT</i>	<i>STATE DESIGNATION</i>	<i>NATIONAL DESIGNATION</i>
Ozone	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Unclassified
PM _{2.5}	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment
Sulfates	Attainment	--
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	--
Visibility Reducing Particles	Unclassified	--

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2019F.

Monitoring Data

The BAAQMD operates a regional air quality monitoring network that regularly measures the concentrations of the major air pollutants. Air pollutant monitoring data is available at <http://www.arb.ca.gov/adam/welcome.html>. Air quality conditions in the Air Basin have improved significantly since the BAAQMD was created in 1955. Ambient concentrations and the number of days on which the region exceeds standards have declined dramatically. Neither Federal nor State ambient air quality standards have been violated in recent decades for nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and vinyl chloride.

Table 3.2-3 provides the air quality monitoring data for Sonoma County. It is important to note that the Federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for Federal standards. Data obtained from the monitoring sites for Sonoma County between 2018 and 2020 is shown in Table 3.2-3.

TABLE 3.2-3: AMBIENT AIR QUALITY MONITORING DATA (SONOMA COUNTY)

POLLUTANT	CAL.	FED.	YEAR	DAYS EXCEEDED STATE/FED STANDARD
	PRIMARY STANDARD			
Ozone (O ₃) (1-hour)	0.09 ppm for 1 hour	NA	2020	0 / 0
			2019	0 / 0
			2018	0 / 0
Ozone (O ₃) (8-hour)	0.07 ppm for 8 hour	0.07 ppm for 8 hour	2020	0 / 0
			2019	0 / 0
			2018	0 / 0
Particulate Matter (PM ₁₀) ¹	50 ug/m ³ for 24 hours	150 ug/m ³ for 24 hours	2020	* / 0
			2019	* / 0
			2018	13.5 / 2.1
Fine Particulate Matter (PM _{2.5})	No 24 hour State Standard	35 ug/ ³ for 24 hours	2020	* / 7.2
			2019	* / 0
			2018	* / 13.1

NOTES:

PPM = PARTS PER MILLION.

UG/M³ = MICRONS PER CUBIC METER.

NA= NOT APPLICABLE

* = THERE WAS INSUFFICIENT (OR NO) DATA AVAILABLE TO DETERMINE THE VALUE

¹DATA FOR PM₁₀ WAS NOT AVAILABLE FOR SONOMA COUNTY AS A WHOLE; THEREFORE, PM₁₀ DATA SPECIFICALLY FROM THE HEALDSBURG-133 MATHESON STREET MONITORING STATION (LOCATED IN SONOMA COUNTY) WAS UTILIZED AS A PROXY.

SOURCE: CALIFORNIA AIR RESOURCES BOARD (ADAM) AIR POLLUTION SUMMARIES, 2018-2020.

ODORS

Typically, odors are regarded as a nuisance rather than a health hazard. However, manifestations of a person’s reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

3.2 AIR QUALITY

It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word “strong” to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

SENSITIVE RECEPTORS

Sensitive receptors are areas where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.

NATURALLY OCCURRING ASBESTOS

The term asbestos is used to describe a variety of fibrous minerals that, when airborne, can result in serious human health effects. Naturally occurring asbestos is commonly associated with ultramafic rocks and serpentinite. Ultramafic rocks, such as dunite, periodotite, and pyroxenite are igneous rocks comprised largely of iron-magnesium minerals. As they are intrusive in nature, these rocks often undergo metamorphosis, prior to their being exposed on the Earth’s surface. The metamorphic rock serpentinite is a common product of the alteration process. The BAAQMD regulates naturally occurring asbestos under its Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. The BAAQMD has adopted Regulation 11, Rules 2 and 14, which address asbestos demolition, renovation, manufacturing, and standards for asbestos containing serpentine. Although naturally occurring asbestos is mapped in Sonoma County, there is no known naturally occurring asbestos mapped within the Specific Plan area.

3.2.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions

standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions. Analysis of the criteria pollutants established by the NAAQS is required under the California Environmental Quality Act (CEQA).

The U.S. EPA is responsible for administering the FCAA. The FCAA requires the U.S. EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health (with an adequate margin of safety, including for sensitive populations such as children, the elderly, and individuals suffering from respiratory diseases), and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

NAAQS standards define clean air and represent the maximum amount of pollution that can be present in outdoor air without any harmful effects on people and the environment. Existing violations of the ozone and PM_{2.5} ambient air quality standards indicate that certain individuals exposed to these pollutants may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

NAAQS standards have been designed to accurately reflect the latest scientific knowledge and are reviewed every five years by a Clean Air Scientific Advisory Committee (CASAC), consisting of seven members appointed by the U.S. EPA administrator. Reviewing NAAQS is a lengthy undertaking and includes the following major phases: Planning, Integrated Science Assessment (ISA), Risk/Exposure Assessment (REA), Policy Assessment (PA), and Rulemaking. The process starts with a comprehensive review of the relevant scientific literature. The literature is summarized and conclusions are presented in the ISA. Based on the ISA, U.S. EPA staff perform a risk and exposure assessment, which is summarized in the REA document. The third document, the PA, integrates the findings and conclusions of the ISA and REA into a policy context, and provides lines of reasoning that could be used to support retention or revision of the existing NAAQS, as well as several alternative standards that could be supported by the review findings. Each of these three documents is released for public comment and public peer review by the CASAC. Members of CASAC are appointed by the U.S. EPA Administrator for their expertise in one or more of the subject areas covered in the ISA. The committee's role is to peer review the NAAQS documents, ensure that they reflect the thinking of the scientific community, and advise the Administrator on the technical and scientific aspects of standard setting. Each document goes through two to three drafts before CASAC deems it to be final.

Although there is some variability among the health effects of the NAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. NAAQS standards were last revised for each of the six criteria pollutant as listed below, with detail on what aspects of NAAQS changed during the most recent update:

- Ozone: On October 1, 2015, the U.S. EPA lowered the national eight-hour standard from 0.075 ppm to 0.070 ppm, providing for a more stringent standards consistent with the current California state standard.
- CO: In 2011, the primary standards were retained from the original 1971 level, without revision. The secondary standards were revoked in 1985.

3.2 AIR QUALITY

- NO₂: The national NO₂ standard was most recently revised in 2010 following an exhaustive review of new literature pointed to evidence for adverse effects in asthmatics at lower NO₂ concentrations than the existing national standard.
- SO₂: On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb.
- PM: the national annual average PM_{2.5} standard was most recently revised in 2012 following an exhaustive review of new literature pointed to evidence for increased risk of premature mortality at lower PM_{2.5} concentrations than the existing standard.
- Lead: The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. In 2016, the primary and secondary standards were retained.

The law recognizes the importance for each state to locally carry out the requirements of the FCAA, as special consideration of local industries, geography, housing patterns, etc. are needed to have full comprehension of the local pollution control problems. As a result, the U.S. EPA requires each state to develop a State Implementation Plan (SIP) that explains how each state will implement the FCAA within their jurisdiction. A SIP is a collection of rules and regulations that a particular state will implement to control air quality within their jurisdiction. The CARB is the state agency that is responsible for preparing and implementing the California SIP.

STATE

CARB Mobile-Source Regulation

The State of California is responsible for controlling emissions from the operation of motor vehicles in the state. Rather than mandating the use of specific technology or the reliance on a specific fuel, the CARB's motor vehicle standards specify the allowable grams of pollution per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved. Towards this end, the CARB has adopted regulations which required auto manufacturers to phase in less polluting vehicles.

California Clean Air Act

The CCAA was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. The CARB is the agency responsible for administering the CCAA. The CARB established ambient air quality standards pursuant to the California Health and Safety Code Section 39606(b), which are similar to the federal standards.

California Air Quality Standards

Although NAAQS are determined by the U.S. EPA, states have the ability to set standards that are more stringent than the federal standards. As such, California established more stringent ambient air quality standards. Federal and state ambient air quality standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates (PM₁₀) and lead. In addition, California has created standards for pollutants that are not covered by federal standards. Although there is some

variability among the health effects of the CAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. The existing state and federal primary standards for major pollutants are shown in Table 3.2-1.

Air quality standard setting in California commences with a critical review of all relevant peer reviewed scientific literature. The Office of Environmental Health Hazard Assessment (OEHHA) uses the review of health literature to develop a recommendation for the standard. The recommendation can be for no change, or can recommend a new standard. The review, including the OEHHA recommendation, is summarized in a document called the draft Initial Statement of Reasons (ISOR), which is released for comment by the public, and also for public peer review by the Air Quality Advisory Committee (AQAC). AQAC members are appointed by the President of the University of California for their expertise in the range of subjects covered in the ISOR, including health, exposure, air quality monitoring, atmospheric chemistry and physics, and effects on plants, trees, materials, and ecosystems. The Committee provides written comments on the draft ISOR. The CARB staff next revises the ISOR based on comments from AQAC and the public. The revised ISOR is then released for a 45-day public comment period prior to consideration by the Board at a regularly scheduled Board hearing.

In June of 2002, the CARB adopted revisions to the PM₁₀ standard and established a new PM_{2.5} annual standard. The new standards became effective in June 2003. Subsequently, staff reviewed the published scientific literature on ground-level ozone and nitrogen dioxide and the CARB adopted revisions to the standards for these two pollutants. Revised standards for ozone and nitrogen dioxide went into effect on May 17, 2006 and March 20, 2008, respectively. These revisions reflect the most recent changes to the CAAQS.

Tanner Air Toxics Act

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for the CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before the CARB can designate a substance as a TAC. To date, the CARB has identified more than 21 TACs and has adopted the U.S. EPA's list of hazardous air pollutants as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, the CARB then adopts an Asbestos Airborne Toxic Control Measure for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology to minimize emissions.

The AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. The CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators).

LOCAL

Bay Area Air Quality Management District

The BAAQMD attains and maintains air quality conditions in the Air Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of the BAAQMD includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. The BAAQMD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the FCAA, FCAA Amendments, and the CCAA.

TOXIC AIR CONTAMINANTS REGULATION

The BAAQMD has regulated TACs since the 1980s. At the local level, air pollution control or management districts may adopt and enforce CARB's control measures. Under BAAQMD Regulation 2-1 (General Permit Requirements), Regulation 2-2 (New Source Review), and Regulation 2-5 (New Source Review), all nonexempt sources that possess the potential to emit TACs are required to obtain permits from BAAQMD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new source review standards and air toxics control measures. The BAAQMD limits emissions and public exposure to TACs through a number of programs. The BAAQMD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. In addition, the BAAQMD has adopted Regulation 11, Rules 2 and 14, which address asbestos demolition renovation, manufacturing, and standards for asbestos containing serpentine.

BAAQMD AIR QUALITY PLANS

As stated above, the BAAQMD prepares plans to attain ambient air quality standards in the Air Basin. The BAAQMD prepares ozone attainment plans (OAP) for the national ozone standard and clean air plans (CAP) for the California standard both in coordination with the MTC and the Association of Bay Area Governments (ABAG).

With respect to applicable air quality plans, the BAAQMD prepared the 2017 Clean Air Plan (also known as the "Spare the Air: Cool the Climate" plan) to address nonattainment of the national 1-hour ozone standard in the Air Basin. The purpose of the 2017 Clean Air Plan is to protect public health and stabilize the climate. The 2017 Clean Air Plan includes a multi-pollutant strategy to reduce emissions and ambient concentrations of ozone, fine particulate matter, toxic air contaminants, as well as greenhouse gases.

BAAQMD CEQA GUIDELINES

The most recent version of the BAAQMD CEQA Guidelines were published May 2017 and are based on BAAQMD's CEQA Guidelines that were updated in 2012. The 2017 BAAQMD CEQA Guidelines include revisions made to address the California Supreme Court's ruling in *California Building Industry Association v. Bay Area Air Quality Management District*. The BAAQMD is currently working to update its Guidelines; a Draft Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans was released in February 2022 for public comment. The BAAQMD CEQA Guidelines is an informational document to provide lead government agencies, consultants, and project proponents

with uniform guidance for assessing air quality impacts and preparing the air quality sections of environmental documents for projects subject to CEQA.

Metropolitan Transportation Commission/Association of Bay Area Governments

Plan Bay Area 2040 is the long-range Regional Transportation Plan (RTP) prepared by the Metropolitan Transportation Commission (MTC) for the nine-county San Francisco Bay Area. An RTP is a long-term blueprint for a region's transportation system, conducted every five years. The RTP identifies and analyzes the transportation needs of the metropolitan region and creates a framework for transportation project priorities. *Plan Bay Area 2040* discusses how the Bay Area will grow through 2040 and identifies transportation and land use strategies. The document provides the Plan's goals, a proposed growth pattern and supporting transportation investment strategy, and key actions needed to address on-going and long-term regional challenges.

Sonoma County General Plan

The Sonoma County General Plan identifies the following goals, objectives, and policies related to air quality:

OPEN SPACE AND RESOURCE CONSERVATION ELEMENT

GOAL OSRC-16: Preserve and maintain good air quality and provide for an air quality standard that will protect human health and preclude crop, plant and property damage in accordance with the requirements of the Federal and State Clean Air Acts.

Objective OSRC-16.1: Minimize air pollution and greenhouse gas emissions.

Objective OSRC-16.2: Encourage reduced motor vehicle use as a means of reducing resultant air pollution.

Policy OSRC-16a: Require that development projects be designed to minimize air emissions. Reduce direct emissions by utilizing construction techniques that decrease the need for space heating and cooling.

Policy OSRC-16b: Encourage public transit, ridesharing and van pooling, shortened and combined motor vehicle trips to work and services, use of bicycles, and walking. Minimize single passenger motor vehicle use.

Policy OSRC-16c: Refer projects to the local air quality districts for their review.

Policy OSRC-16d: Review proposed changes in land use designations for potential deterioration of air quality and deny them unless they are consistent with the air quality levels projected in the General Plan EIR.

Policy OSRC-16e: Cooperate with the local air quality district to monitor air pollution and enforce mitigations in areas affected by emissions from fireplaces and woodburning stoves.

Policy OSRC-16f: Encourage the adoption of standards, the development of new technology, and retrofitting to reduce air pollution resulting from geothermal development.

3.2 AIR QUALITY

Policy OSRC-16g: Residential units shall be required to only install fireplaces, woodstoves or any other residential wood-burning devices that meet the gram-per-hour EPA or Oregon DEQ wood heater emissions limits (exempt devices are not allowed).

Policy OSRC-16h: Require that development within the Bay Area Air Quality Management District that generates high numbers of vehicle trips, such as shopping centers and business parks, incorporate air quality mitigation measures in their design.

Policy OSRC-16i: Ensure that any proposed new sources of toxic air contaminants or odors provide adequate buffers to protect sensitive receptors and comply with applicable health standards. Promote land use compatibility for new development by using buffering techniques such as landscaping, setbacks, and screening in areas where such land uses abut one another.

Policy OSRC-16j: Require consideration of odor impacts when evaluating discretionary land uses and development projects near wastewater treatment plant or similar uses.

Policy OSRC-16k: Require that discretionary projects involving sensitive receptors (facilities or land uses that include members of the population sensitive to the effects of air pollutants such as children, the elderly, and people with illnesses) proposed near the Highway 101 corridor include an analysis of mobile source toxic air contaminant health risks. Project review should, if necessary, identify design mitigation measures to reduce health risks to acceptable levels.

Policy OSRC-16l: Work with the applicable Air Quality districts to adopt a diesel particulate ordinance. The ordinance should prioritize on site over off site mitigation of diesel particulate emissions in order to protect neighboring sensitive receptors from these emissions.

CIRCULATION AND TRANSIT ELEMENT

GOAL CT-2: Increase the opportunities, where appropriate, for transit systems, pedestrians, bicycling and other alternative modes to reduce the demand for automobile travel.

Objective CT-2.6: In areas designated for through traffic, use existing circulation and transit facilities more efficiently, especially highways, to reduce the amount of investment required in new or expanded facilities, reduce greenhouse gas emissions, and increase the energy efficiency of the transportation system.

Objective CT-2.7: Use Traffic Demand Management measures to reduce peak period congestion.

Objective CT-2.8: Provide bicycle and pedestrian links from bus stops and other transit facilities to residential areas, employment centers, schools, institutions, parks, and the greater roadway system in general, especially focusing on short trips that could result in a mode shift away from automobile travel.

Objective CT-2.9: Develop alternative mode trip databases, to improve quantitative evaluation of public transit and improve integration with other alternative modes.

Objective CT-2.10: Utilize shoulders, paths, and bike lanes for other alternative transportation modes along existing streets, roads, and bicycle routes where consistent with public safety and the Vehicle Code.

Policy CT-2a: Provide convenient, accessible transit facilities for youth, seniors, and persons with disabilities, and paratransit services as required by the American Disabilities Act (ADA). Promote efficiency and cost effectiveness in paratransit service such as use of joint maintenance and other facilities.

Policy CT-2b: Establish transfer facilities and supportive park-and-ride lots that provide convenient connection to the transit routes on Figure CT-2. Locate transit centers to avoid rerouting by buses, provide adequate off street parking, and provide convenient pedestrian access from activity centers.

Policy CT-2c: On transit routes, design the physical layout and geometrics of arterial and collector highways to be compatible with bus operations.

Policy CT-2d: Require major traffic generating projects on existing or planned transit routes to provide fixed transit facilities, such as bus turnouts, passenger shelters, bike lockers, and seating needed to serve anticipated or potential transit demand from the project.

Policy CT-2d: Require major employment centers and employers to provide facilities and Traffic Demand Management (TDM) programs that support alternative transportation modes, such as bike and shower facilities, telecommuting, flexible schedules, etc. These programs may apply to existing employers as well as to new development. Establish measurable goals for these programs, and utilize a transportation coordinator that will provide information, select TDM measures, and monitor and report on program effectiveness. If voluntary TDM measures do not effectively reduce peak congestion, impose mandatory TDM measures by ordinance.

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Specific Plan will have a significant impact on the environment associated with air quality if it will:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The potential impact of the first two bulleted items (above) is analyzed in Impact 3.2-1; impacts from the third bulleted item are analyzed in Impact 3.2-2; impacts from the fourth bullet item (odors and other emissions) are analyzed under Impact 3.2-3. Impacts related to greenhouse gases, climate change, and energy are addressed in Section 3.6. The approach to analyzing impacts related to project-generated pollutants of human health concern, which overlap with several of the above thresholds of significance, is described in detail below (and analyzed in detail under Impact 3.2-1).

3.2 AIR QUALITY

THRESHOLDS

The May 2017 BAAQMD CEQA Guidelines¹ provides the following thresholds relevant to criteria air pollutants for Plan-level analyses:

1. Consistency with Current Air Quality Plan control measures, and
2. Projected VMT or vehicle trip increase is less than or equal to projected population increase.

Under the above threshold of significance in the BAAQMD CEQA Guidelines, if a Specific Plan is consistent with the current Air Quality Plan control measures, and projected VMT or vehicle trips are less than or equal to projected population increase, the project would be considered to have a less than significant impact with regard to criteria air pollutants and their precursors.

Sonoma County has considered the air quality thresholds updated by BAAQMD in its latest update to the CEQA Air Quality Guidelines (May 2017) and regards these thresholds to be based on substantial evidence and the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACS and PM_{2.5}.

Separately, the BAAQMD identifies in their BAAQMD CEQA Guidelines *Risk and Hazard Screening Analysis Process Flow Chart*² that roadways with at least 10,000 average daily traffic (ADT) should contact the BAAQMD for guidance or conduct a site-specific HRA, as no screening tool is currently available. The BAAQMD also maintains a *Planning Healthy Places* guidance document, which is designed to provide important air quality and public health information and tools for healthy infill development. The *Planning Healthy Places* guidance document include interactive maps that identifies areas within the BAAQMD jurisdiction that should conduct further study, as well as areas where “best practices to reduce exposure” (as identified within the *Planning Healthy Places* guidance document) are recommended by the BAAQMD to implemented.

Highway 12 in Sonoma County, which includes the segment of Highway 12 within the Plan Area, is identified in the *Planning Healthy Places* document as having relatively elevated levels of air pollution,³ due to its traffic volume exceeding 10,000 vehicles per day. For such areas, the Air District recommends implementing all of their “best practices to reduce exposure” that are feasible and applicable to a project or plan in these locations.

Additionally, the BAAQMD has also identified a number of areas within the Bay Area where additional analysis (i.e. further study) is recommended to assess the local concentrations of TACs and fine PM, and therefore the health risks from air pollution. These areas are provided by the Air District’s mapping tool.⁴ The Air District recommends using caution when considering sensitive land uses in these areas. There are two such areas identified by the Air District within the Plan Area (i.e. two gasoline stations). Specifically, the gasoline stations are a Valero Station, located at 18605 Sonoma Highway, and a Sonoma Beacon station, located at 18618 Sonoma Highway.

¹ Bay Area Air Quality Management District, CEQA Guidelines, May 2017.

² Health Risk Screening Analysis Flow Chart, Revised 9/28/21: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/tools/2020_02_20-screening-approach-flow-chart-pdf.pdf?la=en

³ See Figure 2, on page 10 of the *Planning Healthy Places* document.

⁴ <https://www.baaqmd.gov/plans-and-climate/planning-healthy-places>

Impacts related to Project-generated Pollutants of Human Health Concern

The California Supreme Court provided guidance on analysis of air quality impacts on human health in *Sierra Club v. County of Fresno* (2108) 6 Cal. 5th 502. The case reviewed the long-term, regional air quality analysis contained in the EIR for the proposed Friant Ranch development. The Friant Ranch project is a 942-acre master-plan development in unincorporated Fresno County within the San Joaquin Valley Air Basin, an air basin currently in nonattainment for the ozone and PM_{2.5} NAAQS and CAAQS. The Court found that the air quality analysis was inadequate because it failed to provide enough detail “for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time.” The Court’s decision clarifies that the agencies authoring environmental documents must make reasonable efforts to connect a project’s air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.

All criteria pollutants that would be generated by the project are associated with some form of health risk (e.g., asthma). Criteria pollutants can be classified as either regional or localized pollutants. Regional pollutants can be transported over long distances and affect ambient air quality far from the emissions source. Localized pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, NO₂, SO₂, and lead (Pb) are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition. As discussed above, the primary criteria pollutants of concern generated by the project are ozone precursors (ROG and NO_x) and PM (including Diesel PM). However, the BAAQMD does not currently have a methodology that would correlate the expected air quality emissions of projects to the likely specific health consequences of the increased emissions. Moreover, there are also no tools currently available to correlate the expected air quality emissions of projects to the likely specific health consequences of the increased emissions.

REGIONAL PROJECT-GENERATED CRITERIA POLLUTANTS (OZONE PRECURSORS AND REGIONAL PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and NO₂) contribute to the formation of ground-borne ozone on a regional scale, where emissions of ROG and NO₂ generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutants may be transported over long-distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project. Appendix C.3 provides a table that describes why there are no available technical models and tools for correlating project-generated emissions to health end points for project-level CEQA analysis.

As discussed above, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment or non-attainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by the project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which at certain

concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with ozone and particulate pollution, the effects are a result of cumulative and regional emissions. As previously stated, there is no currently available technical modeling available to measure these specific health effects. As such, a project's incremental contribution cannot be traced to specific health outcomes on a regional scale. Therefore, a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis.

IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: Implementation of the proposed Specific Plan would not conflict with or obstruct implementation of the applicable air quality plan, or result in a cumulatively considerable net increase of criteria pollutants (Less than Significant)

The following discussion is provided to analyze whether the proposed project would conflict with or obstruct implementation of any applicable air quality plans, or result in a cumulatively considerable net increase in criteria pollutants for which the project region is in non-attainment under an applicable federal or state ambient air quality standard. Additionally, a qualitative analysis of the proposed project's impact related to project-generated pollutants of human health concern is also provided herein.

CEQA requires lead agencies to determine whether a project is consistent with all applicable air quality plans. The BAAQMD's most current plan is the 2017 Clean Air Plan. The BAAQMD CEQA Guidelines recommend that lead agencies consider the following questions relative to this consistency determination:

1. Does the project support the primary goals of the of the 2017 Clean Air Plan?
2. Does the project include applicable control measures from the 2017 Clean Air Plan?
3. Does the project disrupt or hinder implementation of the 2017 Clean Air Plan control measures?

The primary goals of the 2017 Clean Air Plan are to protect public health and the climate. The 2017 Clean Air Plan contains 85 individual control measures that describe specific actions to reduce emissions of air and climate pollutants from the full range of emission sources. The control measures are categorized based upon the economic sector framework used by the Air Resources Board for the AB 32 Scoping Plan Update. These sectors include:

- Stationary (Industrial) Sources
- Transportation
- Energy
- Buildings
- Agriculture
- Natural and Working Lands
- Waste Management
- Water
- Super-GHG Pollutants

CONSISTENCY WITH THE 2017 CLEAN AIR PLAN

The 2017 Clean Air Plan defines an integrated, multi-pollutant control strategy to reduce emissions of particulate matter, TACs, ozone precursors, and greenhouse gases. One of the key elements in the control strategy is to reduce motor vehicle travel by promoting transit, bicycling, walking, and ridesharing, and to direct new development to areas that are well-served by transit, and conducive to bicycling and walking. This is consistent with the Specific Plan, which aims to improve the pedestrian, bicycle, and transit network within the Springs area. Goal SC-1 of the proposed Specific Plan ensures that the street network would be designed to provide equally for the needs of pedestrians, bicyclists, motorists, and transit riders. The Specific Plan also contains a large number of policies to ensure that the proposed Specific Plan would make it easier to get around the Specific Plan area by foot, bicycle, and transit, which are presented at the end of this discussion, below (i.e. Policy SC-1a; Policy SC-1b; Policy SC-1c; Policy SC-1e; Policy SC-2a; Policy SC-2b; Policy SC-2c; Policy SC-2d; Policy SC-2e; Policy SC-2f; Policy SC-2h; Policy SC-2i; Policy SC-2j; Policy SC-2k; Policy SC-2l; Policy SC-2o; Policy SC-2p; Policy SC-3a; Policy SC-3b; Policy SC-3c; Policy SC-3e; Policy SC-3f; Policy SC-3g; Policy SC-3h; Policy SC-3i; Policy SC-3j). These policies would do so through circulation improvements, improvement of pedestrian and bicycle linkages and facilities, provision of new pedestrian and bicycle amenities, and the development of public spaces within the Specific Plan area. In addition, the Specific Plan area would create new infill opportunities and provide high-density and mixed-use housing, which would encourage travel by foot, bicycle, and transit. Furthermore, Policy SC-4L of the proposed Specific Plan calls for the installation of bicycle parking near the front entrance of commercial buildings, and Policy SC-4m calls for bicycle parking in all parking lots and structures.

Additionally, Goal SC-3 of the proposed Specific Plan is designed to increase transit ridership in the Springs Area. Several policies support this goal by encouraging coordination with Sonoma County Transit to improve local bus service and to promote a local shuttle service (Route 32), support for the creation of a public awareness campaign to promote transit use, improvement to local public transit infrastructure (such as bus shelters and benches), and by encouraging private shuttles. Furthermore, Policy SC-4i encourages the construction of new public parking and programs that reduce parking demand, consistent with the 2017 Clean Air Plan.

Another key element of the 2017 Clean Air Plan is to accelerate the widespread adoption of electric vehicles. Policy SC-4j of the proposed Specific Plan encourages the installation of electric charging stations on both public property and in private development. The proposed Specific Plan would be consistent with all of the key elements of the 2017 Clean Air Plan relating to transportation.

The proposed Specific Plan would develop new residential and non-residential buildings that would comply with or exceed the latest version of the California Title 24 building energy efficiency standards, and would thereby be consistent with the key elements of the 2017 Clean Air Plan relating to buildings and energy. The proposed Specific Plan would also comply with the latest state legislation relating to water and waste management, which ensures that the proposed Specific Plan would not conflict with the key elements of the 2017 Clean Air Plan relating to the water and waste management sectors. Separately, the Proposed Specific Plan does not include new stationary sources (i.e., industrial facilities, landfills, wastewater treatments plants, etc.), and therefore would not conflict with the key elements of the 2017 Clean Air Plan relating to stationary sources. Moreover, the proposed Specific Plan does not propose agricultural land uses, or land uses that would use “super-GHGs”, such as methane, black carbon, or fluorinated gases, which can have very large greenhouse gas effects.

If approval of the proposed Springs Specific Plan would cause the disruption, delay, or otherwise hinder the implementation of any air quality plan control measure, it may be inconsistent with the 2017 Clean

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Air Plan. The proposed Springs Specific Plan does not cause the disruption, delay, or otherwise hinder the implementation of any quality plan control measure; therefore, it is consistent with the 2017 Clean Air Plan. For the above-specified reasons, the proposed Specific Plan would be consistent with the 2017 Clean Air Plan as promulgated by the BAAQMD, and implementation of the Springs Specific Plan would have a ***less than significant*** impact relative to this topic.

CONSISTENCY WITH THE SONOMA COUNTY GENERAL PLAN

The proposed Specific Plan is consistent with the existing Sonoma County General Plan. The existing Sonoma County General Plan Open Space and Resource Conservation Element includes an extensive list of objectives and policies that are specifically aimed at improving air quality, which are presented in the Regulatory Setting (Section 3.2.2), above. The proposed Specific Plan promotes a compact urban form, emphasizes infill development, and ensures that land use patterns do not expose sensitive receptors to substantial pollutant concentrations.

Additionally, the Circulation and Transit Element of the Sonoma County General Plan includes a wide range of objectives and policies that would effectively reduce vehicle miles travelled throughout the Specific Plan area, through the use of improved circulation for pedestrians, bicyclists, and transit systems. These applicable objectives and policies are described in greater detail in Section 3.13 (Transportation and Circulation). The proposed Specific Plan is consistent with these objectives and policies. Goal SC-1 and associated policies of the proposed Specific Plan ensure that the street network would be designed to provide equally for the needs of pedestrians, bicyclists, motorists, and transit riders. The Specific Plan also contains a large number of policies and design measures to ensure that the proposed Specific Plan would make it easier to get around the Specific Plan area by foot, bicycle, and transit, as previously described, and which are also presented at the end of this discussion.

The General Plan Open Space and Resource Conservation Element contains objectives and policies that are specifically aimed at reducing greenhouse gas emissions/climate change, and are provided within the Regulatory Setting and discussed in more detail in Section 3.7 (Greenhouse Gases and Energy). Subsequent development projects proposed within the Springs Specific Plan area would be subject to all relevant General Plan objectives and policies that provide protections for air quality.

All future development and infrastructure projects within the Springs Specific Plan area would be subject to all relevant General Plan emissions and air quality goals, objectives, and policies, which were adopted in order to reduce emissions and air quality impacts. Further discretionary review of individual development and infrastructure projects would occur, as applicable, as required under CEQA. It is further noted that the Springs Specific Plan implements some of the primary General Plan objectives adopted to reduce air quality emissions. Sonoma County General Plan Objective OSRC-16.2 encourages reduced motor vehicle use as a means of reducing resultant air pollution. Separately, Sonoma County General Plan Objective CT-2.8 calls for the provision of bicycle and pedestrian links from bus stops and other transit facilities to residential areas, employment centers, schools, institutions, parks, and the greater roadway system in general, especially focusing on short trips that could result in a mode shift away from automobile travel. The Specific Plan would provide improved circulation for pedestrians, bicyclists, and transit, thereby satisfying these General Plan objectives. The Springs Specific Plan emphasizes a compact, mixed use pattern that emphasizes alternative transportation access and multi-modal connectivity throughout the Plan Area and into the surrounding areas.

The proposed Specific Plan is consistent with the objectives and policies contained in the Sonoma County General Plan, by promoting a compact urban development form, emphasizing infill development, and

ensuring that land use patterns do not expose sensitive receptors to pollutant concentrations. The proposed Specific Plan is also consistent with the General Plan Open Space and Resource Conservation Element, as well as the Circulation and Transit Element of the Sonoma County General Plan. Implementation of the Springs Specific Plan, which is consistent with all applicable Sonoma County General Plan objectives and policies, would have a **less than significant** impact relative to this topic.

THRESHOLDS OF SIGNIFICANCE

The BAAQMD’s May 2017 CEQA Guidelines also identify thresholds of significance for criteria air pollutants and precursors for planning-level documents. As described in Section 2.7.1 of the 2017 CEQA Guidelines, proposed plans (except regional plans) must show the following over the planning period of the plan to result in a less than significant impact:

- Consistency with current air quality plan control measures.
- A proposed plan’s projected vehicle miles traveled (VMT) or vehicle trips (VT) (either measure may be used) increase is less than or equal to its projected population increase.

The analysis provided above demonstrates that the proposed project would be consistent with the current air quality plan control measures.

The following describes VMT and population increases associated with implementation of the Springs Specific Plan.

The proposed Springs Specific Plan is intended to foster a vibrant, attractive, multimodal community with increased opportunities for housing and improved circulation for pedestrians, bicyclists, and transit. The Springs Specific Plan will accommodate future growth in the Plan area, including new businesses, expansion of existing businesses, and new residential development. In order to analyze the proposed Plan’s consistency with the BAAQMD thresholds listed above, this analysis looks at population growth when analyzing relative increases in local VMT.

According to the Sonoma County Transportation Authority travel model, daily VMT in Sonoma County is 28,570,046 miles (W-Trans, 2021). The “Project-only” daily VMT under regional buildout would be 51,459 miles. Sonoma County has an existing population of 504,217 (U.S. Census, 2017). Full buildout of the Springs Specific Plan is expected to generate approximately 1,977 residents (consistent with the scenario modelled by W-Trans).

Table 3.2-4 shows the population growth generated by Springs Specific Plan, compared to existing levels within Sonoma County. Table 3.2-5 shows County-wide VMT and plus-project VMT following buildout of the Springs Specific Plan.

TABLE 3.2-4: POPULATION GROWTH

EXISTING POPULATION IN SONOMA COUNTY ¹	504,217
NEW POPULATION GENERATED BY THE PLAN ²	1,977
PERCENT INCREASE IN POPULATION IN THE COUNTY GENERATED BY THE PLAN	0.39%

SOURCES: ¹U.S. CENSUS, 2017; ²W-TRANS, 2021

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TABLE 3.2-5: COUNTY AND COUNTY PLUS PROJECT VMT (DAILY)

COUNTY BASELINE VMT	28,570,046
COUNTY VMT + PROJECT VMT	28,621,505
PERCENT INCREASE IN VMT	0.18%

SOURCE: W-TRANS, 2021

As shown in the two tables above, implementation of the proposed project would result in an approximately 0.18% increase in County-wide VMT, compared to a 0.39% increase in County-wide population. Therefore, the VMT increase associated with the Springs Specific Plan is lower than the population growth associated with the Specific Plan. The proposed project would not result in a VMT increase that would exceed the projected population increase, and would also be consistent with all BAAQMD current air quality plan control measures. Therefore, the proposed project is consistent with the adopted BAAQMD thresholds.

The proposed project would further the fundamental goals of the BAAQMD in reducing emissions of criteria pollutants associated with vehicle miles traveled, and would increase opportunities for transit ridership, and improved circulation for pedestrians and bicyclists in the Springs and the surrounding areas. For these reasons, this impact is considered **less than significant**.

CONSISTENCY WITH THE PLAN BAY AREA 2040

The *Plan Bay Area 2040* (MTC, 2017) is the most recently adopted Regional Transportation Plan prepared by the MTC for the San Francisco Bay Area region. The MTC calculated employment and household projections for *Plan Bay Area 2040*. The MTC forecasted that, between 2010 and 2040, the San Francisco Bay Area will see increases in the number of jobs, population, and households. Specifically, the forecast includes:

- Growth of 1.3 million jobs between 2010 and 2040, with nearly half of those jobs – over 600,000 – already added between 2010 and 2015.
- An increase in over 2 million people between 2010 and 2040. Almost one-fourth of the projected growth occurred between 2010 and 2015.
- An increase in approximately 820,000 households. Only 13 percent of this growth occurred between 2010 and 2015, as household formation was held back in part by post-recession financial conditions and a lack of housing production.

The adopted Plan Bay Area does not include population projections at the local level, but rather presents regional projections. *Plan Bay Area 2040* states that by 2040 the San Francisco Bay Area is projected to add 2.1 million people, increasing total regional population from 7.2 million to 9.3 million, an increase of 30 percent or roughly 1 percent per year.

While no specific development projects are proposed as part of the Springs Specific Plan, the Springs Specific Plan will accommodate future growth in the Springs, including new businesses, expansion of existing businesses, and new residential uses. Proposed growth projections for the Specific Plan area are provided in Table 2.0-4 in Chapter 2.0.

As shown in Table 2.0-4 in Chapter 2.0, full buildout of the proposed Specific Plan area would result in a maximum of 706 residential units. According to the Market and Feasibility Analysis completed for the proposed project (New Economics & Advisory, 2016), the average household size in the Specific Plan area

is 2.8. Therefore, this would represent a maximum residential population of up to approximately 1,977 persons, which is well within the projections of Plan Bay Area 2040 for Sonoma County. In addition, the projected employment increase associated with the non-residential development within the Specific Plan area would be relatively modest and would be consistent with the Bay Area's overall employment and housing growth projections. Development within the Specific Plan area would also assist Sonoma County in providing additional housing opportunities and accommodating the County's Regional Housing Needs Allocation. The proposed Specific Plan, including its anticipated population growth, does not conflict with the latest adopted and conforming Regional Transportation Plan. This is a **less than significant** impact.

PROJECT EFFECTS ON PUBLIC HEALTH

The portion of Sonoma County that is within the BAAQMD, which includes the Plan Area, has a state designation of nonattainment for ozone, PM₁₀, and PM_{2.5}. As described above, the proposed project does not conflict with or obstruct implementation of the applicable air quality plan. The BAAQMD has developed the *2017 Clean Air Plan* and *Plan Bay Area 2040* to be consistent with the emissions levels that would not exceed a CAAQS or contribute substantially to an existing or projected violation of a CAAQS. Ambient levels of these criteria pollutants are likely to decrease in the future, based on current and future implementation of federal and/or state regulatory requirements, such as improvements to the statewide vehicle fleet over time (including the long-term replacement of internal combustion engine vehicles with electric vehicles in coming decades).

There are no tools available that could allow a precise estimate of health effects of a plan-level document on receptors, as described in detail in Appendix C.3. Therefore, the following analysis of health effects is presented qualitatively.

Ozone

O₃ is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC) (also known as ROG) and oxides of nitrogen (NO₂) in the presence of sunlight. The reactivity of O₃ causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O₃ not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O₃ for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. Environmental Protection Agency 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. Environmental Protection Agency 2019b).

However, as previously stated, precursors of ozone (ROG and NO₂) are accommodated in the emission inventories of State- and federally-required air plans and would not have a significant impact on the

attainment and maintenance of ozone AAQS. Moreover, there is currently available technical modeling available to measure these specific health effects. As such, a project's incremental contribution cannot be traced to specific health outcomes on a regional scale.

Particulate Matter

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO₂) and laboratory studies of animals and humans, PM can cause major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution has health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed. The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in PM_{2.5} results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM₁₀ and PM_{2.5} can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. Environmental Protection Agency 2019c).

The project would generate emissions of PM during project construction and operational activities. However, there is currently no available technical modeling available to measure these specific health effects. As such, a project's incremental contribution cannot be traced to specific health outcomes on a regional scale.

Discussion

As previously discussed, the magnitude and locations of any potential changes in ambient air quality, and thus health consequences, from these additional emissions cannot be quantified with a high level of certainty due to the dynamic and complex nature of pollutant formation and distribution (e.g., meteorology, emissions sources, sunlight exposure). Air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment or non-attainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by the project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which at certain concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with ozone and particulate pollution, the effects are a result of cumulative and regional emissions. Since there is no currently available technical modeling available to measure these specific health effects, the proposed project's incremental contribution cannot be traced to specific health outcomes on a regional scale.

CONCLUSION

The proposed project would be consistent with the 2017 Clean Air Plan, the Sonoma County General Plan, the BAAQMD Thresholds of Significance, and the Plan Bay Area 2040. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality, or result in a cumulatively considerable net increase in criteria pollutants. There would be a **less than significant** impact.

SPECIFIC PLAN COMPONENTS THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Goal SC-1: *Ensure that the Street Network is Designed to Provide Equally for the Needs of All Users, including Pedestrians, Bicyclists, Motorists, and Transit Riders.*

Policy SC-1a: *Make it easier and safer to get around the Springs by foot, bicycle, transit, and automobile.*

Policy SC-1b: *Ensure that circulation improvements result in attractive, functional roadways, bicycle lanes, sidewalks, pathways, transit stops, and parking areas that enhance access and safety for all users.*

Policy SC-1c: *Continue to improve and enhance Highway 12 to create a vibrant, multi-modal corridor by requiring wider sidewalks, buffered bike lanes, shade trees, street furniture, and other amenities.*

Policy SC-1e: *Implement the roadway cross-sections included in this Specific Plan which are designed to accommodate all modes of transportation including walking, bicycling, transit, and driving.*

Policy SC-1h: *Development projects that exceed ten (10) residential units or 5,000 square feet of non-residential development shall reduce VMT through implementation of a Transportation Demand Management (TDM) plan. Development projects shall be subject to the TDM conditions below, which require applicable projects to provide a foundational set of strategies plus one additional measure. A project may propose construction or funding of offsite pedestrian, bicycle, and transit infrastructure and/or participation in future regional or countywide VMT reduction programs, in lieu of a TDM plan if demonstrated to the satisfaction of the PRMD Director that the associated reduction in vehicle travel would be comparable to the TDM requirements.*

- A. *Foundational Measures: Development projects must implement all of the following TDM measures at a minimum:*
- *On-site or contracted TDM coordinator*
 - *TDM marketing*
 - *Rideshare matching*
 - *Onsite bicycle amenities*
 - *Emergency Ride Home Program (applies to nonresidential uses)*
- B. *Additional Measures: Development projects must implement at least one additional TDM measure to achieve vehicle miles traveled (VMT) and trip reduction goals. The measure must be approved by the County and can be chosen from the strategies below. The enumerated list does not preclude a project from implementing other TDM measures if desired or required by County Code.*

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Nonresidential development

- *Transit/vanpool subsidies*
- *Parking cash-out*
- *VMT Mitigation Bank (if available)*
- *Off-Site Physical Non-Auto Mode Improvement(s)*

Residential development

- *Transit subsidies*
- *School-pool matching*
- *Unbundled parking*
- *VMT Mitigation Bank (if available)*
- *Off-Site Physical Non-Auto Mode Improvement(s)*

Goal SC-2: *Create a Safe, Convenient, and Well-connected Pedestrian and Bicycle Circulation System with Generous Amenities that Encourage Walking and Cycling.*

Policy SC-2a: *Ensure that circulation improvements create a walkable and bikeable community with convenient access to schools, parks, shops, services, restaurants, and other local destinations.*

Policy SC-2b: *Improve pedestrian and bicycle linkages and facilities throughout the Springs to improve mobility; provide safe routes to schools and transit stops; make the area more inviting to pedestrians and cyclists; and improve connectivity to nearby communities and regional destinations. See Figures 5 and 6 and Tables 3 and 4.*

Policy SC-2c: *Create a pedestrian- and bicyclist-friendly environment by ensuring that new development is human-scale and areas are provided for public seating. Other amenities that should be provided include street furniture, landscaping, shade, bicycle racks, trash receptacles, and pedestrian oriented lighting and signage. Amenities should be placed in locations that do not decrease the walkability of the sidewalk.*

The ultimate configuration of any new pedestrian crossings shall be evaluated and determined by the Sonoma County Department of Transportation and Public Works, in collaboration with Caltrans, and in consideration of the physical characteristics and best design practices that exist at the time the design is initiated.

Policy SC-2d: *Require that adjacent developments be connected by safe, direct walkways. Ensure that projects are designed to anticipate and accommodate future street and sidewalk connections to new development on adjacent lands.*

Policy SC-2e: *Prohibit cul-de-sacs and dead end streets, except where existing conditions require them. If cul-de-sacs are necessary, require walkways connecting to adjacent streets and future development.*

Policy SC-2f: *Require direct pedestrian access between housing and any adjacent transit facility.*

Policy SC-2g: Provide new and improved crosswalks as shown in Figure 5. Prioritize safety features, such as pedestrian warning lights and bulb-outs, that improve visibility and create a more comfortable pedestrian environment, particularly in the vicinity of schools and parks.

Policy SC-2h: Provide new and improved bicycle lanes and enhance bicycle safety through the use of signs, bicycle lane buffers, and green colored pavement, as shown in Figure 6. Priority should be given to intersections when making safety improvements.

Policy SC-2i: Prioritize crosswalk, sidewalk, and bicycle lane improvements near schools, parks, transit stops, and the Springs plaza.

Policy SC-2j: When planning new crosswalks, locate crosswalks on the far side of the bus stop so that the bus passes through the crosswalk before stopping for riders.

Policy SC-2k: Require development projects along Highway 12 to provide increased sidewalk widths, consistent with the cross-sections identified in this chapter and the setback requirements set forth in the Design Guidelines chapter.

Policy SC-2l: Establish an improvement district or comparable mechanism to fund installation and maintenance of water stations, benches, street trees, landscaping, trash cans, and other community amenities along the Highway 12 corridor.

Policy SC-2o: Encourage the development of public spaces, such as outdoor seating areas, that are easily accessible from the public sidewalk or pathway. Ensure that public spaces are designed for pedestrian comfort and provide visual interest.

Policy SC-2p: Provide water filling stations at key locations along the Highway 12 corridor. Recommended locations are shown on Figure 6, Bicycle Circulation Map.

Goal SC-3: Increase Transit Ridership in the Springs Area

Policy SC-3a: Coordinate with Sonoma County Transit to improve local bus service by increasing the frequency of bus service in the Springs and decreasing travel times.

Policy SC-3b: Support the creation of a public awareness campaign to promote transit use. Provide easy to understand schedule and bus pass information in English and Spanish.

Policy SC-3c: Coordinate with Sonoma County Transit to promote the local shuttle service (route 32) which runs between the Springs and the City of Sonoma, including continuing the branding of route 32 as a shuttle, creating a distinct look for shuttle vehicles, and updating transit signage for route 32. Sonoma County transit is also encouraged to allocate marketing resources to publicize the shuttle route to residents, employees, and visitors.

Policy SC-3d: Work with Sonoma Transit to improve bus stops by providing well-lit shelters, benches, bicycle racks, and trash cans. Provide schedule information at each bus shelter location.

Policy SC-3f: In conjunction with road or development projects, review whether a bus turnout is appropriate in locations where transit shelters exist or are planned.

Policy SC-3g: Maintain fare-free service on the Sonoma County Transit local route serving the Springs area (currently route 32 Sonoma Shuttle).

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Policy SC-3h: Explore use of micro-transit and on-demand transit.

Policy SC-3i: Encourage private shuttles to serve the community.

Policy SC-3j: Work with local employers and retailers to identify opportunities for private shuttles to serve employment sites and other destinations that are not currently served by transit.

Goal SC-4: *Ensure Adequate Public and Private Parking to Accommodate Residents, Businesses, and Visitors to the Springs*

Policy SC-4d: Support car-sharing by encouraging larger development projects to reserve parking spaces for car-share vehicles. Reserve strategic on-street spaces for car-share vehicles as demand for such services increases.

Policy SC-4i: Consider the establishment of a parking district or in-lieu parking fees to fund the construction of new public parking and programs that reduce parking demand, such as bicycle path development and transit improvements.

Policy SC-4j: Encourage the installation of electric charging stations on both public property and in private development.

Policy SC-4l: Require bicycle parking near the front entrance of commercial buildings.

Policy SC-4m: Include bicycle parking in all parking lots and structures.

Impact 3.2-2: Implementation of the proposed Specific Plan has the potential to cause health risks associated with toxic air contaminants (Less than Significant with Mitigation)

Controlling TACs became a national priority with the passage of the Clean Air Act Amendments of 1990, whereby Congress mandated that the U.S. EPA regulate 188 air toxics, also known as hazardous air pollutants. The U.S. EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources. In addition, the EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment. These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter.

The 2007 EPA rule requires controls that will dramatically decrease Mobile Source Air Toxics (MSAT) emissions through cleaner fuels and cleaner engines. According to a Federal Highway Administration analysis using EPA's MOBILE6.2 model, even if vehicle activity (VMT) increases by 145 percent, a combined reduction of 72 percent in the total annual emission rate for the priority mobile source air toxics is projected from 1999 to 2050. California maintains stricter standards for clean fuels and emissions compared to the national standards, therefore it is expected that MSAT trends in California will decrease consistent with or more than the U.S. EPA's national projections.

Currently, the CARB monitors toxics throughout California; however, there are no toxic air monitoring sites located in Sonoma County. The closest toxic air monitoring site to the Specific Plan area is located in

San Pablo. As air toxics research continues, new tools and techniques will be developed for assessing health outcomes as a result of lifetime air toxics exposure.

Health risks associated with TACs are most pronounced in the areas adjacent to freeway segments. Under the Community Air Risk Evaluation program, the BAAQMD has designated certain areas as “Impacted Communities” if the following occur: the areas (1) are close to or within areas of high TAC emissions; (2) have sensitive populations, defined as youth and seniors, with significant TAC exposures; and (3) have significant poverty. No part of Sonoma County is mapped by the BAAQMD as an Impacted Community under the Community Air Risk Evaluation program.

The BAAQMD has also promulgated a *Planning Healthy Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning* document in May 2016 (BAAQMD, 2016), to address the issue of healthy infill development. This document includes important information for local governments, developers, and the general public, including the location of communities and places throughout the region that are estimated to have elevated levels of fine particulates and/or toxic air contaminants, as well as best practices that may be implemented by local governments and developers to reduce health risks from air pollution in these locations that experience elevated air pollution levels. The purpose of this guidance document is to encourage local governments to address and minimize potential local air pollution issues early in the land-use planning process, and to provide technical tools to assist them in doing so.

Highway 12 in Sonoma County, which includes the segment of Highway 12 within the Plan Area, is identified in the Planning Healthy Places document as having relatively elevated levels of air pollution,⁵ due to its traffic volume exceeding 10,000 vehicles per day. For such areas, the Air District recommends implementing all of their “best practices to reduce exposure” that are feasible and applicable to a project or plan in these locations. A summary of these best practices to reduce exposure is provided in the bulleted list below:

- Health Protective Distances: Plan sensitive land uses as far from local sources of air pollution such as freeways as is feasible.
- Install Air Filters: Install air filters rated at a minimum efficiency reporting value (MERV) 13 or higher in buildings associated with sensitive land uses (e.g. schools, residences, hospitals).
- Project Phasing: When applicable, and when development is being phased over time (i.e. being built over several years), build residential units and/or sensitive land uses that are closest to the emissions source at the latest date in the future (e.g. in year 5 vs. year 1).
- Building Site Design and Operations: When designing a project site or developing a plan area, place sensitive land uses as far away from emission sources (including loading docks, busy roads, etc.) as is feasible. Place open space, commercial buildings, or parking garages between sensitive land uses and air pollution sources. This will help to create a “buffer” separating housing and other sensitive land uses away from air pollutants. Locate operable windows, balconies, and building air intakes as far away from any emission source as is feasible. Incorporating open space (i.e. parks) between buildings can improve air flow and air pollution movement.
- Barriers (sound walls): Consider incorporating solid barriers into site design, similar to a sound wall, between buildings and sources of air pollution (for example, a freeway).

⁵ See Figure 2, on page 10 of the Planning Healthy Places document.

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- Vegetation: Plant dense rows of trees and other vegetation between sensitive land uses and emission source(s). Large, evergreen trees with long life spans work best in trapping air pollution, including: Pine, Cypress, Hybrid Poplar, and Redwoods.
- Consider Limiting Ground Floor Uses: Consider limiting sensitive land uses on the ground floor units of buildings near non-elevated sources, e.g. ground level heavily traveled roadways and freeways.
- Alternative Truck Routes: Truck routes can be planned or re-rerouted through non-residential neighborhoods, and to avoid other sensitive land uses such as daycare centers, schools, and elderly facilities.

The proposed project would implement these best practices to reduce exposure, as feasible, as provided by the policies and zoning within the Specific Plan. For example, the standard set of health risk reduction measures contained in Specific Plan Measure Air-B requires individual projects with sensitive receptors to install air filters of MERV 13 or higher in buildings with sensitive land uses; locate sensitive receptors as far away as feasible from the source(s) of air pollution as possible, including locating sensitive receptors away from ground floors, where feasible; plant trees and/or vegetation between sensitive receptors and pollution sources, and utilize CARB's Tier 4 emission standards for diesel generators, as feasible. Separately, Specific Plan Measure Noise-A identifies sound barriers and increased setbacks as potential measures to ensure noise levels meet the County noise standards, which would also reduce the potential impact of air pollution on sensitive receptors. Further, Specific Plan Policy SC-1c, which would require the improvement and enhancement of the Highway 12 segment with the Plan Area by requiring wider sidewalks, buffered bike lanes, shade trees, street furniture, and other amenities, would increase vegetation as well as passively reduce the likelihood of heavy-duty trucks selecting the Highway 12 corridor when other routes are available, all else being equal. Additionally, Specific Plan Policy SC-2n requires new development and redevelopment projects to include street trees and other vegetation. Lastly, the overall zoning established by the Specific Plan rezones much of the existing residential zoning located adjacent to Highway 12 as Mixed Use (MX) under the proposed Specific Plan, which would tend to replace much of the existing residential zoning adjacent to Highway 12 with other land uses (such as commercial) that are less likely to develop land uses with sensitive receptors.

It should also be noted that the BAAQMD has also identified a number of areas within the Bay Area where additional analysis (i.e. further study) is recommended to assess the local concentrations of TACs and fine PM, and therefore the health risks from air pollution. These areas are provided by the Air District's mapping tool.⁶ The Air District recommends using caution when considering sensitive land uses in these areas. There are two such areas identified by the Air District within the Plan Area (i.e. two gasoline stations). Specifically, the gasoline stations are a Valero Station, located at 18605 Sonoma Highway, and a Sonoma Beacon station, located at 18618 Sonoma Highway. To help clarify and standardize analysis and decision-making in the environmental review process for development that would occur in the vicinity of these gas stations, future projects would be required to implement Measure Air-B, which would minimize risks associated with any new sensitive receptors located within 1,000 feet of Highway 12 or within 300 feet of the gas stations. Measure Air-B requires that individual projects with sensitive receptors that are within 1,000 feet of Highway 12 or within 300 feet of the gas stations to incorporate measures into the individual project design in order to reduce the potential health risk due to exposure to toxic air contaminants. Specifically, Measure Air-B requires that either the project applicant conduct an HRA and incorporate project-specific risk reduction measures if the HRA concludes that the health risk exceeds

⁶ <https://www.baaqmd.gov/plans-and-climate/planning-healthy-places>

acceptable levels, or incorporate a standard set of health risk reduction measures, such as installation of air filtration systems, location of sensitive receptors as far away as feasible from the source(s) of air pollution as possible, planting trees and/or vegetation between sensitive receptors and pollution sources, and utilizing CARB's Tier 4 emission standards for diesel generators, as feasible.

Separately, the BAAQMD CEQA Guidelines provide recommendations for all communities to ensure reduced health risks associated with TACs. The existing Sonoma County General Plan includes policies that are intended to minimize exposure of TACs to sensitive receptors (listed in the Regulatory Setting). These policies help to protect sensitive receptors, and otherwise limit air pollution during construction and operation activities. These objectives and policies are consistent with the BAAQMD recommendations that are intended to reduce health risks associated with TACs. Specifically, General Plan Policy OSRC-16i requires that any proposed new sources of toxic air contaminants provide adequate buffers to protect sensitive receptors and comply with applicable health standards. In addition, there are several policies that relate to reducing diesel particulate matter (DPM), which is a common TAC emitted from heavy-duty long-haul vehicles, as well as wood-burning fireplaces (see Policy OSRC-16l and Policy OSRC-16g).

The Specific Plan area is bisected by the Highway 12 commercial corridor (a California state highway). Existing daily traffic on the highway in the central part of the Specific Plan area averages 12,600 vehicles per day. The proposed project includes residences, which are considered sensitive receptors. The proposed project also has the potential to allow for other sensitive receptors, such as day cares. The proposed project would implement the Air District's best practices to reduce exposure, as provided above, where appropriate. Additionally, individual projects within the Plan Area would be required to implement Air-B, as applicable.

Stationary source TACs are not known to be a major concern within the Springs area, based on the limited number of TAC sources within the surrounding area. No major sources of TACs (such as wastewater treatment plants, regional trucking facilities, or industrial plants) are located nearby. No known significant stationary sources of TACs are generated within 1,000 feet of the Specific Plan area.⁷ Additionally, the future residential land uses within Specific Plan area would be developed many miles east of the Highway 101 corridor (a major freeway). No industrial uses are proposed as part of the Specific Plan. Furthermore, the vast majority of land uses that are known to generate TACs (such as industrial, and most vehicle-oriented uses) would be prohibited through zoning (see Chapter 2, Project Description, for a list of uses allowed in each zone associated with the Specific Plan). In the event that future projects within any of the non-residential areas within the Specific Plan propose development that would use TACs in substantial quantities, as determined by the BAAQMD (such as some kinds of large-scale auto repair service centers, gas stations, and/or dry cleaning operations), then the project proponent would be required to prepare a toxic air contaminant health risk analysis as recommended by the BAAQMD CEQA Guidelines at the individual development level, and incorporate feasible mitigation measures to reduce health risks to acceptable levels, as provided within the Sonoma County General Plan (as provided by General Plan Policy OSRC-16i), and as provided by Specific Plan Measure Air-B. Adequate buffers would be required between sensitive land uses and the source of TACs. Subsequent development projects proposed within the Specific Plan area would be subject to all relevant General Plan goals, objectives, and policies that provide protections for risks associated with TACs. The implementation of these Sonoma County General Plan objectives and policies that are intended to address air quality TACs impacts, as described above, and

⁷ The BAAQMD recommends that all receptors located within 1,000 feet of a major source of TACs be evaluated for potential increases in risks or hazards.

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implementation of Specific Plan Measures Air-B and Air-C, identified below, would ensure that impacts associated with the Specific Plan are reduced to a **less than significant** level.

SPECIFIC PLAN COMPONENTS THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Measure Air-B: *Prior to the approval of entitlements or permitting operation of project with sensitive receptors (e.g. residential uses, new or expanded daycares, schools, parks, nursing homes, or medical facilities) that are located within a TAC source, including 1,000 feet of Highway 12 or 300 feet of a gas station, the project applicant(s) shall incorporate appropriate measures into the individual project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose one of the following methods:*

- 1. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the County for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the County for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the County;*

OR

- 2. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the County for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the County:*
 - Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.*
 - The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from the TAC sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods.*
 - Sensitive receptors shall be located on the upper floors of buildings or, if located on the ground floor, shall be located toward the edge of the property boundary that is farthest from the TAC source.*
 - Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the*

following: Pine (Pinus nigra var. maritima), Cypress (X Cupressocyparis leylandii), Hybrid poplar (Populus deltoids X trichocarpa), and Redwood (Sequoia sempervirens).

- *Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.*

The project applicant(s) shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant(s) shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.

Measure Air-C: *Prior to approval of entitlements or permitting operation of any new or modified commercial building/use that would emit toxic air contaminants (such large-scale auto repairs service centers, gas stations or dry cleaning operations), prioritization screening shall be performed in accordance with the Air Toxics "Hot Spots" Program, Facility Prioritization Guidelines (July 1990) and the Air Toxics "Hot Spots" Information and Assessment Act. The prioritization screening shall be performed in accordance with the California Air Pollution Control Officers Association Air Toxic "Hot Spots" Program guidance. The prioritization screening shall also be conducted consistent with the guidance provided by the Bay Area Air Quality Management District's (Air District) latest guidance, which will be responsible for determining which facilities must perform a health risk assessment.*

If a health risk assessment is warranted for a facility based on its prioritization score, the project applicant shall retain a qualified air quality consultant to prepare an assessment the facilities for the potential to expose the public to toxic air contaminants in excess of the applicable thresholds (utilizing an air dispersion modelling program such as AERMOD). Facilities that exceed the applicable threshold(s) have the potential to expose the public to toxic air contaminants levels that would be considered significant. Facilities that exceed the applicable threshold(s) shall incorporate mitigation to reduce the risks from emission of toxic air contaminants to an acceptable level (i.e., to a level that does not exceed the applicable threshold[s]). Potential mitigation includes: reducing the size of the facility area; rearranging the site to reduce the potential for impacts on the nearest sensitive receptors; and utilizing products that reduce the level of toxic air contaminants, or removal of such products from the operational phase of the project.

Impact 3.2-3: Implementation of the proposed Specific Plan would not create objectionable odors or other emissions that would adversely impact a substantial number of people (Less than Significant)

Objectionable odors can be generated from certain types of commercial and/or industrial land uses. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries, and chemical plants. In general, residential land uses are not associated with odor generation, but they do serve as sensitive receptors. Odors rarely have direct health impacts, but they can be very unpleasant and can lead to anger and concern over possible health effects among the public. Each year the BAAQMD receives thousands of citizen complaints about objectionable odors. The BAAQMD CEQA Guidelines recommendation for assessing plan level odor impacts is to "identify the location of existing and planned odor sources in the plan area and policies to reduce potential odor impacts in the plan area." No significant odor sources are known to exist in the Springs Specific Plan area.

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Examples of facilities that are known producers of operational odors include: Wastewater Treatment Facilities, Chemical Manufacturing, Sanitary Landfill, Fiberglass Manufacturing, Transfer Station, Painting/Coating Operations (e.g. auto body shops), Composting Facility, Food Processing Facility, Petroleum Refinery, Feed Lot/Dairy, Asphalt Batch Plant, and Rendering Plant. If a project would locate receptors and known odor sources in proximity to each other further analysis may be warranted.

Commercial uses, particularly retail, are not typically associated with the creation of objectionable odors. However, restaurants, especially fast food restaurants, have the potential to generate substantial sources of odors as a result of cooking processes and food waste disposal. Char broilers, deep-fryers, and ovens tend to produce food odors that could be considered offensive to some people. The food waste produced by any restaurants allowed under the proposed zoning could putrefy if not properly managed, which could produce objectionable odors. Any restaurants developed within the Plan area would involve food preparation that could result in cooking exhaust and smoke, and would produce food waste. As odors are highly subjective, one receptor may consider cooking exhaust and related smoke an acceptable odor, while another receptor may find such odors objectionable. Nonetheless, any future restaurants developed within the Plan area would be required to comply with all State and local regulations associated with cooking equipment and controls. This would ensure that pollutants associated with smoke and exhaust from cooking surfaces would be captured and filtered, allowing only filtered air to be released into the atmosphere.

Decomposition of biological materials, such as food waste and other trash, could create objectionable odors if not properly contained and handled. Future development projects which would result in biological materials or other odorous waste would provide waste receptacles and would utilize outdoor trash dumpsters with lids, which would be picked up regularly during normal solid waste collection operating hours within the area. The dumpster lids are intended to contain odors emanating from the dumpsters. The dumpsters would be stored in screened areas for further protection from potential objectionable odors. The garbage collected on-site and stored in the outdoor dumpsters would not be on-site long enough to cause substantial odors. Thus, the outdoor, enclosed, and covered trash dumpsters that would be picked up regularly would provide proper containment and handling of the trash generated on-site.

The Specific Plan area does not propose any land uses within the vicinity of any potential source of objectionable odors and does not include uses that are anticipated to result in significant levels of objectionable odors or other emissions not previously analyzed herein. Individual developments within the Plan Area that have the potential to generate objectionable odors, such as restaurants, would be required to comply with all State and local regulations associated with cooking equipment and controls. Implementation of the proposed Springs Specific Plan would have a **less than significant** impact relative to this topic.

This section describes the regulatory setting, regional biological resources, and impacts that are likely to result from project implementation. The following analysis is based on literature review and records searches performed by De Novo Planning Group (2018), as well as the County’s General Plan EIR (2008).

One comment was received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the California Department of Transportation (July 2018). The portion of the comment related to this topic is addressed within this section.

3.3.1 ENVIRONMENTAL SETTING

ACRONYMS

CDFW	California Department of Fish and Wildlife (formerly the California Department of Fish and Game, or CDFG)
CESA	California Endangered Species Act
CNDDDB	California Natural Diversity Database
CNPS	California Natural Diversity Database
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
CNPS	California Native Plant Society
FESA	Federal Endangered Species Act
NMFS	National Marine Fisheries Service
OHWM	ordinary high-water mark
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

REGIONAL SETTING

Sonoma County encompasses over one million acres of diverse landscape, ranging from the marine environments of the coastal zone, to the forests, woodlands, and grasslands of the coast range foothills and mountains, the vernal pools, seasonal wetlands, and freshwater marshes of the Santa Rosa Plain and Laguna de Santa Rosa, and the extensive marshlands along San Pablo Bay. Urban development occupies much of the valley floors through the central portion of the county along U.S. 101 and Highways 116 and 12, with cities separated and generally surrounded by grazing lands and agricultural uses, primarily vineyards, dryland crops, and irrigated pasture.

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM

The California Wildlife Habitat Relationships (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. When first published in 1988, the classification scheme had 53 habitats. At present, there are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated.

3.3 BIOLOGICAL RESOURCES

Figure 3.3-1 illustrates the location of each cover type (wildlife habitat classification) within the Plan area. Table 3.3-1 shows the acreage for each on-site cover type. A brief description of each cover type follows.

TABLE 3.3-1: COVER TYPES WITHIN THE PLAN AREA

<i>COVER TYPE</i>	<i>ACRES WITHIN THE PLAN AREA</i>
AGS - Annual Grassland	15.17
BAR - Barren	6.31
MHC - Montane Hardwood	8.16
MRI - Montane Riparian	3.31
URB - Urban	145.87
Total	178.82

SOURCE: CASIL GIS DATA, 2016, CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM, 2018.

Developed Cover Types

Urban habitats are not limited to any particular physical setting. Three urban categories relevant to wildlife are distinguished: downtown, urban residential, and suburbia. The heavily-developed downtown is usually at the center, followed by concentric zones of urban residential and suburbs. There is a progression outward of decreasing development and increasing vegetative cover. Species richness and diversity is extremely low in the inner cover. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. A distinguishing feature of the urban wildlife habitat is the mixture of native and exotic species. Within the Plan area, there are 145.87 acres of urban habitat. This habitat type is found along Highway 12 within the Plan area.

Herbaceous Cover Types

Annual Grassland habitat occurs mostly on flat plains to gently rolling foothills. This habitat type may include native or non-native grasses. Climatic conditions are typically Mediterranean, with cool, wet winters and dry, hot summers. The length of the frost-free season averages 250 to 300 days. Annual precipitation is highest in northern California. Within the Plan area, there are 15.17 acres of annual grassland habitat. This habitat type is found in the southeastern corner of the Plan area, north of Verano Avenue and east of Robinson Road.

Hardwood Woodland Cover Types

Montane Hardwood habitats are found throughout California mostly west of the Cascade-Sierra Nevada crest. East of the crest, it is found in localized areas of Placer, El Dorado, Alpine and San Bernardino Counties. Elevations range from 100 meters (300 feet) near the Pacific Ocean to 2745 meters (9000 feet) in southern California. Frost and short periods of freezing occur in winter (160 to 230 frost-free days). Mean summer temperatures in the Montane Hardwood habitat vary between 20 and 25 degrees C (68 and 77 degrees F) and mean winter temperatures between 3 and 7 degrees C (37 and 45 degrees F). Annual precipitation varies from 2,794 millimeters (110 inches) in the northern Coast Range to 914 millimeters (36 inches) in the mountains of southern California. Within the Plan area, there are 8.16 acres of montane hardwood habitat. This habitat type is found in the Plan area in four general locations: in the northeastern corner (east of Highway 12 and north of Richards Boulevard), in the northern portion of the Plan area (north of Feters Avenue and south of Depot Road), in the southern portion of the Plan area (south of Siesta Way and north of Agua

Caliente Creek), and in the southeastern corner (north of Verano Avenue and east of Robinson Road).

Montane Riparian habitats are found in the Klamath, Coast and Cascade ranges and in the Sierra Nevada south to about Kern and northern Santa Barbara Counties, usually below 2,440 meters (8,000 feet). This habitat intergrades with montane chaparral, montane hardwood, montane hardwood/conifer, lodgepole pine, red fir and wet meadow habitats. Riparian areas are found associated with montane lakes, ponds, seeps, bogs and meadows as well as rivers, streams and springs. Water may be permanent or ephemeral. The range of wildlife that uses this habitat for food, cover and reproduction include amphibians, reptiles, birds and mammals. The growing season extends from spring until late fall, becoming shorter at higher elevations. Most tree species flower in early spring before leafing out. Within the Plan area, there are 3.31 acres of montane riparian habitat. This habitat type is found in the Plan area in three general locations: adjacent east of Larson Park, north of Thomson Avenue and west of Sierra Drive, and adjacent north of Maxwell Farms Regional Park.

Other Habitats

Barren habitat is defined by the absence of vegetation. Any habitat with less than 2% total vegetation cover by herbaceous, desert, or non-wildland species and less than 10% cover by tree or shrub species is defined this way. The physical settings for permanently barren habitat represent extreme environments for vegetation. An extremely hot or cold climate, a near-vertical slope, an impermeable substrate, constant disturbance by either human or natural forces, or a soil either lacking in organic matter or excessively saline can each contribute to a habitat being inhospitable to plants. Within the Plan area, there are 6.31 acres of barren habitat. This habitat type is found in the northern and southern portions of the Plan area generally along Highway 12.

LOCAL SETTING

The Springs Specific Plan area (Plan area) is an approximately 180-acre area located in the central Sonoma Valley immediately north of the City of Sonoma. The Springs includes portions of the unincorporated communities of Agua Caliente, Feters Hot Springs, and Boyes Hot Springs. The Plan area is bounded by Agua Caliente Road at the north and Verano Avenue at the south and is bisected by the Highway 12 commercial corridor. The Plan area is urban and largely built out.

The 'L'-shaped Plan area has several distinct settings: the 1.6-mile stretch of mixed use along Highway 12 corridor that forms the vertical stroke of the 'L', the residential neighborhoods just east and west of the highway, and the residential area that forms the base of the 'L' to the east along Donald and Harley Streets.

Pequeno Creek crosses the Plan area south of Feters Avenue and is a tributary of Sonoma Creek, joining with Sonoma Creek northwest of Larson Park. Agua Caliente Creek, also a tributary of Sonoma Creek, crosses the Plan area south of Encinas Lane, joining Sonoma Creek northwest of Maxwell Farms Regional Park.

The Plan area currently includes the following uses, as identified by the Sonoma County Assessor's office: 78.5 acres of single-family residential, 21.6 acres of multi-family residential (including duplexes through fourplexes), 15.74 acres of commercial, 2.77 acres of office, 1.47 acres of

3.3 BIOLOGICAL RESOURCES

industrial, 3.35 acres of mixed use, and 3.59 acres of public uses and 15.6 acres of vacant land. Figure 2.0-3 shows an aerial view of the Plan area.

The Plan area is relatively flat at an elevation of approximately 110 to 185 feet above sea level. The area's terrain generally slopes gently down from east to west. Figure 2.0-5 in Chapter 2.0 shows the U.S. Geological Survey (USGS) Topographic Map of the Plan area.

The Plan area is located in the unincorporated area of Sonoma County, north of the City of Sonoma city limits. Adjoining lands to the north of the Plan area are designated for Urban Residential (UR), Rural Residential (RR), and Diverse Agriculture (DA) uses. Adjoining lands to the east of the Plan area are designated for UR, RR, Resources and Rural Development (RRD), and Land Intensive Agriculture (LIA). Adjoining lands to the west of the Plan area are designated for UR, RR, DA, General Commercial (GC), and Recreation and Visitor Serving Commercial (RVSC) uses.

The City of Sonoma city limits are adjacent to the southern portion of the Plan area. Surrounding land uses within the City of Sonoma include low density residential, rural residential, commercial, and park. Maxwell Farms Regional Park is located south of W. Verano Avenue, south of the Plan area.

SPECIAL-STATUS SPECIES

Special-status species are generally defined as: 1) species listed as a candidate, threatened, or endangered under the federal or state Endangered Species Act; 2) species considered rare or endangered under the California Environmental Quality Act; 3) plants considered "rare, threatened, or endangered in California" by the California Native Plant Society (Lists 1B); 4) animal listed as "species of special concern" by the state; and 5) animals fully protected in California by the Fish and Game Code.

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDDB), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants, the U.S. Fish and Wildlife Service's (USFWS) endangered and threatened species lists, and observations from local experts. The background search was regional in scope and focused on the documented occurrences within the 9-quadrangle radius of the Plan area, which includes the following USGS quadrangles: Kenwood, Rutherford, Yountville, Glen Ellen, Sonoma, Napa, Petaluma River, Sears Point, Cuttings Wharf.

The 9-quadrangle search revealed 92 special-status species within the region: 53 plants and 39 animals. Tables 1 and 2 in Appendix B provide a complete list of special-status plant and animal species that are documented in the region, their habitat, potential for Plan area occurrence, and current protective status. Tables 3.3-2 and 3.3-3 show the special-status plant and wildlife species which have a moderate to high potential to occur within the Plan area only. Figure 3.3-2 illustrates the general location of these records maintained by the CNDDDB.

TABLE 3.3-2: SPECIAL-STATUS PLANTS WITHIN 9-QUADRANGLE REGION FOR THE PLAN AREA WITH MODERATE TO HIGH POTENTIAL FOR OCCURRENCE

PLANT	STATUS (FED/CA/ CNPS)	HABITAT ASSOCIATION	BLOOMING PERIOD	POTENTIAL FOR OCCURRENCE
Baker's navarretia <i>Navarretia leucocephala ssp. bakeri</i>	--/--/1B.1	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales; adobe or alkaline soils. 3-1680 m.	Apr-Jul	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
bent-flowered fiddleneck <i>Amsinckia lunaris</i>	--/--/1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 3-795 m.	Mar-Jun	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
big-scale balsamroot <i>Balsamorhiza macrolepis</i>	--/--/1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Sometimes on serpentine. 35-1465 m.	Mar-Jun	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Clara Hunt's milk- vetch <i>Astragalus claranus</i>	FE/CT/1B. 1	Cismontane woodland, valley and foothill grassland, chaparral. Open grassy hillsides, especially on exposed shoulders in thin, volcanic clay soil moist in spring. 95-235 m.	Mar-May	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Cobb Mountain lupine <i>Lupinus sericatus</i>	--/--/1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, broadleaved upland forest. In stands of knobcone pine-oak woodland, on open wooded slopes in gravelly soils; sometimes on serpentine. 120-1390 m.	Mar-Jun	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Colusa layia <i>Layia septentrionalis</i>	--/--/1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 15-1100 m.	Apr-May	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
fragrant fritillary <i>Fritillaria liliacea</i>	--/--/1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 3-400 m.	Feb-Apr	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Franciscan onion <i>Allium peninsulare var. franciscanum</i>	--/--/1B.2	Cismontane woodland, valley and foothill grassland. Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 5-320 m.	(Apr) May- Jun	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.

3.3 BIOLOGICAL RESOURCES

PLANT	STATUS (FED/CA/ CNPS)	HABITAT ASSOCIATION	BLOOMING PERIOD	POTENTIAL FOR OCCURRENCE
green jewelflower <i>Streptanthus hesperidis</i>	--/--/1B.2	Chaparral, cismontane woodland. Openings in chaparral or woodland; serpentine, rocky sites. 240-765 m.	May-Jul	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
holly-leaved ceanothus <i>Ceanothus purpureus</i>	--/--/1B.2	Chaparral, cismontane woodland. Rocky, volcanic slopes. 145-780 m.	Feb-Jun	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Jepson's coyote- thistle <i>Eryngium jepsonii</i>	--/--/1B.2	Vernal pools, valley and foothill grassland. Clay. 3-305 m.	Apr-Aug	Moderate Potential: Limited mesic habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Jepson's leptosiphon <i>Leptosiphon jepsonii</i>	--/--/1B.2	Chaparral, cismontane woodland. Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates. 55-855 m.	Mar-May	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Napa bluecurls <i>Trichostema ruygatii</i>	--/--/1B.2	Cismontane woodland, chaparral, valley and foothill grassland, vernal pools, lower montane coniferous forest. Often in open, sunny areas. Also has been found in vernal pools. 30-680 m.	Jun-Oct	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Napa false indigo <i>Amorpha californica var. napensis</i>	--/--/1B.2	Broadleafed upland forest, chaparral, cismontane woodland. Openings in forest or woodland or in chaparral. 30-735 m	Apr-Jun	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
narrow-anthered brodiaea <i>Brodiaea leptandra</i>	--/--/1B.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Volcanic substrates. 30-590 m.	May-Jul	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Northern California black walnut <i>Juglans hindsii</i>	--/--/1B.1	Riparian forest, riparian woodland. Few extant native stands remain; widely naturalized. Deep alluvial soil, associated with a creek or stream. 0-640 m.	Apr-May	Moderate Potential: Limited riparian habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
oval-leaved viburnum <i>Viburnum ellipticum</i>	--/--/2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. 215-1400 m.	May-Jun	Moderate Potential: Limited woodland habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.

PLANT	STATUS (FED/CA/CNPS)	HABITAT ASSOCIATION	BLOOMING PERIOD	POTENTIAL FOR OCCURRENCE
Sebastopol meadowfoam <i>Limnanthes vinculans</i>	FE/CE/1B.1	Meadows and seeps, vernal pools, valley and foothill grassland. Swales, wet meadows and marshy areas in valley oak savanna; on poorly drained soils of clays and sandy loam. 15-115 m.	Apr-May	Moderate Potential: Limited mesic habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Sonoma Alopecurus <i>Alopecurus aequalis</i> var. <i>sonomensis</i>	FE/--/1B.1	Freshwater marshes and swamps, riparian scrub. Wet areas, marshes, and riparian banks, with other wetland species. 5-360 m.	May-Jul	Moderate Potential: Limited riparian habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
thin-lobed horkelia <i>Horkelia tenuiloba</i>	--/--/1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland. Sandy soils; mesic openings. 45-640 m.	May-Jul (Aug)	Moderate Potential: Limited habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.
Tiburon buckwheat <i>Eriogonum luteolum</i> var. <i>caninum</i>	--/--/1B.2	Chaparral, valley and foothill grassland, cismontane woodland, coastal prairie. Serpentine soils; sandy to gravelly sites. 60-640 m.	May-Sep	Moderate Potential: Limited habitat associated with Agua Caliente Creek and Pequeno Creek is available in Plan area.

SOURCE: CDFW CNDDDB 2018.

ABBREVIATIONS:

FEDERAL

FE FEDERAL ENDANGERED

STATE

CE CALIFORNIA ENDANGERED SPECIES

CR CALIFORNIA RARE

CALIFORNIA RARE PLANT RANKS (FORMERLY CNPS LISTS)

1A CNPS - PRESUMED EXTIRPATED IN CALIFORNIA AND EITHER RARE OR EXTINCT ELSEWHERE

1B CNPS - RARE, THREATENED, OR ENDANGERED

2B CNPS - PLANTS RARE, THREATENED, OR ENDANGERED IN CALIFORNIA BUT MORE COMMON ELSEWHERE

3 REVIEW LIST: PLANTS WHICH MORE INFORMATION IS NEEDED

CALIFORNIA THREAT RANKS

0.1 SERIOUSLY THREATENED IN CALIFORNIA

0.2 MODERATELY THREATENED IN CALIFORNIA

0.3 NOT VERY THREATENED IN CALIFORNIA

TABLE 3.3-3: SPECIAL-STATUS ANIMALS WITHIN 9-QUADRANGLE REGION FOR THE PLAN AREA WITH MODERATE TO HIGH POTENTIAL FOR OCCURRENCE

ANIMAL	STATUS (FED/CA)	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
MAMMALS			
pallid bat <i>Antrozous pallidus</i>	--/SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	High Potential: The nearest previously documented occurrence is located approximately 0.65 miles to the south. Potential roosting habitat in existing structures and trees. Site could provide foraging opportunities.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--/SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Moderate Potential: The nearest previously documented occurrence is located approximately 9.7 miles to the southwest. Potential roosting habitat in existing structures and trees. Site could provide foraging opportunities.

3.3 BIOLOGICAL RESOURCES

<i>ANIMAL</i>	<i>STATUS (FED/CA)</i>	<i>HABITAT ASSOCIATION</i>	<i>POTENTIAL FOR OCCURRENCE</i>
BIRDS			
bank swallow <i>Riparia</i>	--/CT	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	High Potential: This species is documented regionally, including in the Plan area. Habitat associated with Agua Caliente Creek and Pequeno Creek is available in the Plan area.
AMPHIBIANS & REPTILES			
California giant salamander <i>Dicamptodon ensatus</i>	--/SSC	Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County, and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	High Potential: There is one previously documented occurrence within the Plan area. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat for adult breeding form and larval development of this species within the Plan area. There is very limited habitat for the terrestrial adult form of this species.
California red-legged frog <i>Rana draytonii</i>	FT/SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Moderate Potential: The nearest previously documented occurrence is located approximately 3.6 miles to the west. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat, however, there is very limited upland habitat within the Plan area.
foothill yellow-legged frog <i>Rana boylei</i>	--/CC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Moderate Potential: The nearest previously documented occurrence is located approximately 1.8 miles to the southwest. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat, however, there is very limited upland habitat within the Plan area.
red-bellied newt <i>Taricha rivularis</i>	--/SSC	Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	Moderate Potential: The nearest previously documented occurrence is located approximately 3.9 miles to the north. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat for adult breeding form and larval development of this species within the Plan area. There is very limited habitat for the terrestrial adult form of this species.
western pond turtle <i>Emys marmorata</i>	--/SSC	Needs mammal burrows for refuge and oviposition sites. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Moderate Potential: The nearest previously documented occurrence is located approximately 1.3 miles to the southeast. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat for this species within the Plan area. Upland habitat for egg-laying is limited, to not existent, in the Plan area.

ANIMAL	STATUS (FED/CA)	HABITAT ASSOCIATION	POTENTIAL FOR OCCURRENCE
FISH			
steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus</i> pop. 11	FT/--	From Russian River, south to Soquel Creek and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins.	High Potential: The nearest previously documented occurrence is located approximately 1.9 miles to the southwest in Sonoma Creek. The Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek and provide habitat for this species within the Plan area.

SOURCE: CDFW CNDDDB 2018.

ABBREVIATIONS:

FEDERAL

FE FEDERAL ENDANGERED

FT FEDERAL THREATENED

FC FEDERAL CANDIDATE

FD FEDERAL DELISTED

MBTA MIGRATORY BIRD TREATY ACT

STATE

CE CALIFORNIA ENDANGERED SPECIES

CT CALIFORNIA THREATENED

SSC CDFW SPECIES OF SPECIAL CONCERN

FP FULLY PROTECTED

3.3.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the state and nation including the California Department of Fish and Wildlife (CDFW), USFWS, U.S. Army Corps of Engineers (USACE), and the National Marine Fisheries Service. These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the federal, state and local regulations that are applicable to the Project.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), administered by the USFWS and National Marine Fisheries Service (NMFS), provides protection to plant and wildlife species listed as endangered or threatened. In general, USFWS has jurisdiction over terrestrial and fresh-water species, while NMFS has jurisdiction over ocean-going species.

Section 9 of FESA generally prohibits all persons from causing the "take" of any member of a listed species. (16 U.S.C. Section 1538.) This prohibition applies mainly to animals; it only extends to plants in areas "under federal jurisdiction" and plants already protected under state law. (Id., subd. (a)(2)(B); see also Northern Cal. River Watch v. Wilcox (9th Cir. 2010) 620 F.3d 1075.)

"Take" is defined in statute as, "... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." (16 U.S.C. Section 1532(19).) Harass is defined in regulation as "...an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering." (See 50 CFR Section 17.3.) Harm is defined in regulation as "...significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering." (Id.) Despite the general prohibition against take, FESA in some

3.3 BIOLOGICAL RESOURCES

circumstances permits “incidental take,” which means take that is incidental to, but not the purpose of, the carrying out of an otherwise lawful activity. (16 U.S.C. Section 1539(a).) Under section 10 of FESA, persons seeking permission to engage in actions that could result in such incidental take can obtain such permission through the approval of a habitat conservation plan (HCP) by either USFWS or NMFS. (16 U.S.C., Section 1539(a).)

Proposed federal actions that would result in take of a federal-listed or proposed species require consultation with USFWS or NMFS under section 7 of FESA. (Id., Section 1536.) The objective of consultation is to determine whether the proposed federal action would jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat. Where such an outcome would not occur, USFWS or NMFS must still impose reasonable and prudent measures to minimize the effects of the incidental taking. Where such an outcome could occur, USFWS or NMFS must propose reasonable and prudent alternatives that, if implemented, would avoid such an outcome. (Id.)

Compliance with ESA can be achieved under Section 7 or 10 of FESA depending on the involvement of the federal government. Section 7 requires federal agencies to make a finding on all federal actions, including the approval by an agency of a public or private action, such as the issuance of a “404 permit” for filling wetlands by the USACE, on the potential of the action to jeopardize the continued existence of any listed species impacted by the action or to result in the destruction or adverse modification of such species’ critical habitat. Provisions of Section 10 are implemented when there is no federal involvement in a project except compliance with FESA. A take not specifically allowed by federal permit under Section 7 or Section 10(a)(1)(B) of the FESA is subject to enforcement through civil or criminal proceedings under Section II of the FESA.

Migratory Bird Treaty Act

To kill, possess, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., Section 703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Federal Bald and Golden Eagle Protection Act

The Federal Bald and Golden Eagle Protection Act provide regulations to protect bald and golden eagles as well as their nests and eggs from willful damage or injury.

Clean Water Act – Section 404

Section 404 of the Clean Water Act (CWA) regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. Section 328.2(f)]. Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. Section 328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high-water mark (OHWM). The OHWM is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical character of the soil,

destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. Section 328.3(e)].

Clean Water Act – Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the Regional Water Quality Control Board (RWQCB). To obtain the water quality certification, the RWQCB must indicate that the proposed fill would be consistent with the standards set forth by the state.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act prohibits the obstruction or alteration of any navigable water of the United States. The Act requires authorization from the USACE for any excavation or deposition of materials into these waters or for any work that could affect the course, location, condition, or capacity of rivers or harbors.

STATE

Fish and Game Code Section 2050-2097 - California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) administers a number of laws and programs designed to protect fish and wildlife resources. Principal of these is the California Endangered Species Act of 1984 (CESA Fish and Game Code Section 2050 et seq.), which regulates the listing and take of state endangered and threatened species, as well as candidate species. Under Section 2081 of CESA, CDFW may authorize take of an endangered and/or threatened species, or candidate species, by an incidental take permit or Memorandum of Understanding (MOU) for scientific, educational, or management purposes. In approving an incidental permit, CDFW must ensure, among other things, that “[t]he impacts of the authorized take shall be minimized and fully mitigated.” Further, “[t]he measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking on the species. Where various measures are available to meet this obligation, the measures required shall maintain the applicant's objectives to the greatest extent possible. All required measures shall be capable of successful implementation.” To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants, as previously designated under the California Native Plant Protection Act (discussed below). Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code Section 2800-2835 – Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning Act is set forth in Fish and Game Code Sections 2800–2835. The intent of the legislation is to provide for conservation planning as an officially recognized policy that can be used as a tool to eliminate conflicts between the protection of natural resources and the need for growth and development. In addition, the legislation promotes conservation planning as a means of coordination and cooperation among private interests, agencies, and landowners, and as a mechanism for multispecies and multi-habitat management and

conservation. The development of Natural Community Conservation Plans (NCCPs) is an alternative to obtaining take authorization under Section 2081 of the Fish and Game Code.

Fish and Game Code Section 1900-1913 California Native Plant Protection Act

In 1977, the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the state. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Wildlife Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Fish and Game Code Section 3503, 3503.5, 3800 - Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called "raptors," are protected. The law indicates that it is unlawful to take, possess, or destroy the nest or eggs of any such bird, unless it is in accordance with the Code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Fish and Game Code Section 1601-1603 – Streambed Alteration

Under the California Fish and Game Code, CDFW has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a "Streambed Alteration Agreement" from CDFW prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on fish and wildlife resources. These agreements are usually initiated through the local CDFW warden and will specify timing and construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Fish and Game Code Section 3511, 3513, 4700, and 5050 – Fully Protected Species

Fish and Game Code Sections 3511, 3513, 4700, and 5050 pertain to fully protected wildlife species (birds in Sections 3511 and 3513, mammals in Section 4700, and reptiles and amphibians in Section 5050) and strictly prohibit the take of these species. CDFW cannot issue a take permit for fully protected species, except under narrow conditions for scientific research or the protection of livestock, or if an NCCP has been adopted.

California Environmental Quality Act Guidelines Section 15380 – Unlisted Species Worth of Protection

The CEQA Guidelines provide that a species that is not listed on the federal or state endangered species list may nevertheless be considered rare or endangered if the species meets certain criteria. (CEQA Guidelines Section 15380) Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e. candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFW. Additionally, the California Native Plant Society (CNPS), a nongovernmental organization, maintains a list of plant species native to California that have low populations, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere.

California Wetlands Conservation Policy

In August 1993, the Governor announced the “California Wetlands Conservation Policy.” The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of State and federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Wat. Code, Section 13000 et seq.) is California’s primary water quality control statute. But its protections extend to wetlands, and in some instances wetlands that are not subject to federal jurisdiction under the Clean Water Act. Under the Porter-Cologne Act definition, waters of the state are “any surface water or groundwater, including saline waters, within the boundaries of the state.” (Wat. Code, Section 13050[e].) Although all waters of the United States that are within the borders of California are also waters of the state, the reverse is not necessarily true. Therefore, California retains authority to regulate discharges of waste into any waters of the state, discharges to receiving waters more broadly than the CWA does.

Waters of the state fall under the jurisdiction of the nine RWQCBs. Under Porter-Cologne, each RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution. California Water Code Section 13260 requires any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements [WDRs]) with the applicable RWQCB. Construction activities that may discharge wastes into the waters of the state must meet the discharge control requirements of the Porter-Cologne Act.

LOCAL

Sonoma County General Plan

The Sonoma County General Plan contains the following goals, objectives, and policies that are relevant to biological resources:

LAND USE ELEMENT

GOAL LU-10: The uses and intensities of any land development shall be consistent with preservation of important biotic resource areas and scenic features.

Objective LU-10.1: Accomplish development on lands with important biotic resources and scenic features in a manner which preserves or enhances these features.

CONSERVATION AND OPEN SPACE ELEMENT

GOAL OSRC-7: Protect and enhance the County's natural habitats and diverse plant and animal communities.

Objective OSRC-7.1: Identify and protect native vegetation and wildlife, particularly occurrences of special status species, wetlands, sensitive natural communities, woodlands, and areas of essential habitat connectivity.

Objective OSRC-7.2: Designate important Biotic Habitat Areas and update designations periodically using credible data sources.

Objective OSRC-7.3: Establish development guidelines to protect designated Biotic Habitat Areas and assure that the quality of these natural resources is maintained.

Objective OSRC-7.4: Where appropriate, support regulatory efforts by other agencies to protect biotic habitat.

Objective OSRC-7.5: Maintain connectivity between natural habitat areas.

Objective OSRC-7.6: Establish standards and programs to protect native trees and plant communities.

Objective OSRC-7.7: Support use of native plant species and removal of invasive exotic species.

Objective OSRC-7.8: Encourage voluntary efforts to restore and enhance biotic habitat.

Objective OSRC-7.9: Preserve and restore the Laguna de Santa Rosa, San Pablo Bay and Petaluma marshes and other major marshes and wetlands.

Objective OSRC-7.10: Promote production of native marine and shoreline plant and animal habitats along the Pacific Coast and San Pablo Bay shorelines.

Policy OSRC-7c: Notify discretionary and ministerial permit applicants of possible requirements of Federal and State regulatory agencies related to jurisdictional wetlands or special status species.

Policy OSRC-7k: Require the identification, preservation and protection of native trees and woodlands in the design of discretionary projects, and, to the maximum extent practicable, minimize the removal of native trees and fragmentation of woodlands, require any trees removed to be replaced, preferably on the site, and provide permanent protection of other existing woodlands where replacement planting does not provide adequate mitigation.

Policy OSRC-7o: Encourage the use of native plant species in landscaping. For discretionary projects, require the use of native or compatible non-native species for landscaping where consistent with fire safety. Prohibit the use of invasive exotic species.

GOAL OSRC-8: Protect and enhance Riparian Corridors and functions along streams, balancing the need for agricultural production, urban development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, flood control, bank stabilization, and other riparian functions and values.

Objective OSRC-8.1: Designate all streams shown on USGS 7.5 minute quadrangle topographic maps as of March 18, 2003, as Riparian Corridors and establish streamside conservation areas along these designated corridors.

Objective OSRC-8.2: Provide standards for land use and development in streamside conservation areas that protect riparian vegetation, water resources and habitat values while considering the needs of residents, agriculture, businesses and other land users.

Objective OSRC-8.3: Recognize and protect riparian functions and values of undesignated streams during review of discretionary projects.

Policy OSRC-8f: Develop and/or adopt, where appropriate, revised streamside specific standards, guidelines, and/or best management practices that provide for protection of Riparian Corridors by watershed, stream, or other geographic areas. Once adopted, the revised standards would replace the standards that are in effect at the time.

Policy OSRC-8i: As part of the environmental review process, refer discretionary permit applications near streams to CDFG and other agencies responsible for natural resource protection.

Sonoma County Code

RIPARIAN AND CREEK STANDARDS

Section 7-14.5 of the Sonoma County Code establishes stream setbacks for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half times the height of the stream bank plus thirty feet, 2) thirty feet outward from the top of the stream bank, or 3) any distance established in the general plan and/or zoning code.

The Riparian Corridor Combining Zone is established by Article 65 of the Sonoma County Code to protect biotic resource communities, including critical habitat areas within and along riparian corridors, for their habitat and environmental value, and to implement the provisions of the General Plan Open Space and Resource Conservation and Water Resources Elements. These provisions are intended to protect and enhance riparian corridors and functions along designated streams, balancing the need for agricultural production, urban development, timber and mining operations,

3.3 BIOLOGICAL RESOURCES

and other land uses with the preservation of riparian vegetation, protection of water resources, floodplain management, wildlife habitat and movement, stream shade, fisheries, water quality, channel stability, groundwater recharge, opportunities for recreation, education and aesthetic appreciation and other riparian functions and values. The Riparian Corridor Combining Zone generally prohibits ground-disturbing activities such as grading, vegetation removal, agricultural cultivation, structures, roads, utility lines, and parking lots, with certain exceptions.

TREE PROTECTION ORDINANCE

Section 26-88-010(m) of the Sonoma County Code outlines the County's Tree Protection Ordinance. Discretionary projects must be designed to minimize the destruction of certain tree species as defined in the code. Discretionary projects are subject to construction standards established to prevent harm or removal of protected trees, including prohibitions on dumping harmful substances in proximity of protected trees, marking the location of roots prior to construction and other measures.

HERITAGE OR LANDMARK TREE ORDINANCE

Chapter 26D of the Sonoma County Code outlines the County's Heritage or Landmark Tree Ordinance. According to the Code, no person shall remove a heritage or landmark tree without obtaining a tree permit as outlined in Section 26D-5 and as exempted under Section 26D-6. A "Landmark tree" means a tree or grove of trees so designated by the Sonoma County board of supervisors because of its outstanding characteristics in terms of size, age, rarity, shape or location. A "Heritage tree" means a tree or grove of trees so designated by the Sonoma County board of supervisors because of historical interest or significance.

VALLEY OAK HABITAT COMBINING DISTRICT

Article 67 of the Sonoma County Code establishes the Valley Oak Habitat (VOH) Combining District. The purpose of this Article is to protect and enhance valley oaks and valley oak woodlands. The Article outlines mitigation requirements for cutting down or removing valley oaks within the VOH district. Additionally, where any development project within the VOH district is subject to design review pursuant to another provision of the Article, the design review approval shall include measures to protect and enhance valley oaks on the project site in accordance with guidelines adopted by resolution or ordinance of the board of supervisors. Such measures shall include, but not be limited to, a requirement that valley oaks shall comprise a minimum of fifty percent of the required landscape trees for the development project.

Limited portions of the Plan area are located in the VOH district. The portions of the Plan area within the district generally include the area west of Highway 12 and north of Maxwell Farms Regional Park and some area near Sonoma Charter School.

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

A significant impact would occur if implementation of the Project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally - or state- protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

IMPACTS AND MITIGATION

Impact 3.3-1: Implementation of the Project could have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Less than Significant)

Approval of the Project would not directly approve or entitle any development or infrastructure projects. However, implementation of the Project, including adoption of the Specific Plan and the Specific Plan Zoning Map, would allow and facilitate future development in the Plan area, which could result in adverse impacts to special-status plant and wildlife species, as well as sensitive natural habitat or wildlife movement corridors.

PLANTS

The CNDDDB search identified 53 documented special-status plant species within the 9-quad region for the Plan area. The developed areas within the Plan area provide very limited to no potential for special status species plants. The portion of the Plan area with the highest potential for presence of any special status plant species is along the Agua Caliente Creek and the Pequeno Creek. This area provides limited woodland and riparian habitat within the Plan area. While it is anticipated that the Agua Caliente Creek and the Pequeno Creek will be preserved and undeveloped, there exists the

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potential for future development or infrastructure improvements to encroach upon sensitive plant habitat adjacent to the creeks.

INVERTEBRATES

Special-status invertebrates that occur within the 9-quad region (which includes the following USGS quadrangles: Kenwood, Rutherford, Yountville, Glen Ellen, Sonoma, Napa, Petaluma River, Sears Point, Cuttings Wharf) for the Plan area include: California freshwater shrimp and vernal pool fairy shrimp. The Plan area does not contain suitable habitat for these special-status invertebrate species. As a result, subsequent development under the Project would not result in any substantial adverse effects to these species.

AMPHIBIANS & REPTILES

Special-status reptiles and amphibians that occur within the 9-quad region for the Plan area include: California giant salamander, California red-legged frog, foothill yellow-legged frog, red-bellied newt, and western pond turtle. The Plan area contains moderately suitable habitat for California red-legged frog, foothill yellow-legged frog, red-bellied newt, and western pond turtle. California giant salamander has a high potential to exist within the creek areas. The Agua Caliente Creek and Pequeno Creek provide aquatic habitat for California giant salamander adult breeding form and larval development of this species within the Plan area. However, there is very limited upland habitat within the Plan area for the terrestrial adult form of this species. While it is anticipated that the Agua Caliente Creek and the Pequeno Creek will be preserved, there exists the potential for future development or infrastructure improvements to encroach upon sensitive plant habitat adjacent to the creeks.

FISH

Special-status fish that occur within the 9-quad region for the Plan area include: Delta smelt, longfin smelt, Sacramento splittail, and steelhead - Central Valley DPS. The Plan area does not contain suitable habitat for Delta smelt, longfin smelt, and Sacramento splittail. Subsequent development under the Project would not result in any substantial adverse effects to these species. However, the Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek and provide potential habitat for steelhead - Central Valley DPS.

BIRDS

Special-status birds that occur within the 9-quad region for the Plan area include: bald eagle, bank swallow, black swift, black-crowned night heron, burrowing owl, California black rail, California horned lark, California Ridgway's rail, double-crested cormorant, ferruginous hawk, golden eagle, grasshopper sparrow, great blue heron, great egret, northern harrier, San Pablo song sparrow, saltmarsh common yellowthroat, Swainson's hawk, tricolored blackbird, western snowy plover, western yellow-billed cuckoo, white-tailed kite, and yellow rail. Because of the high mobility of these species, most of them have the potential to pass through the site from time to time. Bank swallow and yellow rail have been documented on or immediately adjacent to the Plan area. The remaining species have been documented within 3.0 to 13.3 miles from the Plan area.

As shown in Table 3.3-3, habitat is not present for the following species: bald eagle, black-crowned night heron, California black rail, California Ridgway's rail, double-crested cormorant, golden eagle, San Pablo song sparrow, saltmarsh common yellowthroat, tricolored blackbird, western snowy

plover, and yellow rail. The following species have a low potential to occur in the Plan area: black swift, burrowing owl, California horned lark, ferruginous hawk, grasshopper sparrow, great blue heron, great egret, northern harrier, Swainson's hawk, western yellow-billed cuckoo, and white-tailed kite. The Plan area lacks grasslands used for nesting and foraging for many of these species. Additionally, limited habitat is located along Agua Caliente Creek and Pequeno Creek. Nesting is also possible in other larger trees throughout the Plan area. Foraging habitat is limited, to not existent in the Plan area.

Bank swallow has a high potential to occur in the Plan area. This species is documented regionally, including in the Plan area. Agua Caliente Creek and Pequeno Creek provide available habitat in Plan area.

Subsequent development under the Project could result in the direct loss of habitat areas associated with these special-status bird species, since suitable habitat for these species does occur in the region and along Agua Caliente Creek and Pequeno Creek. Additionally, indirect impacts to special-status bird species could occur with implementation of the Project. Indirect impacts could include habitat degradation and increased human presence.

MAMMALS

Special-status mammals that occur within the 9-quad region for the Plan area include: American badger, pallid bat, salt-marsh harvest mouse, Suisun shrew, and Townsend's big-eared bat. Of these species, the following have the potential to occur on-site: American badger (low potential), pallid bat (high potential), and Townsend's big-eared bat (moderate potential). Agua Caliente Creek and Pequeno Creek provide some habitat for movement, foraging, and denning of American badger. Potential roosting habitat for pallid bat and Townsend's big-eared bat is located in existing structures and trees in the Plan area. The Plan area could also provide foraging opportunities.

Subsequent development under the Project could result in the direct loss of habitat areas associated with these special-status mammal species, since suitable habitat for these species does occur in the region. Additionally, indirect impacts to special-status mammal species could occur with implementation of the Project. Indirect impacts could include habitat degradation, increased human presence, and the loss of foraging habitat.

CONCLUSION

Construction and maintenance activities associated with future development projects under the Project could result in the direct and indirect loss or indirect disturbance of special-status plant or wildlife (i.e. amphibian, reptile, fish, bird, or mammal) species or their habitats that are known to occur, or have potential to occur, in the region. Impacts to special-status species or their habitat could result in a substantial reduction in local population size, lowered reproductive success, or habitat fragmentation. Significant impacts on special-status species associated with individual subsequent projects could include:

- increased mortality caused by higher numbers of automobiles in new areas of development;
- direct mortality from the collapse of underground burrows, resulting from soil compaction;
- direct mortality resulting from the movement of equipment and vehicles through construction areas;
- direct mortality resulting from removal of trees with active nests;

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- direct mortality or loss of suitable habitat resulting from the trimming or removal of obligate host plants;
- loss of breeding, foraging, and refuge habitat resulting from the permanent removal of riparian vegetation;
- abandoned eggs or young and subsequent nest failure for special-status nesting birds, including raptors, and other non-special-status migratory birds resulting from construction-related noises;
- loss or disturbance of rookeries and other colonial nests;
- loss of suitable foraging habitat for special-status raptor species; and
- loss of migration corridors resulting from the construction of permanent structures or features.

Subsequent development projects will be required to comply with the County's General Plan and adopted Federal, State, and local regulations for the protection of special-status plants and animals, including habitat. The Sonoma County General Plan includes numerous policies and actions intended to protect special-status plants and animals, including habitat, from adverse effects associated with future development and improvement projects. The Specific Plan includes Measures Bio-A, which requires plant surveys prior to grading in areas along the Agua Caliente Creek corridor and the Pequeno Creek corridor. Measure Bio-B requires avoidance and minimization measures (such as preconstruction surveys, corrective measures, and construction personnel training) for amphibian and reptile species. Measure Bio-C requires compliance with Riparian Corridor Combining Zone provisions to avoid instream impacts to protected fish. Measure Bio-D requires preconstruction surveys and appropriate buffers for bird species. Measure Bio-E requires surveys and buffers for bat maternity roosts if removal of roosting areas would occur during the bat pupping season. While future development of the Plan area has the potential to result in significant impacts to protected special-status plants and animals, including habitat, the implementation of Specific Plan Measures Bio-A through Bio-E as well as Federal and State regulations, would reduce impacts to these resources to a **less than significant** level.

SPECIFIC PLAN COMPONENTS THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Measure Bio-A: *On parcels adjacent to Agua Caliente Creek and Pequeno Creek, future projects subject to a grading permit shall retain a biologist to perform special-status plant surveys. The surveys shall be performed during the floristic season. If any special-status plants are found during the surveys, the project proponent(s) shall contact Permit Sonoma to obtain the appropriate avoidance and minimization measures and shall implement the measures, including throughout project design, construction, and operation, as required. Projects where avoidance or minimization is not feasible are subject to a use permit.*

Measure Bio-B: *Future projects that require a grading permit within the Plan area shall implement the following measures to avoid or minimize impacts on special-status amphibian and reptile species:*

- *Preconstruction surveys for California giant salamander, California red-legged frog, foothill yellow-legged frog, red-bellied newt, and western pond turtle shall be conducted by a qualified biologist in all areas of suitable habitat (e.g., the Agua Caliente Creek Corridor, the Pequeno Creek Corridor, and the upland areas associated with either creek) within 500 feet of project disturbance. Surveys shall be conducted within 24 hours before project disturbance.*

- *If any of these species are found during preconstruction surveys, activities within 200 feet of the find shall cease until appropriate corrective measures have been completed or it is determined by the qualified biologist and County staff, in coordination with USFWS and CDFW, that the species will not be harmed by the continuation of activities. Any sightings or incidental take shall be reported to USFWS and CDFW immediately.*
- *Construction personnel performing activities within aquatic habitats and adjacent uplands to be disturbed by project activities shall receive worker environmental awareness training from a qualified biologist to instruct workers to recognize the species, their habitats, and measures being implemented for its protection. Verification shall be provided to County confirming that workers have received environmental awareness training.*

Measure Bio-C: *Future development projects within 100-feet of Agua Caliente Creek or Pequeno Creek shall be subject to the provisions of the Riparian Corridor Combining Zone.*

Measure Bio-D: *Future development projects within the Plan area shall implement the following measures to avoid or minimize impacts to special-status birds that may occur on the site:*

- *Preconstruction surveys for active nests of bank swallow, black swift, burrowing owl, California horned lark, ferruginous hawk, grasshopper sparrow, great blue heron, great egret, northern harrier, Swainson's hawk, western yellow-billed cuckoo, and white-tailed kite shall be conducted by a qualified biologist in all areas of suitable habitat (e.g., open grassland or field areas, larger trees throughout the Plan area, Agua Caliente Creek Corridor, Pequeno Creek Corridor, and the upland areas associated with either creek) within 500 feet of project disturbance. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the respective nesting seasons in a given area.*
- *If any active nests, or behaviors indicating that active nests are present, are observed, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. The size of the buffer shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. If buffers are adjusted, monitoring will be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist has determined that the young have fledged or the nest site is otherwise no longer in use.*

Measure Bio-E: *Future development projects within the Plan area shall implement the following measures to avoid or minimize impacts on special-status bats:*

- *If a project will disturb roosting areas (i.e. buildings, trees, shrubs, bridges, etc.) during the bat pupping season (April 1 through July 31), surveys for active maternity roosts shall be conducted by a qualified biologist. The surveys shall be conducted from dusk until dark.*
- *If a special-status bat maternity roost is located, appropriate buffers around the roost sites shall be determined by a qualified biologist and implemented to avoid destruction or abandonment of the roost resulting from habitat removal or other project activities. The size of the buffer shall depend on the species, roost location, and specific construction activities*

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to be performed in the vicinity. No project activity shall commence within the buffer areas until the end of the pupping season (August 1) or until a qualified biologist confirms the maternity roost is no longer active.

Impact 3.3-2: Implementation of the Project could result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (Less than Significant)

Streams, rivers, wet meadows, and vernal pools (wetlands and jurisdictional waters) are of high concern because they provide unique aquatic habitat (perennial and ephemeral) for many endemic species, including special-status plants, birds, invertebrates, and amphibians. These aquatic habitats oftentimes qualify as protected wetlands or jurisdictional waters and are protected from disturbance through the CWA.

The Plan area is located in an urban area and the majority of the project site is built out. The only aquatic resources in the Plan area are Agua Caliente Creek and Pequeno Creek. Other known wetlands or other known waters are not present. The Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek. Agua Caliente Creek crosses the southern portion of the Plan area north of Maxwell Farms. Pequeno Creek crosses the northern portion of the Plan area near Larson Park. Scattered riparian habitat exists along both creeks. Medium Density Residential uses are proposed within the Plan area adjacent to Agua Caliente Creek, and Mixed Use and Recreation uses are proposed within the Plan area adjacent to Pequeno Creek. The future construction and operation of these uses will be required to comply with all applicable laws and regulations, so as not to disturb existing creek habitat.

Section 404 of the CWA requires any project that involves disturbance to a wetland or water of the U.S. to obtain a permit that authorizes the disturbance. If a wetland or jurisdictional water is determined to be present, then a permit must be obtained from the USACE to authorize a disturbance to the wetland. Although subsequent projects may disturb protected wetlands and/or jurisdictional waters, the regulatory process that is established through Section 404 of the CWA ensures that there is “no net loss” of wetlands or jurisdictional waters. If, through the design process, it is determined that a future development project cannot avoid a wetland or jurisdictional water, then the USACE would require that there be an equal amount of wetland created elsewhere to mitigate any loss of wetland.

There is a chance that water features could be impacted throughout the buildout of the individual projects. The implementation of an individual project would require a detailed and site-specific review of the site to determine the presence or absence of water features. If water features are present and disturbance is required, Federal and State laws require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these Federal and State laws are implemented through the permit process.

Subsequent development projects will be required to comply with the County General Plan and adopted Federal, State, and local regulations for the protection of sensitive natural communities, including protected wetlands. The Sonoma County General Plan includes numerous policies and actions intended to protect wetlands and waters of the U.S. from adverse effects associated with future development and improvement projects. While future development has the potential to

result in significant impacts to protected water features, compliance with existing Federal and State regulations would reduce impacts to these resources. Therefore, this impact is **less than significant**.

Impact 3.3-3: Implementation of the Project may result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Less than Significant)

The CNDDDB record search revealed three documented occurrences of sensitive habitat within the 9-quad region for the Plan area: Coastal Brackish Marsh, Northern Coastal Salt Marsh, Northern Vernal Pool, and Valley Needlegrass Grassland. However, none of these habitats are documented within the Plan area. While not always documented as a sensitive natural community in the CNDDDB, streams, rivers, wet meadows, and vernal pools are of high concern because they provide unique aquatic habitat for many endemic species, including special-status plants, birds, invertebrates, and amphibians.

As noted previously, the Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek. Agua Caliente Creek crosses the southern portion of the Plan area north of Maxwell Farms. Pequeno Creek crosses the northern portion of the Plan area near Larson Park. Scattered riparian habitat exists along both creeks. Medium Density Residential uses are proposed within the Plan area adjacent to Agua Caliente Creek, and Mixed Use and Recreation uses are proposed within the Plan area adjacent to Pequeno Creek.

The segments of Agua Caliente and Pequeno Creek that traverse the Plan area are designated with the Riparian Corridor Combining Zone. The Specific Plan will maintain this Combining Zone designation, which generally prohibits ground-disturbing activities within fifty feet of the designated corridors, with certain exceptions where vegetation removal is minimized, minor activities associated with an existing structure are involved, where it is determined that the area has no substantial value for riparian functions, or if a conservation plan is adopted that provides for protection of the riparian functions.

In addition, Section 7-14.5 of the Sonoma County Code establishes stream setbacks for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half times the height of the stream bank plus thirty feet, 2) thirty feet outward from the top of the stream bank, or 3) any distance established in the general plan and/or zoning code. Future development project would be subject to these setback requirements, or those of the riparian corridor combining zone, whichever is greater.

The Sonoma County General Plan includes numerous policies intended to protect sensitive natural communities, including riparian habitat, from adverse effects associated with future development and improvement projects. For example, Goal OSRC-8 aims to protect and enhance Riparian Corridors and functions along streams, balancing the need for agricultural production, urban development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, flood control, bank stabilization, and other riparian functions and values. This goal also includes three objectives and two policies which help implement and meet this goal.

While future development has the potential to result in significant impacts to protected habitats, implementation of the existing county code as discussed above would ensure that this impact is **less than significant**.

Impact 3.3-4: Implementation of the Project may result in interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Less than Significant)

Habitat loss, fragmentation, and degradation resulting from land use changes or habitat conversion can alter the use and viability of wildlife movement corridors (i.e., linear habitats that naturally connect and provide passage between two or more otherwise disjunct larger habitats or habitat fragments). Wildlife habitat corridors maintain connectivity for daily movement, travel, mate-seeking, and migration; plant propagation; genetic interchange; population movement in response to environmental change or natural disaster; and recolonization of habitats subject to local extirpation or removal. The suitability of a habitat as a wildlife movement corridor is related to, among other factors, the habitat corridor's dimensions (length and width), topography, vegetation, exposure to human influence, and the species in question.

Species utilize movement corridors in several ways. "Passage species" are those species that use corridors as thru-ways between outlying habitats. The habitat requirements for passage species are generally less than those for corridor dwellers. Passage species use corridors for brief durations, such as for seasonal migrations or movement within a home range. As such, movement corridors do not necessarily have to meet any of the habitat requirements necessary for a passage species everyday survival. "Corridor dwellers" are those species that have limited dispersal capabilities – a category that includes most plants, insects, reptiles, amphibians, small mammals, and birds – and use corridors for a greater length of time.

The CNDDDB record search did not reveal any documented wildlife corridors or wildlife nursery sites on or adjacent to the Plan area. The only recognized movement corridors for wildlife through the Plan area are for aquatic species along creeks and drainages. As noted previously, the Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek. Development along these riparian corridors are subject to setbacks and construction limitations of the Riparian Corridor Combining Zone as described above, to preserve riparian habitat.

Subsequent development projects will be required to comply with the General Plan and adopted Federal, State, and local regulations for the protection of movement corridors. The Sonoma County General Plan includes numerous policies intended to protect movement corridors from adverse effects associated with future development and improvement projects. For example, General Plan Policy OSRC-7b(1)(d) provides limited direction for ministerial permit applications within the designated corridors, attempting to minimize new fencing designed to exclude wildlife and use of roadway undercrossings and oversized culverts to allow for movement of terrestrial wildlife. Policy OSRC-7e encourages property owners to consult with CDFW and install wildlife friendly fencing in all areas outside urban land use designations. Policy OSRC-7i calls for a comprehensive study of habitat fragmentation, connectivity loss, and the effects of exclusionary fencing on wildlife movement.

While future development projects have the potential to result in significant impacts to protected movement corridors, the implementation of existing riparian corridor protections would limit impacts to these resources to a **less than significant** level.

Impact 3.3-5: Implementation of the Project may result in conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant)

The Sonoma County General Plan and Municipal Code contain local policies and ordinances which aim to protect biological resources within the County, including the Plan area. Specifically, the Conservation and Open Space Element of the General Plan establishes numerous policies related to biological resources, which are listed below. Additionally, the Sonoma County VOH Combining District establishes mitigation requirements for removal of large valley oak trees. Further, the Tree Protection Ordinance and Heritage or Landmark Tree Ordinance regulate the removal of protected, heritage or landmark trees. Consistency with the Conservation and Open Space Element and the Tree Ordinances is discussed below.

GENERAL PLAN OPEN SPACE AND RESOURCE CONSERVATION ELEMENT POLICIES

Policy OSRC-7c: Notify discretionary and ministerial permit applicants of possible requirements of Federal and State regulatory agencies related to jurisdictional wetlands or special status species.

- **Consistent:** *Future applicants within the Plan area would be subject to all Federal, State, and local requirements related to jurisdictional wetlands or special status species.*

Policy OSRC-7k: Require the identification, preservation and protection of native trees and woodlands in the design of discretionary projects, and, to the maximum extent practicable, minimize the removal of native trees and fragmentation of woodlands, require any trees removed to be replaced, preferably on the site, and provide permanent protection of other existing woodlands where replacement planting does not provide adequate mitigation.

- **Consistent:** *The majority of the Plan area is built out and contains urban habitat. Future development projects within the Plan area would be subject to existing local policies, such as the County's Tree Ordinance, which contain specific tree replacement requirements. Additionally, the Project includes Design Guidelines and policies which encourage the use of native vegetation and trees.*

Policy OSRC-7o: Encourage the use of native plant species in landscaping. For discretionary projects, require the use of native or compatible non-native species for landscaping where consistent with fire safety. Prohibit the use of invasive exotic species.

- **Consistent:** *The Specific Plan Design Guidelines encourage the use of native plants and discourage the use of non-native plants. The Design Guidelines also require the use of native riparian vegetation in or adjacent to a riparian corridor.*

Policy OSRC-8f: Develop and/or adopt, where appropriate, revised streamside specific standards, guidelines, and/or best management practices that provide for protection of Riparian Corridors by watershed, stream, or other geographic areas. Once adopted, the revised standards would replace the standards that are in effect at the time.

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- **Consistent:** *The Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek. Agua Caliente Creek crosses the southern portion of the Plan area north of Maxwell Farms. Pequeno Creek crosses the northern portion of the Plan area near Larson Park. These creeks are designated "Riparian Corridors". Future development within the Plan area would be subject to the Riparian Corridor ordinance and all Federal, State, and other local requirements related to streams and waterways.*

Policy OSRC-8i: As part of the environmental review process, refer discretionary permit applications near streams to CDFG [CDFW] and other agencies responsible for natural resource protection.

- **Consistent:** *As noted above, Agua Caliente Creek and Pequeno Creek are tributaries to Sonoma Creek which are located in the Plan area. The County would refer future permit applications near streams to the CDFW and any other agency or agencies which is responsible for natural resources protection. Future development within the Plan area would be subject to all Federal, State, and local requirements related to streams and waterways.*

TREE PROTECTION ORDINANCE

The Tree Protection Ordinance, Section 26-88-010(m) of County Code, requires construction standards to be put in place to ensure the protection of certain defined "protected species" of trees on project sites.

- **Consistent:** *The standards outlined in the code would continue to apply to discretionary projects within the plan area. The adoption of the plan would not remove or modify these existing protections and all discretionary projects would continue to be subject to the protections afforded by this Tree Protection Ordinance*

HERITAGE OR LANDMARK TREE ORDINANCE

Chapter 26D of the Sonoma County Code outlines the County's Heritage or Landmark Tree Ordinance. According to the Code, no person shall remove a heritage or landmark tree without obtaining a tree permit as outlined in Section 26D-5 and as exempted under Section 26D-6. A "Landmark tree" means a tree or grove of trees so designated by the Sonoma County Board of Supervisors because of its outstanding characteristics in terms of size, age, rarity, shape or location. A "Heritage tree" means a tree or grove of trees so designated by the Sonoma County Board of Supervisors because of historical interest or significance.

- **Consistent:** *Trees protected by this ordinance must be designated as protected trees by the Board of Supervisors. No such trees have been designated within the plan area at this time. Should a tree or grove of trees be designated in the future, such trees will be protected by the ordinance and any potential work or request to remove such trees must adhere to the requirements of the ordinance.*

VOH COMBINING DISTRICT

As noted previously, Article 67 of the Sonoma County Code establishes the VOH Combining District. The Article outlines mitigation requirements for cutting down or removing valley oaks within the VOH district. Additionally, where any development project within the VOH district is subject to design review pursuant to another provision of the Article, the design review approval shall include

measures to protect and enhance valley oaks on the project site in accordance with guidelines adopted by resolution or ordinance of the board of supervisors.

- **Consistent:** *Limited portions of the Plan area are located in the VOH district. The portions of the Plan area within the district generally include the area west of Highway 12 and north of Maxwell Farms Regional Park and some area near Sonoma Charter School. Existing trees are located in the Plan area, including these VOH district areas. Some of these existing trees may qualify as “large valley oaks”. Based upon the wide scope of the Project, development of detailed, site-specific information regarding potential large valley oaks and their possibility for removal is not feasible. Subsequent development projects will be required to comply with the County’s Municipal Code regulations, including the mitigation requirements set forth in Article 67 of the County Code, or the VOH Combining District. For example, a future project applicant for development within the VOH district areas of the Specific Plan would be required to replace any large valley oak, or small valley oaks having a cumulative diameter at breast height greater than sixty inches, which require removal in accordance with mitigation requirements outlined in the Code.*

CONCLUSION

Adoption of the Project would not conflict with local policies or ordinances protecting biological resources. The Specific Plan itself does not conflict with the policies contained in the County’s General Plan. Subsequent development projects will be required to comply with the General Plan policies, as well as the County Code. Implementation of the County’s General Plan policies and the Project’s proposed Specific Plan Design Guidelines would ensure consistency with already established ordinances. This is a **less than significant** impact.

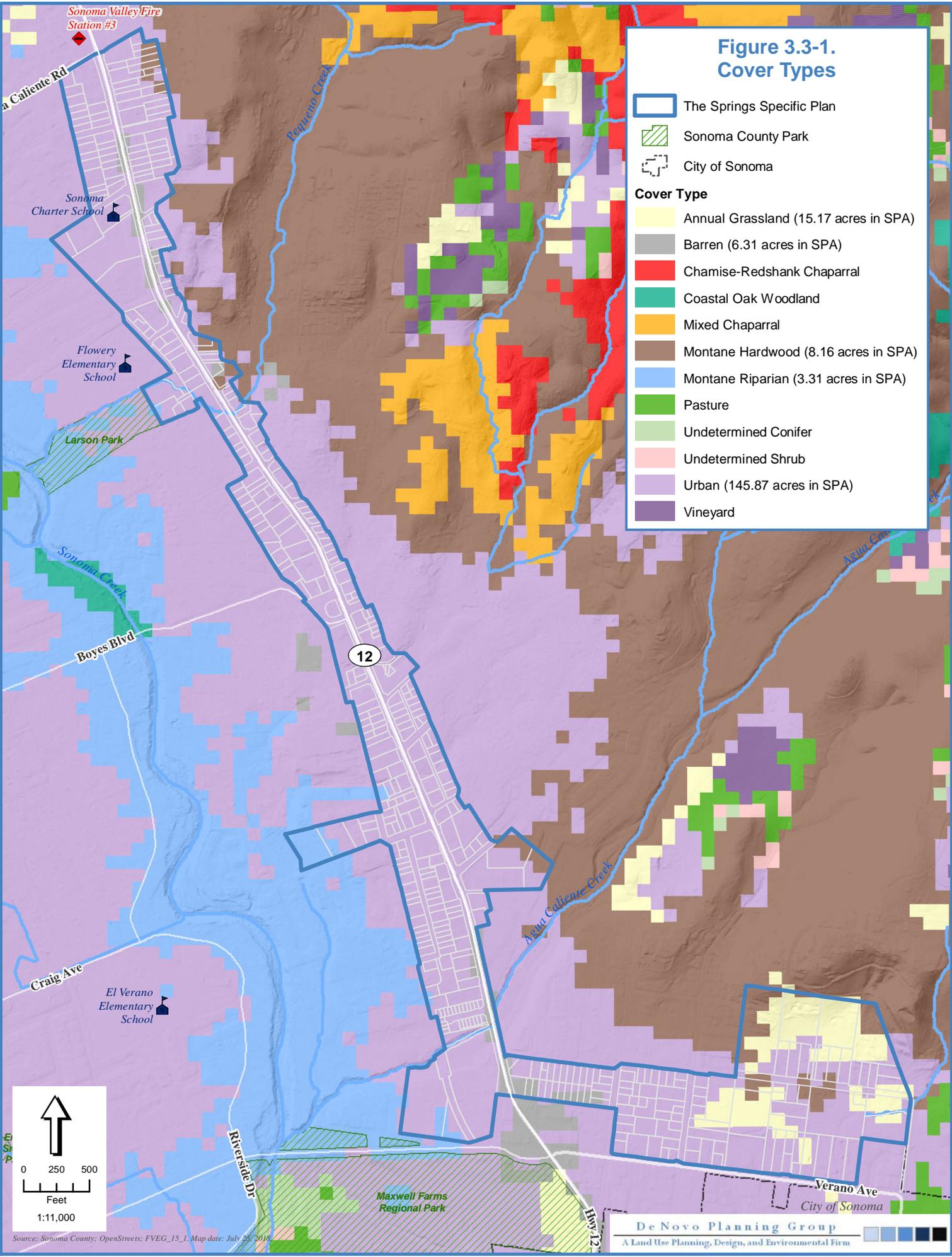
Impact 3.3-6: Implementation of the Project may result in conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (No Impact)

The Plan area is not subject to an adopted habitat conservation plan or natural community conservation plan. Therefore, implementation of the Project would have **no impact** relative to this topic.

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**Figure 3.3-1.
Cover Types**

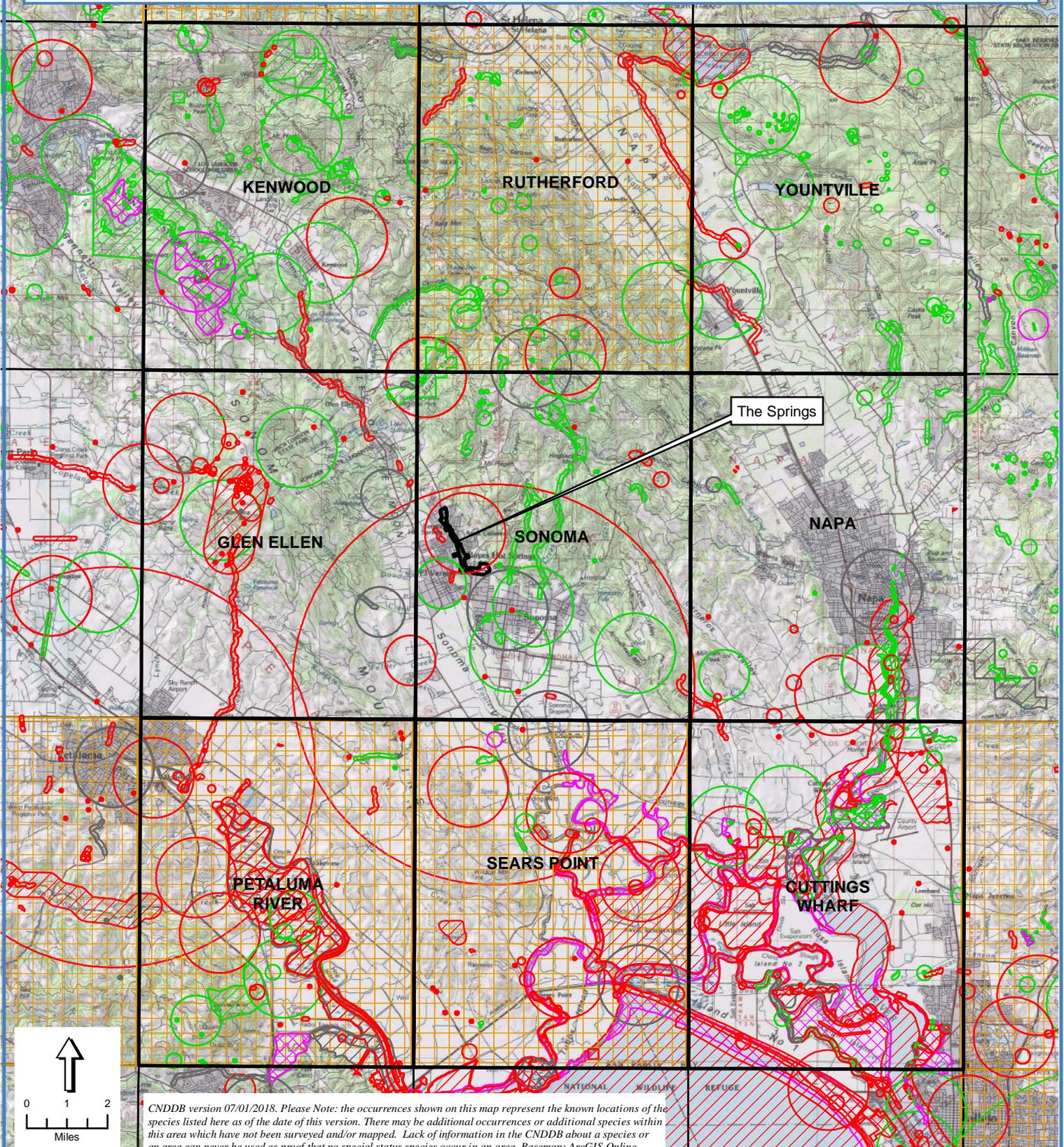
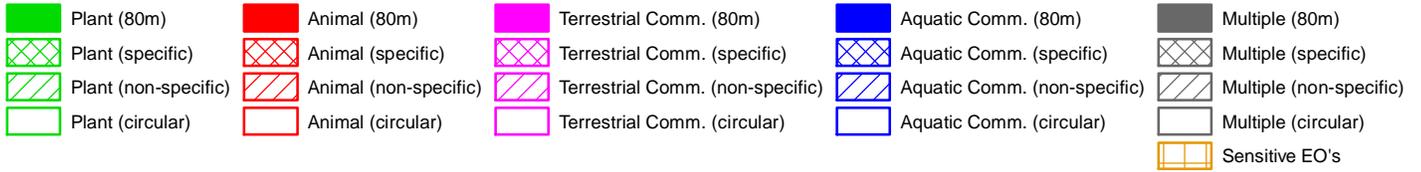
-  The Springs Specific Plan
 -  Sonoma County Park
 -  City of Sonoma
- Cover Type**
-  Annual Grassland (15.17 acres in SPA)
 -  Barren (6.31 acres in SPA)
 -  Chamise-Redshank Chaparral
 -  Coastal Oak Woodland
 -  Mixed Chaparral
 -  Montane Hardwood (8.16 acres in SPA)
 -  Montane Riparian (3.31 acres in SPA)
 -  Pasture
 -  Undetermined Conifer
 -  Undetermined Shrub
 -  Urban (145.87 acres in SPA)
 -  Vineyard



Source: Sonoma County; OpenStreets; FVEG_15_1_Map date: July 28, 2018

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Figure 3.3-2. California Natural Diversity Database: 9-Quad Search



CNDDB version 07/01/2018. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area. Basemap: ArcGIS Online Topographic Map Service. Map date: July 25, 2018.

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This section has been prepared in accordance with CEQA Guidelines Section 15064.5 and provides a discussion of the prehistoric period background, ethnographic background, historic period background, known cultural resources in the region, the regulatory setting, an impact analysis, and mitigation measures. Information in this section is derived primarily from the Cultural Resource Assessment for the Springs Specific Plan, Sonoma County, California (Peak & Associates, Inc., 2016). Potential impacts to tribal resources are addressed in Section 3.15, Tribal Cultural Resources.

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.4.1 ENVIRONMENTAL SETTING

ACRONYMS

AB	Assembly Bill
CHRIS	California Historical Resources Information System
CRHR	California Register of Historic Resources
HABS	Historic American Building Survey
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
PRC	Public Resources Code
PQS	Professional Qualifications Standards
SB	Senate Bill
SOI	Secretary of the Interior
USGS	U.S. Geological Survey
XPI	Extended Phase I

PREHISTORY

Four primary prehistorical patterns are generally recognized in the North Coast Ranges. The earliest pattern is the Borax Lake Pattern; the millingstone (i.e. metate) and mano are common in this period and sites from this period are often located above 5000 feet. The Mendocino Aspect began no earlier than 3000 B.C. and was characterized by Concave Base and Willits Side Notch projectile points, manos and metates, and also the mortar and pestle. Sites generally occur in low elevation. The late Borax Lake Aspect, which continued to occupy the northern end of the lake, was characterized by Wide Stem and Concave Base points and manos and metates, with no mortar and pestle. Around 1 B.C., on the east side of the lake basin, the Mendocino Aspect is replaced or assimilated by the Houx Aspect of the Berkeley Pattern, which emanated from the shores of San Francisco Bay to the south. The Houx Aspect completely replaced the Mendocino Aspect, identified by Meighan in 1955, in southern Sonoma County. However, within northern Sonoma County there is a mixture of Houx Aspect and Mendocino Aspect traits. The characteristic artifacts of the Houx Aspect of the Berkeley Pattern are the Excelsior point series, Houx Wide Stems, “burinated flakes,” and the heavy use of the bowl mortar and pestle. The Houx Aspect endured until the beginning of the Emergent Period -- circa A.D. 500. The Emergent Period was characterized by changes consisting of relative, if not absolute, population increase due to influxes of new peoples and a reduced resource base. The adaptive strategy changed from “foraging” to “collecting.” The Emergent Period is characterized by the appearance of small comer-notched, side-notched, and triangular

projectile points; the hopper mortar and pestles; clam shell disc beads; and smoking pipes -- all traits of the Augustine Pattern.

ETHNOLOGY

The Coast Miwok at time of contact by Europeans had a territory that extended from modern day Marin County north into southern Sonoma County, including the Springs Specific Plan area (Plan area). Ethnographic studies conducted in the early part of the 20th century identified a number of named village sites including one within The Springs Study Area, *huchi*, and two others, *wuki liwa* and *temblek*, in the immediate vicinity.

There is extensive coastline in this territory and resources from the sea and salt marshes were important in Coast Miwok subsistence, however, the resources available in the interior of their territory were by no means ignored. Sea mammals were not part of the diet but various species of fish were taken with nets, seines, weirs, spears and line-with-gorge technologies, as appropriate. Even more important in the diet were clams and some species of mussel, resulting in the characteristic coastal shell middens familiar through archeology.

Villages were located to facilitate access to food resources at various times of year. The Coast Miwok moved among residences on the coast, around salt or freshwater marshes and on interior streams so that they would be close to the most abundant food supply available at a particular season. Dwellings were conical brush-on-frame structures capable of sheltering up to ten individuals. Other structures included semi-subterranean sweathouses which served as something of a men's club, and--at major villages--a dance house for religious ceremonies. The dance house was basically the same construction as the sweathouse only larger. An excavation about two feet deep and fifteen in diameter formed the floor and a timber framework supported a brush dome capped with earth.

Archeology has provided an extensive collection of the stone tools that were used, but it is clear from ethnology that basketry and cordage were used for the majority of utilitarian objects. These materials do not preserve well, so they are uncommon in archeological sites. Basket making was a highly developed skill and baskets were woven tightly enough to hold water and cooking of acorn mush was accomplished by dropping hot rocks into baskets containing the mush. Cordage was used for the variety of nets used in taking fish, birds and small mammals.

In terms of socio-political organization, the term Coast Miwok is primarily a convenience for anthropologists, denoting a group speaking the same language and occupying a contiguous territory. In fact, there was no overall political control of this group and the real basis of social organization was the main village. Within the village group, close ties were maintained through the extensive religious/ceremonial life and through kinship ties.

Through much of aboriginal California, shell beads served as a form of currency. As a coastal people, the Coast Miwok had access to the raw material and bead manufacture was an important industry because it provided currency to trade for goods from neighboring groups. The Coast Miwok used imported obsidian in making arrowheads and other edged tools and chert to form more utilitarian edged implements.

HISTORIC PERIOD BACKGROUND

The Springs Study Area in Sonoma County lies within a region of early settlement, important events and famed early citizenry. The history has been told in a number of sources; this summary is a brief synopsis of the history of this area.

Historical Settlement

In 1823, Father Altamira travelled to Sonoma to select a mission site. The new mission in Sonoma was named for St. Francis Solano, a Franciscan missionary to the New World who died in Peru in 1610. This was the last of the 21 California missions to be built, and the most northerly.

In 1833, Governor Figueroa initiated a plan to settle Marin and Sonoma counties. In 1835, the Plaza de Sonoma was founded by Vallejo at Mission San Francisco Solano. Vallejo laid out the new pueblo around a plaza. The plaza was used by the soldiers assigned to defend the settlement for a drilling ground from 1835-1846. Vallejo's home, barracks and a number of adobes were built around the plaza in the 1840s. The lands of the Pueblo of Sonoma totaled 5,872 acres, with ownership confirmed in 1851.

A portion of Plan area lies on lands of Rancho Petaluma. This was the land grant made to General Vallejo in 1843 by Governor Micheltorrena. The grant originally consisted of ten leagues of land, with an additional five leagues given to him in 1844. The patent to the lands was finally confirmed in 1873. On the rancho lands, Vallejo built a large adobe.

Extending northward from the lands of the Pueblo de Sonoma is the land grant of Rancho Agua Caliente. Governor Alvarado had awarded this land grant along Sonoma Creek to Lazaro Piña in 1840. General Vallejo purchased part of this land grant, with Thaddeus Leavenworth acquiring the portion of the grant closet to Sonoma. Leavenworth had come to California as chaplain with Stevenson's Regiment of New York Volunteers.

Many American settlers in the Sacramento Valley and adjacent areas had become aware of the danger of being driven from their holdings by the Mexican Army. Encouraged by General John Fremont, 33 men surprised General Vallejo at Sonoma and took possession of the outpost on June 14, 1846. Vallejo and his brother, Salvador, were taken prisoner and held at Sutter's Fort for two months. The Bear Flag of the California Republic was created and flown over the community since the American flag could not be raised in Sonoma, as the actions of the Bear Flaggers was not authorized by the U.S. government. On July 9, 1846, the United States flag was raised to replace the Bear Flag.

Sonoma County

Sonoma County was one of the original 27 counties in California. Development began in the region, with the small community of Agua Caliente established by 1877. Much of the remainder of the Plan area was held as portions of larger tracts of land, apparently in agricultural use for orchards and vineyards (Thompson 1877).

Boyes Hot Springs/Fetters Hot Springs

The commercial appeal of the hot springs in the area was recognized early in time. In 1895, H.E. Boyes recognized the commercial appeal of the 112-degree water he tapped while drilling a well. Five years later, he had built the Boyes Hot Springs Hotel where the Sonoma Mission Inn stands today. The

destination was quickly dubbed the finest hot mineral resort in California, and bestowed with rumors of curative powers (Kyle 2002).

Soon thereafter, George and Emma Fetters opened the Fetters Hot Springs resort near the community of Agua Caliente. Eventually, a number of hotels grew up in the region, with the heyday of the resorts in the 1920s. The area became known as “The Springs.”

The Railroads

The construction of a rail line through the area brought economic benefits to the region. By 1877, there were two railroads in the area: the San Francisco and North Pacific Railroad, extending through the study area from Glen Ellen southward, through Sonoma and the Southern Pacific Railroad line, which paralleled the San Francisco and North Pacific Railroad, crossing the line north of The Springs and crossing Sonoma Creek, running on the west side of the creek. Both lines were still in operation in 1916, with the line through The Springs identified as the Northwestern Pacific (Santa Rosa U.S. Geological Survey [USGS] 1:62,500 map).

At some point after 1916, the Southern Pacific acquired the NWP line, and by the time the 1941 Sonoma topographic map was issued by the U.S. Army, the Southern Pacific line utilized the route of the San Francisco and North Pacific Railroad through the Plan area, with the line on the west side of the Sonoma Valley no longer in existence. The railroad provided quick shipping for the agricultural products of the region.

Canneries, wineries and fruit drying companies grew up in the area as major industries. The railroad also provided transportation for the lumber industry to the west, and a number of basalt quarries in the region.

Development of the Region

The 1941 U.S. Army topographic map that includes the Plan area shows scattered buildings, with a concentration of development in the area of the town of Agua Caliente. In the post-World War II era of the late 1940s, there was a major surge in development with large identified communities at Fetters Hot Springs and Boyes Hot Springs (Sonoma USGS topographic map 1951). By 1980, most of the northern and central portions of the study area had been developed, with the addition of commercial buildings and residential properties (Sonoma USGS topographic map 1980).

CULTURAL RESOURCES IN THE PLAN AREA

“Cultural resources” encompass archaeological, Native American, traditional, and built environment resources, including but not necessarily limited to buildings, structures, objects, districts, and sites.

As defined in Section 15064.5 of the CEQA Guidelines, “historical resources” includes the following:

- (1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historic Resources (CRHR) (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).
- (2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or

culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code, § 5024.1, Title 14 CCR, Section 4852) including the following:
 - (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
 - (B) Is associated with the lives of persons important in our past;
 - (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - (D) Has yielded, or may be likely to yield, information important in prehistory or history.
- (4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

CEQA requires that the lead agency determine if there are historical resources within a project area that are listed in the California Register of Historical Resources, or if additional properties not yet listed may be historical resources or legally defined unique archaeological sites for purposes of CEQA. If so, the lead agency must then determine if the proposed project has the potential to impact those resources.

Seventeen cultural resources have been identified within the Plan area, according to files maintained by the Northwest Information Center (Information Center) of the California Historical Resources Information System (CHRIS). The CHRIS records search identifies buildings, structures, historic sites, prehistoric sites, and any other cultural resources that have been reported to the Information Center. Out of the 17 resources, 15 are buildings, and two are archaeological sites. The Information Center did not indicate that any of the reported resources are included on the California Office of Historic Preservation's Archaeological Determination of Eligibility list. In addition, none are listed on the California Register of Historical Resources or the National Register of Historic Places (NRHP). Cultural resource information is generally considered confidential (California State Government Code Section 6254.10); the Peak & Associates, Inc., 2016 report is on file at the Information Center. For specific information regarding cultural resources, see The Springs Specific Plan Existing Conditions Report (December 2016).

Nineteen additional buildings within Plan area are identified on the Sonoma County Historic Property Data File Directory (see Table 3.4-1). All of the buildings listed in Table 3.4-1 were previously determined to be ineligible for the National Register. Additionally, two properties within the Plan area are designated

3.4 CULTURAL RESOURCES

landmarks and are zoned Historic Combining District: 17348 Highway 12/213 Depot Road (Assessor's Parcel Number 056-201-052) and 17341 Highway 12 (Assessor's Parcel Number 056-251-038).

TABLE 3.4-1: BUILDINGS LISTED ON THE SONOMA COUNTY HISTORIC PROPERTY DATA FILE DIRECTORY

PROPERTY #	ADDRESS	YEAR BUILT
113353	590 Verano Avenue, Sonoma	1950
113356	600 Verano Avenue, Sonoma	1955
113357	610 Verano Avenue, Sonoma	1955
113359	620 Verano Avenue, Sonoma	1955
113362	630 Verano Avenue, Sonoma	1955
113363	634 Verano Avenue, Sonoma	1975
113365	640 Verano Avenue, Sonoma	1965
113367	676 Verano Avenue, Sonoma	1955
113368	680 Verano Avenue, Sonoma	1955
113369	700 Verano Avenue, Sonoma	1966
113373	766 Verano Avenue, Sonoma	1955
113374	770 Verano Avenue, Sonoma	1955
113375	782 Verano Avenue, Sonoma	1955
113376	790 Verano Avenue, Sonoma	1955
089320	870 Verano Avenue, Sonoma	1925
113384	876 Verano Avenue, Sonoma	1980
113386	880 Verano Avenue, Sonoma	1970
113387	890 Verano Avenue, Sonoma	1980
113388	896 Verano Avenue, Sonoma	1980

SOURCE: SONOMA COUNTY HISTORIC PROPERTY DATA FILE DIRECTORY

3.4.2 REGULATORY SETTING

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act was enacted in 1966 as a means to protect cultural resources that are eligible to be listed on the NRHP. The law sets forth criterion that is used to evaluate the eligibility of cultural resources. The NRHP is composed of districts, sites, buildings, structures, objects, architecture, archaeology, engineering, and culture that are significant to American history.

Virtually any physical evidence of past human activity can be considered a cultural resource. Although not all such resources are considered to be significant and eligible for listing, they often provide the only means of reconstructing the human history of a given site or region, particularly where there is no written history of that area or that period. Consequently, their significance is judged largely in terms of their historical or archaeological interpretive values. Along with research values, cultural resources can be significant, in part, for their aesthetic, educational, cultural and religious values.

“Historic properties” is a term defined by the National Historic Preservation Act as any prehistoric or historic district, site, building, structure, or object included on, or eligible for inclusion on, the NRHP, including artifacts, records, and material remains related to such property

National Register of Historic Places

The eligibility criteria for the NRHP are as follows (36 CFR 60.4):

The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

- (A) that are associated with events that have made a significant contribution to the broad patterns of our history; or*
- (B) that are associated with the lives of persons significant in our past; or*
- (C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- (D) that have yielded, or may be likely to yield, information important in prehistory or history.*

STATE

California Register of Historic Resources

The CRHR was established in 1992 and codified in the Public Resource Code Section 5024.1. The law creates several categories of properties that may be eligible for the CRHR. Certain properties are included in the program automatically, including: properties listed in the NRHP; properties eligible for listing in the NRHP; and certain classes of State Historical Landmarks. Determining the CRHR eligibility of historic and prehistoric properties is guided by CEQA Guidelines Section 15064.5(a) and Public Resources Code Sections 21083.2 and 21084.1.

Cultural resources, under CRHR guidelines, are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. Per Public Resources Code Section 5024.1, a cultural resource may be eligible for listing on the CRHR if it meets any of the following NRHP criteria:

- *is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;*
- *is associated with the lives of persons important in our past;*
- *embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values; or*
- *has yielded, or may be likely to yield, information important in prehistory or history.*

Codes Governing Human Remains

The disposition of human remains is governed by Health and Safety Code Section 7050.5 and PRC Sections 5097.94 and 5097.98 and falls within the jurisdiction of the Native American Heritage Commission (NAHC). If human remains are discovered, the county coroner must be notified within 48 hours, and there should be no further disturbance to the site where the remains were found. If the coroner determines the remains are Native American, the coroner is responsible to contact the NAHC within 24 hours. Pursuant to PRC Section 5097.98, the NAHC will immediately notify those persons it believes to be most likely

descended from the deceased Native Americans so they can inspect the burial site and make recommendations for treatment or disposal.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines Section 15064.5 provides guidance for determining the significance of impacts to archaeological and historical resources. Demolition or material alteration in an adverse manner of a historical resource, including archaeological sites, is generally considered a significant impact.

CEQA also provides for the protection of Native American human remains (CEQA Guidelines Section 15064.5[d]). Native American human remains are also protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001, et seq.), which requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items within their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. This act also requires plans for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony that might be uncovered as a result of development projects overseen or funded by the federal government.

If a prehistoric or historic period cultural resource does not meet any of the four CRHR criteria, it may nonetheless be classified a “unique archaeological resource” as outlined in Public Resources Code Section 21083.2(g), if it is: an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- it has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- it is directly associated with a scientifically recognized important prehistoric or historic event or person.

If the lead agency determines that a project may have a significant effect on a unique archaeological resource, the environmental impact report prepared for the project must address the issue of that resource, per Public Resources Code Section 21083.2(a).

LOCAL

Sonoma County General Plan

The existing Sonoma County General Plan identifies the following goals, objectives, and policies related to cultural resources:

OPEN SPACE & RESOURCE CONSERVATION ELEMENT

GOAL OSRC-19: Protect and preserve significant archaeological and historical sites that represent the ethnic, cultural, and economic groups that have lived and worked in Sonoma County, including Native American populations. Preserve unique or historically significant heritage or landmark trees.

Objective OSRC-19.1: Encourage the preservation and conservation of historic structures by promoting their rehabilitation or adaptation to new uses.

Objective OSRC-19.2: Encourage preservation of historic building or cemeteries by maintaining a Landmarks Commission to review projects that may affect historic structures or other cultural resources.

Objective OSRC-19.3: Encourage protection and preservation of archaeological and cultural resources by reviewing all development projects in archaeologically sensitive areas.

Objective OSRC-19.4: Identify and preserve heritage and landmark trees.

Objective OSRC-19.5: Encourage the identification, preservation, and protection of Native American cultural resources, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites. Ensure appropriate treatment of Native American and other human remains discovered during a project.

Objective OSRC-19.6: Develop and employ procedures to protect the confidentiality and prevent inappropriate public exposure of sensitive archaeological resources and Native American cultural resources, sacred sites, places, features, or objects.

Policy OSRC-19a: Designate the County Landmarks Commission to review projects within designated historic districts.

Policy OSRC-19b: Refer proposals for County Landmark status and rezonings to the Historic Combining District to the County Landmarks Commission.

Policy OSRC-19c: The County Landmarks Commission shall review Historic Building Surveys and make recommendations for designation of structures or cemeteries as County landmarks.

Policy OSRC-19d: Include a list of historic structures proposed for designation as County landmarks in Specific or Area Plans or Local Area Development Guidelines and refer the list to the Landmarks Commission for their recommendations.

Policy OSRC-19e: Refer applications that involve the removal, destruction or alteration of a structure or cemetery identified in a historic building survey to the Landmarks Commission for mitigation. Measures may include reuse, relocation, or photo documentation.

Policy OSRC-19f: Use the Heritage or Landmark Tree Ordinance and the design review process to protect trees.

Policy OSRC-19g: Pursue grant funding for the preparation and updating of historic resource inventories.

Policy OSRC-19h: Designate the County Landmarks Commission to administer a preservation program for stabilization, rehabilitation, and restoration of historic structures.

Policy OSRC-19i: Develop a historic resources protection program that provides for an ongoing process of updating the inventory of historic resources. Such a program should include:

- (1) Periodic historic building surveys,

- (2) Formalized recognition of the inventory of historic resources as recommended by the State Office of Historic Preservation, including rezoning to the Historic Combining District (HD), and
- (3) Procedures for the protection of recognized historic resources for both ministerial and discretionary projects.

Policy OSRC-19j: Develop an archaeological and paleontological resource protection program that provides:

- (1) Guidelines for land uses and development on parcels identified as containing such resources,
- (2) Standard project review procedures for protection of such resources when discovered during excavation and site disturbance, and
- (3) Educational materials for the building industry and the general public on the identification and protection of such resources.

Policy OSRC-19k: Refer applications for discretionary permits to the Northwest Information Center to determine if the project site might contain archaeological or historical resources. If a site is likely to have these resources, require a field survey and preparation of an archaeological report containing the results of the survey and include mitigation measures if needed.

Policy OSRC-19l: If a project site is determined to contain Native American cultural resources, such as sacred sites, places, features, or objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites, notify and offer to consult with the tribe or tribes that have been identified as having cultural ties and affiliation with that geographic area.

Policy OSRC-19m: Develop procedures for consulting with appropriate Native American tribes during the General Plan adoption and amendment process.

Policy OSRC-19n: Develop procedures for complying with the provisions of State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, if applicable, in the event of the discovery of a burial or suspected human bone. Develop procedures for consultation with the Most Likely Descendant as identified by the California Native American Heritage Commission, in the event that the remains are determined to be Native American.

Sonoma County Landmarks Commission

The Sonoma County Landmarks Commission was established in 1974 and charged with the authority to designate Historic Landmarks and Historic Districts zoning. Sonoma County Code Section 26-68-005 states:

Intent and Purpose. The Board of Supervisors finds and declares that the preservation of structures, sites, and areas of historical, architectural, and aesthetic interest promotes the general welfare of the citizens of Sonoma County. The purpose of this district is to protect those structures, sites, and areas that are reminders of past eras, events and persons important in local, state, or national history, or which provide significant examples of architectural styles of the past, or which are unique and irreplaceable assets to the county and its communities, or which provide for this and further generations examples of the physical

surroundings in which past generations lived, so that they may serve an educational and cultural function for the citizens of Sonoma County and for the general public.

All structures, sites, and areas associated with significant events or persons, or that are important examples of architectural styles, are eligible for consideration as a Sonoma County Historic Landmark. As revised in 2008, the following criteria, which are based on NRHP and CRHR designation criteria, are used by the Landmark Commission for designation (Sonoma County Landmarks Commission, adopted April 3, 1978; revised June 30, 2008).

The quality of significance in Sonoma County, California, or American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, association, and one or more of the following:

- that are associated with events that have made a significant contribution to the broad patterns of our history
- that are associated with the lives of persons significant in our past
- that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- that have yielded, or may be likely to yield, information important in prehistory or history

Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible as an Historic Landmark. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

- A religious property deriving primary significance from architectural or artistic distinction or historical importance
- A building or structure removed from its original location, but that is significant primarily for architectural value, or which is the surviving structure most importantly associated with an historic person or event
- A birthplace or grave of an historical figure of outstanding importance if there is no other appropriate site or building directly associated with his/her productive life
- A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with an historic event
- A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived within that area
- A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance
- A property achieving significance within the past 50 years, if it is an important element to the environment of a particular community.

Sonoma County Code Section 11.14.050

Section 11.14.050, Protection of human remains and archaeological resources, outlines steps to follow should human remains or archaeological resources be discovered during construction, grading, or drainage activities. Specifically, the code states:

“Where human remains or archaeological resources are discovered during construction grading and drainage, all work shall be halted in the vicinity of the find, the director shall be notified, and the following shall occur before work may be resumed:

- A. Human remains. If human remains or suspected human remains are discovered, the permittee shall notify the county coroner and comply with all state law requirements, including Health and Safety Code section 7050.5 and Public Resources Code section 5097.98, to ensure proper disposition of the human remains or suspected human remains, including those identified to be Native American remains.
- B. Archaeological resources. If archaeological resources or suspected archaeological resources are discovered, the director shall notify the State Historic Preservation Officer and the Northwest Information Center at Sonoma State University, and the permittee shall retain a qualified archeologist to evaluate the find to ensure proper disposition of the archaeological resources or suspected archaeological resources. All costs associated with the evaluation and mitigation of the find shall be the responsibility of the permittee. The director shall provide notice of the find to any tribes that have been identified as having cultural ties and affiliation with the geographic area in which the archaeological resources or suspected archaeological resources were discovered, if the tribe or tribes have requested notice and provided a contact person and current address to which the notice is to be sent. The director may consult with and solicit comments from notified tribes to aid in the evaluation, protection, and proper disposition of the archaeological resources or suspected archaeological resources. The need for confidentiality of information concerning the archaeological resources or suspected archaeological resources shall be recognized by all parties. For the purposes of this section, archaeological resources include historic or prehistoric ruins, burial grounds, pottery, arrowheads, midden, or culturally modified soil deposits. Artifacts associated with prehistoric ruins include humanly modified stone, shell, bone, or other cultural materials such as charcoal, ash, and burned rock indicative of food procurement or processing activities. Prehistoric domestic features include hearths, fire pits, or floor depressions; mortuary features are typically represented by human skeletal remains.”

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project is considered to have a significant impact on cultural resources if it will:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5

- Disturb any human remains, including those interred outside of formal cemeteries

IMPACTS AND MITIGATION MEASURES

Impact 3.4-1: Implementation of the Project has the potential to cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5. (Less than Significant)

The Plan area is located in an area known to have historical cultural resources. Seventeen cultural resources have been identified within the Plan area, according to files maintained by the Northwest Information Center (Information Center) of the CHRIS. The CHRIS records search identifies buildings, structures, historic sites, prehistoric sites, and any other cultural resources that have been reported to the Information Center. The Information Center did not indicate that any of the reported resources are included on the California Office of Historic Preservation's Archaeological Determination of Eligibility list. In addition, none are listed on the CRHR or the NRHP.

As with most projects in the region that involve ground-disturbing activities, there is the potential for disturbance of an archaeological, historic, or tribal cultural resource or the discovery of a previously unknown archaeological, historical, or tribal cultural resource.

The Sonoma County General Plan includes policies that would reduce impacts to cultural, historic, and archaeological resources, as well as policies for the conservation of cultural, historic, and archaeological resources. These relevant policies are listed above under Section 3.4.2, Regulatory Setting provide a robust framework for ensuring that effects on significant historic, archaeological and tribal cultural resources are reduced. Although ministerial projects are exempt from CEQA and do not require an archaeological records search or survey, Section 11.14.050 (see above) of the County Code outlines steps to take should archaeological resources or human remains be discovered during construction. Furthermore, Public Resources Code Section 5097.993 and Penal Code Section 622.5 explicitly prohibit the removal or destruction of archaeological resources on both public and private lands.

Development facilitated by the project could impact presently unknown historical resources at these sites through demolition, construction, and reconstruction activities associated with the project. The Specific Plan includes Measure Cult-A and Cult-B, which require an architectural history evaluation and mitigations respectively for discretionary projects, and calls for a cultural resources survey for project areas that contain or are sensitive for cultural resources. With implementation of Specific Plan Measures Cult-A and Cult-B, this impact would be **less than significant**.

SPECIFIC PLAN COMPONENTS THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Measure Cult-A: Architectural History Evaluation. *For any future project proposed on or adjacent to a property that includes buildings, structures, objects, sites, landscape/site plans, or other features that are 45 years of age or older at the time of or permit application, the project applicant shall hire a qualified architectural historian to prepare an historical resources evaluation. The qualified architectural historian or historian shall meet the Secretary of the Interior's (SOI) Professional Qualifications Standards (PQS) in architectural history or history. The qualified architectural historian or historian shall conduct an intensive-level evaluation in accordance with the guidelines and best practices recommended by the State Office of Historic Preservation to identify any potential historical resources in the proposed project area.*

Under the guidelines, properties 45 years of age or older shall be evaluated within their historic context and documented in a technical report and on Department of Parks and Recreation Series 523 forms. The report will be submitted to the County for review prior to any permit issuance. If no historic resources are identified, no further analysis is warranted. If historic resources are identified by the Architectural History Evaluation, the project shall be required to implement Measure Cult-B.

Measure Cult-B: Architectural History Mitigation: *If historical resources are identified in an area proposed for redevelopment as the result of the process described in Measure Cult-A, the project applicant shall reduce impacts to the extent feasible (as defined in CEQA Guidelines Section 15364). Application of mitigation shall generally be overseen by a qualified architectural historian or historic architect meeting the PQS, unless unnecessary in the circumstances (e.g. preservation in place). In conjunction with any project that may affect the historical resource, the project applicant shall provide a report identifying and specifying the treatment of character-defining features and construction activities to the County for review and approval, prior to permit issuance, to avoid or substantially reduce the severity of the proposed activity on the historical qualities of the resource. Any and all features and construction activities shall become Conditions of Approval for the project and shall be implemented prior to issuance of construction (demolition and grading) permits.*

Mitigation measures may include but are not limited to compliance with the Secretary of the Interior's Standards for Treatment of Historic Properties and documentation of the historical resource in the form of a Historic American Building Survey (HABS)-like report. The HABS report shall comply with the Secretary of the Interior's Standards for Architectural and Engineering Documentation and shall generally follow the HABS Level III requirements, including digital photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the PQS and submitted to the County prior to issuance of any permits for demolition or alteration of the historical resource.

Impact 3.4-2: Implementation of the Project has the potential to cause a significant impact on archaeological resources if development facilitated by the project would cause a substantial adverse change in the significance of an archaeological resources, including those that qualify as historical resources. (Less than Significant)

Ground-disturbing activities associated with development facilitated by the project have the potential to damage or destroy historic-age or prehistoric archaeological resources that may be present on or below the ground surface, though this potential is expected to be low based on evaluation the Cultural Resource Assessment for the Springs Specific Plan, Sonoma County, California (Peak & Associates, Inc., 2016). Implementation of Specific Plan Measures Cult-C through Cult-I would reduce impacts to archaeological resources to less than significant levels by ensuring the avoidance of archeological resources to the extent feasible, or by identifying, evaluating, and conducting data recovery archaeological resources that may be impacted by future projects in a timely manner. With these Specific Plan measures, the impacts would be reduced to a **less than significant** level.

SPECIFIC PLAN COMPONENTS THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Measure CULT-C Phase I Archaeological Resources Study: *Prior to project approval, the project applicant shall investigate the potential to disturb archaeological resources. If the project will involve any ground disturbance, a Phase I cultural resources study shall be performed by a qualified professional meeting the*

SOI's PQS for archaeology (National Park Service 1983). If a project would solely involve the refurbishment of an existing building and no ground disturbance would occur, this measure would not be required. A Phase I cultural resources study shall include a pedestrian survey of the project site and sufficient background research and field sampling to determine whether archaeological resources may be present. Archival research shall include a records search of the Northwest Information Center no more than two years old and a Sacred Lands File search with the NAHC. The Phase I technical report documenting the study shall include recommendations that must be implemented prior to and/or during construction to avoid or reduce impacts on archaeological resources, to the extent that the resource's physical constituents are preserved or their destruction is offset by the recovery of scientifically consequential information. The report shall be submitted to the County for review and approval, prior to the issuance of any grading or construction permits, to ensure that the identification effort is reasonable and meets professional standards in cultural resources management. Recommendations in the Phase I technical report shall be made Conditions of Approval and shall be implemented throughout all ground disturbance activities.

Measure Cult-D Extended Phase I Testing: *For any projects proposed within 100 feet of a known archaeological site and/or in areas identified as sensitive by the Phase I study (Measure Cult-C), the project applicant shall retain a qualified archaeologist to conduct an Extended Phase I (XPI) study to determine the presence/absence and extent of archaeological resources on the project site. XPI testing should comprise a series of shovel test pits and/or hand augured units and/or mechanical trenching to establish the boundaries of archaeological site(s) on the project site. If the boundaries of the archaeological site are already well understood from previous archaeological work and is clearly interpretable as such by a qualified cultural resources professional, an XPI will not be required. If the archaeological resource(s) of concern are Native American in origin, the qualified archaeologist shall confer with local California Native American tribe(s) and any XPI work plans may be combined with a tribal cultural resources plan prepared under Measure TCR-C. If applicable, a Native American monitor shall be present in accordance with Measure TCR-D.*

All archaeological excavation shall be conducted by a qualified archaeologist(s) under the direction of a principal investigator meeting the SOI's PQS for archaeology (National Park Service 1983). If an XPI report is prepared, it shall be submitted to Sonoma County for review and approval prior to the issuance of any grading or construction permits. Recommendations contained therein shall be implemented for all ground disturbance activities.

Measure Cult E Archaeological Site Avoidance: *Any identified archaeological sites (determined after implementing Measures Cult-C and/or Cult-D) shall be avoided by project-related construction activities, where feasible. A barrier (temporary fencing) and flagging should be placed between the work location and any resources within 60 feet of a work location to minimize the potential for inadvertent impacts.*

Measure Cult F Phase II Site Evaluation: *If the results of any Phase I and/or XPI (Measures Cult-C and/or Cult-D) indicate the presence of archaeological resources that cannot be avoided by the project (Measure Cult-E) and that have not been adequately evaluated for CRHR listing at the project site, the qualified archaeologist will conduct a Phase II investigation to determine if intact deposits remain and if they may be eligible for the CRHR or qualify as unique archaeological resources. If the archaeological resource(s) of concern are Native American in origin, the qualified archaeologist shall confer with local California Native American tribe(s) and any Phase II work plans may be combined with a tribal cultural resources plan prepared under Measure TCR-C. If applicable, a Native American monitor shall be present in accordance with Measure TCR-D.*

A Phase II evaluation shall include any necessary archival research to identify significant historical associations and mapping of surface artifacts, collection of functionally or temporally diagnostic tools and debris, and excavation of a sample of the cultural deposit. The sample excavation will characterize the nature of the sites, define the artifact and feature contents, determine horizontal and vertical boundaries, and retrieve representative samples of artifacts and other remains.

If the archeologist and, if applicable, a Native American monitor (see Measure TCR-D) or other interested tribal representative determine it is appropriate, cultural materials collected from the site shall be processed and analyzed in a laboratory according to standard archaeological procedures. The age of the materials shall be determined using radiocarbon dating and/or other appropriate procedures; lithic artifacts, faunal remains, and other cultural materials shall be identified and analyzed according to current professional standards. The significance of the sites shall be evaluated according to the criteria of the CRHR. The results of the investigations shall be presented in a technical report following the standards of the California Office of Historic Preservation publication "Archaeological Resource Management Reports: Recommended Content and Format (1990 or latest edition)." The report shall be submitted to Sonoma County for review and approval prior to the issuance of any grading or construction permits. Recommendations in the Phase II report shall be implemented for all ground disturbance activities.

Measure Cult-G Phase III Data Recovery: *Should the results of the Phase II site evaluation (Measure Cult-F) yield resources that meet CRHR significance standards and if the resource cannot be avoided by project construction in accordance with Measure Cult-E, the project applicant shall ensure that all feasible recommendations (as defined in CEQA Guidelines Section 15364) for mitigation of archaeological impacts are incorporated into the final design and approved by the County prior to construction. Any necessary Phase III data recovery excavation, conducted to exhaust the data potential of significant archaeological sites, shall be carried out by a qualified archaeologist meeting the SOI standards for archaeology according to a research design reviewed and approved by the County prepared in advance of fieldwork and using appropriate archaeological field and laboratory methods consistent with the California Office of Historic Preservation Planning Bulletin 5 (1991), Guidelines for Archaeological Research Design, or the latest edition thereof. If the archaeological resource(s) of concern are Native American in origin, the qualified archaeologist shall confer with local California Native American tribe(s) and any Phase III work plans may be combined with a tribal cultural resources plan prepared under Measure TCR-C. If applicable, a Native American monitor shall be present in accordance with Measure TCR-D.*

As applicable, the final Phase III Data Recovery reports shall be submitted to Sonoma County prior to issuance of any grading or construction permit. Recommendations contained therein shall be implemented throughout all ground disturbance activities.

Measure Cult-H Cultural Resources Monitoring: *If recommended by Phase I, XPI, Phase II, or Phase III studies (Measures Cult-C, Cult-D, Cult-F, and/or Cult-G), the project applicant shall retain a qualified archaeologist to monitor project-related, ground-disturbing activities. If archaeological resources are encountered during ground-disturbing activities, Measures Cult-E through Cult-G shall be implemented, as appropriate. The archaeological monitor shall coordinate with any Native American monitor as required by Measure TCR-D.*

Measure Cult-I Unanticipated Discovery of Archaeological Resources: *If archaeological resources are encountered during ground-disturbing activities, work within 60 feet shall be halted and the project applicant shall retain an archaeologist meeting the SOI's PQS for archaeology (National Park Service 1983) immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan*

and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work may be warranted, such as data recovery excavation, to mitigate any significant impacts to historical resources. If the resource is of Native American origin, implementation of Measures TCR-A through TCR-D may be required. Any reports required to document and/or evaluate unanticipated discoveries shall be submitted to the County for review and approval. Recommendations contained therein shall be implemented throughout the remainder of ground disturbance activities.

Impact 3.4-3: Implementation of the Project has the potential to disturb human remains, including those interred outside of dedicated formal cemeteries. (Less than Significant)

Indications are that humans have occupied Sonoma County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, dedicated burials. Regulations at the state and local levels exist to address the discovery of human remains. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. If an unanticipated discovery of human remains occurs, the county coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the NAHC, which will determine and notify a most likely descendant, who shall complete an inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access. With adherence to existing regulations, the archaeological resources measures identified above, program and project impacts would be less than significant.

Compliance with existing regulations described above would reduce project impacts to human remains to ***less than significant levels*** by ensuring proper identification and treatment of any human remains that may be present in the Plan Area.

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This section provides a background discussion of the seismic and other geologic and soil hazards found in the Springs Specific Plan area (Plan area) and the regional vicinity. This section is organized with an existing setting, regulatory setting, and impact analysis.

There were no comments received during the public review period or scoping meeting for the Notice of Preparation (NOP) regarding this topic. As discussed in the NOP for the proposed Springs Specific Plan, there are no known mineral resource lands, including locally-important mineral recovery sites, within the Plan area. The Project would have no impact on mineral resources.

3.5.1 ENVIRONMENTAL SETTING

ACRONYMS

ABAG	Association of Bay Area Governments
CBSC	California Building Standards Code
Kw	Erosion Factor
ML	Local Magnitude
MM	Modified Mercalli Scale
Mw	Moment Magnitude
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Natural Resource Conservation Service
USGS	United States Geological Service

REGIONAL GEOLOGY

Sonoma County's complex geology can be explained, in part, by the historical geological processes in the Coast Range. These geologic processes include volcanic, erosion, sedimentation, and tectonic processes. The formation of mountains with parallel valleys in Sonoma County is a result of the collision of the North American Plate with the Pacific Plate. The San Andreas Fault system forms the border of these two tectonic plates. This fault system is more than 600 miles long, extending from Pt. Arena to the Gulf of California, and is located along the western boundary of the County, just 25 miles west of the Springs Specific Plan area. The San Andreas Fault system is responsible for the structural alignment and orientation of the mountains and valleys in the Coast Range.

The topography in Sonoma County is varied, including several mountain ranges, distinctive valleys, and coastal terraces. The geology is quite complex and is continually evolving because of its location at an active plate margin. The County is bounded on the south by the San Pablo Bay and associated wetlands. The Cotati and Petaluma Valleys create the wide basin stretching from Santa Rosa to the Bay. Rolling hills and grasslands predominate here, as well as in Marin County to the south. The rugged Mayacamas and Sonoma Mountains geographically form the eastern boundary and physically separate Sonoma County from Lake and Napa Counties. The Sonoma Valley runs north-south between the Sonoma Mountains on the west and the taller Mayacamas Mountains to the east. The Geysers geothermal field, located in the northeastern section of the county, extends into both Sonoma and Lake Counties. The Mendocino Highlands form a common geographic unit with Mendocino County to the north. The Alexander Valley runs from northwest to southeast, bounded on the east by the Mayacamas Mountains and on the west

by the Coast Range. The Pacific Ocean forms the western county boundary, including an interesting assemblage of steep hills, marine terraces, beaches, and offshore sea stacks.

Ongoing tectonic forces resulting from the collision of the North American Plate with the Pacific Plate, combined with more geologically recent volcanic activity, have resulted in mountain building and down warping of parallel valleys. The margin of the two tectonic plates is defined by the San Andreas Fault system: a broad zone of active, dormant, and inactive faults dominated by the San Andreas Fault which trends along the western margin of the county. This fault system results in the northwestern structural alignment that controls the overall orientation of the county's ridges and valleys. The land has been modified by more recent volcanic activity, evidenced by Mount St. Helena that dominates the northeastern part of the county. Erosion, sedimentation, and active faulting occurring in recent times have further modified Sonoma County's landscape to its current form.

FAULTS

Faults are classified as Historic, Holocene, Late Quaternary, Quaternary, and Pre-Quaternary according to the age of most recent movement (California Geological Survey, 2002). These classifications are described as follows:

- **Historic:** faults on which surface displacement has occurred within the past 200 years;
- **Holocene:** shows evidence of fault displacement within the past 11,000 years, but without historic record;
- **Late Quaternary:** shows evidence of fault displacement within the past 700,000 years, but may be younger due to a lack of overlying deposits that enable more accurate age estimates;
- **Quaternary:** shows evidence of displacement sometime during the past 1.6 million years; and
- **Pre-Quaternary:** without recognized displacement during the past 1.6 million years.

Faults are further distinguished as active, potentially active, or inactive. (California Geological Survey, 2002).

- **Active:** An active fault is a Historic or Holocene fault that has had surface displacement within the last 11,000 years;
- **Potentially Active:** A potentially active fault is a pre-Holocene Quaternary fault that has evidence of surface displacement between about 1.6 million and 11,000 years ago; and
- **Inactive:** An inactive fault is a pre-Quaternary fault that does not have evidence of surface displacement within the past 1.6 million years. The probability of fault rupture is considered low; however, this classification does not mean that inactive faults cannot, or will not, rupture.

There are no known active or potentially active faults located within the Plan area. However, there are numerous faults located in the region. Figure 3.5-1 illustrates the location of nearby faults. Below is a brief summary of the most notable faults in the regional vicinity:

- **San Andreas Fault System:** The San Andreas Fault system is an active fault located approximately 25 miles west of the Plan area. The fault generally follows a northwest to southeast line and is capable of an 8.0 magnitude earthquake. Major seismic events along this fault were recorded on April 18, 1906 (in the Northern segment) and on January 9, 1857 (in the Mojave segment). The most recent seismic event along this fault was the 1989 Loma Prieta earthquake, which occurred on October 18, 1989. The Loma Prieta earthquake registered at a magnitude 6.9, and was felt as far away as San Diego and western Nevada (California Geological Survey, 2002).

- **Rodgers Creek Fault:** The Rodgers Creek Fault is an active fault located approximately 3.5 miles to the west of the Plan area. The fault generally follows a path that is parallel to the San Andreas Fault and is capable of a 7.0 magnitude earthquake.
- **Healdsburg Fault:** The Healdsburg Fault is an active fault located to the northwest of the Plan area. The fault generally follows a path that is parallel to the San Andreas Fault and is capable of a 7.5 magnitude earthquake. The last reported event was recorded on 1969.
- **Mayacama Fault:** The Mayacama Fault is an active fault located to the northwest of the Plan area. The fault generally follows a path that is parallel to the San Andreas Fault and is capable of a 7.5 magnitude earthquake.
- **Bennet Valley Fault:** The Bennett Valley Fault is a well-constrained fault northwest of the Plan area. This fault is associated with northeastward partitioning of slip between the Rodgers Creek and the Mayacama Fault Zones. Surface expression of this fault zone is obscured by landslides in many places.
- **West Napa Fault:** The West Napa fault, located approximately 5 miles east of the Plan area, is associated with an approximately 57-km-long zone of late Quaternary deformation that trends along the western margin of the Napa Valley near the City of St. Helena to the Carquinez Strait. Geologists from UC Davis now warn that the West Napa Fault, which in 2014 triggered the Bay Area's strongest earthquake in the past 25 years (6.0 magnitude), is longer and quicker-moving than previously thought.

SEISMIC HAZARDS

Seismic hazards include both rupture (surface and subsurface) along active faults and ground shaking, which can occur over wider areas. Ground shaking, produced by various tectonic phenomena, is the principal source of seismic hazards in areas devoid of active faults. All areas of the state are subject to some level of seismic ground shaking.

Several scales may be used to measure the strength or magnitude of an earthquake. Magnitude scales (ML) measure the energy released by earthquakes. The Richter scale, which represents magnitude at the earthquake epicenter, is an example of an ML. As the Richter scale is logarithmic, each whole number represents a 10-fold increase in magnitude over the preceding number. The following table (Table 3.5-1) represents effects that would be commonly associated with Richter Magnitudes:

TABLE 3.5-1: RICHTER MAGNITUDES AND EFFECTS

MAGNITUDE	EFFECTS
< 3.5	Typically not felt
3.5 – 5.4	Often felt but damage is rare
5.5 – < 6	Damage is slight for well-built buildings
6.1 – 6.9	Destructive potential over ±60 miles of occupied area
7.0 – 7.9	“Major Earthquake” with the ability to cause damage over larger areas
≥ 8	“Great Earthquake” can cause damage over several hundred miles

SOURCE: ASSOCIATION OF BAY AREA GOVERNMENTS, 2011.

Moment Magnitude (Mw) is used by the United States Geological Service (USGS) to describe the magnitude of large earthquakes in the U.S. The value of moment is proportional to fault slip multiplied by the fault surface area. Thus, moment is a measurement that is related to the amount of energy released at the point of movement. The Mw scale is often preferred over other scales, such as the Richter, because

it is valid over the entire range of magnitudes. Moment is normally converted to Mw, a scale that approximates the values of the Richter scale.

Seismic ground shaking hazards are calculated as a probability of exceeding certain ground motion over a period of time, usually expressed in terms of "acceleration." The acceleration of the Earth during an earthquake can be described in terms of its percentage of gravity. For example, the 10% probability of exceedance in 50 years is an annual probability of 1 in 475 of being exceeded each year. This level of ground shaking has been used for designing buildings in high seismic areas. This probability level allows engineers to design buildings for larger ground motions than what is expected to occur during a 50-year interval, which will make buildings safer than if they were only designed for the ground motions that are expected to occur in the next 50 years.

In contrast, other scales describe earthquake intensity, which can vary depending on local characteristics. The Modified Mercalli Scale (MM) expresses earthquake intensity at the surface on a scale of I through XII. The following table (Table 3.5-2) represents the potential effects of an earthquake based on the Modified Mercalli Intensities.

TABLE 3.5-2: MODIFIED MERCALLI INTENSITIES AND EFFECTS

<i>MM</i>	<i>EFFECTS</i>
I	Movement is imperceptible
II	Movement may be perceived (by those at rest or in tall buildings)
III	Many feel movement indoors; may not be perceptible outdoors
IV	Most feel movement indoors; Windows, doors, and dishes will rattle
V	Nearly everyone will feel movement; sleeping people may be awakened
VI	Difficulty walking; Many items fall from shelves, pictures fall from walls
VII	Difficulty standing; Vehicle shaking felt by drivers; Some furniture breaks
VIII	Difficulty steering vehicles; Houses may shift on foundations
IX	Well-built buildings suffer considerable damage; ground may crack
X	Most buildings and foundations and some bridges destroyed
XI	Most buildings collapse; Some bridges destroyed; Large cracks in ground
XII	Large scale destruction; Objects can be thrown into the air

SOURCE: ASSOCIATION OF BAY AREA GOVERNMENTS, 2011.

Earthquakes pose a serious potential threat in the Specific Plan area. Although no known faults cross the Plan area, Sonoma County is traversed by many active or potentially active faults, including the San Andreas fault and the Healdsburg/Rodgers Creek fault. The Rodgers Creek fault, which has been identified as an extension of the Hayward fault, lies closest to the Planning Area and represents a significant earthquake risk. Table 3.5-3 below lists 30-year earthquake probabilities of a magnitude of 6.7 or higher, using the Richter scale, for prominent faults within the vicinity of the Plan area. The Richter scale, a logarithmic scale ranging from 0.1 to 9.0, with 9.0 being the strongest, measures the magnitude of an earthquake relative to ground shaking.

TABLE 3.5-3: 30-YEAR EARTHQUAKE PROBABILITIES

<i>FAULT SEGMENT</i>	<i>30-YEAR PROBABILITY OF MAGNITUDE 6.7 OR HIGHER</i>
Rodgers Creek Fault	14.5%
Hayward Fault	14.3%
Green Valley Fault	6.8%
San Andreas Fault North Segment	6.4%
West Napa Fault	2.3%

SOURCE: USGS EARTHQUAKE HAZARDS PROGRAM EARTHQUAKE PROBABILITIES 2014-2044.

As noted above, while there are no known active faults located within the Plan area, the area could experience considerable ground shaking generated by nearby faults. For example, the Plan area and its surroundings could experience intensities ranging from MM VIII (houses may shift on their foundations and drivers may have difficulty steering vehicles) with higher intensities of MM IX (well-constructed buildings will sustain moderate damage while poorly constructed buildings will be heavily damaged) projected to the region located south and west of the Plan area, generated by seismic events occurring in the region (ABAG, 2016).

SEISMIC HAZARD ZONES

Alquist-Priolo Fault Zones

An active earthquake fault, per California's Alquist-Priolo Act, is one that has ruptured within the Holocene Epoch ($\approx 11,000$ years). Based on this criterion, the California Geological Survey identifies Earthquake Fault Zones. These Earthquake Fault Zones are identified in Special Publication 42 (SP42), which is updated as new fault data become available. The SP42 lists all counties and cities within California that are affected by designated Earthquake Fault Zones. The Fault Zones are delineated on maps within SP42 (Earthquake Fault Zone Maps).

There are no Alquist-Priolo Earthquake Fault Zones located within the Plan area; however, approximately five miles to the west lies the Rodgers Creek fault. Figure 3.5-1 illustrates the location of the closest Alquist-Priolo Earthquake Fault Zones.

Seismic Hazard Zones

The State Seismic Hazards Mapping Act (1990) addresses hazards along active faults. The Northern California counties affected by the Seismic Hazard Zonation Program include Alameda, San Francisco, San Mateo and Santa Clara. The Southern California counties affected by the Program include San Bernardino, Los Angeles, Orange, and Ventura. There are/are no seismic hazard zones currently mapped in Sonoma County.

LIQUEFACTION

Liquefaction, which is primarily associated with loose, saturated materials, is most common in areas of sand and silt or on reclaimed lands. Cohesion between the loose materials that comprise the soil may be jeopardized during seismic events and the ground will take on liquid properties. Thus, liquefaction requires specific soil characteristics and seismic shaking.

3.5 GEOLOGY AND SOILS

In collaboration with the USGS Earthquake Hazard Program, the California Geological Survey produces Liquefaction Susceptibility Maps and identifies “Zones of Required Investigation” per the State’s Seismic Hazard Zonation Program.

Within the Plan area and surrounding areas, liquefaction susceptibility is mapped by the Association of Bay Area Governments (ABAG) Resiliency Program. Liquefaction potential in the Plan area is categorized as "Very Low" to "Very High." The area designated as having a "Very High" potential for liquefaction is located along the southern portion of the Plan area, and is generally associated with the channelized Agua Caliente Creek running along Meadowbrook Avenue. The area between Depot and Northside Avenue is designated as having a "Moderate" potential for liquefaction, as is the area surrounding Agua Caliente Creek. However, the remainder of the Plan area is designated as having a “Very Low” susceptibility for liquefaction. See Figure 3.5-2 for the liquefaction susceptibility of the Plan area.

OTHER GEOLOGIC HAZARDS

Soils

According to the Natural Resource Conservation Service, there are nine different soil types located in the Plan area. As shown in Table 3.5-4, there are seven different soil types in the Plan area, and six soil series in the area. Figure 3.5-3 presents a map of the soils located in the Plan area and immediate vicinity. Information from the NRCS official soil description for these series is provided further below.

TABLE 3.5-4: PLAN AREA SOILS

<i>NRCS SOIL DESCRIPTION</i>	<i>ACRES IN PLAN AREA</i>
Clough gravelly loam, 2-9% slopes	47.9
Goulding cobbly clay loam, 5-15% slopes	0.03
Goulding-Toomes complex, 9-50% slopes	0.19
Huichica loam, 2-9% slopes	5.57
Red Hill clay loam, 2-15% slopes	22.71
Red Hill clay loam, 30-50% slopes	3.38
Riverwash	0.18
Tuscan cobbly clay loam, 0- 9% slopes	90.73
Zamora silty clay loam, 0-2% slopes	8.14

SOURCE: NATURAL RESOURCE CONSERVATION SERVICE, 2018.

- The **Clough series** are moderately well to somewhat poorly drained, very slowly permeable soils that occur on old terraces formed in gravelly alluvium that is high in quartz and cherts derived mostly from conglomerates and other sedimentary rocks. These soils are located in the central portion of the Plan area and in the southeastern corner of the Plan area on 2 to 9% slopes, and total 47.9 acres.
- The **Goulding series** are shallow, somewhat excessively drained soils formed in material weathered from metavolcanic or metasedimentary rocks. These soils occur in one small area in the southeastern portion of the Plan area on 5 to 15% slopes, and total 0.03 acres.
- The **Huichica series** are imperfectly drained, moderately slowly to very slowly permeable soils that occur in gently sloping smooth to hummocky floodplains under grass and scattered oaks. These soils occur in one small area in the northwestern portion of the Plan area on 2 to 9% slopes, and total 5.57 acres.

- The **Red Hill series** consists of well or moderately well drained, moderately permeable soils that occur on strongly sloping to steep uplands under hardwoods and conifers. These soils are located in the south-central portion of the Plan area and in the southeastern corner of the Plan area on 2 to 15% slopes, and total 22.71 acres.
- The **Tuscan series** consists of well drained, moderately to very slowly permeable soils that occur on broad gently sloping old alluvial terraces that are hummocky or gently undulating. These soils are located in the southern and northern-most portions of the Plan area on 0 to 9% slopes, and total 90.73 acres.
- The **Zamora series** consists of very deep, moderately well drained soils with moderately slow permeability that formed in alluvium from mixed rocks. These soils are located in the northern-central portion of the Plan area on 0 to 2% slopes, and total 8.14 acres.

Erosion

The U.S. Natural Resource Conservation Service (NRCS) delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of erosion factors is provided by the NRCS Physical Properties Descriptions:

- Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Erosion factor Kw indicates the erodibility of the whole soil, whereas Kf indicates the erodibility of the fine soils. The estimates are modified by the presence of rock fragments.

Soil erosion data for the Specific Plan area were obtained from the NRCS. Table 3.5-5 depicts the soil erosion susceptibility in the Specific Plan area. As identified in Table 3.5-5 below, the erosion factor (Kw) varies from 0.02 to 0.37, which is considered low to moderate potential for erosion. The majority of the Specific Plan area (approximately 68 percent) is dominated by Tuscan cobbly clay loam and Clough gravelly loam, which both have a low susceptibility of erosion with a K-Factor of 0.17. Individual values for soils are shown below in Table 3.5-5.

TABLE 3.5-5: EROSION SUSCEPTIBILITY AND SHRINK-SWELL POTENTIAL OF SOILS WITHIN PLAN AREA

MAP SYMBOL AND SOIL NAME	EROSION FACTOR (Kw)	SHRINK-SWELL POTENTIAL (PERCENTAGE OF LINEAR EXTENSIBILITY)
CgC—Clough gravelly loam, 2 to 9 percent slopes	0.17	2.4
GID—Goulding cobbly clay loam, 5 to 15 percent slopes	0.10	1.5
GIE—Goulding cobbly clay loam, 15 to 30 percent slopes	0.10	1.5
GoF—Goulding-Toomes complex, 9 to 50 percent slopes	0.24	3.1
HtC—Huichica loam, 2 to 9 percent slopes	0.37	2.9
RhD—Red Hill clay loam, 2 to 15 percent slopes	0.24	5.7
RhF—Red Hill clay loam, 30 to 50 percent slopes	0.24	5.7
RnA—Riverwash	0.02	1.5
TuC—Tuscan cobbly clay loam, 0 to 9 percent slopes	0.17	5.9
ZaA—Zamora silty clay loam, 0 to 2 percent slopes	0.37	4.0

SOURCE: NATURAL RESOURCE CONSERVATION SERVICE, 2018.

Shrink-Swell Potential

Some soils swell when wet and shrink as they dry, cracking walls, destroying foundations and breaking buried pipes. Table 3.5-5 above list soils within the Plan area, and their associated shrink-swell potential. Figure 3.5-4 shows the approximate location of soils with low and moderate shrink-swell potential within the Specific Plan area. Approximately 40 percent of the Specific Plan area has Tuscan cobbly clay loam which is considered a moderately expansive soil. The areas with a shrink-swell potential of three percent or more may require special design considerations due to shrink-swell potential.

According to the NRCS Physical Properties Descriptions, *"Linear extensibility" refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The volume change is reported as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed."*

Expansive Soils

The NRCS delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of linear extensibility (also known as shrink-swell potential or expansive potential) is provided by the NRCS Physical Properties Descriptions:

"Linear extensibility" refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

The linear extensibility of the soils within the Plan area ranges from Low to Moderate. Figure 3.5-4 illustrates the shrink-swell potential of soils in the Specific Plan area. Moderate expansive soils would require special design considerations due to shrink-swell potentials.

Lateral Spreading

Lateral spreading generally is a phenomenon where blocks of intact, non-liquefied soil moves down slope on a liquefied substrate of large areal extent. The potential for lateral spreading is present where open banks and unsupported cut slopes provide a free face (unsupported vertical slope face). Ground shaking, especially when inducing liquefaction, may cause lateral spreading toward unsupported slopes. The Plan area is relatively flat at an elevation of approximately 110 to 185 feet above sea level. The area's terrain generally slopes gently down from east to west. Therefore, the potential for lateral spreading is generally low. The greatest potential for lateral spreading in the Plan area is in sloped areas.

Subsidence

Subsidence is the settlement of soils of very low density generally from either oxidation of organic material, or desiccation and shrinkage, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. In Sonoma County, subsidence occurs in the southern portions of the County near Petaluma and San Pablo Bay. The Plan area is not within an area where subsidence would likely occur.

Naturally Occurring Asbestos

The term “asbestos” is used to describe a variety of fibrous minerals that, when airborne, can result in serious human health effects. Naturally occurring asbestos is commonly associated with ultramafic rocks and serpentinite. Ultramafic rocks, such as dunite, peridotite, and pyroxenite are igneous rocks comprised largely of iron-magnesium minerals. As they are intrusive in nature, these rocks often undergo metamorphosis, prior to their being exposed on the Earth’s surface. The metamorphic rock serpentinite is a common product of the alteration process. Naturally occurring asbestos is mapped in Sonoma County, although it is all located to the north of the Plan area in mountainous areas. There is no naturally occurring asbestos mapped within the Plan area.

Tsunami/Seiches

Tsunamis and seiches are standing waves that occur in the ocean or relatively large, enclosed bodies of water (i.e., Lake Tahoe) that can follow seismic, landslide, and other events from local sources (California, Oregon, Washington coast) or distant sources (Pacific Rim, South American Coast, Alaska/Canadian coast). The Plan area is not within a tsunami or seiche hazard area.

STRUCTURAL DAMAGE

Fault Rupture Damage. There are no known active faults that have been mapped within the Specific Plan area, and the potential for structures to be adversely affected by fault rupture is considered to be relatively low based on the absence of known faults. As noted previously, the California Geological Survey has not established any Alquist-Priolo Earthquake Fault Zones in the Specific Plan area.

Ground Shaking Damage. As is the case for most areas within California, the potential for seismic ground shaking in the Specific Plan area is expected. As a result, the State requires special design considerations for all structural improvements in accordance with the seismic design provisions in the California Building Code. California’s seismic design provisions require enhanced structural integrity based on several risk parameters with the ultimate objective of protecting the life and safety of building occupants and the public. For large earthquakes, the seismic design standards primarily ensure that the building will not collapse, but some structural and non-structural damage may be expected. Older buildings constructed of unreinforced masonry, including materials such as brick, concrete, and stone, pre-1940 wood frame houses, and pre-1973 tilt-up concrete buildings are particularly susceptible to structural damage from ground shaking. In most cases, these older buildings require retrofit, or they risk significant structural damage during an earthquake.

Liquefaction Damage. The liquefaction potential within the majority of the Plan area is designated “moderate” to “high”. Liquefaction poses a hazard to structures and infrastructure. There are a variety of geotechnical strategies that can be implemented to mitigate the potential for structural damage. These include appropriate foundation design, engineering soils, groundwater management, and the use of special flexible materials for construction.

Landslide and Lateral Spreading Damage. Within Sonoma County, the hillsides have a medium to high susceptibility for landslides, while the valleys have a low susceptibility. Given the planning area's relatively level slopes, landslide potential is very low for all but a small portion of land located between Fetters and Central Avenue. Landslide potential increases in the foothills and mountains to the east of the Planning Area but are not a significant constraint to development within the Planning Area.

The lateral spreading potential increases some in the same areas as the landslide potential. There are a variety of geotechnical strategies that can be implemented to mitigate the potential for landslide and lateral spreading in this area. These include engineering soils, groundwater management, surface water control, slope reconfiguration, and structural reinforcement if necessary.

PALEONTOLOGICAL RESOURCES

Paleontology is the study of the forms of life existing in prehistoric or geologic times, as represented by the fossils of plants, animals, and other organisms. Paleontological remains are fairly common in Sonoma County. They include plants, invertebrates, and vertebrates ranging in age from approximately 140 million years to less than 8,000 years before the present. Within Sonoma County, paleontological remains have been primarily recovered from the following geologic formations:

- *Franciscan complex (Jurassic)* – This formation largely covers the northern part of the County, with the exception of the Alexander Valley and northern Santa Rosa plain;
- *Wilson Grove Formation (Miocene-Pliocene)* – This is a common location for Paleontological remains, and is largely located in the western part of the county, along with the Ohlson Ranch Formation (Miocene-Pliocene), and the Petaluma Formation. The boundaries of this area are Occidental, Sebastopol, Petaluma, and the Coast. These formations are also present around the base of the Sonoma Mountains; and
- *Sonoma Volcanics (Miocene-Pliocene)* – This is the formation of the Sonoma Mountains and the Sonoma/ Napa Mountains which form the eastern border of the County.

3.5.2 REGULATORY SETTING

FEDERAL

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act of 1977 (42 USC 7701, et seq.) requires the establishment and maintenance of an earthquake hazards reduction program by the Federal government.

Executive Order 12699

Signed in January 1990, this executive order of the President implements provisions of the Earthquake Hazards Reduction Act for “federal, federally assisted or federally regulated new building construction” and requires the development and implementation of seismic safety programs by Federal agencies.

International Building Code

The purpose of the International Building Code is to provide minimum standards to preserve the public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. The International Building Code standards address foundation design, shear wall strength, and other structurally related conditions.

STATE

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) or simply "Title 24," contains the regulations that govern the construction of buildings in California. The CBSC includes 12 parts: California Building Standards Administrative Code, California Building Code, California Residential Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Historical Building Code, California Fire Code, California Existing Building Code, California Green Building Standards Code, and the California Reference Standards Code. Through the CBSC, the State provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

California Health and Safety Code

Section 19100, et seq., of the California Health and Safety Code establishes the State's regulations for earthquake protection. This section of the Code requires structural designs to be capable of resisting likely stresses produced by phenomena such as strong winds and earthquakes.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State Mining and Geology Board, which governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include:

- Fault – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- Fault Zone – a zone of related faults, which commonly are braided and sub parallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- Sufficiently Active Fault – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years); and
- Well-Defined Fault – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

“Sufficiently Active” and “Well Defined” are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are to be mapped by the State Geologist to assist local governments in land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

The State Geologist is required to delineate the various “seismic hazard zones.”

- Cities and counties, or other local permitting authority, must regulate certain development “projects” within the zones. They must withhold the development permits for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.
- The State Mining and Geology Board provides additional regulations, policies, and criteria to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps and for evaluating and mitigating seismic hazards.
- Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

State Geological Survey

Similar to the DMG, the California Geological Survey is responsible for assisting in the identification and proper utilization of mineral deposits, as well as the identification of fault locations and other geological hazards.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.).

The Regional Water Quality Control Board issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act’s implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act’s goal of “fishable and swimmable” navigable (surface) waters. Technically, all NPDES permits issued by the Regional Water Quality Control Board are also Waste Discharge Requirements issued under the authority of the California Water Code.

California Public Resources Code

Section 5097.5 of the California PRC states:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

As used in this PRC section, “public lands” means lands owned by or under the jurisdiction of the State or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, local agencies are required to comply with PRC Section 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

LOCAL

Sonoma County General Plan

The Sonoma County General Plan includes goals, objectives, and policies to protect residents, businesses, visitors, and land uses from seismic and geologic hazards.

PUBLIC SAFETY ELEMENT

GOAL PS-1: Prevent unnecessary exposure of people and property to risks of damage or injury from earthquakes, landslides, and other geologic hazards.

Objective PS-1.1: Continue to develop and utilize use available data on geologic hazards and associated risks.

Objective PS-1.2: Regulate new development to reduce the risks of damage and injury from known geologic hazards to acceptable levels.

Objective PS-1.3: Use the Sonoma County Hazard Mitigation Plan to help reduce future damage from geologic hazards.

Policy PS-1a: Continue to use all available data on geologic hazards and related risks from the appropriate agencies.

Policy PS-1b: Continue to use studies of geologic hazards prepared during the development review process.

Policy PS-1c: Consider amendments of this Element to incorporate new data which significantly change the hazard assessments contained herein.

Policy PS-1d: Support and integrate research on geologic hazards, their probabilities, and their effects within Sonoma County.

Policy PS-1e: Continue to implement the "Geologic Hazard Area" combining district which establishes regulations for permissible types of uses and their intensities and appropriate development standards.

Policy PS-1f: Require and review geologic reports prior to decisions on any project which would subject property or persons to significant risks from the geologic hazards areas shown on Public Safety Element hazard maps and related file maps and source documents. Geologic reports shall describe the hazards and include mitigation measures to reduce risks to acceptable levels. Where appropriate, require an engineer's or geologist's certification that risks have been mitigated to an acceptable level and, if indicated, obtain indemnification or insurance from the engineer, geologist, or developer to minimize County exposure to liability.

Policy PS-1g: Prohibit structures intended for human occupancy (or defined as a "project" in the Alquist-Priolo Special Studies Zones Act and related Administrative Code provisions) within 50 feet of the surface trace of any fault.

Policy PS-1h: Adopt, upon approval by the International Code Council (ICC) and the State of California, revisions to the Uniform Building Code which increase resistance of structures to groundshaking and other geologic hazards.

Policy PS-1i: Require dynamic analysis of structural response to earthquake forces prior to County approval of building permits for structures whose irregularity or other factors prevent reasonable load determination and distribution by static analysis.

Policy PS-1j: Encourage strong enforcement of State seismic safety requirements for design and construction of buildings and facilities subject to State and Federal standards such as bridges, dams, power plants, hospitals and schools.

Policy PS-1k: Incorporate measures to mitigate identified geologic hazards for all County roads, public facilities, and other County projects to an acceptable level.

Policy PS-1l: Use the following criteria in siting and design of essential service buildings and facilities, particularly those of high public occupancy:

- (1) To the extent feasible, avoid siting such buildings and facilities in areas subject to a Modified Mercalli Index (MMI) Groundshaking Intensity Level of Very Violent (X), Violent (IX), or Very Strong (IIX) as shown on Figures PS-1a.
- (2) Where such buildings and facilities must be located in the above areas, design and construct them to the highest feasible safety standard.

Policy PS-1m: Make readily available to property owners and the public all maps identifying geologic hazards in Sonoma County, particularly the MMI Groundshaking Intensity Level maps noted above.

Policy PS-1n: Develop a Strategic Plan for damage assessment and recovery of essential service buildings and facilities, particularly those of high public occupancy, as part of the County's emergency response planning, focused in areas subject to an MMI Groundshaking Intensity level of Very Violent (X), Violent (IX), or Very Strong (IIX).

Policy PS-10: Adopt an ordinance requiring strengthening and/or reinforcement of Unreinforced Masonry Buildings, except residential structures, considering the cost of the work and the value, frequency of use, and level of occupancy of the buildings.

OPEN SPACE & RESOURCES CONSERVATION ELEMENT

GOAL OSRC-10: Encourage the conservation of soil resources to protect their long term productivity and economic value.

Objective OSRC-10.1: Preserve lands containing prime agricultural and productive woodland soils and avoid their conversion to incompatible residential, commercial or industrial uses.

GOAL OSRC-11: Promote and encourage soil conservation and management practices that maintain the productivity of soil resources.

Objective OSRC-11.1: Ensure that permitted uses are compatible with reducing potential damage due to soil erosion.

Objective OSRC-11.1: Establish ways to prevent soil erosion and restore areas damaged by erosion.

Policy OSRC-11a: Design discretionary projects so that structures and roads are not located on slopes of 30 percent or greater. This requirement is not intended to make any existing parcel unbuildable if Health and Building requirements can be met.

Policy OSRC-11b: Include erosion control measures for any discretionary project involving construction or grading near waterways or on lands with slopes over 10 percent.

Policy OSRC-11c: Encourage agricultural land owners to work closely with the N.R.C.S. and local Resource Conservation Districts to reduce soil erosion and to encourage soil restoration.

Policy OSRC-11d: Require a soil conservation program to reduce soil erosion impacts for discretionary projects that could increase waterway or hillside erosion. Design improvements such as roads and driveways to retain natural vegetation and topography to the extent feasible.

Policy OSRC-11e: Retain natural vegetation and topography to the extent economically feasible for any discretionary project improvements near waterways or in areas with a high risk of erosion as noted in the Sonoma County Soil Survey.

Policy OSRC-11f: Prepare and submit to the Board of Supervisors an erosion and sediment control report.

Policy OSRC-11g: Continue to enforce the Uniform Building Code to reduce erosion and slope instability problems.

Sonoma County Code

Chapter 11, Construction Grading and Drainage, of the County's Code outlines the Sonoma County Construction Grading and Drainage Ordinance. This chapter is enacted for the purpose of regulating construction grading and drainage through standards to protect the public health, safety, and welfare, minimize hazards to life and property, protect against soil loss and pollution of waterway, protect from

flooding, protect aquatic resources and wildlife habitat, and promote groundwater conservation and recharge.

The provisions in Chapter 11 apply to all construction grading and drainage occurring within the unincorporated area of the county, except for construction grading and drainage for timber operations conducted under an approved timber harvesting plan or nonindustrial timber management plan.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on geology, and soils, if it will:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42;
 - Strong seismic ground shaking;
 - Seismic-related ground failure, including liquefaction; or
 - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Project implementation has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides (Less than Significant)

The Alquist-Priolo Earthquake Fault Zoning Act (1972) and the Seismic Hazards Mapping Act (1990) direct the State Geologist to delineate regulatory "Zones of Required Investigation" to reduce the threat to public health and safety and to minimize the loss of life and property posed by earthquake-triggered ground failures. There are no Zones of Required Investigation located within the Plan area.

However, there are numerous faults located in the greater region. Figure 3.5-1 illustrates the location of these faults. These include the Bennett Valley Fault, Tolay Fault, Lakeview Fault, West Napa Fault Zone, Rodgers Creek Fault, and San Andreas Fault. Rupture of any of these faults, or of an unknown fault in the region, could cause seismic ground shaking. As a result, future development in the Plan area may expose people or structures to potential adverse effects associated with a seismic event, including strong ground shaking and seismic-related ground failure.

While there are no known active faults located within the Plan area, the area could experience considerable ground shaking generated by nearby faults. For example, the Plan area and its surroundings could experience intensities of MM VIII by seismic events occurring in the region (ABAG, 2016).

Within Sonoma County, the hillsides have a medium to high susceptibility for landslides, while the valleys have a low susceptibility. Given the Plan area's relatively level slopes, landslide potential is very low for all but a small portion of land located between Fetters and Central Avenue. As shown in Figure 3.5-5, landslide potential increases in the foothills and mountains to the east of the Plan area but are not a significant constraint to development within the area.

Additionally, some of the buildings within the Plan area are unreinforced masonry buildings. Unreinforced masonry buildings often cannot support the horizontal forces exerted by earthquakes. These buildings are regulated by State law. As part of the Sonoma County Hazard Mitigation Plan (2017), the County inventoried all of the unreinforced masonry buildings in the unincorporated areas as required by State law. Within the unincorporated areas, there are 316 unreinforced masonry buildings, 131 of which are classified as "active" because they have not been strengthened or otherwise brought into conformance. The remaining 185 structures are exempt from State law. The County is currently reviewing a seismic retrofit ordinance, based on a model ordinance provide by the California Seismic Safety Commission, to reduce earthquake hazards and create incentives to encourage building owners to improve their structures.

All future projects within the Plan area will be required to comply with the provisions of the CBSC, which requires development projects to: perform geotechnical investigations in accordance with State law, engineer improvements to address potential seismic and ground failure issues, and use earthquake-resistant construction techniques to address potential earthquake loads when constructing buildings and improvements. As future development and infrastructure projects are considered by the County, each project will be evaluated for conformance with the CBSC, General Plan, Zoning Ordinance, and other regulations.

The Sonoma County General Plan goals, objectives, and policies identified in subsection 3.5.2, Regulatory Setting, require new land development proposals to avoid unreasonable exposure to geologic hazards, including earthquake damage, subsidence, liquefaction, and expansive soils. All development and construction proposals must be reviewed by the County to ensure conformance with applicable General Plan requirements (listed above) and CBSC building standards. Development on soils sensitive to seismic activity is only allowed after adequate site analysis, including appropriate siting, design of structure, and foundation integrity, as required by General Plan Policies PS-1f, PS-1i, PS1j, PS-1k, and PS-1l. The General Plan policies require geotechnical investigations to be completed prior to approval of any buildings as a means to ensure that these facilities are constructed in a way that mitigates site-specific seismic and/or geological hazards. All future projects within the Plan area would be required to prepare geotechnical soils investigations to address seismic safety issues and provide adequate mitigation for potential hazards identified, as required by Policy PS-1f and the CBSC. With the implementation of the policies and actions required by the Sonoma County General Plan, as well as applicable State and County codes, potential impacts associated with a seismic event, including rupture of an earthquake fault, seismic ground shaking, and liquefaction would be **less than significant**.

Impact 3.5-2: Project implementation has the potential to result in substantial soil erosion or the loss of topsoil (Less than Significant)

The Project would allow development and improvement projects that would involve some land clearing, grading, and other ground-disturbing activities that could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of a substantial amount of nonrenewable topsoil and could adversely affect water quality in nearby surface waters.

Soil erosion data for the Plan area and vicinity were obtained from the NRCS. The erosion factor Kw varies from 0.02 to 0.37, which is considered low to moderate potential for erosion.

As future development and infrastructure projects are considered by the County, each project will be evaluated for conformance with the state and local requirements. For example, future projects would be subject to the County's Construction Grading and Drainage Ordinance, which outlines the construction grading permit requirements, as well as the County's erosion prevention and sediment control best management practices guide. A construction drainage permit will be required prior to commencing any construction drainage work involving construction or modification of drainage facilities or related work, including preparatory land clearing, vegetation removal, or other ground disturbance (except where exempted from permit requirements by Subsection C of Chapter 11 of the Code). A construction grading permit shall be required prior to commencing any construction grading or related work, including preparatory land clearing, vegetation removal, or other ground disturbance (except where exempted from permit requirements by Subsection C of Chapter 11 of the Code). Future new projects would be required to implement Low Impact Development strategies, as well as best management practices. In addition to compliance with County standards and policies, the Regional Water Quality Control Board will require a project specific Storm Water Pollution Prevention Plan to be prepared for each project that disturbs an area of one acre or larger. The Storm Water Pollution Prevention Plans will include project specific best management practices that are designed to control drainage and erosion.

With the implementation of the applicable State and County requirements, potential impacts associated with erosion and loss of topsoil would be **less than significant**.

Impact 3.5-3: Project implementation has the potential to result in development located on a geologic unit or soil that is unstable, or that would

become unstable as a result of the Project, and potentially result in on- or off-site, lateral spreading, subsidence, liquefaction or collapse (Less than Significant)

Development allowed under the Project could result in the exposure of people and structures to conditions that have the potential for adverse effects associated with ground instability or failure. Soils and geologic conditions in the Plan area may have the potential for, lateral spreading, subsidence, liquefaction, or collapse. Each are discussed below:

Lateral Spreading: Lateral spreading generally is a phenomenon where blocks of intact, non-liquefied soil moves down slope on a liquefied substrate of large areal extent. The potential for lateral spreading is present where open banks and unsupported cut slopes provide a free face (unsupported vertical slope face). Ground shaking, especially when inducing liquefaction, may cause lateral spreading toward unsupported slopes. The Plan area is relatively flat at an elevation of approximately 110 to 185 feet above sea level. The area's terrain generally slopes gently down from east to west. Therefore, the potential for lateral spreading is generally low. The greatest potential for lateral spreading in the Plan area is in sloped areas.

Any future development in sloped areas would be required to adhere to General Plan Policy OSRC-11a which requires projects to be designed so that structures and roads are not located on slopes of 30 percent or greater, such as in the northeast portion of the Plan area, the area near the Aqua Caliente Creek bed, and the southeastern portion of the Plan area north of Donald Street. The vast majority of land in the Plan area is not located on slopes of 30 percent or greater. The CBSC requires geotechnical studies prior to new development. Through the CBSC, the State provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control. All future projects in the Plan area would be subject to the CBSC requirements.

Subsidence: Subsidence is the settlement of soils of very low density generally from either oxidation of organic material, or desiccation and shrinkage, or both, following drainage. In Sonoma County, subsidence has been documented in the southern portions of the County near Petaluma and San Pablo Bay. The Plan area is not within an area where subsidence is likely occur.

Liquefaction: Liquefaction, which is primarily associated with loose, saturated materials, is most common in areas of sand and silt or on reclaimed lands. Cohesion between the loose materials that comprise the soil may be jeopardized during seismic events and the ground will take on liquid properties. Thus, liquefaction requires specific soil characteristics and seismic shaking.

Liquefaction potential in the Plan area is categorized as "Very Low" to "Very High." The area designated as having a "Very High" potential for liquefaction is located along the southern portion of the Plan area, and is generally associated with the channelized Agua Caliente Creek running along Meadowbrook Avenue. The area between Depot and Northside Avenue is designated as having a "Moderate" potential for liquefaction, as is the area surrounding Agua Caliente Creek. However, the remainder of the Planning Area is designated as having a "Very Low" susceptibility for liquefaction. Liquefaction poses a hazard to structures and infrastructure. All development is subject to California building code, which may require applicant's to employ a qualified geologist or structural engineer to mitigate the potential for structural damage. In high risk areas, the County requires a soils investigation to identify soils-related hazards as part of a building permit application and requires development to implement the recommendations of

the report. Typical approaches may include appropriate foundation design, engineering soils, groundwater management, and the use of special flexible materials for construction.

Collapse: Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. According to the Sonoma County General Plan Draft EIR, weak or collapsing soils that compress under a load or when wet can be found in the County. All development is subject to California building code, which may require applicant's to employ a qualified geologist or structural engineer to mitigate the potential for structural damage. In high risk areas, the County requires a soils investigation to identify soils-related hazards as part of a building permit application and requires development to implement the recommendations of the report. Typical approaches may include appropriate foundation design, engineering soils, groundwater management, and the use of special flexible materials for construction.

Conclusion: As future development and infrastructure projects are considered within the Plan area, each project will be evaluated for conformance with the CBSC, the General Plan, Zoning Ordinance, Construction Grading and Drainage Ordinance, and other regulations. Future development and improvement projects would be required to have a geotechnical study prepared and incorporated into the improvement design, consistent with State and County requirements.

In addition to the requirements associated with the CBSC and the County Code, the General Plan includes policies and actions to ensure that development, infrastructure, and other projects address potential ground failure and instability issues through compliance with applicable building standards, identification of potential geologic hazards, preparation of geotechnical studies, and appropriate site analysis and engineering measures to mitigate any identified hazards, including landslides, lateral spreading, liquefaction, and other potential ground failures, to an acceptable level. Specifically, Policy PS-1f requires geologic reports be completed and reviewed for any project which would subject property or persons to significant risks from the geologic hazards areas shown on Public Safety Element hazard maps and related file maps and source documents. These geologic reports describe the hazards and include mitigation measures to reduce risks to acceptable levels. Policy PS-1i requires dynamic analysis of structural response to earthquake forces prior to County approval of building permits for structures whose irregularity or other factors prevent reasonable load determination and distribution by static analysis. See Section 3.5.2, Regulatory Setting, for a complete list of goals, objectives, and policies related to this topic.

With the implementation of applicable County requirements, including the policies and actions in the General Plan and County Code provisions, as well as applicable State requirements, potential impacts associated with ground instability or failure would be **less than significant**.

Impact 3.5-4: Project implementation has the potential to result in development on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property (Less than Significant)

"Linear extensibility" (also known as shrink-swell potential or expansive potential) refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an

expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

Expansive soil properties can cause substantial damage to building foundations, piles, pavement, underground utilities, and other improvements. Structural damage, such as warping and cracking of improvements, and rupture of underground utility lines, may occur if the expansive potential of soils is not considered during the design and construction of all improvements.

Linear extensibility is a method for measuring expansion potential. The expansion potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

The linear extensibility of the soils within the Plan area ranges from Low to Moderate. Figure 3.5-4 illustrates the shrink-swell potential of soils in the Plan area. Moderate expansive soils will require special design considerations due to shrink-swell potential.

The Public Safety Element of the County's General Plan establishes goals, objectives, and policies that are designed to protect from geologic hazards, including expansive soils. Policy PS-1f requires geologic reports be completed and reviewed for any project which would subject property or persons to significant risks from the geologic hazards areas shown on Public Safety Element hazard maps and related file maps and source documents. Consistency with the General Plan goals, objectives, and policies will require a site-specific, design-level geotechnical investigation, prepared by an engineer, and submitted to the County for review and confirmation. A site-specific geotechnical investigation will identify the potential for damage related to expansive soils and non-uniformly compacted fill and engineered fill. If a risk is identified, design criteria and specification options may include removal of the problematic soils, and replacement, as needed, with properly conditioned and compacted fill material that is designed to withstand the forces exerted during the expected shrink-swell cycles and settlements. See Section 3.5.2, Regulatory Setting, for a complete list of goals, objectives, and policies related to this topic.

Design criteria and specifications set forth in the design-level geotechnical investigation will ensure impacts from problematic soils are minimized. There are no additional significant adverse environmental impacts, apart from those disclosed in the relevant chapters of this Draft EIR, that are anticipated to occur due to expansive soils. Therefore, this impact is considered **less than significant**.

Impact 3.5-5: Project implementation has the potential to result in development on soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems (No Impact)

The Plan area is located in an Urban Service Area and is served by municipal sewer and water. The Project would not require the use of septic tanks or alternative waste water disposal systems for the disposal of waste water. Implementation of the Project would result in **no impact** relative to this topic.

Impact 3.5-6: Implementation of the Project has the potential to directly or indirectly destroy a unique paleontological resource (Less than Significant)

The Plan area is not expected to contain subsurface paleontological resources, although it is possible. The inadvertent discovery of a paleontologic resource could result in damage to or destruction of the resource.

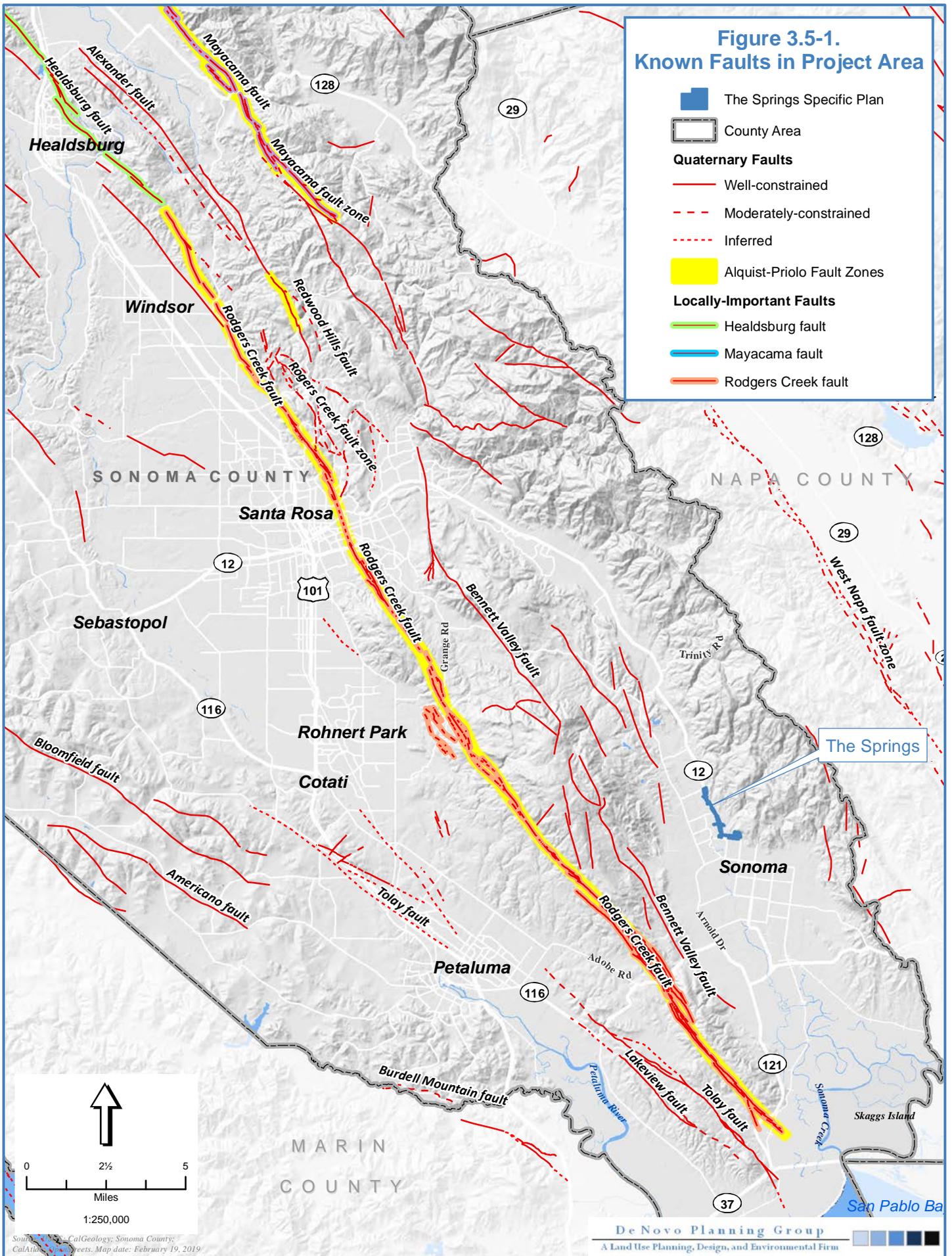
Implementation of Specific Plan Measure Paleo-A would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction. With this Specific Plan component, this impact would be **less than significant**.

SPECIFIC PLAN COMPONENT THAT MINIMIZES THE POTENTIAL FOR IMPACTS

***Measure Paleo-A:** If any paleontological resources are found during grading and construction activities, all work within 100 feet of the find shall cease, the County of Sonoma shall be notified, and the applicant shall retain an appropriately qualified paleontologist to determine the significance of the discovery. The paleontologist shall evaluate the discovery, including defining the physical extent and nature of the deposit. If necessary, the evaluation shall include preparation of a treatment plan, such as avoidance of the discovery, documentation of the paleontologic resources, or salvage of paleontologic resources, to mitigate any significant impacts to paleontologic resources.*

**Figure 3.5-1.
Known Faults in Project Area**

-  The Springs Specific Plan
-  County Area
- Quaternary Faults**
-  Well-constrained
-  Moderately-constrained
-  Inferred
-  Alquist-Priolo Fault Zones
- Locally-Important Faults**
-  Healdsburg fault
-  Mayacama fault
-  Rodgers Creek fault



Source: CalGeology; Sonoma County; CalAtlas. Map date: February 19, 2019.

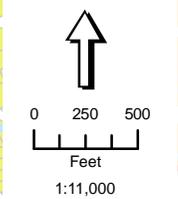
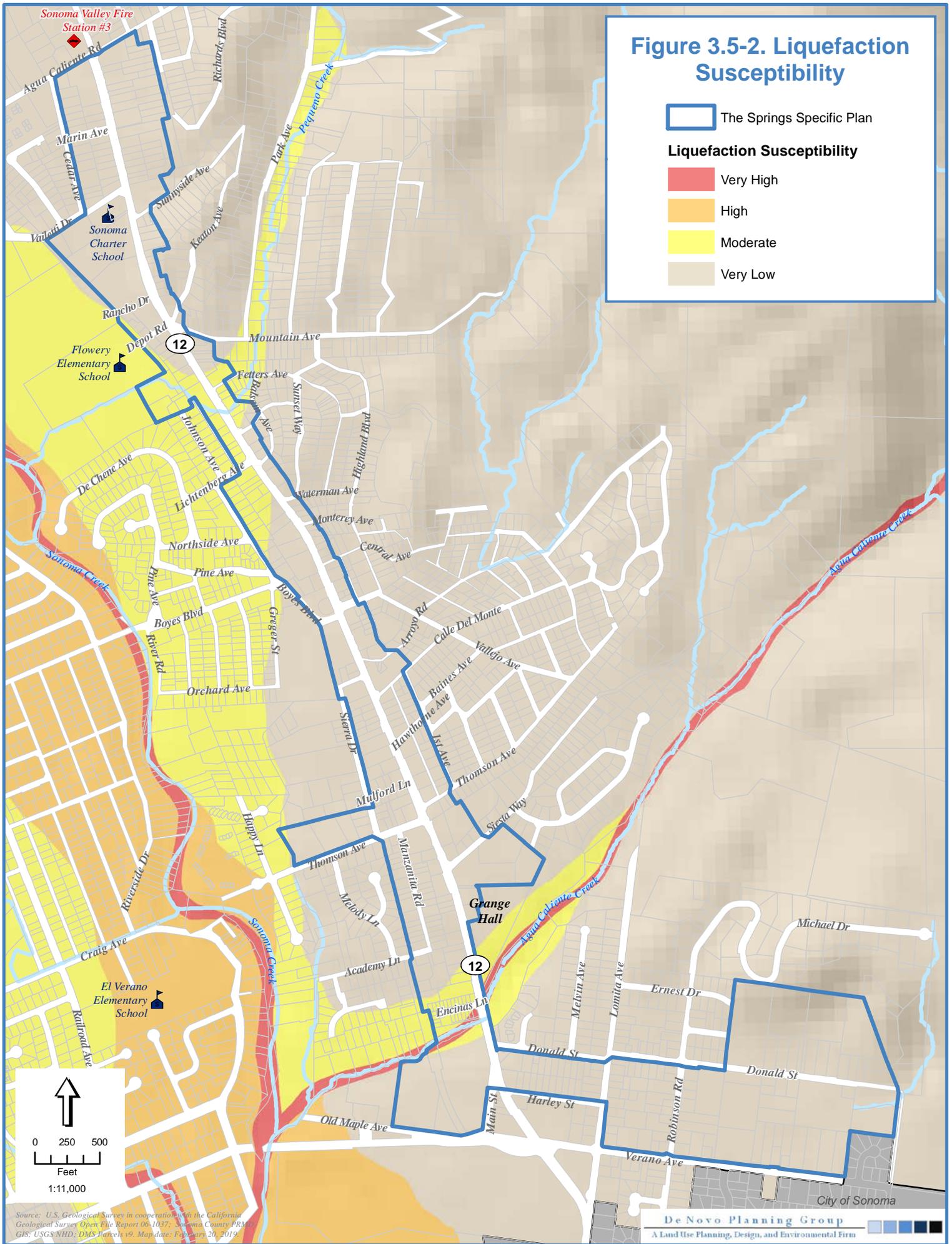
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Figure 3.5-2. Liquefaction Susceptibility

 The Springs Specific Plan

Liquefaction Susceptibility

-  Very High
-  High
-  Moderate
-  Very Low

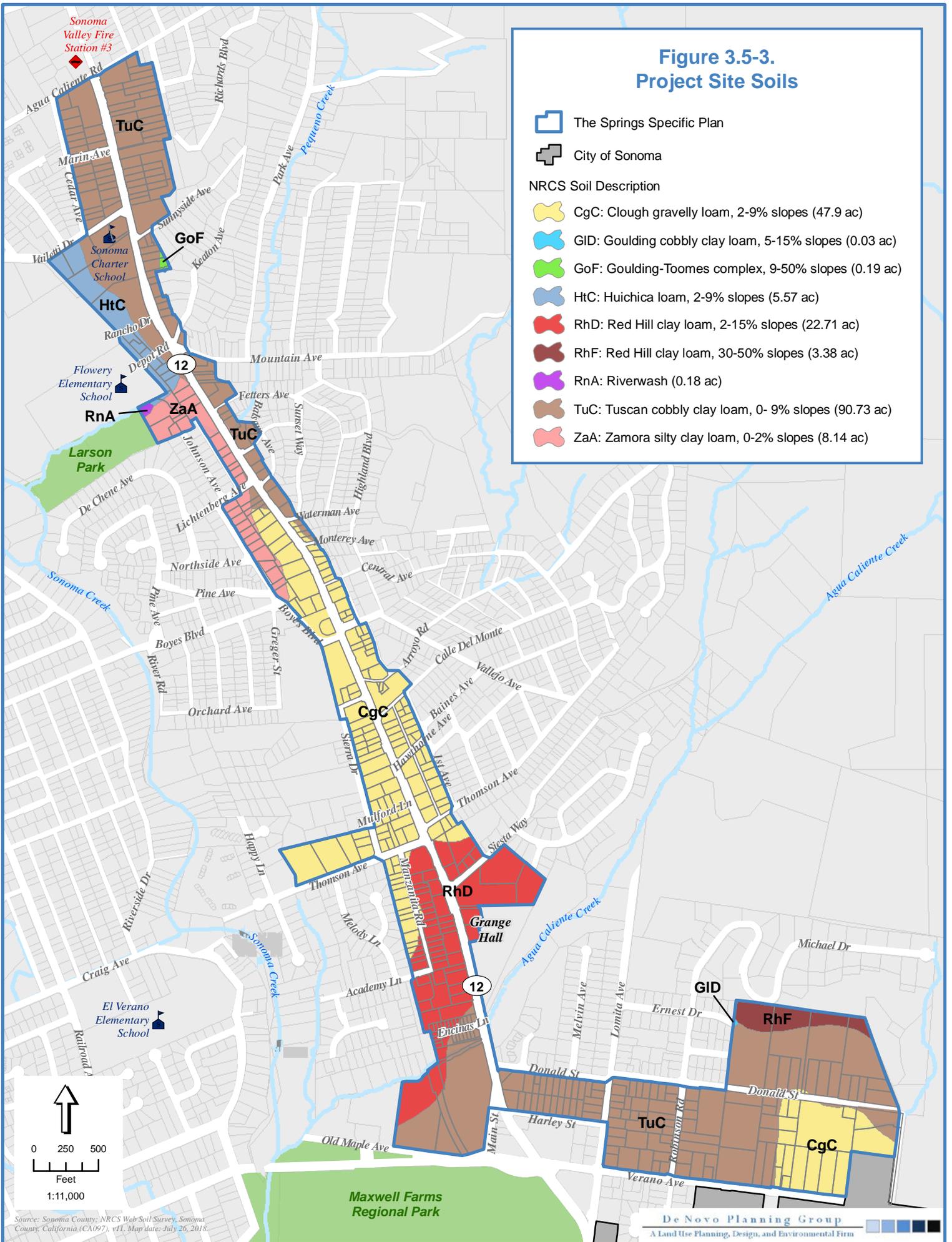


Source: U.S. Geological Survey in cooperation with the California Geological Survey Open File Report 06-1037; Sonoma County PRM; GIS: USGS NHD; DMS Parcels v9. Map date: February 20, 2019.

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**Figure 3.5-3.
Project Site Soils**

-  The Springs Specific Plan
-  City of Sonoma
- NRCS Soil Description**
-  CgC: Clough gravelly loam, 2-9% slopes (47.9 ac)
-  GID: Goulding cobbly clay loam, 5-15% slopes (0.03 ac)
-  GoF: Goulding-Toomes complex, 9-50% slopes (0.19 ac)
-  HtC: Huichica loam, 2-9% slopes (5.57 ac)
-  RhD: Red Hill clay loam, 2-15% slopes (22.71 ac)
-  RhF: Red Hill clay loam, 30-50% slopes (3.38 ac)
-  RnA: Riverwash (0.18 ac)
-  TuC: Tuscan cobbly clay loam, 0- 9% slopes (90.73 ac)
-  ZaA: Zamora silty clay loam, 0-2% slopes (8.14 ac)



Source: Sonoma County, NRCS Web Soil Survey, Sonoma County, California, (CA097), v11, Map date: July 26, 2018.

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**Figure 3.5-4.
Expansive Soils**

 The Springs Specific Plan

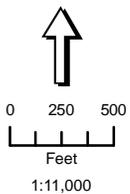
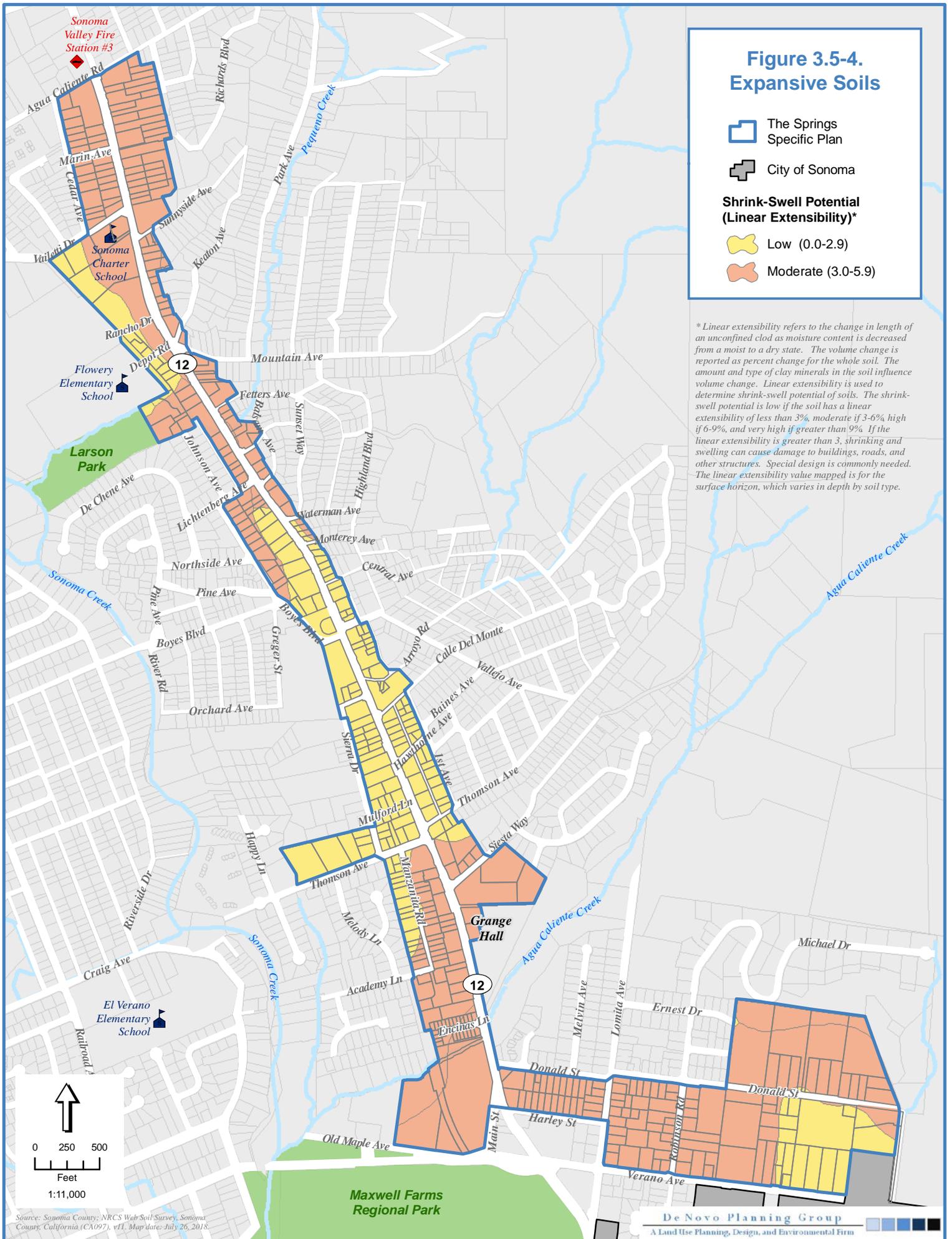
 City of Sonoma

**Shrink-Swell Potential
(Linear Extensibility)***

 Low (0.0-2.9)

 Moderate (3.0-5.9)

* Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The volume change is reported as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change. Linear extensibility is used to determine shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3%, moderate if 3-6% high if 6-9%, and very high if greater than 9%. If the linear extensibility is greater than 3, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is commonly needed. The linear extensibility value mapped is for the surface horizon, which varies in depth by soil type.



Source: Sonoma County, NRCS Web Soil Survey, Sonoma County, California, (CA097), v11, Map date: July 26, 2018.

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Figure 3.5-5. Landslide Susceptibility

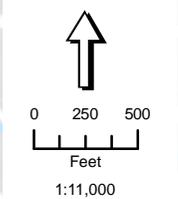
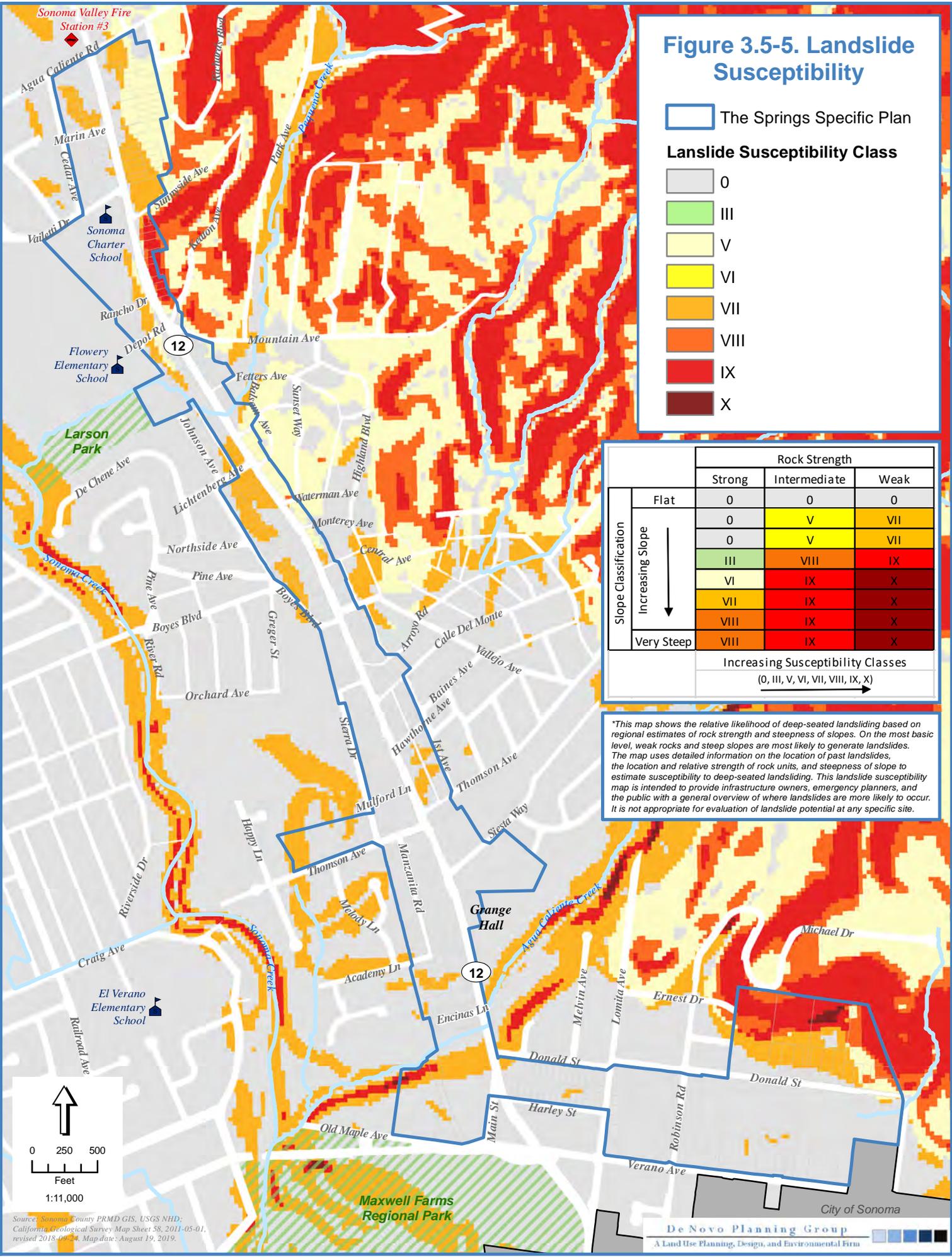
The Springs Specific Plan

Landslide Susceptibility Class

- 0
- III
- V
- VI
- VII
- VIII
- IX
- X

		Rock Strength		
		Strong	Intermediate	Weak
Slope Classification	Flat	0	0	0
	Increasing Slope ↓	0	V	VII
		0	V	VII
		III	VIII	IX
		VI	IX	X
		VII	IX	X
	VIII	IX	X	
	Very Steep	VIII	IX	X
Increasing Susceptibility Classes (0, III, V, VI, VII, VIII, IX, X)				

**This map shows the relative likelihood of deep-seated landsliding based on regional estimates of rock strength and steepness of slopes. On the most basic level, weak rocks and steep slopes are most likely to generate landslides. The map uses detailed information on the location of past landslides, the location and relative strength of rock units, and steepness of slope to estimate susceptibility to deep-seated landsliding. This landslide susceptibility map is intended to provide infrastructure owners, emergency planners, and the public with a general overview of where landslides are more likely to occur. It is not appropriate for evaluation of landslide potential at any specific site.*



Source: Sonoma County PRMD GIS, USGS NHD; California Geological Survey Map Sheet 58, 2011-05-01, revised 2018-06-04. Map date: August 19, 2019.

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This section discusses regional greenhouse gas (GHG) emissions, climate change, and energy conservation impacts that could result from buildout of the Project. It begins with background on GHGs and their links to climate change, and continues with the effects of global climate change. This section is organized under the following headings: existing setting, regulatory setting, approach/methodology, and impact analysis.

The analysis of GHGs, climate change, and energy conservation impacts focuses on the Project's consistency with local, regional, and statewide climate change planning efforts, including the CARB's 2017 Climate Change Scoping Plan. Discussion of estimated energy use and GHG emissions resulting from the Project's buildout are provided. Information in this section is derived primarily from the California Air Resources Board (CARB), the Bay Area Air Quality Management District (BAAQMD), and the California Emission Estimator Model (CalEEMod)TM (v.2020.4.0).

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.6.1 ENVIRONMENTAL SETTING

ACRONYMS

ABAG	Association of Bay Area Governments
AB 32	Assembly Bill 32
BAAQMD	Bay Area Air Quality Management District
CAFE	Corporate Average Fuel Economy
CARB	California Air Resources Board
CEC	California Energy Commission
CH₄	Methane
CO₂	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalents
EPAct	Energy Policy Act of 1992
GHG	Greenhouse Gas
GWh	Gigawatt-hours
GWP	Global Warming Potential
H₂O	Water Vapor
kBtu	One Thousand British Thermal Units
kWh	Kilowatt-hour
MT CO_{2e}	Metric tons of Carbon Dioxide Equivalents
MMCO_{2e}	Million Metric Tons of Carbon Dioxide Equivalents
MPO	Metropolitan Planning Organization
N₂O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
O₃	Ozone
PG&E	Pacific Gas & Electric
RCPA	Sonoma County Regional Climate Protection Authority
RPS	Renewable Portfolio Standard
SB 32	Senate Bill 32

3.6 GREENHOUSE GASES AND ENERGY

SB 375	Senate Bill 375
SCP	Sonoma Clean Power
SP	Service Population
U.S. DOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency

SONOMA VALLEY AND GREENHOUSE GASES

The Springs is an unincorporated community located in central Sonoma Valley immediately north of the City of Sonoma. The Sonoma Valley is a visitor-serving (tourist) area, which generates GHGs from both local activity as well as from visitors to the area. GHGs in Sonoma Valley are generated by a variety of GHG sectors, including the mobile (vehicle), area (i.e. landscaping equipment), energy (e.g. electricity and natural gas), water & wastewater (supply and treatment), solid waste (off-gassing from landfills), and agriculture sectors.

GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Atmospheric GHGs play a critical role in influencing the Earth's surface temperature. Solar radiation enters Earth's atmosphere, and a portion of the radiation is absorbed by the Earth's surface. However, the Earth reflects approximately 35% of this radiation back towards space, with the radiation changing from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring GHGs include water vapor (H₂O), carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and ozone (O₃). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Although the direct GHGs, which include CO₂, CH₄, and N₂O, occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to the current period, concentrations of these three GHGs have increased globally by 40%, 150%, and 20%, respectively (IPCC, 2013). The mobile (vehicle) sector represents the largest single source of GHGs, followed by the generation of GHGs by the industrial sector (California Energy Commission, 2018a). Every GHG has a Global Warming Potential (GWP), a measurement of the impact that particular gas has on 'radiative forcing'; that is, the additional heat/energy which is retained in the Earth's ecosystem through the addition of this gas to the atmosphere. Therefore, GHG emissions are typically expressed in terms of carbon dioxide equivalents (i.e. CO₂e), in order to represent a project's total contribution to the greenhouse effect with a single value. CO₂e is quantified by taking the contribution of all GHG emissions to the greenhouse effect and converting them to a single unit equivalent (i.e. equivalent to the global warming potential of CO₂, which is the most common GHG), using specific global warming potential (GWP) values for each GHG that is not CO₂. When added together, the resultant value provides GHG emissions in terms of carbon dioxide equivalents (i.e. CO₂e), thereby providing a common basis for comparing a project's emissions to applicable thresholds and targets.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced approximately 440 million gross metric tons of carbon dioxide equivalents (MMTCO₂e) in 2016 (California Energy Commission, 2018a). By 2020, California is projected to produce 509 MMTCO₂e per year (California Air Resources Board, 2015a).

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2016, accounting for 41% of total GHG emissions in the state. This category was followed by the industrial sector (23%), the electricity generation sector (including both in-state and out of-state sources) (16%), the agriculture sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Energy Commission, 2018a).

EFFECTS OF GLOBAL CLIMATE CHANGE

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated erosion, including wetlands and other types of habitat, and impact levees and inland water systems.

It is anticipated that the winter snow season would be shortened if the temperature of the ocean warms, leading to a reduction in snowpack. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. The snowpack portion of the supply could potentially decline by 50% to 75% by the end of the 21st century (National Resources Defense Council, 2014). This decline could lead to significant challenges securing an adequate water supply for the population. Further, a higher ocean temperature could result in increased wind-borne transport of water vapor from the ocean into the state; however, since this transport of water would likely increasingly come in the form of rain rather than snow in the high elevations, more precipitation could lead to a higher potential for and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately 5.9 inches along the central and southern California coast during the last century and it is predicted to rise an additional 29 to 54 inches by 2100, depending on future GHG emission levels (State of California, 2019a; State of California 2019b). Effects from sea level rise could include increased coastal flooding, saltwater intrusion and disruption of wetlands. Climate change in California could also critically effect migratory species. Under the emissions scenarios of the Climate Scenarios report (California Environmental Protection Agency, 2010), California's Fourth Climate Change Assessment Statewide Summary Report (State of California, 2019a), and California's Fourth Climate Change Assessment San Francisco Bay Area Region Report (State of California, 2019b), impacts of global warming in California and the Bay Area region are anticipated to include, but are not limited to, the following.

Wildfires

Warming temperatures combined with expansion of the wildland-urban interface are projected to increase fire risk in most of the Bay Area, though risks may decline in some areas as they become more heavily urbanized (State of California, 2019b). Wildfires have also been occurring more frequently in recent years in Sonoma County, a trend which is expected to continue under future climate change. Cal-Adapt, which is a web-based climate adaptation planning tool by the California Energy Commission, estimates that the annual area burned by wildfires in Sonoma County will increase from an average of 1,584.3 annual mean hectares in the 1961-1990 period to an average of 2,345.3 annual mean hectares in the 2070-2099 period (Cal-Adapt, 2019). Climate change will likely modify the vegetation in California, affecting the characteristics of fires on the land. Land use and development patterns also play an important role in future fire activity. Because of these complexities, projecting future wildfires is complicated, and results depend on the time period for the projection and what interacting factors are

included in the analysis. Because wildfires are affected by multiple and sometimes complex drivers, projections of wildfire in future decades in California range from modest changes from historical conditions to relatively large increases in wildfire regimes.

Public Health

The Fourth Climate Change Assessment San Francisco Bay Area Region Report identified a number of climate-related changes threatening Bay Area health, including more extreme heat events, increased air pollution from ozone formation and wildfires, longer and more frequent droughts, and flooding from sea level rise and high-intensity rain events. Nineteen heat-related events occurred in the United States from 1999 to 2009 that had significant impacts on human health, resulting in about 11,000 excess hospitalizations. However, the National Weather Service issued Heat Advisories for only six of the events. Heat-Health Events (HHEs), which better predict risk to populations vulnerable to heat, will worsen drastically throughout the state. In Sonoma County, the average number of extreme heat days is expected to increase from the approximately 4 days per year in the 1961-1990 period to approximately 24 days per year in the 2070-2099 period (Cal-Adapt, 2019).

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. Climate change poses direct and indirect risks to public health, as people will experience earlier death and worsening illnesses. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions.

Energy Resources

Higher temperatures will increase annual electricity demand for homes, driven mainly by the increased use of air conditioning units. High demand is projected in inland and Southern California, and more moderate increases are projected in cooler coastal areas, including Sonoma County. However, the increased annual residential energy demand for electricity is expected to be offset by reduced use of natural gas for space heating. Increases in peak hourly demand during the hot months of the year could be more pronounced than changes in annual demand. This is a critical finding for California's electric system, because generating capacity must match peak electricity demand.

Water Resources

A vast network of artificial reservoirs and aqueducts, fed by northern California rivers and the Colorado River, capture and transport water throughout the state. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow. The snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70% to 90%. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snow pack would pose challenges to water managers and hamper hydropower generation. More importantly, the loss of snow pack has the potential to severely disrupt water resource availability over the long-term, especially in agricultural areas.

Like the rest of the State, the San Francisco Bay Area is expected to face a challenging combination of decreased water supply, a less reliable supply, and potential reduction in the quality of water supplies due to climate impacts, including melting snowpack, increasing seawater intrusion into groundwater, increasing rates of evapotranspiration, and levee failures or subsidence that contaminate Delta supplies (State of California, 2019b).

In Sonoma County, most of the water supply comes from Lake Mendocino and Lake Sonoma extracted via the Russian River. Although loss of snow pack in the watersheds surrounding these water bodies is not a major concern (as it is in the Sierra Nevada range), droughts enhanced by climate change are already impacting these watersheds. For example, in April 2021, the lowest ever water levels were recorded in Lake Sonoma.¹ These water sources are likely to come under increasing strain in the long-term due to increased summer water shortages throughout the state. The shorter, more intense storms generated by climate change could also require the need for long-term water storage solutions beyond what the current water storage and distribution system is designed to handle.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry, reducing the quantity and quality of agricultural products statewide. Although higher CO₂ levels can stimulate plant production and increase plant water-use efficiency, California's farmers will require more water for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a point. However, faster growth can result in less-than-optimal development for many agricultural products, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products, including wine grapes, fruits, nuts, and milk.

Crop growth and development will be affected by global warming. Continued global warming will likely shift the habitat ranges of existing invasive plants, and alter competition patterns with native plants. Range expansion is expected in many species, while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps, thereby displacing crops and slowing down agricultural production.

Continued global warming is also likely to alter the abundance and types of many insect pests, lengthen insect pests' breeding season, and increase pathogen growth rates. The intensity and frequency of pest and disease outbreaks will increase, since rising temperatures increase transmission of vector-borne disease from pests like insects up to an optimum temperature or "turn-over point," above which transmission slows. Sonoma County, as well as California as a whole, is located in an area that is susceptible to an increase in transmission of vector-borne diseases due to rising temperatures. Separately, rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests, and also interferes with plant growth.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the state's coastal regions. Under the business-as-usual conditions, sea level is anticipated to rise 22 to 35

¹ See: <https://sanfrancisco.cbslocal.com/2021/04/25/california-drought-historically-low-water-lake-sonoma/>

inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. A large area of southern Sonoma County, including the area encompassing and surrounding the San Pablo National Wildlife Refuge, is anticipated to be flooded due to rising sea levels by the middle of this century.

Statewide damages due to rising sea levels could reach nearly \$17.9 billion from inundation of residential and commercial buildings under 50 centimeters (~20 inches) of sea-level rise. This level of sea level rise is close to the 95th percentile of potential sea-level rise by the middle of this century. A 100-year coastal flood, on top of this level of sea-level rise, would almost double the costs.

ENERGY CONSUMPTION

Energy in California is derived from a wide variety of sources. Fossil fuels (including gasoline and diesel fuel, natural gas, and other fossil fuels used to generate electricity) are the most widely used forms of energy in the state. However, renewable sources of energy (such as solar and wind) are growing in proportion to California's overall energy portfolio. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS), which requires the State to derive at least 33% of electricity from renewable resources by 2020, and 60% by 2030, and to achieve zero-carbon emissions by 2045 (as passed in September 2018, under SB 100).

According to the U.S. Energy Information Administration, in 2018, California's energy consumption was second-highest among the states, but its per capita energy consumption was the fourth-lowest due in part to its mild climate and its energy efficiency programs.² Additionally, California's per capita rate of energy usage has remained relatively constant since the 1970's. Many State regulations since the 1970's, including new building energy efficiency standards and vehicle fleet efficiency measures, as well as growing public awareness, have helped to keep per capita energy usage in the state constant.

The consumption of nonrenewable energy (primarily gasoline and diesel fuel) associated with the operation of passenger, public transit, and commercial vehicles results in GHG emissions that propel global climate change. The use of other fuels such as natural gas and ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

California's Fourth Climate Change Assessment San Francisco Bay Area Region Report indicates that warmer summers will increase energy demand across the region, while warmer winters will lead to a decline in winter heating demand. Climate change effects on the Bay Area's energy distribution system include vulnerabilities to outages during wind and wildfire events, flooding of natural gas transmission facilities located along waterways due to sea level rise and extreme storm events, and exposure of the transportation fuel sector, which distributes oil from refineries to end users, to extreme weather events, including flooding and wildfire (State of California, 2019b).

Electricity

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. In 2019, more than one-fourth of the electricity supply came from facilities outside of the state. Much of the power delivered to California from states in the Pacific Northwest was generated by renewable energy sources. States in the Southwest delivered power

²U.S. Energy Information Administration, 2021. Accessed at: <https://www.eia.gov/state/analysis.php?sid=CA>

generated from renewables, coal-fired power plants, natural gas-fired power plants, and from nuclear generating stations (U.S. EIA, 2021). In 2020, approximately 37% of California’s utility-scale net electricity generation was fueled by natural gas. In addition, about 33% of the state’s utility-scale (i.e. grid-connected) net electricity generation came from renewable technologies, such as solar, wind, geothermal, small-scale hydroelectric, and biomass³. Another 12% of the state’s utility-scale net electricity generation came from large-scale hydroelectric generation, and nuclear energy powered an additional 9%. The amount of electricity generated from coal was approximately 3% (California Energy Commission (CEC), 2020). The percentage of renewable resources as a proportion of California’s overall energy portfolio is increasing over time, as directed by the State’s RPS. The following table (Table 3.6-1) summarizes the sources of electricity generation for California in 2020.

TABLE 3.6-1: CALIFORNIA UTILITY-SCALE NET ELECTRICITY GENERATION MIX (YEAR 2020)

<i>SOURCE</i>	<i>PERCENTAGE</i>
Natural gas	37%
Renewables (Biomass, Geothermal, Small Hydroelectric, Solar, Wind)	33%
Large Hydroelectric	12%
Nuclear	9%
Coal	3%
Other and Unspecified Nonrenewables	6%

SOURCE: CALIFORNIA ENERGY COMMISSION, 2020. ACCESSED AT: [HTTPS://WWW.ENERGY.CA.GOV/DATA-REPORTS/ENERGY-ALMANAC/CALIFORNIA-ELECTRICITY-DATA/2020-TOTAL-SYSTEM-ELECTRIC-GENERATION](https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation)

NOTE: NUMBERS MAY NOT ADD UP DUE TO ROUNDING.

According to the CEC, total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66%. The statewide electricity consumption in 1997 was 246,225 GWh, reflecting an annual growth rate of 1.14% between 1990 and 1997 (U.S. EIA, 2017b). Statewide consumption was 290,567 GWh in 2016, an annual growth rate of 0.8% between 1997 and 2016 (U.S. EIA, 2017b).

Sonoma Clean Power is Sonoma County’s primary electricity provider, replacing Pacific Gas & Electric (PG&E) in 2014 with its own electric generation service. In 2018, Sonoma Clean Power utilized eligible renewables for 49% of its energy mix (Sonoma Clean Power, 2018). Eligible renewables are those energy resources (such as solar, wind, biomass, geothermal, and eligible hydroelectric) that meet the state’s RPS standard for renewable resources. Sonoma Clean Power also utilized an additional 42% of its energy mix from non-eligible hydroelectric resources.

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2016, world consumption of oil had reached 96 million barrels per day. The United States, with approximately 5% of the world’s population, accounts for approximately 19% of world oil consumption, or approximately 18.6 million barrels per day (International Energy Agency, 2018). The transportation sector relies heavily on oil. In California, petroleum-based fuels

³ Biomass energy is energy generated or produced by living or once-living organisms. The most common biomass materials used for energy are plants, such as corn and soy, above. The energy from these organisms can be burned to create heat or converted into electricity.

currently provide approximately 96% of the state's transportation energy needs (California Energy Commission, 2012).

Natural Gas/Propane

The state produces approximately 12% of the natural gas it consumes, while obtaining 22% from Canada and 65% from the Rockies and the Southwest (California Energy Commission, 2012). Total natural gas demand in California in 2012 was 2,313 billion cubic feet of natural gas (California Energy Commission, 2012).

Regional Emissions

The BAAQMD conducts periodic inventories of two types of GHG emissions within the San Francisco Bay Area Air Basin. The Consumption-Based Greenhouse Gas Inventory of San Francisco Bay Area Neighborhoods, Cities, and Counties analyzes GHG emissions related to goods and services that are produced anywhere in the world and consumed within the Bay Area and categorizes products within five basic sectors: transportation, housing, food, goods, and services. The Bay Area Emissions Inventory Summary Report: Greenhouse Gases (BAAQMD), is a production-based inventory that analyzes GHG emissions that are produced within the Bay Area.

The most recent consumption-based GHG emissions inventory provides a base year inventory for year 2013. Data from this inventory indicates the average Bay Area household emitted a total of 44.3 MMTCO₂e associated with the consumption of goods and services, which is 3% less than the average California household emissions of 45.7 metric tons per year.⁴ Similar to the state inventory, the transportation sector, which includes combustion of fossil fuels in mobile sources such as cars, trucks, locomotives, ships, and boats, contributes the most (14.6 MMTCO₂e) toward regional GHG levels (approximately 33% of regional consumption-based GHG emissions).⁵

The most recent production-based GHG emissions inventory provides a base year inventory for year 2011. Data from this inventory indicates the San Francisco Bay Area emitted a total of 86.6 MMTCO₂e, or approximately 20% of the total statewide GHG emissions in year 2011. The production-based inventory divides emissions into six sectors: transportation, industrial and commercial, electricity and co-generation, residential fuel usage, off-road equipment, and agriculture and farming.⁶ Similar to the state inventory, the combustion of fossil fuels in mobile sources such as cars, trucks, locomotives, ships, and boats contribute the most (34.3 MMTCO₂e) toward regional GHG levels (approximately 40% of regional GHG emissions).⁷

⁴ The BAAQMD GHG inventory is based on the U.N. IPCC's 2nd Assessment Report, which uses different GWP values to compute CO₂e. The GWP values in the 2nd Assessment Report are generally lower than the values in the UN IPCC 4th Assessment Report, which the CARB statewide inventory uses. For example, the GWP of methane was reported as 21 in the 2nd Assessment Report and is reported as 25 in the 4th Assessment Report.

⁵ Jones and Kammen, 2015. A Consumption-Based Greenhouse Gas Inventory of San Francisco Bay Area Neighborhoods, Cities and Counties: Prioritizing Climate Action for Different Locations. December 2015.

⁶ The BAAQMD GHG inventory is based on the U.N. IPCC's 2nd Assessment Report, which uses different GWP values to compute CO₂e. The GWP values in the 2nd Assessment Report are generally lower than the values in the UN IPCC 4th Assessment Report, which the CARB statewide inventory uses. For example, the GWP of methane was reported as 21 in the 2nd Assessment Report and is reported as 25 in the 4th Assessment Report.

⁷ BAAQMD, 2015. Bay Area Emissions Inventory Summary Report: Greenhouse Gases. January 2015.

Local Emissions

The Sonoma County Regional Climate Protection Authority (RCAP) has developed community-level GHG emissions inventories for 2010 and 2015, which are provided below for information purposes only (as shown in Table 3.6-2), since implementation of the Climate Action 2020 and Beyond document prepared by RCAP was put on hold following a lawsuit.⁸ As shown in the below table, between 2010 and 2015, GHG emissions in Sonoma County increased for the on-road transportation, livestock and fertilizer, solid waste, and off-road transportation emissions sources, while emissions decreased for the building energy and wastewater sources. Total GHG emissions in Sonoma County increased slightly between 2010 and 2015.

TABLE 3.6-2: SONOMA COUNTY COMMUNITY-WIDE GHG EMISSIONS (MTCO₂E)

INVENTORY SOURCE	YEAR 2010 EMISSIONS	YEAR 2015 EMISSIONS
On-road Transportation	1,899,000	2,126,000
Building Energy	1,220,000	821,000
Livestock and Fertilizer	268,000	361,000
Solid Waste	134,000	213,000
Off-road Transportation	62,000	75,000
Water and Wastewater	19,000	16,000
Total	3,601,000	3,618,000

SOURCE: SONOMA COUNTY REGIONAL CLIMATE PROTECTION AUTHORITY, 2018.

NOTE: NUMBERS MAY NOT ADD UP DUE TO ROUNDING.

3.6.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (CAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The CAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, hazardous air pollutant standards, state attainment plans, National Ambient Air Quality Standards motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The U.S. EPA (EPA) is responsible for administering the CAA. The CAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the United States would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. The National Highway Traffic and Safety Administration,

⁸ In July 2016, the Sonoma County Regional Climate Protection Authority developed a climate action plan, entitled Climate Action 2020 and Beyond, in collaboration with the County of Sonoma and nine cities within the county. However, implementation of Climate Action 2020 and Beyond was put on hold following a lawsuit.

which is part of the U.S. Department of Transportation (U.S. DOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon (mpg). Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the U.S. DOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992 (EPAct)

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; allows bond financing, tax incentives, grants, and loan guarantees for a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Intermodal Surface Transportation Efficiency Act (ISTEA)

ISTEA (49 U.S.C. § 101, et seq.) promoted the development of intermodal transportation systems to maximize mobility, as well as address national and local interests in air quality and energy. ISTEA contained factors that metropolitan planning organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process was then to address these policies. Another requirement was to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption was expected to become a criterion, along with cost and other values that determine the best transportation solution.

Moving Ahead for Progress in the 21st Century (Map-21)

MAP-21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), was signed into law on July 6, 2012. Funding surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014, MAP-21 is the first long-term highway authorization enacted since 2005. MAP-21 creates a streamlined, performance-based, and multimodal program to address the many challenges facing the U.S.

transportation system. These challenges include improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, the U.S. EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In general, this national reporting requirement was designed to provide the U.S. EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO₂ per year. This publicly available data allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level; however, certain suppliers of fossil fuels and industrial GHG, along with vehicle and engine manufacturers, will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

In 2012, the U.S. EPA issued a Final Rule that establishes the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (2014) 573 U.S. 302 held that U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of best available control technology.

Safer Affordable Fuel-Efficient Vehicle Rule

On September 27, 2019, the U.S. EPA and the National Highway Safety Administration published the “Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program.” The Part One Rule revokes California’s authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. To account for the effects of the Part One Rule, CARB released off-model adjustment factors on November 20, 2019, to adjust criteria air pollutant emissions outputs from the Emission FACTor (EMFAC) model. The Final Rule (i.e., Part Two) then relaxed federal GHG emissions and Corporate Average Fuel Economy standards to increase in stringency at only about 1.5 percent per year from model year 2020 levels over model years 2021-2026. The previously established emission standards and related fuel economy standards would have achieved about four percent per year improvements through model year 2025. Therefore, CARB has prepared off-model CO₂ emissions adjustment factors for both the EMFAC2014 and EMFAC2017 models to account for the impact of this rule. With the incorporation of these adjustment factors, operational emission factors for CO₂ generated by light-duty automobiles, light-duty trucks, and medium-duty trucks associated with project-related vehicle trips may increase by approximately one percent (in 2020) up to as much as 17 percent (in 2050) compared to non-adjusted estimates.

STATE

California Executive Orders S-3-05, S-20-06, B-30-15, Assembly Bill 32, and Senate Bill 32

On June 1, 2005, then Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California’s GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% below the 1990 levels by the year 2050.

In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that the CARB create a plan, which includes market mechanisms, and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state’s Climate Action Team.

In April 2015, Governor Jerry Brown signed Executive Order B-30-15, which requires that there be a reduction in GHG emissions to 40% below 1990 levels by 2030, in order to ensure that GHG emissions are reduced to 80% below 1990 levels by 2050. This intermediate target was codified into law by Senate Bill 32 (SB 32), which was signed into law on September 8, 2016, which includes the requirement to reduce California’s GHG emissions to 40% below 1990 levels by 2030.

Climate Change Scoping Plan

On December 11, 2008, the CARB adopted its Climate Change Scoping Plan (Scoping Plan), which functions as a roadmap of the CARB’s plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce CO₂e emissions by 169 million metric tons (MMT), or approximately 30%, from the state’s projected 2020 emissions level of 596 MMT of CO₂e under a business-as-usual scenario. This is a reduction of 42 MMT CO₂e, or almost 10%, from 2002–2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.

The CARB updated the Scoping Plan in 2013 (First Update to the Scoping Plan) and again in 2017 (the 2017 Climate Change Scoping Plan). The 2013 Update built upon the initial Scoping Plan with new strategies and recommendations, and also set the groundwork to reach the long-term goals set forth by the state. The 2017 Update expands the scope of the plan further by focusing on the strategy for achieving the State’s 2030 GHG target of 40% emissions reductions below 1990 levels (to achieve the target codified into law by SB 32). The 2017 Climate Change Scoping Plan is designed to help California to:

- lower GHG emissions on a trajectory to avoid the worst impacts of climate change;
- support a clean energy economy which provides more opportunities to all Californians;
- provide a more equitable future with good jobs and less pollution for all communities;
- improve the health of all Californians by reducing air and water pollution and making it easier to bike and walk; and
- make California an even better place to live, work, and play by improving our natural and working lands.

The 2017 Climate Change Scoping Plan incorporates pre-existing state legislation that targets the reduction of GHG emissions, such as Assembly Bill (AB) 1493 and AB 1007 (Pavley, Chapter 371, Statutes

of 2005). AB 1492 required automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Separately, AB 1007 directed the CEC to prepare a plan to increase the use of alternative fuels in California. As part of the recommended Scoping Plan actions, CARB recommends statewide targets of no more than 6 MTCO_{2e} or less per capita by 2030 and 2 MTCO_{2e} or less per capita by 2050.

SENATE BILL 375

SB 375 (Stats. 2008, ch. 728) was built on AB 32 (California's 2006 climate change law). SB 375's core provision is a requirement for regional transportation agencies to develop a Sustainable Communities Strategy (SCS) in order to reduce GHG emissions from passenger vehicles. An SCS is one component of the Regional Transportation Plan (RTP). The most recent SCS for the San Francisco Bay Area is entitled "Plan Bay Area 2050".

Plan Bay Area 2050 outlines the region's plan for combining transportation resources, such as roads and mass transit, with a realistic land use pattern in order to meet a State target for reducing GHG emissions. The strategy must take into account the region's housing needs, transportation demands, and protection of resources and farmlands.

Additionally, SB 375 modified the State's Housing Element Law to achieve consistency between the land use pattern outlined in the SCS and the Regional Housing Needs Assessment allocation. The legislation also substantially improved cities' and counties' accountability for carrying out their housing element plans.

Finally, SB 375 amended the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) to ease the environmental review of developments that help reduce the growth of GHG emissions.

Governor's Low Carbon Fuel Standard (California Executive Order #S-01-07)

Executive Order #S-01-07 establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020 and 20% by 2030 through establishment of a Low Carbon Fuel Standard. Carbon intensity is the carbon emission rate relative to the intensity of a specific activity. The Low Carbon Fuel Standard is incorporated into the State Alternative Fuels Plan and is one of the discrete early action GHG reduction measures identified by the CARB pursuant to AB 32. Implementation of Executive Order #S-01-07 has reduced the carbon footprint associated with vehicle travel in California.

California Renewable Portfolio Standard

Established in 2002 by SB 1078, California's Renewables Portfolio Standard (RPS) was accelerated in 2006 under Senate Bill 107 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010. Subsequent recommendations in California energy policy reports advocated a goal of 33% by 2020, and on November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08 requiring that all retail sellers of electricity shall serve 33% of their load with renewable energy by 2020. Senate Bill X1-2 was signed by Governor Edmund G. Brown, Jr., in April 2011, setting the RPS target at 33% by 2020. This RPS applied to all electricity retailers in the state including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities had to adopt the new RPS goals of 20% of retail sales from renewables by the end of 2013, 25% by the end of 2016, and the 33% requirement being met by the end of 2020. More recently, SB 100 (passed in September 2018) established an RPS of 60% by 2030 and 100% (zero-carbon) by 2045.

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. On January 1, 2010, the California Building Standards Commission adopted CALGreen and became the first state in the United States to adopt a statewide green building standards code. CALGreen requires new buildings to reduce water consumption by 20%, divert 50% of construction waste from landfills, and install low pollutant-emitting materials. The California Building Energy Efficiency Standards are updated periodically. The standards were most recently updated in 2019, and are effective as of January 1, 2020. Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient (CEC, 2018). When accounting for the electricity generated by the solar PV system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC, 2018).

CALIFORNIA SOLAR MANDATE

The California Energy Commission introduced the California solar mandate which requires rooftop solar photovoltaic systems to be equipped on all new homes built on January 1, 2020 and beyond. The 2019 Building Energy Efficiency Standards requires that all new single-family homes and multi-family buildings that are under three stories must conform to the new solar code standards and is climate zone-specific depending on the sizing of a home's floor area. This applies to all houses, condos, and apartments that obtain building permits on or after January 1, 2020. This initiative by the CEC aims to spearhead California's milestone goal of producing 60% of the state's energy through clean energy sources by 2030.

AB 758

AB 758, the Comprehensive Energy Efficiency in Existing Buildings Law, tasked CEC with developing and implementing a comprehensive program to increase energy efficiency in existing residential and nonresidential buildings that "fall significantly below the current standards in Title 24." (Pub. Resources Code, section 25943(a)(1).) Approximately 50% of existing residential and nonresidential buildings in California were constructed before California Building Energy Efficiency Standards went into effect in 1978. Other buildings constructed after 1978 also fall below current Title 24 standards and represent significant opportunities for energy efficiency improvements. Pursuant to AB 758, the CEC has developed an Existing Buildings Energy Efficiency Action Plan that identifies strategies to implement energy efficient renovations for such existing commercial, residential, and publicly owned buildings. Strategies include making information about a building's energy efficiency more readily available, educating the public about the cost-benefit of energy efficiency upgrades, making attractive financing more readily available, educating the public and contractors about available energy upgrades and code compliance requirements, and educating a work force capable of implementing energy upgrades.

CEQA Guidelines Appendix F

In order to assure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The goal of conserving energy implies the wise and efficient use of energy.

LOCAL

Bay Area Air Quality Management District

CEQA GUIDELINES

On June 2, 2010, the Bay Area Air Quality Management District's Board of Directors unanimously adopted thresholds of significance (Thresholds) to assist in the review of projects under the California Environmental Quality Act. These Thresholds are designed to establish the level at which the District believed air pollution and greenhouse emissions would cause significant environmental impacts under CEQA. The Thresholds were posted on the Air District's website and included in the Air District's updated CEQA Guidelines (updated May 2012). The BAAQMD published a new version of the Guidelines dated May 2017.⁹

The May 2017 BAAQMD CEQA Guidelines¹⁰ provides the following Thresholds relevant to GHGs for Specific Plans:

- Plan-Level:
 - Construction: no thresholds.
 - Operational:
 - 4.6 CO₂e/SP/year. This efficiency threshold can be applied to other plans, such as specific plans, congestion management plans, etc.

2017 CLEAN AIR PLAN

With respect to applicable air quality plans, the BAAQMD prepared the 2017 Clean Air Plan (also known as the "Spare the Air: Cool the Climate" plan) to address nonattainment of the national 1-hour ozone standard in the Air Basin. The purpose of the 2017 Clean Air Plan is to protect public health and stabilize the climate. The 2017 Clean Air Plan includes a multi-pollutant strategy to reduce emissions and ambient concentrations of ozone, fine particulate matter, toxic air contaminants, as well as GHGs.

Plan Bay Area

On October 21, 2021, the Metropolitan Transportation Commission (MTC) and the Executive Board of the Association of Bay Area Governments (ABAG) jointly adopted Plan Bay Area 2050 and its related supplemental reports. Plan Bay Area 2050 is the most recent SCS/RTP for the Bay Area. Plan Bay Area is an integrated transportation and land use-use strategy through 2050 that marks the nine-county Bay Area region's first long-range plan to meet the requirements of SB 375.

Plan Bay Area 2040 outlines the region's plan for combining transportation resources, such as roads and mass transit, with a realistic land use pattern in order to meet the State target for reducing GHG emissions.

⁹ Bay Area Air Quality Management District (BAAQMD). 2017. California Environmental Quality Act Air Quality Guidelines. San Francisco, CA. June 2010, updated May 2017.

¹⁰ Bay Area Air Quality Management District, CEQA Guidelines, May 2017.

The strategy must take into account the region’s housing needs, transportation demands, and protection of resources and farmlands.

Plan Bay Area 2050 connects the elements of housing, the economy, transportation and the environment through 35 strategies that are intended to make the San Francisco Bay Area more equitable for all residents and more resilient. In the short-term, the plan’s Implementation Plan identifies more than 80 specific actions for MTC, ABAG and partner organizations to take over the next five years to make headway on each of the 35 strategies.

Climate Action in Sonoma County

The RCPA was formed in 2009 to coordinate countywide climate protection efforts among Sonoma County’s nine cities and the county. The RCPA developed a regional Climate Action Plan in 2016, entitled “Climate Action 2020 and Beyond”. This plan was developed over the course of several years, with input from all local city councils, the Board of Supervisors, local government staff, consultants, community sustainability leaders, and members of the public. The RCPA certified an Environmental Impact Report and adopted the Climate Action Plan in 2016. However, the Environmental Impact Report was subsequently litigated. The Superior Court found the Environmental Impact Report inadequate and the Regional Climate Protection Authority declined to appeal due to lack of funds. Unable to adopt the Climate Action 2020 Plan, the Sonoma County Board of Supervisors adopted Resolution No. 18-0166 (“Climate Change Action Resolution”), reaffirming its intent to reduce GHG emissions as part of a coordinated effort through RCPA and to adopt local implementation measures as adopted in Climate Action 2020 and Beyond. This Resolution is intended to help create countywide consistency and clear guidance about coordinated implementation of the GHG reduction measures. See below for more details of this resolution.

CLIMATE CHANGE ACTION RESOLUTION

The Climate Change Action Resolution (Resolution) was adopted on May 8th, 2018 by the Sonoma County Board of Supervisors. Although it does not bind Sonoma County to any specific action, it includes local goals to reduce GHG emissions and provides that the County will pursue local actions to support these goals. The Resolution contains the following actions:

- Sonoma County agrees to work towards the RCPA’s countywide target to reduce greenhouse gas emissions by 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050.
- Sonoma County adopts the following goals to reduce greenhouse gas emissions, and will pursue local actions that support these goals:
 - Increase building energy efficiency
 - Increase renewable energy use
 - Switch equipment from fossil fuel to electricity
 - Reduce travel demand through focused growth
 - Encourage a shift toward low-carbon transportation options
 - Increase vehicle and equipment fuel efficiency
 - Encourage a shift toward low-carbon fuels in vehicles and equipment
 - Reduce idling
 - Increase solid waste diversion

- Increase capture and use of methane from landfills
 - Reduce water consumption
 - Increase recycled water and graywater use
 - Increase water and waste-water infrastructure efficiency
 - Increase use of renewable energy in water and wastewater systems
 - Reduce emissions from livestock operations
 - Reduce emissions from fertilizer use
 - Protect and enhance the value of open and working lands
 - Promote sustainable agriculture
 - Increase carbon sequestration
 - Reduce emissions from the consumption of goods and services;
- Sonoma County will continue to work to increase the health and resilience of social, natural, and built resources to withstand the impacts of climate change; and
 - Sonoma County has the goal of increasing resilience by pursuing local actions that support the following goals:
 - Promote healthy, safe communities
 - Protect water resources
 - Promote as sustainable, climate-resilient economy
 - Mainstream the use of climate projections

CLIMATE ACTION 2020 AND BEYOND

Although Climate Action 2020 and Beyond cannot be used for CEQA processing due to the Superior Court's order, it can serve as an advisory resource for the RCPA's work to coordinate countywide climate protection efforts. Therefore, the following information relating to the Climate Action Plan is provided for informational purposes only.

Climate Action 2020 and Beyond includes:

- A background on climate change;
- an inventory of GHG emissions by sector;
- an overall strategy for reducing GHG emissions in for each GHG emissions source;
- provides detail on how GHG emissions reductions will be implemented;
- provides near-term actions for each city within the county and the unincorporated County; and
- provides an analysis of the County's "climate readiness" (i.e. ability to withstand future climate-related hazards).

Baseline year 2010 community-wide GHG emissions in Sonoma County were found to be approximately 3,601,000 MT CO₂e, with a business-as-usual forecast of approximately 5,113,000 MT CO₂e by 2050.¹¹

¹¹ The AB 32 goal for 2050 is 80% below the 1990 levels by the year 2050.

GREENHOUSE GAS INVENTORY REPORT – SONOMA COUNTY 2015 UPDATE

In July 2018, the RCPA published the first update to the community-wide GHG inventory, based on year 2015 data. This update provides a reference point for progress towards Sonoma County's goals of reducing emissions 25% below 1990 levels by 2020 and 80% below 1990 levels by 2050. Sonoma County GHG emissions in 2015 remained 9% below 1990 levels, while county-wide population grew 4% and gross domestic product (GDP) increased 22%. A comprehensive 2015 GHG inventory update, with a breakdown of jurisdiction-specific GHG emissions, can be downloaded at the RCPA website.¹² A key finding of the 2015 update shows the GHG emissions from energy used in buildings decreased 33% between 2010 and 2015 (exceeding the short-term reduction goal of 27% by 2020).

Sonoma County General Plan

The Sonoma County General Plan identifies the following goals, objectives, and policies related to GHGs and/or energy conservation:

LAND USE ELEMENT

GOAL LU-11: Promote a sustainable future where residents can enjoy a high quality of life for the long term, including a clean and beautiful environment and a balance of employment, housing, infrastructure, and services.

Objective LU-11.1: Use the following sustainability policies pertaining to land use and development in the unincorporated area:

Policy LU-11a: Encourage reduction in greenhouse gas emissions, including alternatives to use of gas-powered vehicles. Such alternatives include public transit, alternatively fueled vehicles, bicycle and pedestrian routes, and bicycle and pedestrian friendly development design.*

Policy LU-11b: Encourage all types of development and land uses to use alternative renewable energy sources and meaningful energy conservation measures.

HOUSING ELEMENT

GOAL HE-6: Improve Conservation of Energy and Natural Resources.

Objective HE-6.1: Promote conservation of energy, water, and other natural resources as a cost-saving measure in existing residential development.

Objective HE-6.2: Promote energy and water conservation and energy efficiency in new residential and mixed-use construction projects.

Objective HE-6.3: Promote solid waste reduction, reuse, and recycling opportunities in residential and mixed-use construction.

Policy HE-6a: Encourage improvements that result in conservation of energy, water, and other natural resources in existing residential development, particularly in renter-occupied units by

¹² See: <https://rcpa.ca.gov/wp-content/uploads/2018/08/Sonoma-County-GHG-Inventory-Update-2015-070618.pdf>

offering workshops, individual consultations, and financial assistance for weatherization and other conservation measures. Support and expand existing programs administered by the Community Development Commission.

Policy HE-6b: Continue to provide funding through the Community Development Commission for retrofits of existing affordable housing units that result in conservation of energy, water, or other natural resources.

Policy HE-6c: Encourage residents and developers to increase energy conservation and improve energy efficiency. Continue to support education programs that promote energy conservation and energy efficiency

Policy HE-6d: Support project applicants in incorporating cost-effective energy efficiency that exceeds State standards.

Policy HE-6e: Promote the use of straw bale, rammed-earth, and other energy-efficient types of construction methods. Encourage use of the County's Alternative Building Materials review process by publishing educational and promotional materials.

Policy HE-6f: Reduce the generation of solid waste in residential construction, and increase solid waste reuse and recycling.

Policy HE-6g: Continue to support education programs related to solid waste reduction, reuse, and recycling opportunities.

Policy HE-6h: Continue to review and develop energy conservation, green building, and energy efficient design programs for new residential and mixed-use development.

OPEN SPACE AND RESOURCE CONSERVATION ELEMENT

GOAL OSRC-14: Promote energy conservation and contribute to energy demand reduction in the County.

GOAL OSRC-15: Contribute to the supply of energy in the County primarily by increased reliance on renewable energy sources.

Objective OSRC-14.1: Increase energy conservation and improve energy efficiency in County government operations.

Objective OSRC-14.2: Encourage County residents and businesses to increase energy conservation and improve energy efficiency.

Objective OSRC-14.3: Reduce the generation of solid waste and increase solid waste reuse and recycling.

Objective OSRC-14.4: Reduce greenhouse gas emissions by 25 percent below 1990 levels by 2015.

Policy OSRC-14a: Continue to support education programs that promote energy conservation; energy efficiency; and solid waste reduction, reuse, and recycling opportunities for County operations, residents and businesses, and local utilities.

3.6 GREENHOUSE GASES AND ENERGY

Policy OSRC-14b: Continue to provide strategic planning for energy conservation and efficiency in County operations.

Policy OSRC-14c: Continue to purchase and utilize hybrid, electric, or other alternative fuel vehicles for the County vehicle fleet; and encourage County residents and businesses to do the same.

Policy OSRC-14d: Support project applicants in incorporating cost effective energy efficiency that may exceed State standards.

Policy OSRC-14e: Develop energy conservation and efficiency design standards for new development.

Policy OSRC-14f: Use the latest green building certification standards, such as the Leadership in Energy and Environmental Design (LEED) standards, for new development.

Policy OSRC-14g: Develop a Greenhouse Gas Emissions Reduction Program, as a high priority, to include the following:

- (1) A methodology to measure baseline and future VMT and greenhouse gas emissions
- (2) Targets for various sectors including existing development and potential future development of commercial, industrial, residential, transportation, and utility sources
- (3) Collaboration with local, regional, and State agencies and other community groups to identify effective greenhouse gas reduction policies and programs in compliance with new State and Federal standards
- (4) Adoption of development policies or standards that substantially reduce emissions for new development
- (5) Creation of a task force of key department and agency staff to develop action plans, including identified capital improvements and other programs to reduce greenhouse gases and a funding mechanism for implementation
- (6) Monitoring and annual reporting of progress in meeting emission reduction targets.

Policy OSRC-14h: Continue to participate in the International Council of Local Environmental Initiatives (ICLEI) Program.

Policy OSRC-14i: Manage timberlands for their value both in timber production and offsetting greenhouse gas emissions.

Policy OSRC-14j: Encourage the Sonoma County Water Agency and other water and wastewater service providers to reduce energy demand from their operations.

GOAL OSRC-16: Preserve and maintain good air quality and provide for an air quality standard that will protect human health and preclude crop, plant and property damage in accordance with the requirements of the Federal and State Clean Air Acts.

Objective OSRC-16.1: Minimize air pollution and greenhouse gas emissions.

Objective OSRC-16.2: Encourage reduced motor vehicle use as a means of reducing resultant air pollution.

Policy OSRC-16a: Require that development projects be designed to minimize air emissions. Reduce direct emissions by utilizing construction techniques that decrease the need for space heating and cooling.

Policy OSRC-16b: Encourage public transit, ridesharing and van pooling, shortened and combined motor vehicle trips to work and services, use of bicycles, and walking. Minimize single passenger motor vehicle use.

CIRCULATION AND TRANSIT ELEMENT

GOAL CT-1: Provide a well-integrated and sustainable circulation and transit system that supports a city and community centered growth philosophy through a collaborative effort of all the Cities and the County.

Objective CT-1.5: Reduce greenhouse gas emissions by minimizing future increase in VMT, with an emphasis on shifting short trips by automobile to walking and bicycling trips.

Objective CT-1.6: Require that circulation and transit system improvements be done in a manner that, to the extent practical, is consistent with community and rural character, minimizes disturbance of the natural environment, minimizes air and noise pollution, and helps reduce greenhouse gas emissions.

Policy CT-1k: Encourage development that reduces VMT, decreases distances between jobs and housing, reduces traffic impacts, and improves housing affordability.

GOAL CT-2: Increase the opportunities, where appropriate, for transit systems, pedestrians, bicycling and other alternative modes to reduce the demand for automobile travel.

Objective CT-2.6: In areas designated for through traffic, use existing circulation and transit facilities more efficiently, especially highways, to reduce the amount of investment required in new or expanded facilities, reduce greenhouse gas emissions, and increase the energy efficiency of the transportation system.

Objective CT-2.7: Use Traffic Demand Management measures to reduce peak period congestion.

Objective CT-2.8: Provide bicycle and pedestrian links from bus stops and other transit facilities to residential areas, employment centers, schools, institutions, parks, and the greater roadway system in general, especially focusing on short trips that could result in a mode shift away from automobile travel.

Objective CT-2.9: Develop alternative mode trip databases, to improve quantitative evaluation of public transit and improve integration with other alternative modes.

Objective CT-2.10: Utilize shoulders, paths, and bike lanes for other alternative transportation modes along existing streets, roads, and bicycle routes where consistent with public safety and the Vehicle Code.

Policy CT-2a: Provide convenient, accessible transit facilities for youth, seniors, and persons with disabilities, and paratransit services as required by the American Disabilities Act (ADA). Promote efficiency and cost effectiveness in paratransit service such as use of joint maintenance and other facilities.

3.6 GREENHOUSE GASES AND ENERGY

Policy CT-2b: Establish transfer facilities and supportive park-and-ride lots that provide convenient connection to the transit routes on Figure CT-2. Locate transit centers to avoid rerouting by buses, provide adequate off street parking, and provide convenient pedestrian access from activity centers.

Policy CT-2c: On transit routes, design the physical layout and geometrics of arterial and collector highways to be compatible with bus operations.

Policy CT-2d: Require major traffic generating projects on existing or planned transit routes to provide fixed transit facilities, such as bus turnouts, passenger shelters, bike lockers, and seating needed to serve anticipated or potential transit demand from the project.

Policy CT-2d: Require major employment centers and employers to provide facilities and Traffic Demand Management (TDM) programs that support alternative transportation modes, such as bike and shower facilities, telecommuting, flexible schedules, etc. These programs may apply to existing employers as well as to new development. Establish measurable goals for these programs, and utilize a transportation coordinator that will provide information, select TDM measures, and monitor and report on program effectiveness. If voluntary TDM measures do not effectively reduce peak congestion, impose mandatory TDM measures by ordinance.

GOAL CT-3: Establish a viable transportation alternative to the automobile for residents of Sonoma County through a safe and convenient bicycle and pedestrian transportation network, well integrated with transit, that will reduce greenhouse gas emissions, increase outdoor recreational opportunities, and improve public health.

Objective CT-3.1: Design, construct and maintain a comprehensive Bikeways Network that links the County's cities, unincorporated communities, and other major activity centers including, but not limited to, schools, public facilities, commercial centers, recreational areas and employment centers.

Objective CT-3.2: Reduce Sonoma County's greenhouse gas emissions by achieving a non-motorized trips mode share of 5% for all trips and 10% for trips under five miles long by 2020.

Objective CT-3.3: Encourage pedestrian, bicycle, and transit oriented development.

Objective CT-3.7: Provide a diverse range of recreational opportunities through a well-designed network of bikeways, multi-use trails, sidewalks, and related support facilities.

Policy CT-3o: Consider development of Bicycle Boulevards in urbanized areas and unincorporated communities on routes that offer alternatives to bikeways on high speed collector and arterial roadways. Bicycle boulevards are streets optimized for travel by bicycles rather than automobiles through reduction of traffic speed and volume using traffic calming measures such as diverters and roundabouts. Traffic controls should be optimized to assign right of way to bicycles. Signage and street design should encourage use by bicyclists and informs motorists that the roadway is a priority route for bicyclists.

Policy CT-3dd: Develop a Class I "Rails with Trails" bikeway along the SMART and NCRA rights-of-way. Give highest priority to segments that provide connections between cities along the Highway 101 corridor from Windsor to Petaluma.

Policy CT-3ee: Encourage the use of flexible parking, circulation and road design standards for higher density residential and mixed-use projects that make walking and bicycling the preferred mode of transportation within the project and surrounding area.

Policy CT-3ff: Provide adequate bicycle parking as part of all new school, public transit stops, public facilities, and commercial, industrial, and retail development following standards established in adopted Bikeways Plan.

Policy CT-3pp: Require pedestrian-oriented street design in Urban Service Areas and unincorporated communities.

3.6.3 IMPACTS AND MITIGATION MEASURES

GHG METHODOLOGY AND THRESHOLDS OF SIGNIFICANCE

Analysis Approach

The California Office of Planning and Research (OPR) recommends that lead agencies under CEQA make a good-faith effort, based on available information, to estimate the quantity of GHG emissions that would be generated by a proposed project, including the emissions associated with construction activities, stationary sources, vehicular traffic, and energy consumption. The purpose of such an effort is to determine whether the impacts have the potential to result in a significant project or cumulative environmental impact and, where feasible mitigation is available, to mitigate any project or cumulative impact determined to be potentially significant. In 2010, the OPR prepared amendments to the State CEQA Guidelines, pursuant to SB 97 (Statutes of 2007) for adoption by the California Natural Resources Agency. The amendments added several provisions reinforcing the requirements to assess a project's GHG emissions as a contribution to the cumulative impact of climate change. The amendments went into effect on March 18, 2010. In late 2018, the OPR finalized further changes the CEQA Guidelines, which address the analysis of greenhouse gas emissions. The amendments became effective December 28, 2019.

Specifically, CEQA Guidelines Section 15064.4, as amended December 28, 2018, states:

(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

- (1) Quantify greenhouse gas emissions resulting from a project; and/or*
- (2) Rely on a qualitative analysis or performance based standards.*

(b) In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. A lead agency should consider the following

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factors, among others, when determining the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (see, e.g., section 15183.5(b)). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

(c) A lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

GHG Thresholds of Significance

Per Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the Project would do any of the following:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

AB 32, SB 375, and SB 32 target the reduction of statewide emissions. These actions do not specify that the emissions reductions should be achieved through uniform reduction by geographic location or by emission source characteristics. Consistent with the guidance provided in CEQA Guidelines Section 15064.4(a)(2), Sonoma County has prepared this EIR in a manner which includes a quantification of the Project buildout GHG emissions, as well as both quantitative and qualitative analysis and discussion of the Project's consistency with AB 32, SB 375, and SB 32. According to the BAAQMD, if the Project is consistent

with the applicable GHG threshold(s) as promulgated by BAAQMD, the Project would not generate GHGs that would have a significant impact on the environment.¹³

The May 2017 BAAQMD CEQA Guidelines¹⁴ provides the following thresholds relevant to GHGs for Specific Plans:

- Plan-Level:
 - Construction: no thresholds.
 - Operational:
 - 4.6 CO₂e/SP/year. This efficiency threshold can be applied to other plans, such as specific plans, congestion management plans, etc.

Under the above threshold of significance in the BAAQMD CEQA Guidelines, if *annual emissions* of operational-related GHGs exceed 4.6 CO₂e/SP/year for a specific plan, the Project would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact to global climate change. However, if the Project is under this threshold, the Project would result in a less than cumulatively considerable contribution of GHG emissions and a less than significant impact to global climate change.

The above-referenced BAAQMD threshold was designed to meet the AB 32 goal of achieving 1990 emission levels by year 2020. However, given that year 2020 has passed, it is important to consider the SB 32 goal for year 2030 of achieving a 40% reduction in emissions levels from 1990 by year 2030. When taking into account a 40% reduction to the BAAQMD threshold contained in the BAAQMD CEQA Guidelines, the threshold would be 2.8 CO₂e/SP/year for a specific plan, for projects post-2020.

In order to determine whether or not the Project would generate GHG emissions that may have a significant impact on the environment, this EIR relies primarily on the Project's consistency with:

1. The GHG efficiency threshold established by the current BAAQMD guidance (i.e. efficiency threshold), revised to achieve the SB 32 goal as discussed above;
2. The per capita GHG efficiency threshold and GHG reduction strategies established by the latest version of the CARB Scoping Plan (the 2017 Climate Change Scoping Plan); and
3. Compliance with the existing Sonoma County General Plan, the 2017 Scoping Plan, and Plan Bay Area 2050.

¹³ Bay Area Air Quality Management District, CEQA Guidelines, May 2017.

¹⁴ Ibid.

 IMPACTS AND MITIGATION MEASURES – GREENHOUSE GASES

Impact 3.6-1: Implementation of the Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs (Significant and Unavoidable)

As discussed above, there is no qualified GHG reduction plan that is applicable in Sonoma County.¹⁵ Additionally, the existing Sonoma County General Plan provides goals, policies, and actions that reduce air pollutants and GHG emissions.

The following provides an analysis of the Project’s consistency with (1) the current version of the statewide Scoping Plan (the 2017 Climate Change Scoping Plan), (2) the Sonoma County General Plan, (3) the Sonoma County Climate Change Action Resolution, and (4) applicable best management practices as promulgated by the BAAQMD (including consistency with the BAAQMD’s GHG thresholds of significance provided for plan-level impacts).

CONSISTENCY WITH THE CARB’S 2017 CLIMATE CHANGE SCOPING PLAN

The draft Specific Plan includes a number of goals and policies to decrease vehicle trips, including:

- **Goal SC-1:** Specific Plan Goal SC-1 would ensure that the street network is designed to provide equally for all users, including pedestrians, bicyclists, and transit riders.
 - **Policies SC-1a, SC-1b, SC-1c, and SC-1e:** These policies would require improvements to pedestrian, bicycle, and transit travel within the Springs area, through circulation improvements, new pedestrian, bicycle, and transit amenities, and other features.
- **Goal SC-2:** Goal SC-2 encourages the creation of safe, convenient, and well-connected pedestrian and bicycle circulation systems with general amenities.
 - **Policies SC-2a through SC-2j:** These policies would require development to provide circulation improvements to create walkable and bikeable communities, improve pedestrian and bicycle linkages and facilities, and encourage a pedestrian- and bicyclist-friendly environment.
- **Goal SC-3:** Goal SC-3 encourages transit ridership in the Springs area.
 - **Policies SC-2a through Policy SC-3j:** These policies support Goal SC-3 by improving coordination with Sonoma County Transit, creating public awareness campaigns to promote transit use, promoting the improvement of bus stops and related amenities, and providing other approaches to increase transit ridership.
- **Goal SC-4:** Goal SC-4 ensures there is adequate parking to accommodate residents, businesses, and visitors to the Springs.
 - **Policy SC-4d:** This policy supports car-sharing by encouraging larger development projects to reserve parking spaces for car-share vehicles.
 - **Policy SC-4i:** This policy considers the establishment of means to fund bicycle path development and transit improvements.
 - **Policy SC-4j:** This policy encourages the installation of electric charging stations on both public property and in private development.

¹⁵ Although the Sonoma County Regional Climate Protection Authority had previously developed a climate action plan for Sonoma County, entitled Climate Action 2020 and Beyond, implementation of Climate Action 2020 and Beyond was put on hold following a lawsuit.

- **Policies SC-4l and Policy SC-4m:** These policies would require bicycle parking near the front entrance of commercial buildings, and in all parking lots and structures, respectively. Development consistent with these goals and policies would reduce transportation-related GHG emissions.

The new buildings (non-residential) constructed and operated within the Plan area would be subject to the current CALGreen energy efficiency standards, resulting in development that is significantly more energy efficient than the current buildings in the surrounding area, many of which were constructed under previous versions of the Title 24 energy code. Plumbing fixtures and landscaping installed as part of the Project would result in a decrease in per capita water use compared to existing land uses throughout the Springs area and the region. The Project would also need to operate in accordance with the goals of AB 341 that requires a 75% diversion rate of waste from landfills. Once built, the Plan area would become part of existing development within the state that can be subjected to a variety of future state or federal GHG reduction measures intended to target existing development to the extent they are legally applicable. Additionally, the Project's operational emissions would be reduced as more regulations are implemented by the CARB and other State agencies to comply with the statewide GHG reduction targets. For example, the project's transportation emissions would be expected to lessen over time as vehicle efficiency standards are implemented beyond the Advanced Clean Cars program and the Low Carbon Fuel Standard is strengthened. Therefore, Project emissions would continue to be reduced beyond the buildout year due to regulations that would indirectly affect project emissions.

California met its 2020 GHG reduction target early (in 2016)¹⁶, and is well positioned to maintain and continue reductions beyond 2020 (CARB, 2014). The first update to the Climate Change Scoping Plan elaborated on potential GHG reduction goals beyond 2020:

This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts [MW] of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80 percent below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions (CARB, 2014b).

Similarly, the CARB's 2017 Climate Change Scoping Plan provides policies that are considered needed to meet the State's mid-term and long-term GHG emissions reduction targets. For example, the 2017 Climate Change Scoping Plan describes that, although "zero net carbon buildings" are not feasible at this time, they will be necessary to achieve the 2050 target. The CARB's 2017 Climate Change Scoping Plan also provides the "Scoping Plan Scenario", which describes policies intended to meet the Governor's climate pillars, and the State's mid-term and long-term GHG emissions reduction targets.

Therefore, recognizing the CARB as an authoritative substantial evidence source in evaluating post-2020 GHG impacts, this analysis also evaluates whether buildout of the Project would interfere with the main programs the CARB has identified to support is conclusions that the state is on a trajectory to meet the 2030 and 2050 GHG targets, discussed below.

¹⁶ California Air Resources Board (CARB). 2018. <https://ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time>

3.6 GREENHOUSE GASES AND ENERGY

- **(1) Initiative to Install 12,000 MW of renewable distributed energy by 2020.** Buildout of the Project would not interfere with the State’s goal to install 12,000 MW of renewable distributed generation systems by 2020, since the Project would be developed after 2020.
- **(2) California Building Standards Commission’s goal to construct net-zero energy homes after 2020.** As spelled out in the California Energy Efficiency Strategic Plan, the state has ambitious (though non-binding) goals for the development of zero net energy buildings. The Project is not anticipated to interfere with the ability of the California Building Standards Commission’s goal of constructing net-zero energy homes after 2020. The Project is expected to achieve full buildout by approximately 2040 and would be constructed to comply with existing building energy standards at the time building permits are obtained. Therefore, buildout of the Project would not interfere with the State’s ability to develop net-zero energy homes for new construction after 2020.
- **(3) Existing building retrofits under AB 758.** Buildout of the Project would not interfere with the State’s implementation of building retrofits to further energy efficiency for existing buildings under AB 758. New buildings and remodels (non-residential) within the Plan area would be constructed compliant with applicable California Building Standards Code requirements, including CALGreen standards, which would not interfere with CEC or other initiatives implemented to increase energy efficiency and reduce GHG emissions associated with buildings that do not adhere to Title 24 standards.
- **(4) 60 Percent RPS by 2030 and Zero-Carbon Electricity under SB 100.** Under SB 100, the State committed to reducing GHG remissions in the electricity sector through the implementation of the 60% eligible renewables by 2030 and 100% by 2045. The California Public Utilities Commission (CPUC) implements and administers RPS compliance, by regulating California’s retail sellers of electricity, which include PG&E. Buildout of the Project would not interfere with the RPS, since it would not affect any retail seller of electricity. In addition, the state is on its way to meeting the 60% RPS requirement by 2030, according to data available from the CPUC. Sonoma County has no ability to affect implementation of the RPS – rather, PG&E and Sonoma Clean Power have full responsibility for meeting the RPS requirements, as implemented and administered by the CPUC. Therefore, the Project would not interfere with implementation of the State’s RPS goals.
- **(5) Low Carbon Fuel Standard.** The Low Carbon Fuel Standard is designed to encourage the use of cleaner low-carbon fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions. Buildout of the Project would not interfere with this state-level program.
- **(6) Mobile Source Strategy.** The CARB developed an updated Mobile Source Strategy in May, 2016. The Mobile Source Strategy is a framework that identifies the levels of cleaner technologies necessary to meet our many goals and high-level regulatory concepts that would allow the State to achieve the levels of cleaner technology. The actions contained in the Mobile Source Strategy are designed to deliver broad environmental and health benefits, as well as support much needed efforts to modernize and upgrade transportation infrastructure, enhance system-wide efficiency and mobility options, and promote clean economic growth in the mobile sector. Buildout of the Project would not interfere with this state-level program, since it is a planning effort at the State

level related to future transportation technology that is independent of the development of individual Projects.

- **(7) Short-Lived Climate Pollutant strategy under SB 1383.** SB 1383 is a State program that provides a strategy to reduce short-lived climate pollutants. The goals of the program are to reduce methane and hydrofluorocarbon (HFC) emissions below 2013 levels by 2030, and a 50% reduction in anthropogenic black carbon emissions below 2013 levels by 2030. Buildout of the Project would not interfere with this state-level program.
- **(8) California Sustainable Freight Action Plan.** This program is designed to improve freight system efficiency within the state by 25% by 2030. Buildout of the Project does not include any features that would interfere with this state-level program, since the Project does not develop any infrastructure or other components that would impede implementation of this program.
- **(9) Post-2020 Cap-and-Trade Program.** The CARB's Scoping Plan also recommended the development of a California Cap-and-Trade Program that links with other Western Climate Initiative partner programs to create a regional market system. On January 1, 2013, the CARB launched the second-largest GHG Cap-and-Trade Program in the world. The Cap-and-Trade Program establishes a hard and declining cap on approximately 85% of total statewide GHG emissions. Under the Cap-and-Trade Program, the CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. As the emissions cap is gradually reduced over time, and as additional sources are brought under the cap to include the vast majority of emissions in the state, the program will ensure that California remains on track to continually reduce emissions and meet the 2020 limit. The Cap-and-Trade Regulation is not directly applicable to the Project because it does not allow for uses (i.e. large industrial, electrical generation, transportation, natural gas, or similar uses) that could potentially utilize California's Cap-and-Trade Program.

Further, the Project has been evaluated based on its potential to exceed the per capita GHG efficiency thresholds established by the 2017 Climate Change Scoping Plan. As described in greater detail under Impact 3.6-2 (below), the Project would not exceed the applicable CARB Scoping Plan per capita GHG efficiency threshold of 6 MT CO₂e per capita per year for year 2030, or the interpolated per capita threshold for year , but would exceed the 2 MT CO₂e per year for year 2050. See Impact 3.6-2 for detailed numerical results and further details.

CONSISTENCY WITH THE SONOMA COUNTY GENERAL PLAN

The existing Sonoma County General Plan provides goals, policies, and actions that reduce air pollutants and GHG emissions. The Project would be consistent with and rely on these goals, objectives, and policies. The Project promotes infill development, develops a centrally-located community plaza, increases the availability of affordable, workforce, and mixed use housing, improves the pedestrian, bicycle, and transit network, and creates and connects to more parks and open space than the currently exists. The goals and policies that would promote consistency with the Sonoma County General Plan include those described in the discussion above (under Consistency with the CARB's 2017 Climate Change Scoping Plan), as well as Specific Plan Goal SC-4, which would ensure adequate availability of public and private parking (by reducing vehicle travel and idling while waiting for parking spot availability to open up), Policy SC-4a and

Policy SC-4b, which facilitate the development of public parking lots and minimization of the negative impacts of parking on overall site design of individual projects. Therefore, the Project would help to reduce air pollutants and GHG emissions, consistent with the goals, objectives, and policies contained within the Sonoma County General Plan, including General Plan Goal OSRC-16 (designed to preserve and protect good air quality), Objective OSRC-16.1 (minimizes air pollution and GHG emissions), Objective OSRC-16.2 (encourages reduced motor vehicle use), Goal CT-2 (encourages increased opportunities for transit systems, pedestrians, bicycling, and other alternative modes of transportation), Objective CT-2.8 (encourages the provision of bicycle and pedestrian links from bus stop and other transit facilities), Objective CT-2.10 (Utilizes availability roadway shoulders, paths, and bike lanes for alternative transportation modes), and the related policies. See the Regulatory Setting for the full list of Sonoma County General Plan policies that are relevant to GHGs.

CONSISTENCY WITH THE SONOMA COUNTY CLIMATE CHANGE ACTION RESOLUTION

The Sonoma County Climate Change Action Resolution contains local goals to reduce GHG emissions. The Project has been developed with the local goals contained within the Sonoma County Climate Change Action Resolution in mind. A full list of Specific Plan goals and policies that demonstrate compliance with many of the GHG reduction goals contained with the Sonoma County Climate Change Action Resolution are provided at the end of this impact discussion. The Project would be consistent with all applicable GHG reduction goals identified within the Sonoma County Climate Change Action Resolution. These are summarized as follows:

- **Goal 1: Increase building energy efficiency:** New development within the Plan area would be required to implement at least existing CALGreen energy efficiency standards and/or the Tier 1 standards for new development. This would ensure that new buildings would have improved energy efficiency than existing development. Therefore, the Project would be consistent with this GHG reduction goal.
- **Goal 2: Increase renewable energy use:** Although individual solar installations are not planned at this time, development within the Plan area would be required to comply with all state and local requirements related to solar energy for new development. It is expected that development within the Project would lead to greater use of renewable energy use over time. The Project would not conflict with this goal.
- **Goal 3: Switch equipment from fossil fuel to electricity:** The Specific Plan includes goals and policies related to encouraging electric vehicles in place of fossil-fuel vehicles. For example, Specific Plan Policy SC-4j encourages the installation of electric charging stations on both public property and in private development. The Project would be consistent with this goal.
- **Goal 4: Reduce travel demand through focused growth:** The Project incorporates mixed use, infill, and higher density development. The Project is located on a transit corridor, and includes mixed-use development, improved jobs-housing balance, and would increase the amount of trips that can be completed by transit instead of personal vehicles. The Specific Plan would provide bicycle, pedestrian, and transit facilities throughout the Springs that are safe, well-lit, shaded, comfortable, well-connected, and accessible. This improved multimodal network would provide greater incentive for people to choose non-vehicular travel for their daily trips. A large number of Specific Plan goals and policies support this goal.

- **Goal 5: Encourage a shift toward low-carbon transportation options:** The Specific Plan contains many goals and policies that encourage non-single-occupancy automobile travel, such as carpooling, walking, bicycling, and transit use. For example, Specific Plan Goal SC-3 encourages transit ridership in the Springs Area, and Policy SC-3a through Policy SC-3j support Goal SC-3 by improving coordination with Sonoma County Transit, creating public awareness campaigns to promote transit use, promoting the improvement of bus stops and related amenities, and providing other approaches to increase transit ridership. Other goals and policies contained within the Specific Plan would encourage walking and bicycling, such as Goal SC-1 and Policies SC-1a, SC-1b, SC-1c, and SC-1e. The Project would be consistent with this goal.
- **Goal 11: Reduce water consumption:** The Project would be required to comply with all policies regulating water conservation, including those contained in Title 24, Part 6 of the California Code of Regulations, also known as the Building Energy Efficiency Standards. Therefore, the Project would not conflict with this goal.
- **Goal 12: Increase recycled water and graywater use:** The Project would be required to comply with all policies the use of recycled water and graywater use, including those contained in Title 24, Part 6 of the California Code of Regulations, also known as the Building Energy Efficiency Standards. Therefore, the Project would not conflict with this goal.
- **Goal 13: Increase water and waste-water infrastructure efficiency:** The Project would not develop large-scale wastewater infrastructure. However, the Project would be required to comply with all local policies relating to the development of water and wastewater infrastructure (including any relating to the local connections from new development to the existing wastewater infrastructure). The Project would not conflict with this goal.
- **Goal 19: Increase carbon sequestration:** The Project would not conflict with state or local policies regulating carbon sequestration and would increase opportunities for carbon sequestration through promoting an increase in street trees. Therefore, the Project would not conflict with this goal.
- **Goal 20: Reduce emissions from the consumption of goods and services:** The Project would not conflict with state or local policies regulating GHG emissions from the consumption of goods and services. The Project would increase the range of goods and services available to Springs area residents, and would also place housing in close proximity to existing and planned sources of local goods and services. The Project promotes walkability and bikeability and would reduce vehicle miles travelled associated with the consumption of goods and emissions. Therefore, the Project would not conflict with this goal.

CONSISTENCY WITH PLAN BAY AREA 2050

Plan Bay Area 2050 is the San Francisco Bay Area's approved SCS/RTP. Plan Bay Area 2050 charted a course for reducing per-capita greenhouse gas emissions through the promotion of more compact, mixed-use residential and commercial neighborhoods near transit. The Project would be consistent with this overall objective for development. Moreover, the Project would be consistent with each of the goals related to climate change identified in Plan Bay Area 2050. For example, the Project is consistent with Plan Bay Area 2050's goal of protecting and preserving adequate housing (to help house the region's population), improving economic mobility, shifting the location of jobs, maintaining and optimizing the existing transportation system, creating healthy and safe streets, building a next-generation transit network,

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expanding access to parks and open space, and reducing climate emissions. Lastly, Plan Bay Area 2050 has been developed consistent with the Sonoma County General Plan, which the Project is also required to be consistent with.

CONSISTENCY WITH BAAQMD GUIDANCE

The BAAQMD maintains separate GHG thresholds of significance for individual projects and for plans. For Specific Plans, the BAAQMD advises the use of the project-level threshold of 4.6 CO₂e/SP/year for year 2020. Since year 2020 has come and gone, the proposed Project is analyzed in comparison to the threshold adjusted for year 2030 (the target year for SB 32). As previously described, the threshold is adjusted to 2.8 CO₂e/SP/year for consistency with SB 32 goal for year 2030 of achieving a 40% reduction in emissions levels from 1990 by year 2030. According to the BAAQMD, construction emissions do not apply to this threshold (BAAQMD, 2017).

As shown under Impact 3.6-2, new development in the Plan area (i.e. development accommodated by the Specific Plan) is estimated to generate approximately 9,851.8 MT CO₂e/year under the unmitigated scenario, and 7,208.3 MT CO₂e/year under the mitigated scenario¹⁷ (see Table 3.6-3), by Project buildout. The Project would generate approximately 1,977 new residents and 632 new employees¹⁸ (or a service population¹⁹ of 2,609). Therefore, based on an estimated service population of 2,609, the Project in 2040 would generate approximately 3.78 MT CO₂e/service population/year under the unmitigated scenario, and 2.76 MT CO₂e/service population/year under the mitigated scenario. Both of these scenarios do not exceed the BAAQMD Plan-level GHG threshold for specific plans of 2.8 MT CO₂e/service population/year (calculated to account for the 2030 goals contained in SB 32).

Separately, the BAAQMD advises that construction emissions do not apply the BAAQMD GHG threshold. However, the BAAQMD recommends Basic Construction Mitigation Measures for all projects. The BAAQMD also encourages lead agencies to incorporate best management practices to reduce GHG emissions during construction, as applicable. Best management practices may include, but are not limited to: using alternative fuels (e.g. biodiesel, electric) construction vehicles/equipment of at least 15% of the fleet; using local building materials of at least 10%; and recycling or reusing at least 50% of construction waste or demolition materials. Compliance with the BAAQMD construction-related mitigation requirements are considered to reduce GHG impacts at both the local and basin-wide levels. Development within the Plan area would implement such measures as required Measure Air-A, below.

CONCLUSION

Overall, the Specific Plan includes a large number of goals and policies that are aimed at reducing GHGs. For example, and as provided in the list below (entitled Specific Plan Components that Mitigate Potential Impacts), the Specific Plan is designed to support walkability, convenient access to nearby transit options, higher density housing, and infill development. New high density and mixed-use housing would bring new housing opportunities to the Springs and would be located within walking distance of transit, shops, restaurants, and other amenities. In addition, a centrally-located community plaza would be developed, which would serve as a gathering place for farmer's markets, concerts, and other community events. The

¹⁷ The mitigated scenario does not include mitigation, as defined by CEQA. Rather, it simply takes into account relevant state and local regulations as well as Specific Plan policies and features that would reduce GHG emissions, which are characterized by the modeling software (CalEEMod) as "mitigation".

¹⁸ W-Trans, Springs Specific Plan VMT Findings and Draft Mitigation Strategy, August 18, 2021.

¹⁹ Note: Service population is the sum of population and employees.

Project as a whole has been designed to provide alternative modes of transportation, beyond automobile travel, which acts as the largest single source of GHG emissions in the County.

The Project is designed in such a way that it would minimize GHGs and climate change impacts to the greatest degree feasible. The Project would also be consistent with all applicable regulatory requirements aimed at reducing project-related GHG emissions, as also discussed above. The Specific Plan contains an extensive list of goals and policies that are designed to reduce GHGs, and the Project does not exceed the GHG efficiency targets promulgated by the BAAQMD guidance and the CARB in their 2017 Climate Change Scoping Plan for year 2030. However, the Project would exceed the emissions per service population threshold for year 2050 as promulgated by CARB in their latest version of the CARB's Scoping Plan (2017 Climate Change Scoping Plan). Therefore, the Project would conflict with or impede implementation of GHG reduction goals identified in AB 32, SB 375, SB 32, or other federal, statewide, and local strategies to help reduce GHG emissions. Impacts associated with GHG plans, policies, and regulations would be **significant and unavoidable**.

SPECIFIC PLAN COMPONENTS THAT MITIGATE POTENTIAL IMPACTS

Measure Air-A: Future project proponent(s) of development, infrastructure, and other land-disturbing projects shall adhere to the *Basic Construction Mitigation Measures* established by the Bay Area Air Quality Management (BAAQMD) CEQA Guidelines 2017, as amended.

Goal SC-1: Ensure that the Street Network is Designed to Provide Equally for the Needs of All Users, including Pedestrians, Bicyclists, Motorists, and Transit Riders.

Policy SC-1a: Make it easier and safer to get around the Springs by foot, bicycle, transit, and automobile.

Policy SC-1b: Ensure that circulation improvements result in attractive, functional roadways, bicycle lanes, sidewalks, pathways, transit stops, and parking areas that enhance access and safety for all users.

Policy SC-1c: Continue to improve and enhance Highway 12 to create a vibrant, multi-modal corridor by requiring wider sidewalks, buffered bike lanes, shade trees, street furniture, and other amenities.

Policy SC-1d: Improve traffic flow by decreasing the number of driveways along Highway 12. Consolidate driveways whenever possible and provide access to parcels via side or rear streets or alleys.

Policy SC-1e: Implement the roadway cross-sections included in this Specific Plan which are designed to accommodate all modes of transportation including walking, bicycling, transit, and driving.

Policy SC-1f: Coordinate with Caltrans and the City of Sonoma to consider the potential redesignation of Highway 12 to parallel routes that are better-suited to accommodate regional traffic.

Policy SC-1g: Monitor traffic patterns on Highway 12 and collaborate with Caltrans periodically to adjust traffic signal timing to improve the flow of traffic.

Policy SC-1h: Development projects that exceed ten (10) residential units or 5,000 square feet of non-residential development shall reduce VMT through implementation of a Transportation Demand Management (TDM) plan. Development projects shall be subject to the TDM conditions below, which require applicable projects to provide a foundational set of strategies plus one additional measure. A project may propose construction or funding of offsite pedestrian, bicycle, and transit infrastructure and/or participation in future regional or countywide VMT reduction programs, in lieu of a TDM plan if demonstrated to the satisfaction of the PRMD Director that the associated reduction in vehicle travel would be comparable to the TDM requirements.

- A. Foundational Measures: Development projects must implement all of the following TDM measures at a minimum:
- On-site or contracted TDM coordinator
 - TDM marketing
 - Rideshare matching
 - Onsite bicycle amenities
 - Emergency Ride Home Program (applies to nonresidential uses)
- B. Additional Measures: Development projects must implement at least one additional TDM measure to achieve vehicle miles traveled (VMT) and trip reduction goals. The measure must be approved by the County and can be chosen from the strategies below. The enumerated list does not preclude a project from implementing other TDM measures if desired or required by County Code.

Nonresidential development

- Transit/vanpool subsidies
- Parking cash-out
- VMT Mitigation Bank (if available)
- Off-Site Physical Non-Auto Mode Improvement(s)

Residential development

- Transit subsidies
- School-pool matching
- Unbundled parking
- VMT Mitigation Bank (if available)
- Off-Site Physical Non-Auto Mode Improvement(s)

- Goal SC-2:** Create a Safe, Convenient, and Well-connected Pedestrian and Bicycle Circulation System with Generous Amenities that Encourage Walking and Cycling.
- Policy SC-2a:* Ensure that circulation improvements create a walkable and bikeable community with convenient access to schools, parks, shops, services, restaurants, and other local destinations.
- Policy SC-2b:* Improve pedestrian and bicycle linkages and facilities throughout the Springs to improve mobility; provide safe routes to schools and transit stops; make the area more inviting to pedestrians and cyclists; and improve connectivity to nearby communities and regional destinations. See Figures 5 and 6 and Tables 3 and 4.
- Policy SC-2c:* Create a pedestrian- and bicyclist-friendly environment by ensuring that new development is human-scale and areas are provided for public seating. Other amenities that should be provided include street furniture, landscaping, shade, bicycle racks, trash receptacles, and pedestrian oriented lighting and signage. Amenities should be placed in locations that do not decrease the walkability of the sidewalk.
- The ultimate configuration of any new pedestrian crossings shall be evaluated and determined by the Sonoma County Department of Transportation and Public Works, in collaboration with Caltrans, and in consideration of the physical characteristics and best design practices that exist at the time the design is initiated.
- Policy SC-2d:* Require that adjacent developments be connected by safe, direct walkways. Ensure that projects are designed to anticipate and accommodate future street and sidewalk connections to new development on adjacent lands.
- Policy SC-2e:* Prohibit cul-de-sacs and dead end streets, except where existing conditions require them. If cul-de-sacs are necessary, require walkways connecting to adjacent streets and future development.
- Policy SC-2f:* Require direct pedestrian access between housing and any adjacent transit facility.
- Policy SC-2g:* Provide new and improved crosswalks as shown in Figure 5. Prioritize safety features, such as pedestrian warning lights and bulb-outs, that improve visibility and create a more comfortable pedestrian environment, particularly in the vicinity of schools and parks.
- Policy SC-2h:* Provide new and improved bicycle lanes and enhance bicycle safety through the use of signs, bicycle lane buffers, and green colored pavement, as shown in Figure 6. Priority should be given to intersections when making safety improvements.
- Policy SC-2i:* Prioritize crosswalk, sidewalk, and bicycle lane improvements near schools, parks, transit stops, and the Springs plaza.
- Policy SC-2j:* When planning new crosswalks, locate crosswalks on the far side of the bus stop so that the bus passes through the crosswalk before stopping for riders.

Policy SC-2k: Require development projects along Highway 12 to provide increased sidewalk widths, consistent with the cross-sections identified in this chapter and the setback requirements set forth in the Design Guidelines chapter.

Policy SC-2l: Establish an improvement district or comparable mechanism to fund installation and maintenance of water stations, benches, street trees, landscaping, trash cans, and other community amenities along the Highway 12 corridor.

Policy SC-2m: Require development projects to establish a mechanism to fund landscaping and maintenance of the required landscaping section along Lichtenberg Avenue, Hawthorne Avenue, and W. Thomson Street.

Policy SC-2n: Require new development and redevelopment projects to include street trees that will provide a shaded canopy whenever possible.

Where street canopy trees are not feasible due to underground infrastructure or other issues, non-canopy trees or other street landscaping, such as planters, may be used, or the street trees may be set back from the sidewalk on private property.

Policy SC-2o: Encourage the development of public spaces, such as outdoor seating areas, that are easily accessible from the public sidewalk or pathway. Ensure that public spaces are designed for pedestrian comfort and provide visual interest.

Policy SC-2p: Provide water filling stations at key locations along the Highway 12 corridor. Recommended locations are shown on Figure 6, Bicycle Circulation Map.

Goal SC-3: Increase Transit Ridership in the Springs Area

Policy SC-3a: Coordinate with Sonoma County Transit to improve local bus service by increasing the frequency of bus service in the Springs and decreasing travel times.

Policy SC-3b: Support the creation of a public awareness campaign to promote transit use. Provide easy to understand schedule and bus pass information in English and Spanish.

Policy SC-3c: Coordinate with Sonoma County Transit to promote the local shuttle service (route 32) which runs between the Springs and the City of Sonoma, including continuing the branding of route 32 as a shuttle, creating a distinct look for shuttle vehicles, and updating transit signage for route 32. Sonoma County transit is also encouraged to allocate marketing resources to publicize the shuttle route to residents, employees, and visitors.

Policy SC-3d: Work with Sonoma Transit to improve bus stops by providing well-lit shelters, benches, bicycle racks, and trash cans. Provide schedule information at each bus shelter location.

Policy SC-3e: Consider including public art at bus stops and using unique designs for street furniture, recognizing that all bus shelter structures will be designed according to Sonoma County Transit's standards.

- Policy SC-3f:* In conjunction with road or development projects, review whether a bus turnout is appropriate in locations where transit shelters exist or are planned.
- Policy SC-3g:* Maintain fare-free service on the Sonoma County Transit local route serving the Springs area (currently route 32 Sonoma Shuttle).
- Policy SC-3h:* Explore use of micro-transit and on-demand transit.
- Policy SC-3i:* Encourage private shuttles to serve the community.
- Policy SC-3j:* Work with local employers and retailers to identify opportunities for private shuttles to serve employment sites and other destinations that are not currently served by transit.
- Goal SC-4:** Ensure Adequate Public and Private Parking to Accommodate Residents, Businesses, and Visitors to the Springs
- Policy SC-4a:* Facilitate the development of public parking lots in proximity to the future community plaza (Highway 12/Boyes Avenue) and in the northern portion of the mixed use corridor, as described in Table 5. Integrate retail into the street-level frontage of any parking garages constructed in a commercial district.
- Policy SC-4b:* Minimize the negative impacts of parking on the overall site design of individual projects by locating parking to the rear of the site, either behind or below buildings, unless parking is provided in a multi-level structure or a shared parking facility. Parking for parcels located along the Highway must be accessed from either side or rear streets or alleys whenever possible. If the site does not have a rear or side street access, shared driveways should be used to minimize sidewalk disruption.
- Policy SC-4d:* Support car-sharing by encouraging larger development projects to reserve parking spaces for car-share vehicles. Reserve strategic on-street spaces for car-share vehicles as demand for such services increases.
- Policy SC-4i:* Consider the establishment of a parking district or in-lieu parking fees to fund the construction of new public parking and programs that reduce parking demand, such as bicycle path development and transit improvements.
- Policy SC-4j:* Encourage the installation of electric charging stations on both public property and in private development.
- Policy SC-4l:* Require bicycle parking near the front entrance of commercial buildings.
- Policy SC-4m:* Include bicycle parking in all parking lots and structures.

Impact 3.6-2: Implementation of the Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (Significant and Unavoidable)

A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative global impact. The Project would establish land use designations to allow development in an area that currently contains residential, commercial, office, and public uses. Future development of the Plan area would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to such future development would be primarily associated with increases of CO₂ and other GHG pollutants, such as CH₄ and N₂O, from mobile sources and utility usage.

In order to determine if the future development contemplated by the Project would generate GHGs that may have a significant effect on the environment, Sonoma County has relied on the Project's consistency with previously adopted plans and programs aimed at reducing GHG levels both locally, regionally, and statewide (including the Sonoma County Climate Change Action Resolution, and the CARB's 2017 Climate Change Scoping Plan). In California, the primary legislation related to statewide GHG reduction targets is AB 32 and SB 32, which call for reducing statewide GHG emissions to 1990 levels by 2020, and to 40% below 1990 levels by 2030. GHG emissions generated by buildout of the Project would consist primarily of CO₂ emissions, with very limited quantities of CH₄ and N₂O also generated. CO₂e provides a universal standard of measurement against which the impacts of releasing (or avoiding the release of) different GHGs can be evaluated. CalEEMod (v.2020.4.0) was used to estimate operational GHG emissions associated with full buildout of the Project. Emissions are expressed in annual metric tons of CO₂ equivalent units of measure (i.e., MTCO₂e), based on the global warming potential of the individual pollutants.

Table 3.6-1 shows the CO₂e emissions, which include mobile source, area source, and energy emissions that would result from operations under buildout of the Project. The full calculations, inputs, and assumptions are provided in Appendix C. The emissions calculations presented below assume implementation of the policies and actions that are immediately available to the Springs area in the near-term. As such, these estimates are considered a "worst-case" scenario, and do not account for all additional GHG emissions reductions that may be achieved following adoption and implementation of the County's climate action plan.

POTENTIAL TO GENERATE SIGNIFICANT GHG EMISSIONS

Short-Term Construction GHG Emissions: The maximum annual GHG emissions associated with construction within the Plan area would be approximately 1,209.0 MT CO₂e/year, with total construction emissions over the lifetime of buildout of the Project estimated at 15,507.9 MT CO₂e (as provided by CalEEMod). Amortized over a 30-year period, total construction emissions of the lifetime of the buildout of the Project would be approximately 516.9 MT CO₂e/year.

Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change in the long-term. The BAAQMD does not have a GHG threshold for construction GHG emissions, and since Project GHG emissions are short-term in nature, construction emissions are not assumed to significantly contribute to long term cumulative GHG emissions impacts. Additionally, the proposed Project would implement Measure AIR-A, which requires implementation of the BAAQMD's Basic Construction Mitigation Measures for all projects. See the analysis below, and Appendix C (which contains the full CalEEMod modeling results) for further detail.

Long-Term Operational GHG Emissions: Buildout of the Plan Area, as described in Section 2.0 (Project Description,) would generate long-term operational GHG emissions. The Project’s unmitigated and mitigated long-term operational GHG emissions of buildout of the Project for years 2040 and 2050 is shown in Table 3.6-3. GHG emissions are categorized into five distinct emissions categories, summarized as follows:

- Area: fossil fuel combustion from landscaping activities (such as fuel used for combustion to power landscaping equipment);
- Energy: fossil fuel combustion from building electricity and natural gas consumption;
- Mobile: fossil fuel combustion from mobile vehicles;
- Waste: off-gassing from landfilled solid waste; and
- Water: emissions associated with supplying and treating water and wastewater.

TABLE 3.6-3: OPERATIONAL GHG EMISSIONS UNDER BUILDOUT OF THE PROJECT (YEARS 2040 AND 2050)

EMISSIONS CATEGORY	EMISSIONS CATEGORY (DETAIL)	UNMITIGATED CO ₂ E (METRIC TONS/YEAR)	MITIGATED CO ₂ E (METRIC TONS/YEAR)
Year 2040			
Area	Energy to fuel landscaping equipment	8.8	8.8
Energy	Electricity and natural gas	1,625.8	1,462.0
Mobile	Energy for vehicle travel	7,625.4	5,175.6
Waste	Off-gassing from landfilled solid waste	431.5	431.5
Water	Energy for transport of water to consumer	160.3	130.4
Total Annual		9,851.8	7,208.3
Year 2050*			
Area	Energy to fuel landscaping equipment	8.8	8.8
Energy	Electricity and natural gas	1,625.8	1,462.0
Mobile	Energy for vehicle travel	7,398.9	5,021.3
Waste	Off-gassing from landfilled solid waste	431.5	431.5
Water	Energy for transport of water to consumer	160.3	130.4
Total Annual		9,625.4	7,054.0

SOURCES: CALEEMOD (v.2020.4.0)

NOTE: EMISSIONS MAY NOT ADD UP DUE TO ROUNDING. *YEAR 2050 GHG EMISSIONS PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

As shown above, the Project was estimated to generate annual operational emissions in 2040 of approximately 9,851.8 MT CO₂e in the unmitigated scenario and 7,208.3 MT CO₂e under the mitigated scenario, and in 2050 of approximately 9,625.4 MT CO₂e in the unmitigated scenario and 7,054.0 MT CO₂e under the mitigated scenario. It should be noted that the mitigated scenario does not account for any mitigation, as defined by CEQA. Rather, it simply takes into account relevant state and local regulations as well as Specific Plan policies and features that would reduce GHG emissions above and beyond the modelled ‘unmitigated’ scenario, as provided below, but does not include mitigation as recognized by CEQA. Specifically, the mitigated scenario takes into account:

- Density of Plan Area: 11.8 dwelling units/acre and 33 jobs/ acre;
- Distance to Downtown Job Centre: 0.01 miles;
- Distance to Nearest Transit Station: 0.5 miles;
- % of Dwelling Units below market rate: 14.6%;
- Improved Pedestrian Network on-site and connecting off-site;
- Traffic calming: 25% of streets with improvements and 25% of intersections with improvements;
- No hearths;
- Meet the Title 24 Energy Efficiency requirements;
- Install modern high-efficiency lighting;

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- Meet indoor water use efficiency requirements as required by the Title 24 Energy Efficiency requirements; and
- Implement water-efficient irrigation systems, as required under the Title 24 Energy Efficiency requirements.

It should also be noted that the State is on track to achieve its goal-oriented target of 100% Renewable Portfolio Standard by 2045.

ANALYSIS

Buildout of the Project is evaluated below, based on its consistency with the applicable GHG thresholds as promulgated by the BAAQMD and as provided by the CARB's 2017 Climate Change Scoping Plan.

Consistency with the CARB's 2017 Climate Change Scoping Plan

The CARB's 2017 Climate Change Scoping Plan, adopted in November 2017, provides guidance on how the State's established GHG reduction targets will be achieved through various State and local actions. As discussed in Chapter 5 of the 2017 Climate Change Scoping Plan "Achieving Success", local jurisdictions working to set GHG reduction targets aligned with the State targets may use per capita emission estimates to recognize the GHG reductions needed to remain in line with State targets. Specifically, the CARB identifies that the State's recommended per capita targets of reducing statewide annual emissions to 6 MTCO_{2e} per capita by 2030, and a longer-term goal of reducing annual emissions to 2 MTCO_{2e} per capita by 2050. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the state's 1990 emissions limit established under AB 32.

Therefore, even though full buildout of the Project would occur by year 2040, an evaluation of the Project's GHG emissions in comparison to year 2050 target is appropriate at this time. It is anticipated that additional future state, regional, and local GHG strategies would be required by 2050, but the exact nature of these GHG strategies is not known at this time. Therefore, the following discussion provides an analysis of the Project's buildout per capita emissions in years 2030 and 2050, consistent with the per capita GHG emissions thresholds as established for the State of California as a whole by 2030 (see CARB's 2017 Climate Change Scoping Plan for further detail).

As shown in Table 3.6-3, new development in the Plan area by 2040 (i.e. development accommodated by the Specific Plan) is estimated to generate in 2040 approximately 9,851.8 MT CO_{2e} under the unmitigated scenario and 7,208.3 MT CO_{2e} under the mitigated scenario, and in 2050 of approximately 9,625.4 MT CO_{2e} in the unmitigated scenario and 7,054.0 MT CO_{2e} under the mitigated scenario. The Project would generate approximately 1,977 new residents by Project buildout, as described in greater detail Chapter 2.0 (Project Description). Therefore, in 2040, the Project would generate approximately 4.98 MT CO_{2e} per capita under the unmitigated scenario, and 3.65 MT CO_{2e} per capita under the mitigated scenario. Additionally, the mitigated scenario for year 2040 would not exceed the interpolated CARB threshold of 4 MTCO_{2e} per capita for year 2040.²⁰

²⁰ The 4 MT CO_{2e} per capita was calculated by taking a straight average of 2 MT CO_{2e} per capita for year 2030 and 6 MT CO_{2e} per capita for year 2050, as promulgated by the CARB in their 2017 Scoping Plan Update.

As described in greater detail under Impact 3.6-2 (below), the Project would not exceed the applicable CARB Scoping Plan per capita GHG efficiency threshold of 6 MT CO₂e per year for year 2040, but would exceed the 2 MT CO₂e per year for year 2050.

Additionally, construction emissions would also be generated by the Project. For the sake of a conservative analysis, construction emissions can be considered in conjunction with operational emissions when evaluating a project's GHG emissions against applicable thresholds. When amortized over a 30-year period, and as described in further detail above, the Project's construction emissions would contribute an additional 516.9 MT CO₂e/year. When added to the Project's operational emissions, the Project would generate in 2040 approximately 5.24 MT CO₂e per capita under the unmitigated scenario, and 3.91 MT CO₂e per capita under the mitigated scenario, and in 2050 approximately 5.13 MT CO₂e per capita under the unmitigated scenario, and 3.83 MT CO₂e per capita under the mitigated scenario. Although the 2040 scenarios do not exceed the CARB threshold of 6 MTCO₂e per capita for year 2040, the 2050 scenarios would exceed the CARB threshold of 2 MTCO₂e per capita for year 2050.

Consistency with BAAQMD Guidance

The BAAQMD maintains separate GHG thresholds of significance for individual projects and for plans. For Specific Plans, the BAAQMD advises the use of the project-level threshold of 4.6 CO₂e/SP/year. Separately, to account for the year 2030 goals contained in SB 32, the project-level threshold of 2.8 CO₂e/SP/year is also used.

There is no BAAQMD Plan-level GHG emissions threshold of significance for construction emissions. In addition, construction emissions that would occur during implementation of the Project would be temporary in nature, and would therefore not generate a significant impact on the environment. Nevertheless, for the sake of a conservative analysis, Project construction emissions were amortized over a 30-year period and are evaluated in conjunction with Project operational emissions below.

New development in the Plan area (i.e. development accommodated by the Specific Plan) is estimated to generate approximately 9,851.8 MT CO₂e/year under the unmitigated scenario, and 7,208.3 MT CO₂e/year under the mitigated scenario (see Table 3.6-3), by Project buildout. The Project would generate approximately 1,977 new residents and 632 new employees²¹ (or a service population²² of 2,609). Therefore, based on an estimated service population of 2,609, the Project in 2040 would generate approximately 3.78 MT CO₂e/service population/year under the unmitigated scenario, and 2.76 MT CO₂e/service population/year under the mitigated scenario. The mitigated scenario does not exceed the 2.8 CO₂e/SP/year for a specific plan (calculated to account for the 2030 goals contained in SB 32).

CONCLUSION

As discussed under Impact 3.6-1, the Specific Plan includes a large number of goals and policies that are aimed at reducing GHGs. For example, and as provided in the list below (entitled Specific Plan Components that Mitigate Potential Impacts), the Specific Plan is designed to support walkability, convenient access to nearby transit options, higher density housing, and infill development. New high density and mixed-use housing would bring new housing opportunities to the Springs and would be located within walking distance of transit, shops, restaurants, and other amenities. In addition, a centrally-located community

²¹ W-Trans, Springs Specific Plan VMT Findings and Draft Mitigation Strategy (Updated Draft), August 18, 2021.

²² Note: Service population is the sum of population and employees.

plaza would be developed, which would serve as a gathering place for farmer's markets, concerts, and other community events. The Project as a whole has been designed to provide alternative modes of transportation, beyond automobile travel, which acts as the largest single source of GHG emissions in the County.

The Project is designed in such a way that it would minimize GHGs and climate change impacts to the greatest degree feasible. The Project would also be consistent with all applicable regulatory requirements aimed at reducing project-related GHG emissions, as also discussed above. The Specific Plan contains an extensive list of goals and policies that are designed to reduce GHGs, and the Project does not exceed the GHG efficiency targets promulgated by the BAAQMD guidance and the CARB in their 2017 Climate Change Scoping Plan for year 2030.

The Project would comply with all relevant goals, policies, and actions as provided with the Sonoma County General Plan. Moreover, the Project would be consistent the applicable GHG emissions efficiency thresholds as promulgated by the BAAQMD. However, although the Project would achieve the year 2030 per service population efficiency target in year 2030, it would not achieve the year 2050 per service population efficiency target in year 2050, as provided in the CARB 2017 Climate Change Scoping Plan. Therefore, the Project would not be in full compliance with all relevant federal, state, and local strategies to help reduce GHG emissions. This a *significant and unavoidable* impact.

ENERGY METHODOLOGY AND THRESHOLDS OF SIGNIFICANCE

Analysis Approach

In order to assure that energy implications are considered in project decisions, the CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. Energy conservation implies that a project's cost effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, cost effectiveness may be determined more by energy efficiency than by initial dollar costs. A lead agency may consider the extent to which an energy source serving the project has already undergone environmental review that adequately analyzed and mitigated the effects of energy production.

Energy Thresholds of Significance

Per Appendix G of the State CEQA Guidelines, the Project would result in a significant impact on energy use if it would:

- Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation;
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In order to determine whether or not the development of the Project would result in a significant impact on energy use, this EIR includes an analysis of energy use related to the development of the Project, which is provided below. The Project is also analyzed with respect to its potential to conflict with or obstruct any state or local plan for renewable energy or energy efficiency.

IMPACTS AND MITIGATION MEASURES – ENERGY

Impact 3.6-3: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources, or conflict with or obstruct a state or local plan for renewable energy of energy efficiency (Less than Significant)

Appendix G of the State CEQA Guidelines requires consideration of the potentially significant energy implications of a project. CEQA requires mitigation measures to reduce “wasteful, inefficient and unnecessary” energy usage (Public Resources Code Section 21100, subdivision [b][3]). The means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the Project would be considered “wasteful, inefficient, and unnecessary” if it were to violate state and federal energy standards and/or result in significant adverse impacts related to project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The Project includes residential and non-residential land uses. The amount of energy used by development of the Project would directly correlate to the number and size of the residential units, the energy consumption of associated unit appliances, outdoor lighting, and the energy use associated with non-residential Plan area buildings and activities. Other major sources of Project energy consumption include fuel used by vehicle trips generated during construction and operation activities, and fuel used by off-road construction vehicles during construction. The following discussion provides calculated levels of energy use expected for the Project, based on commonly used modelling software (i.e. CalEEMod v.2020.4.0 and the California Air Resource Board’s EMFAC2020). It should be noted that many of the assumptions provided by CalEEMod are conservative relative to the Project. For example, the energy intensity values used by CalEEMod to determine Project building energy usage are based on historical values, which are expected to go down in the future as buildings in California become increasingly energy-efficient. Additionally, the off-road construction equipment as provided by default within CalEEMod (based on the size and type of land uses within the proposed Specific Plan) were maintained within the modelling. However, these defaults typically provide an overestimate of project off-road construction emissions, for the sake of a conservative analysis. Therefore, this discussion provides a conservative estimate of Project energy usage.

ELECTRICITY AND NATURAL GAS

“Energy” is one of the categories that were modeled for GHG emissions in CalEEMod. The “Energy” category includes energy consumption from both natural gas and electricity (as provided by PG&E and Sonoma Clean Power). The Project’s total operational mitigated GHG emissions generated from the “Energy” category in 2040 is approximately 1,462.0 MTCO₂e. The following discussion includes a more detailed breakdown of energy consumption in terms of natural gas and electricity consumption. It should be noted that “mitigated” emissions (as defined by CalEEMod) were used in the following tables, since the modeled mitigated scenario takes into account relevant state and local regulation that would reduce GHG emissions above and beyond the modelled ‘unmitigated’ scenario, but this does not include mitigation as recognized by CEQA.

3.6 GREENHOUSE GASES AND ENERGY

Operational natural gas consumption by the Project is estimated to be 17 “tera-BTU” per year (TBTU/year) under the unmitigated scenario, and 15 TBTU/year under the mitigated scenario, at full project buildout. Operational electricity consumption by the Project is estimated to be 8 “tera-watt-hours” per year (TWh/year) under the unmitigated scenario, and 7 TBTU/year under the mitigated scenario, at full project buildout. See Appendix C (CalEEMod) for further detail.

According to the *Appendix A: Calculation Details for CalEEMod*, CalEEMod uses the California Commercial End Use Survey (CEUS) database to develop energy intensity value for non-residential buildings. The energy use from residential land uses is calculated based on the Residential Appliance Saturation Survey (RASS). Similar to CEUS, this is a comprehensive energy use assessment that includes the end use for various climate zones in California.

ON-ROAD VEHICLES (OPERATION)

The Project would generate vehicle trips during its operational phase. According to the Traffic Study prepared for the Project (W Trans, 2021), the Project, at full build out, would generate approximately 18,782,433 additional VMT at project buildout (i.e. additional trips that would occur beyond future VMT without the project). In order to calculate operational on-road vehicle energy usage and emissions generated by the Project, default trip lengths generated by CalEEMod were used, which are based on the Project’s location and urbanization level parameters selected within CalEEMod (i.e. “Sonoma County” and “Urban”, respectively). These values are provided by the individual districts or use a default average for the state (CAPCOA, 2017). Based on the data provided in *Springs Specific Plan VMT Findings and Draft Mitigation Strategy (Updated Draft)* by W-Trans (2021), the Project would generate at total increase of approximately 51,459 average daily vehicle miles travelled (Average Daily VMT). Using fleet mix data provide by CalEEMod (v.2020.4.0), and future buildout year gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2020, De Novo derived weighted MPG factors for operational on-road vehicles at buildout of the Project of approximately 32.8 MPG for gasoline and 12.4 MPG for diesel vehicles. With this information, De Novo calculated as a conservative estimate that buildout of the Project would generate vehicle trips that would use a total of approximately 1,487 gallons of gasoline and 214 gallons of diesel fuel per day, on average, or approximately 542,800 gallons of gasoline and 78,270 annual gallons of diesel fuel per year, at full buildout.

ON-ROAD VEHICLES (CONSTRUCTION)

The Project would also generate on-road vehicle trips during construction activities (from construction workers and vendors). Estimates of vehicle fuel consumed were derived based on the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod, and current gasoline MPG factors provided by EMFAC2020. For the purposes of simplicity, it was assumed that all construction worker vehicles used gasoline as the fuel source (as opposed to diesel fuel or alternative sources), and all vendor vehicles used diesel fuel as the fuels source. Table 3.6-4, below, describes gasoline and diesel fuel used by on-road mobile sources during each phase of the construction schedule. As shown, the vast majority of on-road mobile vehicle fuel used during the construction activities would occur during the building construction phase. See Appendix C for a detailed calculation.

TABLE 3.6-4: ON-ROAD MOBILE FUEL GENERATED BY PROJECT CONSTRUCTION ACTIVITIES – BY PHASE

CONSTRUCTION PHASE	# OF DAYS	TOTAL DAILY WORKER TRIPS ^(A)	TOTAL DAILY VENDOR TRIPS ^(A)	GALLONS OF GASOLINE FUEL ^(B)	GALLONS OF DIESEL FUEL ^(B)
Demolition	200	15	-	1,280	

Site Preparation	120	18	-	921	-
Grading	310	20	-	2,644	-
Building Construction	3100	641	149	42,378	24,013
Paving	220	15	-	1,408	-
Architectural Coating	220	128	-	12,011	-
Total	N/A	N/A	N/A	60,642	24,013

NOTE: ^(A) PROVIDED BY CAL EEMOD. ^(B) SEE APPENDIX C FOR FURTHER DETAIL

SOURCE: CAL EEMOD (v.2020.4.0); EMFAC2020.

OFF-ROAD VEHICLES (CONSTRUCTION)

Off-road construction vehicles would use diesel fuel during the construction of the new development included within the Project. A non-exhaustive list of off-road constructive vehicles expected to be used during the construction phase of the Project includes: cranes, forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO₂ emissions expected to be generated by the Project (as provided by the CalEEMod output), and a CO₂ to diesel fuel conversion factor (provided by the U.S. Energy Information Administration), the Project would use a total of approximately 103,861 gallons of diesel fuel for off-road construction vehicles (during the site preparation and grading phases of the Project). Detailed calculations are provided in Appendix C.

OTHER

The Project could also use other sources of energy not identified here. Examples of other energy sources include alternative and/or renewable energy (such as solar PV) and/or on-site stationary sources (such as on-site diesel generators) for electricity generation. No on-site diesel generators are proposed. However, solar PV would be included within the residential portion of the project, based on the California Solar Mandate.

POTENTIAL TO CONFLICT WITH OR OBSTRUCT ANY RENEWABLE ENERGY AND/OR ENERGY EFFICIENCY PLANS OR PROGRAMS

The Project would not obstruct any state or local plan or program for renewable energy or energy efficiency. For example, the Project would not conflict with PG&E and Sonoma Clean Power's plans for implementing the statewide Renewable Portfolio Standard (RPS) to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. Moreover, overall, the Project does not conflict with any statewide requirement associated with renewable energy or energy efficiency, including the overarching state GHG-reduction requirements associated with AB 32 and SB 32; the Project would not obstruct or conflict with the State's ability to achieve its GHG reduction goals for future years. There are no local plans for renewable energy or energy efficiency – therefore, the Project would not obstruct or conflict with any local plans for renewable energy or energy efficiency.

CONCLUSION

Buildout of the Project would use energy resources for the operation of buildings (electricity and natural gas), for on-road vehicle trips (e.g. gasoline and diesel fuel), and from off-road construction activities associated with buildout of the Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The project applicant(s)/developer(s) responsible for buildout of all or part of the Project would be responsible for conserving energy. This includes an emphasis on reducing per capita energy consumption, including through statewide and local measures, including consistency with the

3.6 GREENHOUSE GASES AND ENERGY

most recent version of Title 24 (Energy Efficiency Standards), for each individual development at their time of individual development. Development of the proposed project is also required to comply with the California Solar Mandate. Overall, development of the proposed project would be in compliance with all applicable federal, state, and local regulations regulating energy usage, including any relevant state and local plans. The proposed project would also comply with the BAAQMD's Best Practices to Reduce Emissions of Local Air Pollution, as promulgated in the BAAQMD's *Planning Healthy Places* guidance, as described in further detail in Section 3.2: Air Quality of this EIR.

Moreover, the proposed project itself includes many goals and policies that would minimize wasteful, inefficient, or unnecessary use of energy. For example, Goal SC-1 requires the street network to be designed for the needs of all users, including non-automobile modes of transit such as pedestrians, bicyclists, and transit riders. Policy SC-1h requires development projects that exceed ten (10) residential units or 5,000 square feet of non-residential development to reduce VMT through implementation of a Transportation Demand Management (TDM) plan. Additionally, Goal SC-2 requires the creation of a pedestrian and bicycle circulation system that encourages walking and cycling. Separately, Goal SC-3 is designed to an increase Transit Ridership in the Springs Area. Other goals and policies that minimize wasteful, inefficient, or unnecessary use of energy are provided throughout the Specific Plan.

As a result, the Project would not result in any significant adverse impacts related to energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for each stage of building of the Project, including construction, operations, maintenance, and/or removal. The electricity and natural gas provider to the Plan Area maintains sufficient capacity to serve the Plan area. The Project would comply with all existing energy standards, including those established by Sonoma County, and would not result in significant adverse impacts on energy resources. Furthermore, existing connections exist between the Plan area and nearby pedestrian and bicycle pathways, and public transit access exists nearby, reducing the need for local motor vehicle travel. The Project would be linked closely with existing networks that, in large part, are sufficient for most residents of the Plan area and the Springs area as a whole. Lastly, the Project would not conflict with any energy plan. For these reasons, the Project would not be expected cause an inefficient, wasteful, or unnecessary use of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This is a ***less than significant*** impact.

The purpose of this section is to disclose and analyze the potential impacts associated with hazards and hazardous materials related to the Plan area and general vicinity, and to analyze the potential for exposure of people to hazards and hazardous materials as the Plan area is built and operated in the future. This section is based in part on the following resources:

- California Department of Toxic Substances Control, 2018. Envirostar database search (DTSC, 2018). Available online at: <http://www.envirostor.dtsc.ca.gov/public/>.
- State Water Resources Control Board (GeoTracker) Information System and Geographic Environmental Information Management System (GEIMS), 2018 (SWRCB, 2018). Available at: <https://geotracker.waterboards.ca.gov/>.
- United States Environmental Protection Agency. 2018. Toxics Release Inventory (TRI) Program (USEPA, 2018). Available at: <https://www.epa.gov/toxics-release-inventory-tri-program>.

No comments regarding this topic were received during the public review period for the NOP or during the scoping meeting for the DEIR.

3.7.1 ENVIRONMENTAL SETTING

ACRONYMS

CCR	California Code of Regulations
CUPA	Certified Unified Program Agency
DTSC	Department of Toxic Substances Control
EPA	Environmental Protection Agency
FHSZ	Fire Hazard Severity Zones
RCRA	Resource Conservation and Recovery Act
SRA	State Responsibility Area
UST	Underground Storage Tank
WUI	Wildland Urban Interface Zone

PHYSICAL SETTING

Project Location and Existing Site Uses

The Plan area is defined as the approximately 180-acre area in the southeastern portion of Sonoma County, as shown in Figure 2.0-2. The Springs is an unincorporated community located in central Sonoma Valley immediately north of the City of Sonoma. The Springs includes portions of the unincorporated communities of Agua Caliente, Feters Hot Springs, and Boyes Hot Springs. The Plan area is bounded by Agua Caliente Road at the north and Verano Avenue at the south and is bisected by the Highway 12 commercial corridor. The Plan area currently includes the following uses, as identified by the Sonoma County Assessor's office: 78.5 acres of single-family residential, 21.6 acres of multi-family residential (including duplexes through fourplexes), 15.74 acres of commercial, 2.77 acres of office, 1.47 acres of industrial, 3.35 acres of mixed use, and 3.59 acres of public uses and 15.6 acres of vacant land.

Existing Surrounding Uses

As described in Section 2.0, the Plan area is located in the unincorporated area of Sonoma County. Adjoining lands to the north of the Plan area are designated for Urban Residential, Rural Residential, and Diverse Agriculture uses. Adjoining lands to the east of the Plan area are designated for Urban Residential, Rural Residential, Resources and Rural Development, Land Intensive Agriculture, and. Adjoining lands to the west of the Plan area are designated for Urban Residential, Rural Residential, Diverse Agriculture , General Commercial, and Recreation and Visitor Serving Commercial uses.

The City of Sonoma city limits are adjacent to the southern portion of the Plan area. Surrounding land uses within the City of Sonoma include low density residential, rural residential, commercial, and park. Maxwell Farms Regional Park is located south of W. Verano Avenue, south of the Plan area.

Area Topography

The Plan area is relatively flat at an elevation of approximately 110 to 185 feet above sea level. The area's terrain generally slopes gently down from east to west.

WILDLAND FIRE HAZARDS

For a discussion of Wildland Fire Hazards, See Section 3.16 Wildfire.

AIRPORTS

There are no airports located within five miles of the Plan area. The nearest airport to the Plan area is the Sonoma Valley Airport. The Sonoma Valley Airport is located approximately 5.7 miles south of the Plan area. The Sonoma Valley Airport is a privately-owned airport that is open for public use. The Plan area is not located within the airport's referral area or safety zones.

SCHOOLS

There are several schools within and surrounding the plan area, including: Sonoma Charter School, Flowery Elementary School, El Verano Elementary School and Altimira Middle School.

Historical Use Information

Historical information was reviewed to develop a history of the previous uses in the proposed Plan area and surrounding area, in order to evaluate the Plan area and adjoining properties for evidence of known environmental conditions. Standard historical sources reviewed during the preparation of this report included the following, as available:

DATABASES

There are multiple federal and state databases that sites with potential for risk from the possible existence of hazardous materials. There are numerous redundancies among these various databases. Below is a brief summary of each.

National Priorities List: The National Priorities List (NPL) of Superfund Sites and Proposed NPL Sites is EPA's database of more than 1,200 sites designated or proposed for priority cleanup under the Superfund

program. NPL sites may encompass relatively large areas. No portion of the Plan area is listed in this database.

RCRIS System: The Resource Conservation and Recovery Information System (RCRIS) is an EPA database that includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. Identification on this list does not indicate that there has been an impact on the environment. Five developed sites within the Plan area are currently listed in this database. All of the sites are located along Highway 12. These sites include Pacific Bell (Handler ID: CAT080029127), J&L Carburetor (Handler ID: CAD982444846), Flowery (Handler ID: CAD981423627), “The Gas Station” (Handler ID: CAD982444796), and Continental Motors (Handler ID: CAD983594987).

CERCLIS Data: Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) is an EPA database that contains information on potential hazardous waste sites that have been reported to EPA by states, municipalities, private companies, and individuals, pursuant to Section 103 of CERCLA. CERCLIS contains sites that are either proposed for or on the NPL, as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Plan area is not listed in this database.

CORRACTS: Resource Conservation and Recovery Act Corrective Actions (CORRACTS) Report is an EPA database that identifies hazardous waste handlers with RCRA corrective action activity. The Plan area is not listed in this database.

PADS System: PCB Activity Database System is an EPA database that identifies generators, transporters, commercial storers, and/or brokers and disposers of polychlorinated biphenyls (PCBs) who are required to notify EPA of such activities. The Plan area is not listed in this database.

Cortese List: The Cortese database list identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with underground storage tanks (USTs) having a reportable release, and all solid waste disposal facilities from which there is known hazardous substance migration. There are sites in Sonoma County on the Cortese database, including sites located in Windsor, Santa Rosa, and Bodega Bay, however none of these sites are located in, or in the vicinity of, the Plan area.

GeoTracker: GeoTracker is a geographic information system (GIS) that provides online access to environmental data and is the interface to the Geographic Environmental Information Management System, a data warehouse which tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies. The terms “release” or “occurrence” include any means by which a substance could harm the environment: by spilling, leaking, discharging, dumping, injecting, or escaping. As shown in Table 3.7-1, the GeoTracker database lists a total of 18 sites within and in the immediate vicinity (one mile) of the Plan area. Of the 18 sites, 15 have a status of “Completed – Case Closed”, two have a status of “Open – Verification Monitoring” (18618 Sonoma Highway and 18618 Sonoma Highway), and one has a status of “Open – Remediation” (18460 Sonoma Highway).

TABLE 3.7-1: GEOTRACKER DATABASE SITES

<i>SITE NAME</i>	<i>ADDRESS</i>	<i>SITE TYPE</i>	<i>STATUS</i>
BP Gas Station	18017 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed
Cal Food & Gas	18605 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed
Elychova Property/Modern Plumbing	17496 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed

3.7 HAZARDS AND HAZARDOUS MATERIALS

SITE NAME	ADDRESS	SITE TYPE	STATUS
Ferrando's Plumbing & HTG	18495 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed
Filipello Property	17420 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed
Former Heon's Dry Cleaner	18460 Sonoma Hwy	Cleanup Program Site	Open - Remediation
Frassi Automotive	17561 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed
Gallo Bros. (Former)	18155 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed
Hooker's Texaco (Former)	16820 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed
Pacific Bell	17021 Cedar Ave	LUST Cleanup Site	Completed - Case Closed
Private Residence	Private Residence	LUST Cleanup Site	Completed - Case Closed
SBC Agua Caliente	17021 Cedar Ave	LUST Cleanup Site	Completed - Case Closed
Sonoma Mission Inn & Spa	18140 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed
Sonoma Super Gas	18618 Sonoma Hwy	LUST Cleanup Site	Open - Verification Monitoring
Sonoma Valley School District	18701 Railroad Ave	LUST Cleanup Site	Completed - Case Closed
Sonoma Valley Unified School District	17420 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed
Ultramar Station #705 (Former)	18618 Sonoma Hwy	LUST Cleanup Site	Open - Verification Monitoring
Valley of the Moon Fire D	16900 Sonoma Hwy	LUST Cleanup Site	Completed - Case Closed

SOURCE: GEOTRACKER DATABASE. ACCESSED MARCH 10, 2016.

GeoTracker has replaced past databases, such as the Leaking Underground Storage Tank Information System (LUSTIS) and the Underground Storage Tank (UST) database. There are no leaking USTs in the Plan area. Additionally, there are two permitted USTs located in the Plan area. The permitted USTs include the following:

- The Molavi Group, dba Sonoma Beacon (18618 Sonoma Highway); and
- The Molavi Group, dba Sonoma Valero (18605 Sonoma Highway).

Toxic Release Inventory: The EPA Toxic Release Inventory does not list data on disposal or other releases of toxic chemicals in the Plan area (USEPA, 2017). The nearest Toxic Release Inventory site is located in the City of Petaluma, approximately 8.0 miles to the southwest of the Plan area.

Envirostor: The DTSC maintains the *Envirostor Data Management System*, which provides information on hazardous waste facilities (both permitted and corrective action) as well as any available site cleanup information. This site cleanup information includes: Federal Superfund Sites (NPL), State Response Sites, Voluntary Cleanup Sites, School Cleanup Sites, Corrective Action Sites, Tiered Permit Sites, and Evaluation / Investigation Sites. The hazardous waste facilities include: Permitted–Operating, Post-Closure Permitted, and Historical Non-Operating.

There is one evaluation site (i.e., site which requires assessment of potentially hazardous conditions) in the City of Sonoma (Broadway Cleaners Site No. 49280010) located at 568 Broadway Sonoma. This site has been referred to the Regional Water Quality Control Board. The property has been operated as commercial dry cleaner facilities since 1957. San Francisco Bay Area Regional Water Quality Control Board (Water Board) took over as lead agency for the site in 2002. Tetrachloroethene (PCE) has been detected in soil and groundwater samples. The Water Board is requiring the property owner to submit a Work-Plan for performing a site specific remediation pilot test followed by interim remedial action to cleanup soil and groundwater contamination. The cleanup status is listed as active.

Solid Waste Information System: The Solid Waste Information System is a database of solid waste facilities that is maintained by the California Department of Resources Recycling and Recovery (CalRecycle). The Solid Waste Information System data identifies active, planned and closed sites.

There are no active, planned, or closed solid waste facilities within the Plan area. The nearest solid waste facility is the Sonoma Transfer Facility located at 4376 Stage Gulch Road, approximately 4 miles southwest of the Plan area. This facility, as well as three other closed facilities, are listed in Table 3.7-2.

TABLE 3.7-2: SOLID WASTE FACILITIES WITHIN 3 MILES OF PLAN AREA

<i>NUMBER</i>	<i>NAME</i>	<i>ACTIVITY</i>	<i>REGULATORY STATUS</i>	<i>OPERATIONAL STATUS</i>
49-AA-0144	Sonoma Transfer Station	Large Volume Transfer/Proc Facility	Permitted	Active
49-AA-0005	Sonoma Landfill	Solid Waste Disposal Site	Permitted	Closed
49-CR-0040	Ahlgrim Site	Solid Waste Disposal Site	Unpermitted	Closed
49-CR-0024	Sonoma Developmental Center	Solid Waste Disposal Site	Pre-regulations	Closed

SOURCE: CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY, 2016. ACCESSED OCTOBER 2018.

None of the records reviewed for the Plan area indicates that a Recognized Environmental Condition is associated with the Plan area.

Google Earth

Historical aerial photographs available on Google Earth were reviewed for information regarding past conditions and land use at the proposed Plan area and in the immediate vicinity. Below is a brief summary of the aerial photographs and related site conditions:

- 1993 Google Earth – The majority of the Plan area is built out to current conditions. However, there is some infill development potential dispersed throughout the area. The majority of the Plan area contains residential uses, including neighborhoods and ranchette style homes further from Highway 12, and commercial uses. The shopping center off Siesta Way is built to current conditions.
- 2003 Google Earth – The Plan area appears to be nearly identical to what is shown in the 1993 Google Earth imagery. The forested areas to the east and west of Highway 12 are more mature with increased tree canopy. Some developed areas appear to be slightly denser, such as the area between Valetti Drive and Rancho Drive.
- 2004 Google Earth – The Plan area appears to be nearly identical to what is shown in the 2003 Google Earth imagery. Sonoma Charter School appears to be similar to current conditions.
- 2015 Google Earth – The entire Plan area appears built to current conditions. Grading of the Fetters Apartments site has begun.
- 2016 Google Earth – The entire Plan area appears built to current conditions. Construction of the Fetters Apartments has begun.
- 2018 Google Earth – The entire Plan area appears built to current conditions. Construction of the Fetters Apartments appears to be complete.

Transportation of Hazardous Materials

The transportation of hazardous materials within the County of Sonoma is subject to various federal, state, and local regulations. The only roadway and transportation route approved for the transportation of explosives, poisonous inhalation hazards, and radioactive materials in the vicinity of the Plan area is Highway 12.

3.7.2 REGULATORY SETTING

FEDERAL

The primary federal agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the EPA, Department of Labor Occupational Safety and Health Administration, and the Department of Transportation. The section below addresses laws regarding the transport, storage, and use of hazardous materials as overseen by these agencies. Federal laws and regulations that are applicable to hazards and hazardous materials are also presented below.

Resource Conservation and Recovery Act

The federal Resource Conservation and Recovery Act (RCRA) regulates the treatment, storage, and disposal of hazardous and non-hazardous wastes. The law mandates that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

RCRA also provides for a regulatory program designed to prevent releases from USTs. The program establishes tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. Owners and operators of USTs had until December 1998 to meet the new tank standards. As of 2001, an estimated 85 percent of USTs were in compliance with the required standards.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. CERCLA was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous substances releases. CERCLA deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act is the principal statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. This law gives the U.S. Department of Transportation and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials (DOE 2002).

Natural Gas Pipeline Safety Act

The Natural Gas Pipeline Safety Act authorizes the U.S. Department of Transportation Office of Pipeline Safety to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases as well as the transportation and storage of liquefied natural gas. The Office of Pipeline Safety regulates the design, construction, inspection, testing, operation, and maintenance of pipeline facilities. While the Federal government is primarily responsible for developing, issuing, and enforcing pipeline safety

regulations, the pipeline safety statutes provide for state assumption of the intrastate regulatory, inspection, and enforcement responsibilities under an annual certification. To qualify for certification, a state must adopt the minimum Federal regulations and may adopt additional or more stringent regulations as long as they are not incompatible.

STATE

The primary state agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the California Office of Emergency Services (OES), California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC), California Department of Transportation (Caltrans), California Highway Patrol (CHP), California Water Resources Control Board, and the California Air Resources Board. Several laws governing the generation, transport, and disposal of hazardous materials are administered by these agencies. State laws and regulations that are applicable to hazards and hazardous materials are presented below.

California Health and Safety Code

Cal-EPA administers laws and regulations governing the use of hazardous materials and the management of hazardous wastes. Many of these regulations are embodied in the California Health and Safety Code. The code includes regulations that govern safe drinking water, substances control, land reuse and revitalization, remediation, restoration, and methamphetamine contaminated property cleanups.

California Code of Regulations Title 22 and Title 26

CCR Title 22 provides state regulations for hazardous materials, and CCR Title 26 provides regulation of hazardous materials management. In 1996, Cal/EPA established the “Unified Hazardous Waste and Hazardous Materials Management Regulatory Program” (Unified Program) which consolidated the six administrative components of hazardous waste and materials into one program.

For the purposes of this EIR, “hazardous material” is defined as provided in California Health & Safety Code Section 25501:

- Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

“Hazardous waste” is a subset of hazardous materials. For the purposes of this EIR, the definition of hazardous waste is essentially the same as that in California Health & Safety Code Sections 25117 and 25141, and in the California Code of Regulations (CCR), Title 22, Section 66261.2:

- Hazardous wastes are wastes that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

3.7 HAZARDS AND HAZARDOUS MATERIALS

CCR Title 22 categorizes hazardous waste into hazard classes according to specific characteristics of ignitibility, corrosivity, reactivity, or toxicity. Hazardous waste with any of these characteristics is also known as a Resource Conservation and Recovery Act (RCRA) waste.

Hazardous materials can be categorized as hazardous non-radioactive chemical materials, radioactive materials, toxic materials, and biohazardous materials. The previous definitions are adequate for non-radioactive hazardous chemicals.

There are countless categories of hazardous materials and hazardous wastes that could be found on any given property based on past uses. Some common examples include agrichemicals (chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as Mecoprop [MCPP], Dinoseb, chlordane, dichloro-diphenyltrichloroethane [DDT], and dichloro-diphenyl-dichloroethylene [DDE]), petroleum based products (oil, gasoline, diesel fuel), a variety of chemicals including paints, cleaners, and solvents, and asbestos-containing or lead-containing materials (e.g., paint, sealants, pipe solder).

LOCAL

Sonoma County General Plan

The Sonoma County General Plan contains the following goals, objectives, and policies that are relevant to hazards and hazardous materials aspects of the Project:

PUBLIC SAFETY ELEMENT

GOAL PS-3. Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires.

Objective PS-3.1: Continue to use complete data on wildland and urban fire hazards.

Objective PS-3.2: Regulate new development to reduce the risks of damage and injury from known fire hazards to acceptable levels.

Objective PS-3.3: Use the Sonoma County Hazard Mitigation Plan to help reduce damages from wildland fire hazards.

Policy PS-3a: Continue to use available information on wildland and structural fire hazards.

Policy PS-3b: Consider the severity of natural fire hazards, potential damage from wildland and structural fires, adequacy of fire protection and mitigation measures consistent with the Public Safety Element in the review of projects.

Policy PS-3c: Continue to adopt revisions to the Uniform Fire and Building Codes and other standards which address fire safety as they are approved by inspection organizations and the State of California. Review, revise, and/or adopt existing or new local codes, ordinances, and Fire Safe Standards to reflect contemporary fire safe practices.

Policy PS-3d: Refer projects and code revisions to the County Department of Fire and Emergency Services and responsible fire protection agencies for their review and comment.¹

Policy PS-3e: The County Department of Fire and Emergency Services shall offer assistance to local agencies in adoption and enforcement of fire safety regulations and shall work with local agencies to develop proposed improvements to County codes and standards.

Policy PS-3f: Encourage strong enforcement of State requirements for fire safety by the California Department of Forestry and Fire Protection.

Policy PS-3g: Encourage continued operation of California Department of Forestry and Fire Protection (CalFire) programs for fuel breaks, brush management, controlled burning, re-vegetation, and fire roads.

Policy PS-3h: Develop a program to improve and standardize the County street addressing system in order to reduce emergency service response times. Where applicable, coordinate the program with the cities.

Policy PS-3i: Encourage and promote fire safe practices and the distribution of fire safe educational materials to the general public, permit applicants, and local planning agencies.

Policy PS-3j: Provide fire hazard information signs in Very High or High Fire Hazard Severity Zones in a manner consistent with Area Plans and that does not degrade Scenic Corridors and scenic views.

Policy PS-3k: Work with the California Department of Forestry and Fire Protection (CalFire) to identify areas of high fire fuel loads and take advantage of opportunities to reduce those fuel loads, particularly in Very High or High Fire Hazard Severity Zones.

Policy PS-3l: Require automatic fire sprinkler systems or other on-site fire detection and suppression systems in all new residential and commercial structures, with exceptions for detached utility buildings, garages, and agricultural exempt buildings.

Policy PS-3m: Consider additional impact or mitigation fees, or a benefit assessment, to offset the impact of new development on fire services.

GOAL PS-4. Prevent unnecessary exposure of people and property to risks of damage or injury from hazardous materials.

Objective PS-4.1: Maintain complete documentation and assessments of data on hazardous materials.

Objective PS-4.2: Regulate the handling, storage, use, and disposal of hazardous materials in order to reduce the risks of damage and injury from hazardous materials.

Policy PS-4a: While maintaining the autonomy granted to it pursuant to State zoning laws, implement Federal, State, and County requirements for the storage, handling, disposal, and use

¹ This department was dissolved and its duties reorganized into the Department of Emergency Management and the Fire Prevention and Hazardous Materials Division of Permit Sonoma.

3.7 HAZARDS AND HAZARDOUS MATERIALS

of hazardous materials, including requirements for management plans, security precautions, and contingency plans.

Policy PS-4b: Prepare and maintain an inventory of sites with storage or use of hazardous materials in threshold planning quantities as determined by Federal and State laws.

Policy PS-4c: Require a use permit for any commercial or industrial use involving hazardous materials in threshold planning quantities as determined by Federal and State laws. Hazardous materials management plans shall be required as a condition of approval for such permits.

Policy PS-4d: Work with applicable regulatory agencies to regulate the transportation of hazardous materials consistent with adopted County policies.

Policy PS-4e: Continue to design and operate County owned solid waste disposal facilities to prevent disposal of and contamination by hazardous materials.

Policy PS-4f: Continue as needed the hazardous materials business advisory group, and consider adding an agricultural representative.

Policy PS-4g: Maintain the Sonoma County Operational Area Hazardous Materials Incident Response Plan, which provides for effective responses to releases of hazardous materials, the safe disposal of hazardous wastes, and a public information program.

Policy PS-4h: Avoid siting of hazardous waste repositories, incinerators, facilities that use a substantial quantity of hazardous materials, or other similar facilities intended primarily for hazardous waste disposal in any area subject to a very strong ground shaking hazard identified on Figures PS-1a through PS-1i or within one quarter mile of schools.

Policy PS-4i: Avoid siting of hazardous waste repositories, incinerators, or similar facilities intended primarily for hazardous waste disposal in any area designated for urban residential or rural residential use or on agricultural lands or at County approved solid waste disposal facilities.

Policy PS-4j: Site hazardous waste facilities which have the primary purpose of reuse, recycling, or source reduction of hazardous wastes in areas designated for industrial use in close proximity to users of hazardous materials and/or generators of hazardous wastes.

Policy PS-4k: Continue to educate the public about and promote the Sonoma County Waste Management Authority's Household Hazardous Waste Program. Encourage free drop-off and reuse of computers and similar equipment containing hazardous materials.

Policy PS-4l: Continue to educate the public about green business opportunities and expand and promote the County Department of Fire and Emergency Services Sonoma Green Business Program.

Policy PS-4m: Continue to educate the public about, encourage, and promote the reduction in use of hazardous materials and the use of safe alternatives to hazardous materials in County operations and private businesses.

Policy PS-4n: Encourage the private sector to reduce the use of potentially hazardous pesticides and to use alternatives such as best management practices.

Policy PS-4o: Encourage reduction in the use of potentially hazardous pesticides and increased use of alternatives, such as best management practices, in County operations, including but not limited to maintenance of roads, parks, and facility grounds. Emphasize the use of alternatives to potentially hazardous pesticides in areas likely to drain to waterways. Coordinate with the cities in this effort.

Sonoma County Hazard Mitigation Plan

The Sonoma County Multi-Jurisdictional Hazard Mitigation Plan Update 2021 (MJHMP) was adopted by the Sonoma County Board of Supervisors on December 7, 2021. Previously, the 2016 Sonoma County Hazard Mitigation Plan was approved on April 25, 2017.

The newly adopted MJHMP was developed as Multi-Jurisdictional plan that will serve multiple cities and fire districts, including the City of Sonoma and the Sonoma Valley Fire District that encompasses the Springs Specific Plan Area. The MJHMP serves multiple purposes, including:

- Protect people and minimize loss of life, injury, and social impacts
- Minimize potential for loss of property, economic and social impacts, and displacement due to hazards
- Minimize potential for environmental impacts and consider a broad-range of mitigation solutions including nature-based solutions
- Communicate natural hazard risk to the whole community within Sonoma County
- Support and inform the development of relevant mitigation policies and programs
- Promote an adaptive and resilient Sonoma County that proactively anticipates the future impact of hazards within the county
- Pursue the development and implementation of long-term, cost-effective, and environmentally sound mitigation projects

Certified Unified Program Agency (CUPA)

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPA), typically at the county level. In Sonoma County, the Sonoma County Hazardous Materials Unit is responsible for the County's CUPA programs. Each designated CUPA is responsible for the implementation of six statewide programs within its jurisdiction. These programs include:

- Underground storage of hazardous substances (USTs);
- Hazardous Materials Business Plan (HMBP) requirements;
- Hazardous Waste Generator requirements;
- California Accidental Release Prevention (Cal-ARP) program;
- Uniform Fire Code hazardous materials management plan;
- Above Ground Storage Tanks (Spill Prevention Control and Countermeasures Plan only).

Implementation of these programs involves:

- Permitting and inspection of regulated facilities;
- Providing educational guidance and notice of changing requirements stipulated in State or Federal laws and regulations;
- Investigations of complaints regarding spills or unauthorized releases;

- Administrative enforcement actions levied against facilities that have violated applicable laws and regulations.

3.7.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous material would occur if the Project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Potential hazards associated with active agricultural operations in close proximity to urban uses is addressed in Section, 3.2, Agricultural Resources.

IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Implementation of the Project has the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less than Significant)

Future development, infrastructure, and other projects allowed under the Project may involve the transportation, use, and/or disposal of hazardous materials. Hazardous materials are typically used in industrial, agricultural, and commercial uses, as well as residential uses. Future uses may involve the transport and disposal of such materials from time to time. Future activities may involve equipment or construction activities that use hazardous materials (e.g., coatings, solvents and fuels, and diesel-fueled equipment), cleanup of sites with known hazardous materials, the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated, or disposal

of contaminated materials at an approved disposal site. While hazardous materials may be associated with industrial and agricultural activities, hazardous materials may also be associated with the regular cleaning and maintenance of residential and other less intense uses. Accidental release of hazardous materials that are used in the construction or operation of a project may occur. There is also the potential for accidental release of pre-existing hazardous materials, either associated with previous activities on a site or naturally occurring hazards such as asbestos.

The Former Heon's Dry Cleaner is a State Water Resources Control Board Cleanup Program Site with a status of open – remediation. According to GeoTracker, the site is currently partially occupied by PC Metro, a cellular phone business. Land use in this area is generally light commercial and residential. There is a small creek located approximately 75 yards to the north of the site which flows to the west. A dry cleaning facility (Heon's Dry Cleaners) was formerly located in the northwestern portion of the onsite building and used the common dry cleaning chemical tetrachloroethene (PCE) at the site for approximately 10 to 20 years until 1993 at which time dry cleaning operations ceased. The site is also the subject of an active leaking fuel UST investigation (the former Sonoma Motorcycle site). Results of a March 2008 water-supply well sampling event, in addition to information obtained from sampling of monitoring wells associated with the site's UST investigation, indicated that there was a release of PCE from the former Heon's Cleaners. PCE have been detected in water supply wells in the site vicinity. PCE appear to have entered a floor drain adjacent to the former dry cleaning facility and entered sewer lines which apparently provided a preferential pathway for migration of PCE and its degradation chemicals. The release of PCE have impacted water wells at 46 and 210 West Thomson Avenue. After initial detection of contamination, drinking water was provided to residents at these two locations. Subsequently, in March 2008, well-head treatment systems were installed at these two water wells. Sub-slab depressurization systems were also installed beneath two buildings to mitigate vapor intrusion into indoor air.

Because the well-head treatment systems have been installed at the two water wells, contaminated drinking water at these two new wells is not present. Any future proposed uses within the Plan area would be served by Valley of the Moon Water District. Additionally, no new wells are proposed to serve new development within the Plan area. If wells are constructed in the area in the future, construction of these wells would comply with the existing County water well construction ordinance, and any required remediation or treatment systems would be installed. No future activities or uses within the Plan area would be at risk due to the Former Heon's Dry Cleaner site.

The use, transportation, and disposal of hazardous materials is regulated and monitored by local fire departments, CUPAs, the State Division of Occupational Safety and Health, and the Department of Toxic Substances Control consistent with the requirements of federal, state, and local regulations and policies. Facilities that store hazardous materials on-site are required to maintain a Hazardous Materials Business Plan in accordance with state regulations. In the event of an accidental release of hazardous materials, the local CUPA and emergency management agencies (e.g., Sheriff and Fire District) would respond. All future projects allowed under the Project would be required to comply with the provisions of federal, state, and local requirements related to hazardous materials. If future projects are consistent and comply with the Specific Plan, the future project would not require further CEQA review.

The County's General Plan includes objectives and policies to address potential impacts associated with hazardous materials. These policies and actions in the General Plan would ensure that potential hazards are identified on a project site, that development is located in areas where potential exposure to hazards and hazardous materials can be mitigated to an acceptable level, and that business operations comply with federal and state regulations regarding the use, transport, storage, and disposal of hazardous

materials. Subsequent development projects proposed within the Plan area would be subject to all applicable General Plan objectives and policies, as well as federal and state regulations.

For example, Policy PS-4c requires a use permit for any commercial or industrial use involving hazardous materials in threshold planning quantities as determined by federal and state laws. Policy PS-4i aims to avoid siting of hazardous waste repositories, incinerators, or similar facilities intended primarily for hazardous waste disposal in any area designated for urban residential or rural residential use or on agricultural lands or at County approved solid waste disposal facilities. Further, Policies PS-4n and PS-4o encourage reducing pesticide use in the County. Compliance with federal, state and local regulations in addition to General Plan Policies PA-4a through PS-4o listed in Section 3.7.2, Regulatory Setting, would ensure that this potential impact is **less than significant**.

Impact 3.7-2: Implementation of the Project has the potential to have projects located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Less than Significant)

As noted previously, the Cortese database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release, and all solid waste disposal facilities from which there is known hazardous substance migration. There are three sites in Sonoma County on the Cortese database, located in Windsor, Santa Rosa, and Bodega Bay. None of these sites are located in the Plan area. Therefore, this is considered a **less than significant** impact.

Impact 3.7-3: Implementation of the Project has the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (Less than Significant)

The Project has limited potential for the routine transport, use, or disposal of hazardous materials as discussed above (Impact 3.7-1). One school, Sonoma Charter School, is located within the Plan area. Flowery Elementary school is located immediately west of the Plan area. Additionally, one other school is located within one-quarter mile of the Plan Area: El Verano Elementary School. The area within ¼-mile of these three schools is mostly developed, but some development potential exists in the area.

The proposed Specific Plan Land Use Chapter includes General Plan and zoning designations, but does not propose actual businesses. As such, it is currently not possible to determine if a specific use will result in hazardous emissions or require handling of hazardous or acutely hazardous materials, substances, or waste. The land use designations with the highest possibility of having businesses that result in hazardous emissions or require handling of hazardous or acutely hazardous materials, substances, or waste are the Retail Business and Service and Neighborhood Commercial designations.

The Sonoma Charter School, which is located within the Plan area, is surrounded by existing residential development, and the school site is designated Public Facility by the Springs Zoning Map. The Springs Zoning Map identifies areas of High Density Residential to the west and east of the Sonoma Charter School site, Medium Density Residential to the north of the school site, and Planned Community to the south of the school site. As expected, residential uses are allowed in the High Density Residential and Medium Density Residential designations. Allowed uses in the Public Facility zone include county- and city-owned

facilities, special district facilities for utilities, and schools. The area adjacent to the school that is zoned Planned Community is the site of the existing Fetter Apartments project.

Additionally, there are no known existing commercial, industrial, or agricultural businesses that are known to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of a school.

Nevertheless, all hazardous materials would be handled in accordance with c, and County requirements, which would limit the potential for a project to expose nearby uses, including schools, to hazardous emissions or an accidental release. Hazardous emissions are monitored by the Bay Area Air Quality Management District, Regional Water Quality Control Board, Department of Toxic Substances Control, and the local CUPA. In the event of a hazardous materials spill or release, notification and cleanup operations would be performed in compliance with applicable federal, state, and local regulations and policies, including hazard mitigation plans. Subsequent development projects proposed within the Plan area would be subject to all relevant General Plan policies and programs that reduce impacts associated with hazardous materials. For example, Policy PS-4c requires a use permit for any commercial or industrial use involving hazardous materials in threshold planning quantities as determined by federal and state laws. Policy PS-4d aims to work with applicable regulatory agencies to regulate the transportation of hazardous materials consistent with adopted County policies. Further, Policy PS-4h avoids siting of hazardous waste repositories, incinerators, facilities that use a substantial quantity of hazardous materials, or other similar facilities intended primarily for hazardous waste disposal in any area subject to a very strong ground shaking hazard identified on Figures PS-1a through PS-1i or within one quarter mile of schools.

Implementation of the federal, state, and County regulations, as detailed in Section 3.7-2, Regulatory Setting, would ensure that this potential impact is **less than significant**.

Impact 3.7-4: Implementation of the Project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant)

(Note: The following discussion is associated with potential impacts of the proposed Project on emergency response plans and/or evacuation plans. Emergency vehicle access to and from the future developments within the Plan area is addressed in Chapter 3.13, Transportation and Circulation.)

the County has an Emergency Operations Plan, Hazard Mitigation Plan, and Community Wildfire Protection Plan. Each of these plans is summarized briefly below, along with the county department responsible for their preparation and dates of planned updates.

Emergency Operations Plan (Sonoma County Department of Emergency Management): an emergency support function based plan that directs emergency response actions countywide. The EOP is an all-hazard plan. Annexes to the EOP provide additional information relevant to a specific threat or response action, when needed. An Evacuation Annex, prepared by the Department of Emergency Management and published in August 2021, outlines the strategies, procedures, and organizational structures to be used in managing coordinated, large-scale evacuations in the Sonoma County Operational Area (countywide).

Sonoma County Multi-Jurisdictional Hazard Mitigation Plan (Permit Sonoma): enhance public awareness, aid in decision-making to address vulnerabilities to future disasters, support eligibility

3.7 HAZARDS AND HAZARDOUS MATERIALS

for state and federal grant programs, support coordination of hazard mitigation policies across local jurisdictions. An MJHMP was adopted by the Board of Supervisors on December 7, 2021. The MJHMP is not a regulatory plan and is not intended as an emergency response or emergency evacuation plan.

Community Wildfire Protection Plan (Permit Sonoma): provides wildfire hazard and risk assessments, community descriptions, options for addressing issues of structural vulnerability to wildfire (e.g. home hardening), and provides a prioritized list of projects which, if implemented, can serve to reduce wildfire hazards, reduce risk of loss of life, property loss, and environmental damage. The Fire Prevention Division of Permit Sonoma began an update process for this plan in 2021. Similar to the MJHMP, the CWPP is not regulatory and is not intended as an emergency response or emergency evacuation plan.

The EOP and its Annexes are not a formally “adopted” plan. However, the EOP functions as the emergency response plan and emergency evacuation plan for the unincorporated County, including for the Plan area. For the reasons discussed below, the Project would not impair implementation of or physically interfere with the EOP.

According to the EOP Evacuation Annex, the County has primary responsibility for emergency evacuation in unincorporated areas, such as the Springs. Any new development in the Plan area, facilitated by this plan, would be accessed by preexisting roadways. No new roads are provided for or contemplated in the Plan. The Specific Plan would not create physical impediments or interfere with the use of the roadways for evacuation or response during an emergency. All future development in the Plan area would be required to meet the most current applicable fire safety and emergency access and egress standards, including those regarding roadway width, turnarounds, and other necessary capacities.

As described in Section 3.12, Public Services, all new construction within the Plan Area would be subject to a Fire Impact Fee, adopted on March 23, 2021. The purpose of the fire impact fee is to fund the cost of fire protection and emergency response facilities, apparatus, and equipment attributable to new residential and nonresidential development in the District. The fire impact fee will ensure that new development will not burden existing development with the cost of expanded facilities, apparatus, and equipment required to accommodate growth as it occurs within the District. (Sonoma Valley, 2022).

The EOP’s Evacuation Annex discusses evacuation methods, routes, and assets. The primary mode of evacuation is assumed to be various forms of ground transport (personal vehicle, bicycle, rail, bus, etc.) for most persons in an evacuation area. Because evacuation routes are situation-specific, the Evacuation Annex does not identify specific routes but states that routes may include interstate, state and surface roads, and will be chosen based on the relative safety of roadway infrastructure and current traffic conditions. Evacuation routes will be selected by law enforcement officials, approved by the Incident Commander at the time of the evacuation decision, then communicated to the EOC.

The Evacuation Annex assumes that the majority of residents can self-evacuate using personal vehicles, and acknowledges that transit-dependent populations (such as those with disabilities and with access and/or functional needs and households without a vehicle) may require public transportation to evacuate. In those cases, Transportation Assembly Points (TAPs) would be used to transport persons who require evacuation assistance to temporary evacuation points and/or shelters in safe areas. The Annex acknowledges that evacuees may arrive at TAPs by foot, bicycle, public transit, paratransit, or private vehicles, and identifies public and private transportation assets (public and private buses) that would be

used for evacuation from TAPs. As with evacuation routes, the location of TAPs in a particular emergency will be selected and activated depending on the immediate circumstances.

The Project is proposed in an existing urbanized area. Implementation of the Project would support improvements to transportation systems throughout the Plan area. The Plan identifies future improvements including addition of new crosswalks, bulb-outs and flashing beacons to improve pedestrian visibility at crossings. Sidewalks would be added along portions of Donald Street, Harley Street and smaller segments throughout the Plan area. Furthermore, the plan's emphasis on improved pedestrian and bicycle infrastructure is intended to support reduced congestion and improved circulation, and may facilitate evacuation, especially for those without access to vehicles who will need to make their way to the designated TAP for their area in the event of an evacuation. Development facilitated by the Project will use existing roadways. Accordingly, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, nor would it reduce existing levels of emergency response service as discussed above. Implementation of the Project would have a **less than significant** impact with regard to this issue.

Impact 3.7-5: Implementation of the Project has the potential to expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (Less than Significant)

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), weather (winds, temperatures, humidity levels and fuel moisture content), topography (degree of slope) and potential ignition sources. The California Department of Forestry and Fire Protection (CalFIRE) uses these factors in the Fire and Resource Assessment Program (FRAP) to quantify fire hazards and categorized them as Fire Hazard Severity Zones (FHSZ). Areas are designated as Moderate or High FHSZ, with areas of significant risk identified as Very High FHSZ. These areas are fully mapped in CalFIRE's jurisdiction (State Responsibility Areas), while areas within local jurisdiction are only categorized if they are Very High FHSZ and the local agency accepts CalFire's recommendation.

Wildland fire hazard and associated risk of loss, injury or death cannot be eliminated entirely but they can be reduced. This can be achieved by limiting the presence of people and structures in areas with potential for wildland fire and by taking measures to reduce risks for existing and proposed development within or adjacent to these areas. This Plan mitigates exposure to wildland fire through both of these approaches.

The Plan area does not include areas designated as Very High FHSZ, which is .6 miles to the north, and accordingly avoids exposure of people or structures to the most significant risk of loss, injury or death involving wildland fires. A majority of the Plan area is in areas of existing urban development and is not within an area identified as having elevated wildfire potential. A portion of the southeast Plan area is in a Moderate Fire Hazard Zone (15 parcels) and a portion of the northeast Plan area is in a High Fire Hazard Zone (46 parcels).

All future projects allowed under the Project would be required to comply with the provisions of federal, state, and local requirements related to wildland fire hazards, including State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. As future development and infrastructure projects are considered by the County, each project would be evaluated for consistency with all applicable building and safety code sections that reduce fire risk. Compliance with these state and local regulations would ensure that potential wildland fire hazards are mitigated through requirements for automatic fire sprinkler systems or other on-site fire detection and suppression systems in new residential and commercial structures, home hardening

provisions, emergency access provisions, defensible space requirements and other mechanisms to ensuring adequate fire protection, hazard minimization and improved public preparedness.

Implementation of the Project would have a **less than significant** impact by avoiding new development in Very High FHSV and by implementing state and local fire and building standards most appropriate for each site.

Impact 3.7-6: Implementation of the Project has the potential to result in a safety hazard or excessive noise for people residing or working in the project area due to proximity to a private airstrip or public airport (Less than Significant)

The nearest airport to the Plan area is the Sonoma Valley Airport. There is no public airport or public use airport within two miles of the Plan area. The Sonoma Valley Airport is located approximately 5.7 miles south of the Plan area.

The primary referral area boundary for the airport, shown in Exhibit 8F of the Comprehensive Airport Land Use Plan, follows Bonneau Road and parcel lines on the north. The boundary follows parcel line to the northeast, the North Western Railroad to the east, Schell Slough, Steamboat Slough, and Sonoma Creek on the northeast, east, and southeast, respectively.

The Plan area is not located within the airport's referral area or safety zones. Implementation of the Project would have a **less than significant** impact with regards to this environmental issue.

SPECIFIC PLAN POLICIES THAT REDUCE THE POTENTIAL FOR IMPACTS

Policy Wildfire-1: In order to reduce fire risk, all projects shall comply with the applicable State and local fire safety regulations associated with wildland-urban interfaces, including fire-safe building standards, and defensible space requirements.

Policy Wildfire-2: New buildings located in the Plan area shall comply with the Wildland-Urban Interface Fire Area Building Standards and Sonoma County Code Chapter 13, or successor regulations, which establish minimum standards for materials and provide a reasonable level of exterior wildland fire exposure protection. The standards require the use of ignition resistant materials and design to resist the intrusion of flame or burning embers from a vegetation fire into buildings.

**Figure 3.7-1.
Fire Hazards**

 The Springs Specific Plan

Responsibility Areas

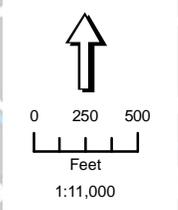
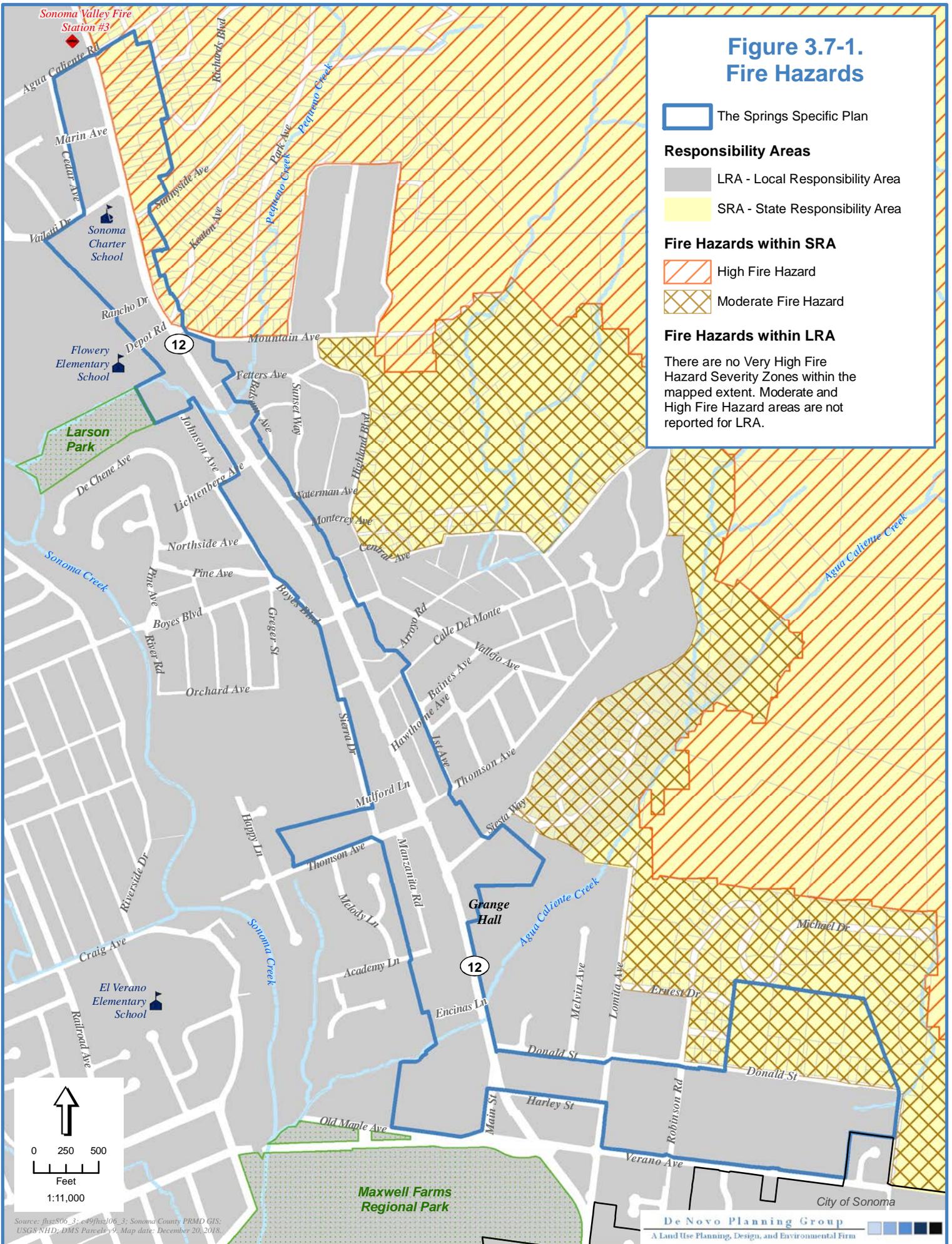
-  LRA - Local Responsibility Area
-  SRA - State Responsibility Area

Fire Hazards within SRA

-  High Fire Hazard
-  Moderate Fire Hazard

Fire Hazards within LRA

There are no Very High Fire Hazard Severity Zones within the mapped extent. Moderate and High Fire Hazard areas are not reported for LRA.



Source: fhsS06_3; e49/fhs106_3; Sonoma County PRMD GIS; USGS NHD; DMS Parcels 9; Map date: December 20, 2018.

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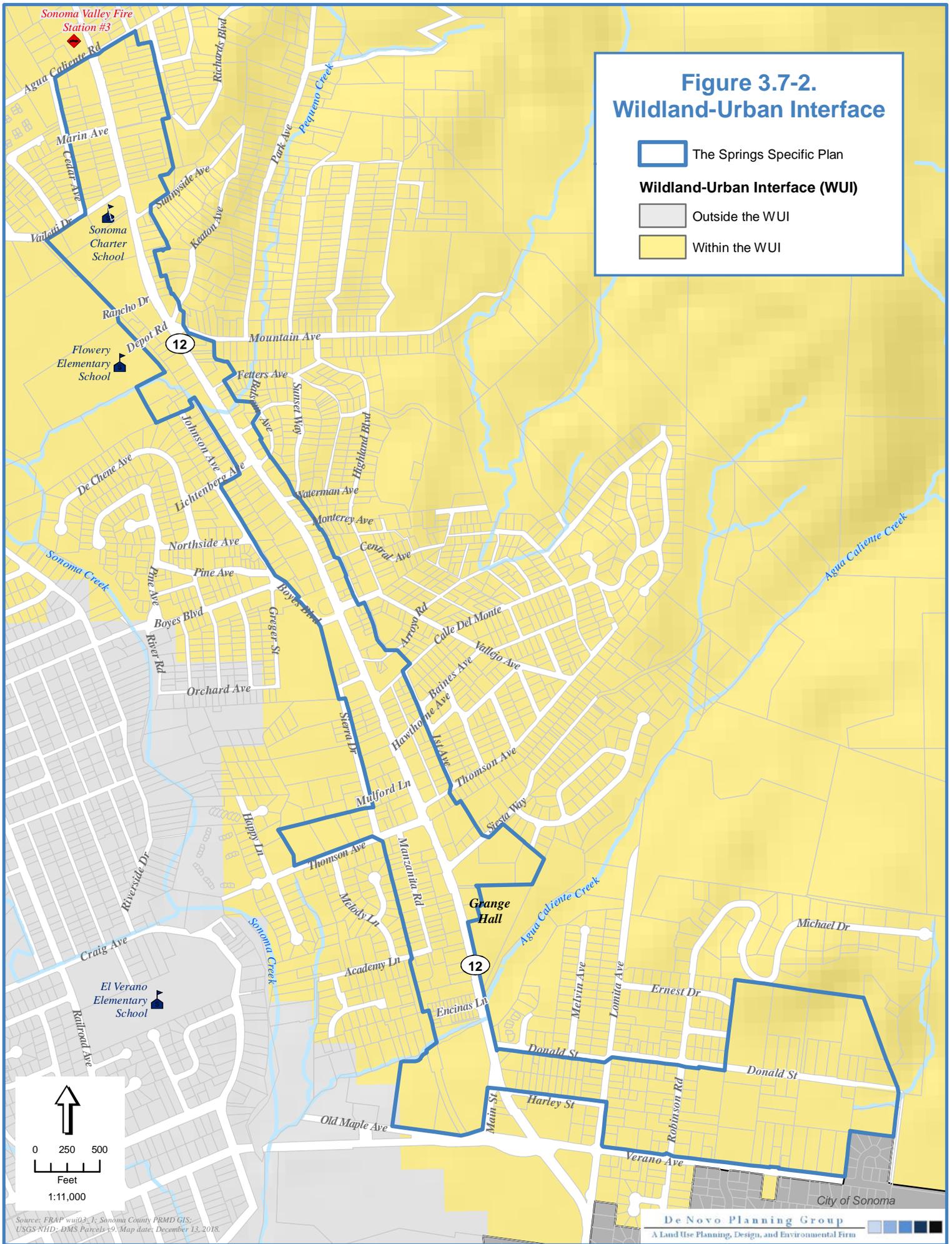
**Figure 3.7-2.
Wildland-Urban Interface**

 The Springs Specific Plan

Wildland-Urban Interface (WUI)

 Outside the WUI

 Within the WUI



Source: FRAP w/03-1, Sonoma County PRMD GIS; USGS NHD; DMS Parcels v9. Map date: December 13, 2018.

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This section describes the regulatory setting, regional hydrology and water quality impacts that are likely to result from implementation of the Project, and includes measures to reduce potential impacts related to stormwater drainage, flooding, and water quality. This section is based in part on the following documents, reports and studies: Sonoma County General Plan 2020 (2008); Sonoma County General Plan 2020 General Plan Update Draft Environmental Impact (2006); Sonoma County Water Agency 2015 Urban Water Management Plan (Brown Caldwell, 2016); Sonoma County Water Agency 2020 Urban Water Management Plan (Brown Caldwell, 2020); Springs Specific Plan Water Supply Assessment (Maddaus Water Management, Inc., 2019); San Francisco Bay Basin Water Quality Control Plan (Basin Plan) (California Regional Water Quality Control Board San Francisco Bay Region, 2017); Sonoma Valley Urban Water Management Plan (EKL, 2021) and Sonoma Valley Sustainable Groundwater Management Plan (Sonoma Water, 2021).

One comment was received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: California Department of Transportation (July 2018). The portion of the comment related to this topic is addressed within this section.

3.8.1 ENVIRONMENTAL SETTING

ACRONYMS

AFY	acre-feet per year
CWA	Clean Water Act
DWR	Department of Water Resources
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps (FIRMs)
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NPDES	National Pollution Discharge Elimination System
RCD	Resource Conservation District
RWQCB	Regional Water Quality Control Board
SCWA	Sonoma County Water Agency
SGMA	Sustainable Groundwater Management Act
SRWCB	State Water Resources Control Board
SUSWMP	Standard Urban Storm Water Mitigation Plan
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
USGS	United States Geological Survey
UWMP	Urban Water Management Plan

REGIONAL HYDROLOGY

The 178-8-acre Plan area is located in central Sonoma Valley immediately north of the City of Sonoma, as described in Section 2.0, and is located within the Sonoma Creek watershed. The watershed has an area of approximately 170 square miles and drains to San Pablo Bay. Elevations in the watershed range from sea level at San Pablo Bay to approximately 2,500 feet mean sea level at Bald Mountain. The City of Sonoma and the unincorporated communities of Boyes Hot Springs, Agua Caliente, Fetters Hot Springs,

and Glen Ellen are all located on the valley floor near the center of the elongated watershed, with the community of Schellville in the lower or southern portion, near the edge of San Pablo Bay, and Kenwood in the upper or north end. Major creeks and tributaries in the Sonoma Creek watershed include Tolay Creek, Schell Creek, Fowler Creek, Arroyo Seco, Yulupa Creek, Graham Creek, Mill Creek, Wilson Creek, Agua Caliente Creek, Calabazas Creek, Nathanson Creek, Dowdall Creek, Carriger Creek, Felder Creek, Asbury Creek, and Bear Creek.

The central part of the Sonoma Creek watershed on the valley bottom is mostly urbanized, while the areas of the valley farther south are mostly in agricultural production. Approximately 54 percent of the watershed is in agricultural use, 30 percent is rural and about 11 percent is recreational. The vegetative cover of the hill slopes of the watershed, where not converted to vineyards, is mostly oak woodland, forest, and some areas of brush.

Flooding in the Sonoma Creek watershed is the result of intense, short-duration rainfall occurring within a larger duration storm event. Tidal action in the San Pablo Bay has a variable effect on flooding in the Sonoma Creek watershed. While flooding above the reclaimed tidal area is of relatively short duration, floodwater ponding in the floodplain adjacent to the San Pablo Bay can last for a few days. The principal flood problems in the main channel are caused by inadequate channel capacity to carry off large flows from short-duration storms of high intensity. Flood problems are accentuated by encroachment of residential development on the channels.

The San Francisco Bay RWQCB has classified the Sonoma Creek watershed as an impaired water body due to sedimentation, nutrients, and pathogens. The development of vineyards on steep hillsides, especially in the 1980s and early 1990s before the county developed vineyard erosion control regulations, has been attributed to be one of the major causes of erosion and sedimentation. This and other related watershed management issues were evaluated and addressed in the Sonoma Creek Watershed Management Plan, with implementation currently underway by the Southern Sonoma Resource Conservation District (RCD) and the Sonoma Ecology Center through educational and outreach programs with stakeholder groups, including the Sonoma Valley Vintners and Growers Alliance.

FEMA Flood Zones

The Federal Emergency Management Agency's (FEMA's) mapping provides important guidance for the County to plan for flooding events and regulating development within identified flood hazard areas. FEMA's National Flood Insurance Program (NFIP) is intended to encourage State and local governments to adopt responsible floodplain management programs and flood measures. As part of the program, the NFIP defines floodplain and floodway boundaries that are shown on Flood Insurance Rate Maps (FIRMs).

Figure 3.8-1 illustrates the areas within the FEMA designated 100- and 500-year floodplain. The majority of the Plan area and surrounding area is designated by FEMA as Zone X (unshaded) which is an area determined to be outside the 500-year floodplain. However, small portions of the Plan area are subject to flooding along the creeks and drainages that traverse the southern portion of the Plan area. The 100-year floodplain extends across Highway 12 between Encinas Lane and Meadowbrook Avenue along Agua Caliente Creek. This portion of the Plan area is delineated as Zone A, which is subject to 100-year flooding with no base flood elevation determined.

Dam Failure

Dam Inundation maps have been required in California since 1972, following the 1971 San Fernando Earthquake and near failure of the Lower Van Norman Dam. As shown in Figure 3.8-2, the Plan area is not

within a dam inundation area. However, areas west of the Plan area (approximately 500 feet) are subject to inundation from the failure of Suttonfield Dam, and the associated floodwaters down Sonoma Creek. The Suttonfield Dam is located near Glen Ellen at Suttonfield Lake, approximately 2.3 miles northwest of the Plan area. The Suttonfield Dam is owned by the Indian Valley Community Services District. This dam was examined by the DWR in 2016 and was determined to have no safety concerns. The dam inundation area generally follows Arnold Drive from south of Glen Ellen to north of Sonoma.

Stormwater Quality

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

A critical period for surface water quality is following a rainstorm that produces significant amounts of runoff into streams at low flow, resulting in poor dilution of contaminants in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels and contaminants have accumulated on impervious surfaces over the drier summer months. Besides greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980s. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules that categorize urban runoff as a point source (an identifiable source) subject to National Pollution Discharge Elimination System (NPDES) permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Sonoma Creek exceeds water quality standards for sediment. The listing was prompted by declines in native fish populations. The Sonoma Creek Sediment TMDL addresses this water quality problem, identifies pollutant sources, and specifies actions to create solutions.

The goals of the Sonoma Creek Sediment TMDL and Habitat Enhancement Plan are to:

- Conserve the steelhead trout population
- Restore water quality to meet water quality standards, including attaining beneficial uses
- Enhance the overall health of the native fish community
- Protect and enhance habitat for native aquatic species
- Enhance the aesthetic and recreational values of the creek and its tributaries

To achieve these goals, specific actions are needed to:

1. Reduce sediment loads, and fine sediment in particular, to Sonoma Creek and its tributaries
2. Attain and maintain suitable gravel quality in freshwater reaches of Sonoma Creek and its tributaries
3. Reduce and prevent channel incision
4. Reduce erosion and sedimentation
5. Repair large sources of sediment supply (e.g., landslides)

6. Enhance channel complexity (e.g., by adding and encouraging retention of large woody debris and restoring riparian vegetation)

Additionally, Sonoma Creek and its tributaries are impaired by pathogens. The overall goal of the Sonoma Creek Pathogens TMDL is to minimize human exposure to waterborne disease-causing pathogens and to protect uses of water for recreational activities such as wading, swimming, fishing, and rafting. The following source categories have the potential to discharge pathogens to surface waters in the Sonoma Creek watershed:

- On-site sewage disposal systems (septic systems)
- Sanitary sewer systems
- Municipal runoff
- Grazing lands
- Dairies
- Municipal wastewater treatment facility
- Wildlife

As of July 2014, the Sonoma County Permit & Resource Management Department has adopted a new NPDES boundary. The boundary is used to determine areas subject to special NPDES storm water requirements to improve water quality. In particular, the boundary assists in determining where low impact development post-construction best management practices (LID BMPS) are required to improve water quality. In addition, the map is a requirement of the North Coast Region Water Quality Control Board, Santa Rosa, in order for the County of Sonoma to reapply for coverage to discharge storm water from local Municipal Separate Storm Sewer System (MS4) into waters of the State as part of the NPDES Phase 1, Term 4 permit renewal.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices can lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies, these same factors often cause a buildup of sediment, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affects both aquatic resources and flood control efforts.

303(D) IMPAIRED WATER BODIES

Section 303(d) of the federal Clean Water Act (CWA) requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

The Plan area does not include any water bodies listed on the Section 303(d) list of impaired water bodies. However, as noted above, Sonoma Creek is listed on the Section 303(d) list for sediment and pathogens. Sonoma Creek is located west of the Plan area, and the natural creeks and drainages that traverse the Plan area are hydrologically connected to Sonoma Creek.

GROUNDWATER RESOURCES

Chapter 3.14, Utilities, of this EIR includes extensive and detailed information regarding the County's water supplies and water demands, specifically, Section 3.14.2, Water Supplies. Groundwater information as provided in Chapter 3.14 is summarized below for convenience.

DWR has identified a total of fourteen groundwater basins and sub-basins in Sonoma County. The Valley of the Moon Water District (Water District) provides water services to development in the Plan area. The Water District is located within the Sonoma Valley Groundwater Subbasin. In addition to the project's direct location in the Sonoma Valley Groundwater Basin, water provided to Water District via SCWA includes groundwater supplies from the Santa Rosa Plain Sub-Basin of the Santa Rosa Valley Basin. No basins with the County are listed as Critically Overdrafted Basins by the DWR.

Sonoma Valley Groundwater Sub-Basin

The Sonoma Valley Groundwater is a sub-basin (DWR number 2-02.02) of the Napa-Sonoma Valley Groundwater Basin (DWR 2-02). The Sonoma Valley Groundwater Subbasin is not adjudicated and has not been identified by the DWR as a critically-overdrafted groundwater basin (California Department of Water Resources, 2019). Approximately 15 percent of the Water District's supply comes from groundwater. The Water District owns and/or operates a total of seven municipal production wells, five of which are currently active, with capacities ranging from 90 gallons per minute (gpm) to 250 gpm.

Groundwater Management

The Sonoma Valley Groundwater Sustainability Plan provides a groundwater management framework. The Sonoma Valley Groundwater Sustainability Agency is a public agency formed to sustainably manage groundwater in the Sonoma Valley groundwater basin. The agency was formed in June 2017 and has a Board of Directors, an administrator and an advisory committee.

A Groundwater Sustainability Plan is a 20-year plan to ensure the sustainable use of groundwater within a groundwater basin. The Sonoma Valley Groundwater Sustainability Agency is required by state law, the Sustainable Groundwater Management Act (SGMA), to develop a Groundwater Sustainability Plan by 2022. The goal of the Groundwater Sustainability Plan is to establish a standard for sustainability of groundwater management and use, and to determine how the basin will achieve this standard. See the Regulatory Setting section below for further information about the SGMA. The Sonoma Valley Groundwater Sustainability Plan was adopted on December 6, 2021.

HISTORICAL AND PROJECTED FUTURE GROUNDWATER USE

The average volume of groundwater pumped from wells located within the District between 2016 and 2020 is provided in Table 3.8-1. The District pumped an average of 532 acre-feet per year over the 5-year time period between 2016 and 2020, and a maximum of 644 acre-feet in 2018. The available groundwater supply and the purchased water supply have been sufficient to meet all of the Districts demands in the past five years and all prior years.

TABLE 3.8-1: HISTORICAL GROUNDWATER PRODUCTION AND ACTUAL WATER DEMAND

	2016	2017	2018	2019	2020
Total Groundwater Production (AFY)	477	596	644	526	419
Total Potable and Raw Water Demand – Actual (AFY)	2,334	2,470	2,671	2,430	2,649

SOURCE: VALLEY OF THE MOON WATER DISTRICT 2020 UWMP, TABLE 6-8

3.8 HYDROLOGY AND WATER QUALITY

The Water District will continue to use groundwater to supplement the purchased SCWA water, but plans to decrease the use of groundwater wells over time as the Water District implements additional water conservation programs. Groundwater production will be used to meet demands in the case of a drought or if allocations of imported SCWA water are decreased. The Water District's projected groundwater production for their service area is presented in Table 3.8-2. As shown in Table 3.8-2, projected groundwater use in the District's service area is projected to decrease.

TABLE 3.8-2: PROJECTED FUTURE GROUNDWATER PRODUCTION – VALLEY OF THE MOON WATER DISTRICT SERVICE AREA

	2020	2025	2030	2035	2040
Total Groundwater Production (AFY)	450	327	232	100	100

SOURCE: SPRINGS SPECIFIC PLAN WATER SUPPLY ASSESSMENT, MADDAUS WATER MANAGEMENT, INC., 2019.

Table 3.8-3 shows the future system demand projections until 2045.

TABLE 3.8-3: FUTURE SYSTEM DEMAND PROJECTIONS (WITHOUT ADDITIONAL PROJECTS)

		2025	2030	2035	2040	2045
District Supplies (AFY ¹)		3089	3275	3467	3667	3856
Demand Projections with Passive and Active Conservation Savings (AFY ²)		2997	3101	3220	3352	3447

NOTES: ¹ VALUES ARE CONSISTENT WITH 2020 UWMP TABLE 4-7 PROJECTED POTABLE WATER DEMAND

² DEMAND VALUES ARE CONSISTENT WITH THE DISTRICT'S 2015 UWMP APPENDIX C WATER DEMAND ANALYSIS AND WATER CONSERVATION MEASURES UPDATE.

Table 3.8-4 shows the total projected annual additional demand generated from future buildout of the Plan area.

TABLE 3.8-4: ANNUAL ADDITIONAL FUTURE WATER DEMANDS FROM PROJECT (AFY)

	2020	2025	2030	2035	2040
Project Future Water Demand	-	52	104	157	209

NOTE: THIS IS THE TOTAL NET INCREASE IN DEMAND DUE TO THE PROJECT. THE REMOVAL OF THREE EXISTING SINGLE-FAMILY UNITS IS INCLUDED IN THIS ESTIMATE

SOURCE: SPRINGS SPECIFIC PLAN WATER SUPPLY ASSESSMENT, MADDAUS WATER MANAGEMENT, 2019; EBA ENGINEERING, 2019.

Table 3.8-5 shows the total system demand projected for the District including the demand from the Project.

TABLE 3.8-5: TOTAL SYSTEM DEMAND WITH ADDED PROJECT, NO DROUGHT

	2015 ¹	2020	2025	2030	2035	2040
Demand Projection for District with Passive and Active Conservation (AFY)	2,528	2,937	2,905	2,850	2,846	2,850
Net Demand from Additional Project (AFY)	N/A	-	52	104	157	209
Total System Demand (AFY)	2,528	2,937	2,957	2,955	3,002	3,059
Supply Assurance (AFY)	2,528	3,650	3,527	3,432	3,300	3,300
Estimated Remaining Supply (AFY)	N/A	713	570	477	298	241
Est. Remaining Supply Reliability (%)	N/A	20%	16%	14%	9%	7%

NOTE: 2015 DATA IS BASED ON ACTUAL NUMBERS FROM THE DISTRICT'S 2015 UWMP. 2020 DATA RELEASED AFTER THE NOP INCLUDE THE SPRINGS SPECIFIC PLAN IN BUILDOUT ESTIMATES, AND CONCUR WITH THESE PROJECTIONS.

SOURCE: MADDAUS WATER MANAGEMENT, 2019; EBA ENGINEERING, 2019.

The total system demand is calculated by adding the net demand generated from the Project from Table 3.14-7 to the system demand projections.

3.8.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation, including the Federal Emergency Management Agency, the US Environmental Protection Agency, the US Army Corps of Engineers, the SWRCB, and the RWQCB. The following is an overview of the federal, state and local regulations that may be applicable to projects within the County of Sonoma.

FEDERAL AND STATE

Clean Water Act (CWA)

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. The SWRCB is responsible for implementing the CWA and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for stormwater discharges (individual permits and general permits). The SWRCB elected to adopt a statewide general permit (Water Quality Order No. 2013-0001-DWQ) for small MS4s covered under the CWA to efficiently regulate numerous stormwater discharges under a single permit. Permittees must comply with all requirements as specified under the general permit.

Permittees must meet the requirements in Provision D of the General Permit, which require the development and implementation of a Storm Water Management Plan with the goal of reducing the discharge of pollutants to the maximum extent practicable. The Storm Water Management Plan must include the following six minimum control measures:

- 1) Public Education and Outreach on Storm Water Impacts
- 2) Public Involvement/Participation
- 3) Illicit Discharge Detection and Elimination
- 4) Construction Site Storm Water Runoff Control
- 5) Post-Construction Storm Water Management in New Development
- 6) Redevelopment and Pollution Prevention/Good Housekeeping for Municipal Operations

Sonoma County is covered under the statewide construction general permit (CGP).

The CWA, and its implementing regulations, requires that certain industrial facilities, construction sites, and MS4 obtain coverage for their stormwater discharges under an NPDES permit, develop a Stormwater Pollution Prevention Plan (SWPPP) or Stormwater Management Plan (SWMP) and put measures in place to prevent discharges of pollutants in stormwater runoff.

303(D) IMPAIRED WATER BODIES

Section 303(d) of the federal CWA requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a TMDL. The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved. The Plan area does not include any water bodies listed on the Section

303(d) list of impaired water bodies. However, Sonoma Creek, which is located west of the Plan area, is listed on the Section 303(d) list of impaired water bodies. The listing for sediment in Sonoma Creek originated from fine sediment impacts to spawning and rearing habitat as noted in the TMDL. The TDML provides actions to reduce fine sediment input to the non-tidal portions of the main stems and all freshwater tributaries.

National Flood Insurance Program

The NFIP, born out of the National Flood Insurance Act of 1968, is a voluntary program that aims to reduce future flood damage by adopting and enforcing floodplain management programs. The NFIP is comprised of three components: FIRMs; flood insurance; and floodplain management. The FEMA FIRMs identify flood plain hazard areas prone to flooding during major storm events. The FIRMs are used by insurance companies to set flood insurance rates and by local municipalities for implementing flood-control ordinances which govern new development. FEMA operates the NFIP.

Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the California Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations. The County and all of the incorporated cities within the county are participants in the NFIP.

Sustainable Groundwater Management Act

A three-bill legislative package, composed of AB 1739, SB 1168, and SB 1319, collectively known as the Sustainable Groundwater Management Act (SGMA) was signed into state law in 2014. SGMA requires local governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, basins should reach sustainability within 20 years of implementing their sustainability plans. The Sonoma Valley Sub-basin classified as having high priority (California Department of Water Resources, 2020).

California Water Code

The Federal CWA places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, although this does establish certain guidelines for the states to follow in developing their programs and allows the Environmental Protection Agency to withdraw control from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal CWA. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Senate Bill 610

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act (UWMP), as well as the California Water Code Section 10910, et seq. The foundation document for compliance with SB 610 is the UWMP, which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well as a Water Supply Assessment required under SB 610.

Water Code Section 10910 (c)(4) states “If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.”

Water supply planning under SB 610 requires reviewing and identifying adequate available water supplies necessary to meet the demand generated by a project, as well as the cumulative demand for the general region over the next 20 years, under a broad range of water conditions. This information is typically found in the current UWMP for the project area. SB 610 requires the identification of the public water supplier for a project.

In addition, SB 610 requires the preparation of a Water Supply Assessment if a project meets the definition of a “Project” under Water Code Section 10912 (a). The code defines a “Project” as meeting any of the following criteria:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A hotel or motel with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a “Project” includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of service connections for the public water system.

Based on the following assumptions, SB 610 does apply to the proposed Specific Plan:

1. The proposed Specific Plan is subject to CEQA and an EIR is required.
2. The proposed Specific Plan, with up to 685 future residential dwelling units, and other non-residential land uses, meets the definition of a “Project” as specified in Water Code section 10912(a) paragraph (1) as defined for residential development.

The proposed Specific Plan has not been the subject of a previously adopted WSA and has not been included in an adopted WSA for a larger project. Thus, a WSA, as required by these criteria under SB 610, has been prepared for the Specific Plan. The Water Supply Assessment is included in Appendix D of this EIR.

California Division of Safety of Dams

The California Division of Safety of Dams has established specific requirements with respect to dam operation. The California Government Code requires dam operators to prepare emergency plans for dam failure and evacuation. The contingency plans are updated every two years and submitted to the State Office of Emergency Services for review and comment.

Incorporated cities are responsible for developing contingency plans for State-designated dams affecting incorporated areas. Sonoma County has the responsibility for developing emergency plans for State-designated dams affecting unincorporated areas within the county. SCWA also reviews development applications when referred from a city for projects within incorporated cities, for compliance with its Flood Control Design Criteria. This manual provides hydrologic and hydraulic analysis and design procedures, criteria, and standards for drainage and flood control projects.

National Pollutant Discharge Elimination System

NPDES permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal CWA, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal CWA and the Act’s implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the CWA’s goal of “fishable and swimmable” navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the California Water Code.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for periods of five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the San Francisco Bay Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. Stormwater discharges from industrial and construction activities in the San Francisco Bay can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

San Francisco Bay Basin Water Quality Control Plan

The San Francisco Bay Basin Water Quality Control Plan (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term “water quality standards,” as used in the Federal CWA, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region’s ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the CWA.

LOCAL

Sonoma County Water Agency

The SCWA was formed in 1949 with the primary responsibilities to produce and furnish water for beneficial uses, water conservation, and flood management. Nine geographical zones, each encompassing a major watershed, were proposed in 1958 as a means of financing the construction and maintenance of flood control works in the county. To date, eight of these zones were officially formed and six zones are currently active. The agency works cooperatively with the incorporated cities, unincorporated communities, and the State and federal government to oversee flood control channel modifications and flood control revenue collection within the six active zones. The SCWA also conducts drainage investigations and develops and implements drainage and flood improvement plans for areas, often working cooperatively with cities to address drainage problems common to both incorporated and unincorporated areas within the Flood Control Zones.

Guidelines for the Standard Urban Storm Water Mitigation Plan

The Guidelines for the Standard Urban Storm Water Mitigation Plan (dated June 2005) were developed to assist project sponsors and municipal staff to implement the Santa Rosa Area Standard Urban Storm Water Mitigation Plan (SUSMP) requirements that were adopted by the North Coast RWQCB in June 2003. Since the SUSMP requirements apply to both privately sponsored projects and public capital improvement projects, the Guidelines should be used by development project applicants, municipal development project review staff, and municipal staff responsible for capital improvement projects. The SUSMP requirements are part of the SWMP that has become an enforceable part of the reissued municipal storm water NPDES permit for the City of Santa Rosa, the County of Sonoma, and the Sonoma County Water Agency.

The SUSMP applies to projects within the area covered by the storm water permit boundary as shown in Figure 1-1 of the Guidelines. In addition, these SUSMP guidelines apply to the unincorporated and urbanized areas surrounding the Cities of Petaluma and Sonoma, which are also shown in Figure 1-1. The

SUSMP does not apply to the cities of Healdsburg, Windsor, Sebastopol, Rohnert Park, Cotati, Petaluma and Sonoma. The majority of the Plan area is within the area covered by the storm water permit boundary.

Valley of the Moon Water District Urban Water Management Plan

The Valley of the Moon Water District's 2015 UWMP describes how the current and future water resources and demands within the District's service area will be managed to provide an adequate and reliable water supply. The service area encompasses approximately 11.8 square miles and includes residential and commercial customers. The District's water supply comes from water purchased from the SCWA and local groundwater production. The District, along with seven other water contractors, has a water supply agreement with the SCWA for the purchase of Russian River water, commonly referred to as the Restructured Water Supply Agreement. The Valley of the Moon Water District adopted the most recent 2020 UWMP in 2021, after the Notice of Preparation for the Springs Specific Plan.

Sonoma Valley Groundwater Sustainability Agency

The Sonoma Valley Groundwater Sustainability Agency is a public agency formed to sustainably manage groundwater in the Sonoma Valley groundwater basin. The agency was formed in June 2017 and has a Board of Directors, an administrator and an advisory committee. The Agency was required by the SGMA to develop a Groundwater Sustainability Plan by 2022. The goal of the Groundwater Sustainability Plan is to establish a standard for "sustainability" of groundwater management and use, and to determine how the basin will achieve this standard. The Sonoma Valley Groundwater Sustainability Plan was adopted on 6, 2021.

Sonoma County Municipal Code

The Sonoma County Permit and Resource Management Department oversees grading activities in the county, enforcing the County's grading requirements and erosion control provisions of the California Building Code, as well as other provisions of the County Code dealing with subdivision and land development.

GRADING AND STORMWATER

Chapter 11A of the County Code outlines the County's stormwater regulations. The purpose of the chapter is to protect and enhance the water quality of the County's watercourses pursuant to and consistent with the Federal CWA and amendments thereto and to assure compliance with the conditions set forth by the NPDES as requirements of stormwater discharge permits.

It is the intent of the Board of Supervisors in enacting Chapter 11A to protect the health, safety and general welfare of the County's citizens by:

- Controlling the discharge to the county's stormwater system from spills and the dumping or disposal of materials other than stormwater.
- Reducing pollutants in stormwater discharges to the maximum extent practicable.

Chapter 36 of the County Code is known as the Sonoma County Vineyard and Orchard Development and Agricultural Grading and Drainage Ordinance. This chapter may also be referred to as the Sonoma County Vineyard Erosion and Sediment Control Ordinance. This chapter is enacted for the purpose of regulating vineyard and orchard development and agricultural grading and drainage within the unincorporated area of the county, and to establish ministerial standards for those activities that:

- a. Protect the public health, safety, and welfare of the county;
- b. Minimize hazards to life and property;
- c. Protect against erosion, and the pollution of watercourses with soil and other pollutants;
- d. Maintain natural and existing drainage patterns;
- e. Protect aquatic resources and wildlife habitat; and
- f. Promote water conservation and groundwater recharge.

The provisions of this chapter shall apply to all vineyard and orchard development and agricultural grading and drainage occurring within the unincorporated area of the county and require permits issued by the Department of Agriculture Weights and Measures.

Grading not associated with vineyard development requires a grading permit issued by the Permit and Resource Management Department including site plans, existing and proposed contour changes, an estimate of the volume of earth to be moved, and soils and / or geotechnical reports. Projects involving grading activities may also require submittal of a drainage plan, especially where alterations to natural drainage ways are proposed or where the project is in a flood prone area. Drainage plans include supporting hydrologic and hydraulic calculations. Most grading activities are also subject to the County's NPDES stormwater program requirements.

FLOOD CONTROL AND FLOODPLAIN MANAGEMENT

Chapter 7B (Flood Damage Prevention Ordinance) of the Sonoma County Code discusses general and specific flood prevention standards to prevent flood damage within the county. Such measures apply to all structures or land constructed, located, extended, converted, or altered within special flood hazard areas in the county, as identified on the FEMA floodplain maps. The code section on Floodplain Management is based on the model FEMA program, and is focused on prevention of placement of fill, buildings and other obstructions in regulatory floodways (the zone along a channel where flow moves with depth and velocity and where obstructions can cause the most damage) and on raising building elevations in floodplain areas to be above the 100-year flood.

Sonoma County General Plan

The Sonoma County General Plan contains the following goals, objectives, and policies that are relevant to hydrology and water quality issues associated with the Plan area:

PUBLIC SAFETY ELEMENT

GOAL PS-2: Reduce existing flood hazards and prevent unnecessary exposure of people and property to risks of damage or injury from flood hazards.

Objective PS-2.1: Maintain complete data on flood hazards.

Objective PS-2.2: Regulate new development to reduce the risks of damage and injury from known flooding hazards to acceptable levels.

Objective PS-2.3: Use the Sonoma County Hazard Mitigation Plan to help reduce future damage from flood hazards.

Policy PS-2a: Maintain available information on flooding and flood hazards in the appropriate County departments.

Policy PS-2b: Coordinate flood hazard analysis and management activities with the U.S. Army Corps of Engineers, Federal Emergency Management Agency (FEMA), and other responsible agencies. Using the flood data collection program, request changes in FEMA maps where appropriate to reflect new data or analyses.

Policy PS-2e: Expand the County's zero net fill requirements to address all areas of the unincorporated County that are located within the 100-year FEMA special flood hazard area.

Policy PS-2f: Preserve floodplain storage capacity by avoiding fill in areas outside of the 100-year FEMA special flood hazard area that retain or could retain flood waters.

Policy PS-2g: Base land use planning and development review on FEMA maps and data or parcel specific scaled interpretations of these maps and site specific elevation data.

Policy PS-2h: Work cooperatively with each City to prepare a comprehensive analysis of the potential flood hazards and drainage impacts for the watersheds with major flood problems in the County (i.e., Russian River, Sonoma Creek, and Petaluma River). Include the following in the analysis:

- (1) Identification of flood hazard areas;
- (2) Identification of historic drainage patterns and existing retention/detention characteristics serving each watershed;
- (3) Identification of impacts associated with placement of significant new impervious surfaces;
- (4) Identification of downstream impacts on existing development and land uses;
- (5) Identification of mitigation measures to reduce flood hazards;
- (6) Identification of significant water recharge areas;
- (7) Identification of sources of significant soil sedimentation and/or stream bank failures; and
- (8) Identification and adoption of regional mitigation measures to be applied to new development to address the proportionate fair share of flood hazard reduction.

Policy PS-2i: Until such time as the analysis under Policy PS-2h is completed and the regional mitigation measures adopted, each discretionary project located in the above watersheds with major flood problems shall analyze drainage and flooding impacts and include feasible and appropriate mitigation measures to reduce flood hazards from the project. Thereafter, each project shall implement its proportionate fair share of the regional mitigation measures.

Policy PS-2k: Use the 100-year flood event and corresponding elevations as the County measure of acceptable level of risk and protection in the consideration of any amendments of the Land Use Map.

Policy PS-2l: On-site and off-site flood related hazards shall be reviewed for all projects located within areas subject to known flood hazards.

Policy PS-2m: Regulate development, water diversion, vegetation management, grading, and fills to minimize any increase in flooding and related damage to people and property.

Policy PS-2n: Consider developing regulations that require the use of low impact development techniques to reduce stormwater runoff from future development.

Policy PS-2o: Costs for drainage facilities to handle the surface runoff from new development shall be the responsibility of the new development.

Policy PS-2p: Require that design and construction of drainage facilities be subject to the review and approval of the Permit and Resource Management Department.

Policy PS-2q: Require that tentative and final subdivision maps and approved site plans show areas subject to flooding as shown on the FEMA maps.

Policy PS-2r: Give priority to floodplain management over flood control structures for preventing damage from flooding except where the intensity of development requires a high level of protection and justifies the costs of structural measures. Where possible, maintain flood channel capacity.

Policy PS-2s: Consider the potential risk of damage from flooding in the design and review of projects, including those which could facilitate floodplain development.

Policy PS-2t: Avoid variances to building setbacks along streams and in 100-year flood plains without the review and approval of the Permit and Resource Management Department.

Policy PS-2u: Request that the Sonoma County Water Agency prioritize and undertake flood hazard mitigation projects on a continuous basis on selected waterways subject to the policies of the Open Space and Resource Conservation Element.

Policy PS-2v: Continue to enforce County code requirements on construction in flood hazard areas and other adopted regulations which implement the National Flood Insurance Program.

Policy PS-2w: Encourage the timely completion and filing of inundation maps for all dams whose failure could cause loss of life or personal injury within Sonoma County. Where inundation maps indicate dam or levee failure could cause loss of life or property or personal injury, coordinate with the corresponding responsible party to investigate levee or dam stability and management and identify rehabilitative maintenance needs as appropriate.

WATER RESOURCES ELEMENT

GOAL WR-1: Protect, restore and enhance the quality of surface and groundwater resources to meet the needs of all reasonable beneficial uses.

Objective WR-1.1: Work with the Regional Water Quality Control Boards (RWQCB) and interested parties in the development and implementation of RWQCB requirements.

Objective WR-1.2: Avoid pollution of stormwater, water bodies and groundwater.

Objective WR-1.3: Inform the public about practices and programs to minimize water pollution and provide educational and technical assistance to agriculture in order to reduce sedimentation and increase on-site retention and recharge of stormwater.

Objective WR-1.4: Seek and secure funding for development of countywide groundwater quality assessment, monitoring, management, and education regarding groundwater quality issues.

Objective WR-1.5: Seek to protect groundwater from saltwater intrusion.

Policy WR-1a: Coordinate with the RWQCB, public water suppliers, Cities, Resource Conservation Districts (RCDs), watershed groups, stakeholders and other interested parties to develop and implement public education programs and water quality enhancement activities and provide technical assistance to minimize stormwater pollution, support RWQCB requirements and manage related County programs. Where appropriate, utilize watershed planning approaches to resolve water quality problems.

Policy WR-1b: Design, construct, and maintain County buildings, roads, bridges, drainage and other facilities to minimize sediment and other pollutants in stormwater flows. Develop and implement “best management practices” for ongoing maintenance and operation.

Policy WR-1c: Prioritize stormwater management measures in coordination with the RWQCB direction, focusing first upon watershed areas that are urbanizing and watersheds with impaired water bodies. Work cooperatively with the RWQCBs to manage the quality and quantity of stormwater runoff from new development and redevelopment in order to:

- (1) Prevent, to the maximum extent practicable, pollutants from reaching stormwater conveyance systems.
- (2) Ensure, to the maximum extent practicable, that discharges from regulated municipal storm drains comply with water quality objectives.
- (3) Limit, to the maximum extent practicable, stormwater from post development sites to pre-development quantities.
- (4) Conserve and protect natural areas to the maximum extent practicable.

Policy WR-1d: Where appropriate, support RWQCB waste discharge requirements for all wastewater treatment systems and other point sources.

Policy WR-1e: Assist in the development of Total Maximum Daily Loads (TMDLs) for the impaired water bodies and pollutants of concern identified by the RWQCBs to achieve compliance with adopted TMDLs. Work with the RWQCB to develop and implement measures consistent with the adopted TMDLs.

Policy WR-1f: Work closely with the RWQCBs, incorporated cities, public water suppliers, and other interested parties in the development and implementation of water quality plans and measures.

Policy WR-1g: Minimize deposition and discharge of sediment, debris, waste and other pollutants into surface runoff, drainage systems, surface water bodies, and groundwater.

Policy WR-1h: Require grading plans to include measures to avoid soil erosion and consider upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable.

Policy WR-1j: Support educational technical assistance programs for agricultural activities and dissemination of best management practices for erosion and sediment control, which include on-site retention of stormwater, maintaining natural sheetflow and drainage patterns, and avoiding concentrated runoff, particularly on slopes greater than 35%.

Policy WR-1k: Seek opportunities to participate in developing programs and implementing projects for water quality restoration and remediation with agencies and organizations such as

RWQCBs, the California Department of Fish and Game, and RCDs in areas where water quality impairment is a concern. Consider allowing expanded treatment options for contaminated water from individual wells.

Policy WR-1o: Require that commercial and industrial uses reduce and pretreat wastes prior to their entering sewer systems.

Policy WR-1q: Require new development projects to evaluate and consider naturally-occurring and human caused contaminants in groundwater.

Policy WR-1r: Work with the Sonoma County Health Services Department and the RWQCBs to educate the general public on evaluating, monitoring and protecting the quality of groundwater.

Policy WR-1s: Resist accepting administrative responsibility for regulatory programs required by State or Federal agencies unless a State or Federal subvention will compensate the County for costs associated with such shift in administrative responsibility.

Policy WR-1t: Where area studies or monitoring find that saltwater intrusion has occurred, support analysis of how the intrusion is related to groundwater extraction and support development of a groundwater management plan or other appropriate measures to avoid further intrusion and, where practicable, reverse past intrusion.

Policy WR-1u: In the marshlands and agricultural areas south of Sonoma and Petaluma, require all environmental assessments and discretionary approvals to analyze and, where practicable, avoid any increase in saltwater intrusion into groundwater.

Policy WR-1v: Request that the SCWA revise the SCWA flood control design criteria to include a section on stream geomorphic analysis and to update information on bank protection and erosion control to incorporate biotechnical bank stabilization methods for the purpose of preventing erosion and siltation in drainage swales and streams.

GOAL WR-2: Manage groundwater as a valuable and limited shared resource.

Objective WR-2.1: Conserve, enhance and manage groundwater resources on a sustainable basis that assures sufficient amounts of clean water required for future generations, the uses allowed by the General Plan, and the natural environment.

Objective WR-2.2: Develop a scientifically based program to collect the data needed to assess and understand groundwater conditions.

Objective WR-2.3: Encourage new groundwater recharge opportunities and protect existing groundwater recharge areas.

Objective WR-2.4: Increase institutional capacity and expertise within the County to competently review hydrogeologic reports and data for critical indicators and criteria.

Objective WR-2.5: Avoid additional land subsidence caused by groundwater extraction.

Policy WR-2a: Encourage and support research on and monitoring of local groundwater conditions, aquifer recharge, watersheds and streams where needed to assess groundwater quantity and quality.

Policy WR-2b: Initiate and support educational programs to inform residents, agriculture, businesses and other groundwater users of best management practices in the areas of efficient water use, water conservation, and increasing groundwater recharge.

Policy WR-2c: Work with well drillers and other parties familiar with groundwater conditions in Sonoma County to develop well permit standards in order to:

- (1) Improve the data obtained from well permit applications on locations, depths, yield, use, flow direction where appropriate, and water levels of proposed and existing wells on the site.
- (2) Establish standards to reduce the potential for well interference and drawdown.
- (3) Ensure sufficient groundwater quantity and quality for existing and proposed uses using the subject well through standards for pump tests, well yields, pollutant levels, and water storage, particularly for higher capacity wells.
- (4) In areas where a groundwater management plan has been approved and has been accepted by the County, require the issuance of well permits and any limitations imposed on well permits to be consistent with the adopted plan.

Policy WR-2d: Continue the existing program to require groundwater monitoring for new or expanded discretionary commercial and industrial uses using wells. Where justified by the monitoring program, establish additional monitoring requirements for other new wells.

Policy WR-2f: Require that discretionary projects in Urban Service Areas maintain the site's pre-development recharge of groundwater to the maximum extent practicable. Develop voluntary guidelines for rural development that would accomplish the same purpose.

Policy WR-2g: In cooperation with Sonoma County Water Agency (SCWA), DWR, and other public agencies and well owners, support the establishment and maintenance of a system of voluntary monitoring of wells throughout the county, utilizing public water system wells and private wells where available. Encourage participation in voluntary monitoring programs, and, if funds are available, consider funding of well monitoring where determined necessary in order to stimulate participation.

Policy WR-2h: In cooperation with SCWA, DWR and other public agencies, support the establishment and maintenance of a groundwater data base from available application data, well tests, monitoring results, study reports and other sources; analyze the data collected in an annual report to the Board; provide the data to DWR; and use the data along with other available information to refine the mapping of groundwater availability classifications. Protect the proprietary nature of well drilling data and release it only in summary form.

Policy WR-2i: In order to identify areas where groundwater supplies may be declining, in the annual report review well permit data, monitoring data and reported problems and recommend to the Board of Supervisors areas where comprehensive groundwater studies are needed. As part of the first annual report, consider the recommendations of the recently completed groundwater studies in the Joy Road, Mark West Springs, and Bennett Valley areas, as well as the Sonoma Valley Groundwater Management Plan. In each such special study area that is approved by the Board following a public hearing, develop a comprehensive groundwater assessment that includes the following:

- (1) An existing system of monitoring wells and stream gauges,

- (2) Locations of water wells,
- (3) Available data on groundwater and surface water levels and contamination,
- (4) Maps and graphs that show past and present data and changes in precipitation, imports, groundwater levels, groundwater quality, rates of extraction, and the relationship of groundwater to surface water,
- (5) Drillers' logs, geologic data and monitoring data needed to estimate water yields in the area,
- (6) Estimated future rates of imports, recharge, extraction, exports, changes in groundwater levels, and possible changes in groundwater quality,
- (7) A water budget for the area that estimates the total amount of water gain or loss in the area,
- (8) Any needed changes in well monitoring, data collection and reporting, and
- (9) Provisions for applicant fees and other funding of County costs.

If an area assessment, as defined above, demonstrates a need for additional management actions to address groundwater problems, prepare a plan for managing groundwater supplies pursuant to the California Water Code or the County's land use or other legal authority. Include involvement by the affected water users, well drillers, local agencies, private water companies and landowners. In recognition of concerns regarding the potential for overdraft condition in the south Santa Rosa Plain groundwater basin, give a high priority to preparation of a groundwater assessment and adoption of a management plan or other appropriate actions in this area prior to approval of any city annexations and changes in land use or density in this area of the county.

Policy WR-2j: Cooperate with the incorporated Cities, SCWA, DWR, US Geological Survey, well drillers, and all water users and purveyors in the development of a comprehensive groundwater assessment for each major groundwater basin in the county and the priorities, sequence and timing for such studies. Prepare such assessments to meet the applicable requirements of the California Water Code for a "groundwater management plan" and, where appropriate, include the following:

- (1) Computer models of groundwater recharge, storage, flows, usage and sustainable yield,
- (2) Assessment of nitrates, boron, arsenic, saltwater and other water quality contaminants,
- (3) Analysis of resource limitations and relationships to other users for wells serving public supply systems and other large users,
- (4) Opportunities for changing the sources of water used for various activities to better match the available resources and protect groundwater,
- (5) Possible funding sources for monitoring, research, modeling and development of management options, and
- (6) Provisions for applicant fees and other funding of County costs.

If a basin assessment indicates that future groundwater availability, water quality and surface water flows may be threatened and there may be a need for additional management actions to address groundwater problems, prepare a plan for managing groundwater supplies which may require limitations on water extraction and use and other special standards for allowed development, wells, extraction or use. Consideration of new management actions shall include involvement by the interests and parties stated above in development of alternatives addressing specific problems and a review of legal and fiscal issues for each alternative.

3.8 HYDROLOGY AND WATER QUALITY

Policy WR-2k: Encourage and support comprehensive studies of long term changes in climate and precipitation patterns in the county and region.

Policy WR-2l: Increase institutional capacity and expertise within the County to competently review hydrogeologic reports and data for critical indicators and criteria.

Policy WR-2m: Work with SWRCB, DWR, California Department of Health Services (DHS), CalEPA, public water suppliers, and applicable County and City agencies to seek and secure funding sources for development of groundwater assessment, protection, enhancement and management programs.

Policy WR-2n: Where area studies or monitoring find that land subsidence has occurred, support analysis of how the subsidence is related to groundwater extraction and develop a groundwater management plan or other appropriate actions, where practicable, to avoid further subsidence.

LAND USE ELEMENT

GOAL LU-8: Protect Sonoma County's water resources on a sustainable yield basis that avoids long term declines in available surface and groundwater resources or water quality.

Objective LU-8.1: Protect, restore, and enhance the quality of surface and groundwater resources to meet the needs of all beneficial uses.

Objective LU-8.2: Coordinate with operators of public water systems to provide an adequate supply to meet long term needs consistent with adopted general plans and urban water management plans.

Objective LU-8.3: Increase the role of water conservation and re-use in meeting the water supply needs of both urban and rural users.

Objective LU-8.4: Participate in the review of new proposals for surface and groundwater imports and exports in order to provide consistency with Sonoma County's ability to sustain an adequate water supply for its water users and natural environment.

Objective LU-8.5: Improve understanding and sound management of water resources on a watershed basis.

Policy LU-8a: Require that new development comply with applicable waste discharge requirements and minimize pollution of storm water, surface water and groundwater.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on the environment associated with hydrology and water quality if it will:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin;

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - Result in substantial erosion or siltation on- or off-site;
 - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
 - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - Impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation; and/or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: Implementation of the Project could result in a violation of water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (Less than Significant)

Section 303(d) of the Federal CWA requires states to identify waters that do not meet water quality standards or objectives and, thus, are considered "impaired" and to develop TMDLs to achieve water quality objectives. The Plan area does not include any water bodies listed on the Section 303(d) list of impaired water bodies. However, Sonoma Creek, which is located west of the Plan area, is listed on the Section 303(d) list of impaired water bodies, and is the receiving water body of creeks that are located within the Plan area.

Sonoma Creek exceeds water quality standards for sediment. The listing was prompted by declines in native fish populations. The Sonoma Creek Sediment TMDL addresses this water quality problem, identifies pollutant sources, and specifies actions to create solutions. Additionally, Sonoma Creek and its tributaries are impaired by pathogens. The overall goal of the Sonoma Creek Pathogens TMDL is to minimize human exposure to waterborne disease-causing pathogens and to protect uses of water for recreational activities such as wading, swimming, fishing, and rafting.

The potential construction and operational water quality impacts are discussed below.

CONSTRUCTION-RELATED WATER QUALITY IMPACTS

The Plan area currently includes the following uses, as identified by the Sonoma County Assessor's office: 78.5 acres of single-family residential, 21.6 acres of multi-family residential (including duplexes through fourplexes), 15.74 acres of commercial, 2.77 acres of office, 1.47 acres of industrial, 3.35 acres of mixed use, and 3.59 acres of public uses and 15.6 acres of vacant land. The areas that are currently vacant (15.6 acres) would be developed in the future under the Project. Similarly, the areas that are underdeveloped or underutilized would be redeveloped.

Grading, excavation, removal of vegetation cover, and loading activities associated with future construction activities in the Plan area could temporarily increase runoff, erosion, and sedimentation.

Construction activities also could result in soil compaction and wind erosion impacts that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

As required by the CWA, each subsequent development project or improvement project within the Plan area will require an approved SWPPP prior to site disturbance that includes best management practices for grading and preservation of topsoil. A SWPPP is not required if the project will disturb less than one acre. SWPPPs are designed to control storm water quality degradation to the extent practicable using best management practices during and after construction.

Future development project applicants within the Plan area must submit the SWPPP with a Notice of Intent to the RWQCB to obtain a General Permit. The RWQCB is an agency responsible for reviewing the SWPPP with the Notice of Intent, prior to issuance of a General Permit for the discharge of storm water during construction activities. The RWQCB accepts General Permit applications (with the SWPPP and Notice of Intent) after specific projects have been approved by the lead agency. The lead agency for each specific project that is larger than one acre is required to obtain a General Permit for discharge of storm water during construction activities prior to commencing construction (per the California CWA). For ministerial projects, applicants will typically submit a grading or building permit application consisting of a Water Quality Management Plan and construction plans that incorporate BMPs.

Further, Chapter 11A of the County Code outlines the County's stormwater regulations. The purpose of the chapter is to protect and enhance the water quality of the County's watercourses pursuant to and consistent with the Federal CWA and amendments thereto and to assure compliance with the conditions set forth by the NPDES as requirements of stormwater discharge permits. This Chapter of the Code applies to projects regardless of the site size. Future projects in the Plan area would be subject to the requirements included in Chapter 11A.

Based upon the wide scope of the Specific Plan, development of detailed, site-specific information on this impact is not feasible. However, each future project must include detailed project specific drainage plans that control storm water runoff and erosion, both during and after construction. The RWQCB will require a project specific SWPPP to be prepared for each future project that disturbs an area one acre or larger. The SWPPPs will include project specific best management measures that are designed to control drainage and erosion. Compliance with these state and local requirements would ensure that future development does not exacerbate the pathogen and sediment TMDLs for Sonoma Creek.

NEW DEVELOPMENT-RELATED WATER QUALITY IMPACTS

New development located on vacant sites under the Project would increase urban runoff compared to the existing condition. Redevelopment of developed or underdeveloped sites under the Project would also increase urban runoff. The increase in urban runoff (i.e., surface runoff of rain water created as a result of urbanization) would introduce constituents into the storm water that are typically associated with urban runoff. These constituents include sediments, petroleum hydrocarbons, pesticides, fertilizers, and heavy metals such as lead, zinc, and copper. These pollutants tend to build up during the dry months of the year. Precipitation during the early portion of the wet season (generally from November to April) washes away most of these pollutants, resulting in high pollutant concentrations in the initial wet weather runoff. This initial runoff is referred to as the "first flush" of storm events. Subsequent periods of rain would result in less concentrated pollutant levels in the runoff.

The amount and type of runoff generated by the various future projects would be greater than under existing conditions, due to increases in impervious surfaces. Due to the increased development potential

and associated increase in population and employment in the Plan area, there would be a corresponding increase in urban runoff pollutants due to the increased number of structures and persons in the Plan area and first flush roadway contaminants due to the increased number of vehicles, as well as an increase in nutrients and other chemicals from landscaped areas. These constituents would result in water quality impacts to onsite and offsite drainage flows to area waterways.

CONCLUSION

The MS4 permits require the discharger to develop and implement a SWMP with the goal of reducing the discharge of pollutants to the maximum extent practicable. The County has developed a Storm Water Management Plan for each of the two MS4 Permits which specifies what BMPs will be used to address certain program areas. The CWA, and its implementing regulations, requires that certain industrial facilities, construction sites, and MS4 obtain coverage for their stormwater discharges under an NPDES permit, develop a SWPPP or SWMP and put measures in place to prevent discharges of pollutants in stormwater runoff.

Each future development project within the Plan area is required to prepare a detailed project specific drainage plan and/or a SWPPP that will control storm water runoff and erosion, both during and after construction. For projects under one acre for which a SWPPP is not required, compliance with Chapter 11A of the County Code would control storm water runoff through implementation of BMPs. Further, a SWMP would be required in order to reduce the discharge of pollutants. In some very limited cases, construction dewatering due to accumulated water in trenches or excavations may be needed. If the project involves the discharge of dewatering into surface waters, the project proponent will need to acquire a Dewatering permit, NPDES permit, and Waste Discharge permit from the RWQCB. It is noted, however, that future projects in the Plan area would likely not involve dewatering.

Subsequent development projects proposed within the Plan area would be subject to all relevant General Plan objectives and policies that aim to reduce water pollution from construction and new development, and protect and enhance natural storm drainage and water quality features. The General Plan policies include numerous requirements that would reduce the potential for implementation of the Project to result in increased water quality impacts. For example, General Plan Policy WR-1h requires grading plans to include measures to avoid soil erosion and requires the consideration of upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable. In addition, compliance with the CWA and regulations enforced by the RWQCB would ensure that construction-related impacts to water quality are minimized and future projects comply with all applicable laws and regulations. Further, subsequent development projects would be subject to Chapter 11 and 11A of the County Code, which require implementation of BMPs, among other requirements, during construction and operation. Lastly, future development projects located within the area covered by the storm water permit boundary would be subject to the Guidelines for the Standard Urban Storm Water Mitigation Plan.

The implementation of these General Plan policies, combined with compliance with Federal and State regulations and applicable local requirements (i.e., Guidelines for the Standard Urban Storm Water Mitigation Plan requirements and County Code), would ensure that implementation of the Project would have a **less than significant** impact related to violation of water quality standards or waste discharge requirements or substantial degradation of surface or ground water quality.

Impact 3.8-2: Implementation of the Project could result in decreased groundwater supplies or interfere substantially with groundwater recharge

such that the Project may impede sustainable groundwater management of the basin (Less than Significant)

The proposed project would connect to the Valley of the Moon Water District water system. As reported in its 2020 UWMP, the Water District primarily relies upon surface water purchased from the SCWA to meet customer demands. Under normal conditions, approximately 85 percent of the District's water supply is surface water purchased from the SCWA. Local groundwater production from wells owned and leased by the District comprises the remaining portion of the District's water supply portfolio.

The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

As shown in Table 3.8-c, projected groundwater use in the District's service area is projected to decrease over the next 20 years, regardless of the Project. Subsequent development projects proposed within the Plan area, such as residential, commercial, office, and recreational projects, would result in new impervious surfaces and could reduce stormwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of groundwater recharge; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff. The amount of new pavement and the extent to which it affects infiltration depends on the site-specific soil type; clay soils tend to have lower infiltration rates. The Plan area soils (shown in Figure 3.5-3 in Section 3.5, Geology and Soils) consist of primarily clay loams (gravelly, silty, and cobbly). These clay soils typically have lower recharge potential.

Projects located in urban areas, such as the uses along the developed Highway 12 corridor, would have less of an impact than projects located on undeveloped or underutilized parcels. According to the Sonoma County Assessor's office, 15.6 acres of the 178.81-acre Plan area (or 8.7 percent of the Plan area) are currently vacant. The remaining parcels are developed or partially developed with residential, commercial, office, public, industrial, or mixed uses. Development of the 15.6 acres (or 0.024 square miles) of vacant parcels scattered throughout the Plan area would result in an increase in impervious surfaces within the Plan area. However, development would be required to be consistent with all applicable County and service provider infrastructure master plans and regulations pertaining to storm water quality and groundwater recharge. For example, the Groundwater Sustainability Plan, which was adopted in 2021, establishes a standard for "sustainability" of groundwater management and use, and determines how the basin will achieve this standard. The Plan includes sustainable management criteria, establishes a groundwater monitoring network, and includes management actions and plan implementation measures to address groundwater recharge. While this plan initially emphasizes voluntary actions, future implementation may include new development requirements for future projects in the plan area in order to maintain sustainable groundwater levels. Irrespective of those potential measures, under adoption of the Project future projects within the Plan area would be required to develop and incorporate sustainability measures, such as creek and sensitive habitat setbacks (which would allow for groundwater infiltration), use of drought tolerant plants (which would minimize groundwater demand for landscaping), or permeable concrete or pavers (compared to impermeable concrete, permeable pavers would provide opportunities for groundwater infiltration in areas used which would typically be paved with impermeable surfaces). The sustainability measures incorporated would vary based on the project size, project location, and project type.

Additionally, the County's General Plan includes objectives and policies which address groundwater quality and groundwater recharge. For example, General Plan Policy WR-2f requires that discretionary projects maintain the site's pre-development recharge of groundwater to the maximum extent practicable. For ministerial projects, applicants will typically submit a grading or building permit application consisting of a Water Quality Management Plan and construction plans that incorporate BMPs. These BMPs and Water Quality Management Plan details would control storm water runoff while also maintaining opportunities for recharge, as applicable. Further, the Specific Plan includes Policy SLU-1i, which requires development to incorporate sustainability measures, such as setbacks from creeks and sensitive habitats, use of native or drought tolerant plants, permeable concrete or pavers, and minimal night lighting in the vicinity of creeks and habitat corridors, whenever appropriate. This policy is supported through compliance with the County's Water Efficient Landscape Ordinance, which regulates the design, installation, and maintenance of new and rehabilitated landscapes in order to ensure that landscape water use is minimized and opportunities for rainwater harvesting or stormwater retention are maximized. Subsequent development projects proposed within the Plan area would be subject to this policy and the supporting Water Efficient Landscape Ordinance.

Lastly, the County's Riparian Corridor Combining Zone requires a 50-foot setback from Agua Caliente and Pequeno Creeks. Section 7-14.5 of the Sonoma County Code establishes stream setbacks for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half times the height of the stream bank plus thirty feet, 2) thirty feet outward from the top of the stream bank, or 3) any distance established in the general plan and/or zoning code. Future development project would be subject to these setback requirements. Preventing development within the riparian corridors in the Plan Area would maintain these creeks for groundwater recharge.

In summary, the Project would not result in decreased groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Implementation of the relevant General Plan objectives and policies, Specific Plan Policy SLU-1i, and the applicable County and local regulations and standards summarized above would ensure that the Project would have a **less than significant** impact relative to groundwater supplies and interference with groundwater recharge.

SPECIFIC PLAN POLICY THAT REDUCE THE POTENTIAL FOR IMPACTS

Policy SLU-1i: Require development to incorporate sustainability measures, such as setbacks from creeks and sensitive habitats, use of native or drought tolerant plants, permeable concrete or pavers, and minimal night lighting in the vicinity of creeks and habitat corridors, whenever appropriate.

Impact 3.8-3: Implementation of the Project could alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation on- or off-site, increase the rate or amount of surface runoff which would result in flooding, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows (Less than Significant)

Individual future projects developed within the Plan area after adoption of the Project would create new impervious surfaces. This would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff, potentially generating additional runoff during storm

events. In addition, the increase in impervious surfaces, along with the increase in surface water runoff, could increase the non-point source discharge of pollutants. Anticipated runoff contaminants include sediment, pesticides, oil and grease, nutrients, metals, bacteria, and trash. Contributions of these contaminants to stormwater and non-stormwater runoff would degrade the quality of receiving waters. During the dry season, vehicles and other urban activities release contaminants onto the impervious surfaces, where they can accumulate until the first storm event. During this initial storm event, or first flush, the concentrated pollutants would be transported via runoff to stormwater drainage systems. Contaminated runoff waters could flow into the stormwater drainage systems that discharge into rivers, agricultural ditches, sloughs, and channels, and ultimately could degrade the water quality of any of these water bodies.

Additionally, individual future projects developed after adoption of the Project could potentially alter surface drainage patterns as a result of directly altering flow patterns. By altering the flow patterns, increased amounts of stormwater runoff occurs as a result of increases in impervious surface areas, or concentration of flows to a specific or smaller area. The construction activities associated with future projects, such as residential, commercial, office, and recreational projects, as well as other infrastructure projects that convert permeable surfaces or install permanent structures, would require stormwater drainage management measures to avoid flooding impacts. For example, future development projects located within the area covered by the storm water permit boundary would be subject to the Guidelines for the Standard Urban Storm Water Mitigation Plan. Some of the treatment controls in the Guidelines can be used to provide flood control by including additional flood detention storage. The existing storm drainage network in the Plan area may require improvements, including additional underground drainage infrastructure, connections to existing drainage infrastructure, and on-site drainage improvements, to convey the additional runoff from individual future projects. If the storm drainage network is not appropriately designed, it could be overwhelmed during a large storm event and result in flooding.

Based upon the wide scope of the Project, development of detailed, site-specific information on this impact is not feasible. As previously discussed, a future project applicant would be required to obtain permits from the U.S. Army Corps of Engineers and the Department of Fish and Wildlife if any work is performed within a waterway, such as Aqua Caliente Creek. Each future development project must also include detailed project specific drainage studies that assess the drainage characteristics of the individual site, the characteristics of the project including the amount of impervious and pervious surfaces proposed, and the location and capacity of infrastructure, so that an appropriate storm drainage plan can be prepared to control storm water runoff, both during and after construction. The drainage plan will ultimately include project specific best management measures that are designed to allow for natural recharge and infiltration of stormwater. Construction of storm drainage improvements would occur as part of an overall development project and is considered in the environmental impacts associated with project construction and implementation as addressed throughout this EIR.

The County of Sonoma has developed the proposed Specific Plan to include goals and policies that, when implemented, will reduce storm water pollution from new development, and protect and enhance natural storm drainage and water quality features, which will in turn reduce water quality impacts. The Sonoma County General Plan also contains a number of policies that would reduce the potential for implementation of the Project to result in increased flooding or result in water quality impacts associated with increased runoff, siltation, or erosion. For example, General Plan Policy WR-1h requires grading plans to include measures to avoid soil erosion and consider upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable. General Plan Policy PS-2f requires preservation of floodplain storage capacity by avoiding fill in areas outside of the 100-year FEMA special

flood hazard area that retain or could retain flood waters. Further, the County Flood Damage Prevention Ordinance outlines the flood prevention standards. Such measures apply to all structures or land constructed, located, extended, converted, or altered within special flood hazard areas in the county, as identified on the FEMA floodplain maps. Chapter 11A of the County Code outlines the County's stormwater regulations and is intended to control the discharge to the county's stormwater system from spills and the dumping or disposal of materials other than stormwater, and reduce pollutants in stormwater discharges to the maximum extent practicable. The purpose of the chapter is to protect and enhance the water quality of the County's watercourses pursuant to and consistent with the Federal CWA and amendments thereto and to assure compliance with the conditions set forth by the County's MS4 permit as requirements of stormwater discharge permits.

Implementation of the General Plan policies, Specific Plan policies, County Code requirements, and other applicable local regulations and guidance would ensure that the Project would have a **less than significant** impact relative to alteration of the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation on- or off-site, increasing the rate or amount of surface runoff which would result in flooding, creating or contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impeding or redirecting flood flows.

Impact 3.8-4: Implementation of the Project could result in flood hazards or risk release of pollutants due to 100-year flood hazard, tsunami, or seiche zones (Less than Significant)

The risks of flooding hazards in the County of Sonoma and immediate surroundings are primarily related to large, infrequent storm events. These risks of flooding are greatest during the rainy season between November and March. Flooding events can result in damage to structures, injury or loss of human and animal life, exposure to waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

Figure 3.8-1 illustrates the areas within the FEMA designated 100-year floodplain. The majority of the Plan area and surrounding area is designated by FEMA as Zone X (unshaded) which is an area determined to be outside the 500-year floodplain. However, small portions of the Plan area are subject to flooding along the natural creeks and drainages that traverse the southern portion of the Plan area. The 100-year flood plain extends across Highway 12 between Encinas Lane and Meadowbrook Avenue along Agua Caliente Creek. This portion of the Plan area is delineated as Zone A, which is subject to 100-year flooding with no base flood elevation determined. The four parcels within the 100-year floodplain are designated (currently and proposed) Urban Residential. The parcels within the 100-year floodplain are currently developed with mobile home park uses. It is noted that a very small portion of these parcels are affected by the 100-year floodplain.

The 100-year floodplain denotes an area that has a one percent chance of being inundated during any particular 12-month period. Floodplain zones (Special Flood Hazard Areas) are determined by FEMA and used to create FIRMs. These tools assist communities in mitigating flood hazards through land use planning. FEMA also outlines specific regulations, intended to be adopted by the local jurisdictions, for any construction, whether residential, commercial, or industrial within 100-year floodplains.

Lands within the FEMA-designated 100-year floodplain (Special Flood Hazard Areas) are subject to mandatory flood insurance as required by FEMA. The insurance rating is based on the difference between

the base flood elevation, the average depth of the flooding above the ground surface for a specific area, and the elevation of the lowest floor. Because Sonoma County participates in the National Flood Insurance Program, it must require development permits to ensure that construction materials and methods will mitigate future flood damage, and to prevent encroachment of development within floodways consistent with the NFIP Flood Insurance Manual. The NFIP Flood Insurance Manual establishes lowest floor requirements for new construction and substantial improvements of residential structures in relation to the base flood level.

Earthquakes centered close to a dam are typically the most likely cause of dam failure. Dam Inundation maps have been required in California since 1972, following the 1971 San Fernando Earthquake and near failure of the Lower Van Norman Dam. As shown in Figure 3.8-2, the Plan area is not within a dam inundation area. However, areas west of the Plan area (approximately 500 feet) is subject to inundation from the failure of Suttonfield Dam located at the Sonoma Developmental Center, and the associated floodwaters down Sonoma Creek.

The Sonoma County General Plan includes numerous objectives and policies specifically designed to address flood hazards. Policy PS-2l requires on-site and off-site flood related hazards to be reviewed for all projects located within areas subject to known flood hazards. Policy PS-2s requires the consideration of the potential risk of damage from flooding in the design and review of projects, including those which could facilitate floodplain development. Policy PS-2i requires discretionary projects located in the Russian River, Sonoma Creek, and Petaluma River watersheds to analyze drainage and flooding impacts and include feasible and appropriate mitigation measures to reduce flood hazards from the project. Thereafter, each project shall implement its proportionate fair share of the regional mitigation measures. Policy PS-2t requires avoidance of variances to building setbacks along streams and in 100-year flood plains without the review and approval of the Permit and Resource Management Department. Policy PS-2l requires review of on- and off-site flood related hazards for all projects located within areas subject to known flood hazards.

In addition to the General Plan requirements, the Project does not remove the floodplain combining district (F2) designation which is applied to lands within the 100-year floodplain. Lands within the F2 district are subject to development standards for floodplains which require development to be designed so that appreciable damage will not occur from the 100-year flood and that structures comply with the flood protection regulations of Chapter 7B of the Sonoma County Code

Subsequent development, infrastructure, and planning projects would be subject to the aforementioned General Plan and County Code requirements. The policies contained in the General Plan combined with the County Code standards for floodplain development represent a comprehensive and holistic approach by Sonoma County to reduce the risks of flooding to city residents and properties. Furthermore, as described in the regulatory setting section, numerous Federal, State, and local agencies are responsible for maintaining flood protection features in the County, including the U.S. Army Corps of Engineers, DWR, and Department of Fish and Wildlife at the Federal and State level.

The implementation of these policies and regulations would ensure that implementation of the Project would have a **less than significant** impact related to flood hazards or risk release of pollutants due to 100-year flood hazard, tsunامي, or seiche zones.

Impact 3.8-5: Implementation of the Project may conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (Less than Significant)

The San Francisco Bay Basin Water Quality Control Plan and the Groundwater Sustainability Plan are the two guiding documents for water quality and sustainable groundwater management in the project area. Consistency with the two plans are discussed below.

SAN FRANCISCO BAY BASIN WATER QUALITY CONTROL PLAN

The San Francisco Bay Basin Water Quality Control Plan (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term “water quality standards,” as used in the Federal CWA, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

As discussed in Impact 3.8-1, impacts related to water quality during construction and operation would be less-than-significant with implementation of a project specific drainage study and SWPPP and compliance with relevant General Plan objectives and policies that aim to reduce water pollution from construction and new development, and protect and enhance natural storm drainage and water quality features. The County General Plan policies include numerous requirements that would reduce the potential for implementation of the Project to result in increased water quality impacts. For example, General Plan Policy WR-1h requires grading plans to include measures to avoid soil erosion and requires the consideration of upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable. In addition, compliance with the CWA and regulations enforced by the RWQCB would ensure that construction-related impacts to water quality are minimized and future projects comply with all applicable laws and regulations.

Further, Chapter 11A of the County Code outlines the County’s stormwater regulations. The purpose of the chapter is to protect and enhance the water quality of the County's watercourses pursuant to and consistent with the Federal CWA and amendments thereto and to assure compliance with the conditions set forth by the NPDES as requirements of stormwater discharge permits. This Chapter of the Code applies to projects regardless of the site size. Future projects in the Plan area would be subject to the requirements included in Chapter 11A.

GROUNDWATER SUSTAINABILITY PLAN

The Sonoma Valley Groundwater Management Plan provides a groundwater management framework. The Sonoma Valley Groundwater Sustainability Agency is a public agency formed to sustainably manage groundwater in the Sonoma Valley groundwater basin. The agency was formed in June 2017 and has a Board of Directors, an administrator and an advisory committee.

A Groundwater Sustainability Plan is a 20-year plan to ensure the sustainable use of groundwater within a groundwater basin. The Sonoma Valley Groundwater Sustainability Agency was required by state law, the SGMA, to develop a Groundwater Sustainability Plan by 2022. Adopted in 2021, the goal of the Groundwater Sustainability Plan is to establish a standard for “sustainability” of groundwater management and use, and to determine how the basin will achieve this standard. As shown in Table 3.8-

2, projected groundwater use in the District's service area is projected to decrease over the next 20 years, regardless of the Project. As discussed in Impact 3.8-2, the project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

As noted above, the MS4 permits require the discharger to develop and implement a SWMP with the goal of reducing the discharge of pollutants to the maximum extent practicable. The County has developed a Storm Water Management Plan for each of the two MS4 Permits which specifies what BMPs will be used to address certain program areas. The CWA, and its implementing regulations, requires that certain industrial facilities, construction sites, and MS4 obtain coverage for their stormwater discharges under an NPDES permit, develop a SWPPP or SWMP and put measures in place to prevent discharges of pollutants in stormwater runoff. These requirements and Plans are consistent with groundwater conservation efforts.

Projects located in urban areas, such as the uses along the developed Highway 12 corridor, would have less of an impact than projects located on undeveloped or underutilized parcels. The Plan area is largely built out and developed. Development of the 15.6 acres of vacant parcels would result in an increase in impervious surfaces within the Plan area. However, development would be required to be consistent with all applicable County and service provider infrastructure master plans and regulations pertaining to storm water quality and groundwater recharge. Additionally, future projects within the Plan area would be required to develop and incorporate sustainability measures, such as creek and sensitive habitat setbacks (which would allow for groundwater infiltration), use of drought tolerant plants (which would minimize groundwater demand for landscaping), or permeable concrete or pavers (which would provide opportunities for groundwater infiltration in areas which would typically be paved with impermeable surfaces).

CONCLUSION

Overall, implementation of the proposed project would have a ***less than significant*** impact related to conflicts with the Basin Plan and Sonoma Valley Groundwater Management Plan.

Figure 3.8-1.

FEMA Flood Insurance Rate Map

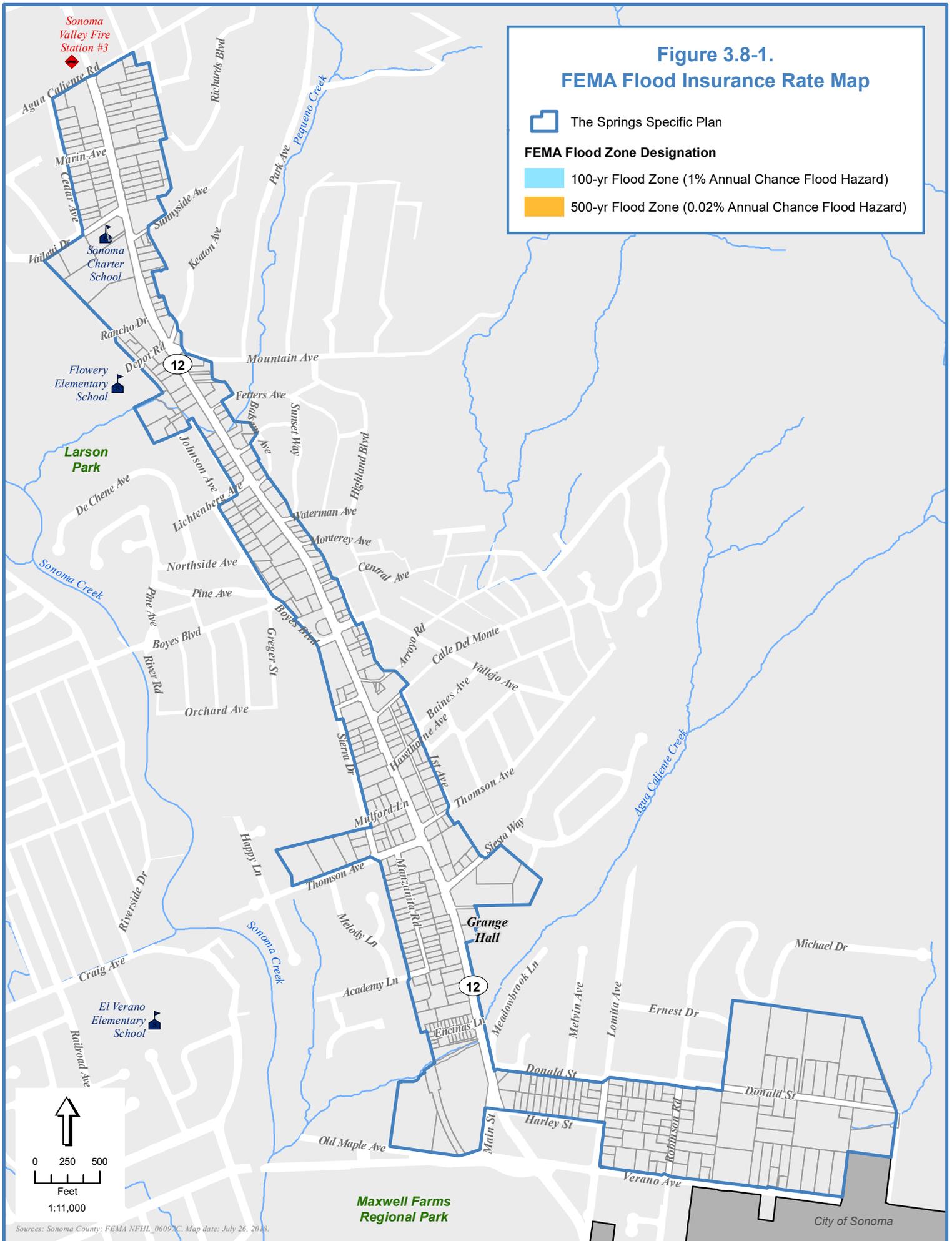


The Springs Specific Plan

FEMA Flood Zone Designation

100-yr Flood Zone (1% Annual Chance Flood Hazard)

500-yr Flood Zone (0.02% Annual Chance Flood Hazard)



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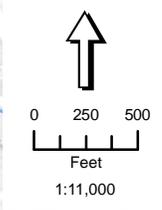
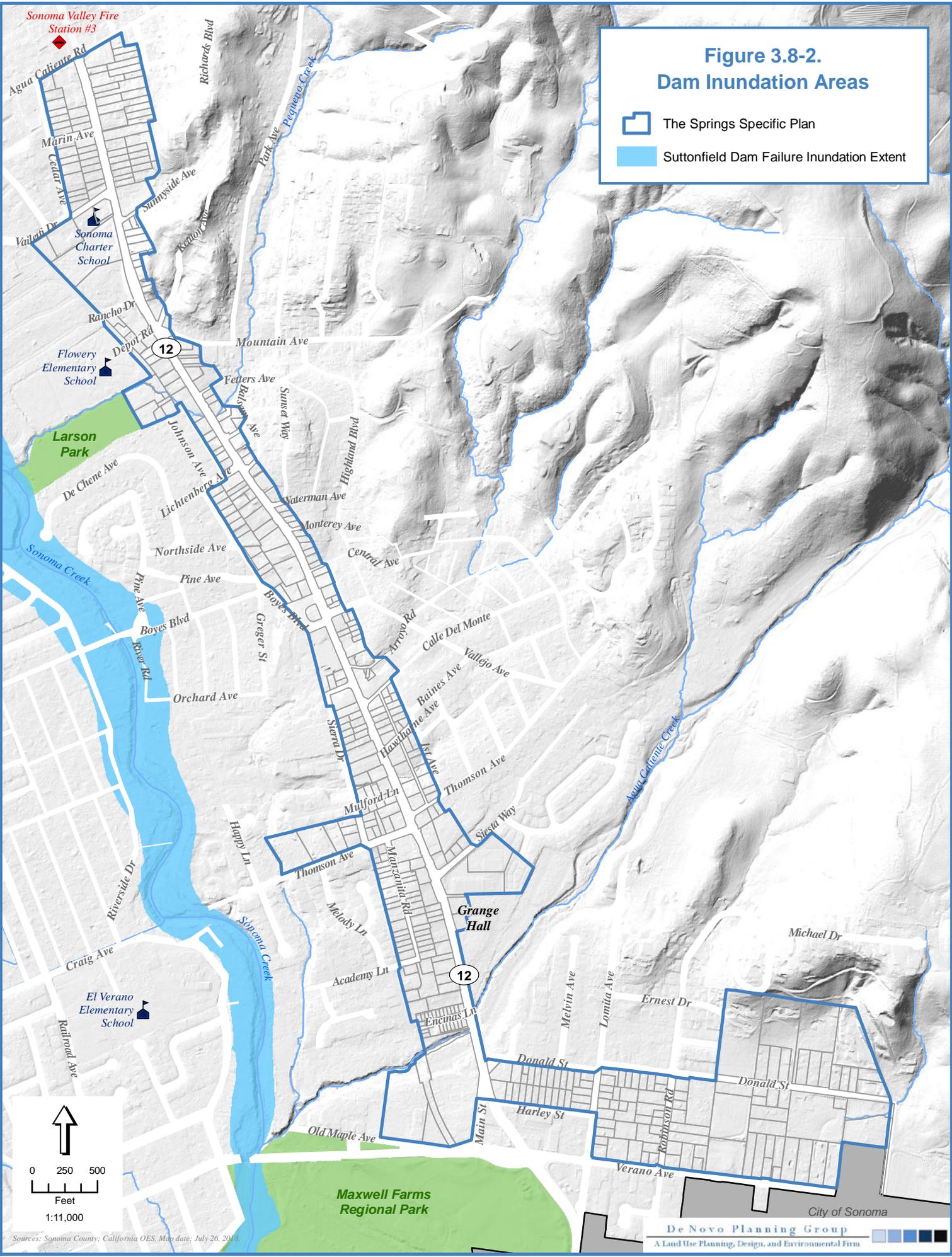
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**Figure 3.8-2.
Dam Inundation Areas**

-  The Springs Specific Plan
-  Suttonfield Dam Failure Inundation Extent



Sources: Sonoma County; California OES. Map date: July 26, 2018.

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The purpose of this section is to identify the existing land use conditions of the proposed Springs Specific Plan area (Plan area) and the surrounding areas, analyze the Project's compatibility with existing land uses, analyze the Project's consistency with relevant planning documents and policies, and recommend mitigation measures to avoid or minimize the significance of potential impacts.

Information in this section is based on site surveys conducted by De Novo Planning Group in 2017 and 2018, ground and aerial photographs, and the following reference documents: the Sonoma County General Plan 2020 (adopted 2008), the Sonoma County General Plan 2020 Draft Environmental Impact Report (2006), and the Sonoma County Zoning Code.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: DP&F Attorneys at Law (July 2018), Ellen Conlan (July 2018), J. Kapolchok & Associates (July, 2018), and Michael R. Woods Law Office (July 2018). Each of the comments related to this topic are addressed within this section. The DP&F Attorneys at Law letter includes comments pertaining to the zoning designation for the Sonoma Splash property (located north of Old Maple and Verano Avenues). The Ellen Conlan letter includes general comments regarding the County's Scenic Resources Overlay, and various comments about the Springs Specific Plan zoning map. The J. Kapolchok & Associates letter includes comments pertaining to the Fairmont Sonoma Mission Inn & Spa property. The Michael R. Woods Law Office letter includes comments pertaining to the Sonoma Splash property.

3.9.1 ENVIRONMENTAL SETTING

PROJECT SITE

The Plan area is located in central Sonoma Valley, north of the City of Sonoma. The Plan area includes portions of the unincorporated communities of Agua Caliente, Fetters Hot Springs, and Boyes Hot Springs. The Plan area is primarily located along the Highway 12 corridor from Agua Caliente Road to Verano Avenue. The Plan area also includes a residential community that exists east of Highway 12, just north of the City of Sonoma. The Project's regional location is shown in Figure 2.0-1 and the Plan area, which serves as the Project boundary, are shown in Figure 2.0-2.

SURROUNDING LAND USES

Adjoining lands to the north of the Plan area include a fire station and residential uses; these lands are designated for Public/Quasi-public, Urban Residential, Rural Residential by the General Plan. Adjoining lands to the east of the Plan area are primarily residential; these adjacent lands are designated Urban Residential, Rural Residential, and Resources and Rural Development by the General Plan. Adjoining lands to the west of the Plan area include residential, commercial, park, and public/quasi-public uses; these lands are designated Urban Residential, Public/Quasi-public, and General Commercial.

The City of Sonoma city limits are adjacent the majority of the southern portion of the Plan area. Surrounding land uses within the City of Sonoma include low density residential, rural residential, commercial, and park. Maxwell Farms Regional Park is located south of W. Verano Avenue, south of the Plan area and is designated Public/Quasi-public by the General Plan.

3.9.2 REGULATORY SETTING

STATE ---

Government Code

For general law jurisdictions, such as the County of Sonoma, the State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the general plan and any applicable specific plans. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in the general plan would also be allowable by the zoning ordinance (Government Code, Section 65860, subd. [c]).

California Specific Plan Law

Article 8, Specific Plan [65450-65457] of the Government Code contains the following provisions for the use of Specific Plan documents for local planning purposes:

65450. After the legislative body has adopted a general plan, the planning agency may, or if so directed by the legislative body, shall, prepare specific plans for the systematic implementation of the general plan for all or part of the area covered by the general plan.

65451. (a) A specific plan shall include a text and a diagram or diagrams which specify all of the following in detail:

(1) The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.

(2) The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.

(3) Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.

(4) A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).

(b) The specific plan shall include a statement of the relationship of the specific plan to the general plan.

65452. The specific plan may address any other subjects which in the judgment of the planning agency are necessary or desirable for implementation of the general plan.

65453. (a) A specific plan shall be prepared, adopted, and amended in the same manner as a general plan, except that a specific plan may be adopted by resolution or by ordinance and may be amended as often as deemed necessary by the legislative body.

(b) A specific plan may be repealed in the same manner as it is required to be amended.

65454. No specific plan may be adopted or amended unless the proposed plan or amendment is consistent with the general plan.

65455. No local public works project may be approved, no tentative map or parcel map for which a tentative map was not required may be approved, and no zoning ordinance may be adopted or amended within an area covered by a specific plan unless it is consistent with the adopted specific plan.

65456. (a) The legislative body, after adopting a specific plan, may impose a specific plan fee upon persons seeking governmental approvals which are required to be consistent with the specific plan. The fees shall be established so that, in the aggregate, they defray but as estimated do not exceed, the cost of preparation, adoption, and administration of the specific plan, including costs incurred pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code. As nearly as can be estimated, the fee charged shall be a prorated amount in accordance with the applicant's relative benefit derived from the specific plan. It is the intent of the Legislature in providing for such fees to charge persons who benefit from specific plans for the costs of developing those specific plans which result in savings to them by reducing the cost of documenting environmental consequences and advocating changed land uses which may be authorized pursuant to the specific plan.

(b) Notwithstanding Section 66016, a city or county may require a person who requests adoption, amendment, or repeal of a specific plan to deposit with the planning agency an amount equal to the estimated cost of preparing the plan, amendment, or repeal prior to its preparation by the planning agency.

(c) Copies of the documents adopting or amending the specific plan, including the diagrams and text, shall be made available to local agencies, and shall be made available to the general public as follows:

(1) Within one working day following the date of adoption, the clerk of the legislative body shall make the documents adopting or amending the plan, including the diagrams and text, available to the public for inspection.

(2) Within two working days after receipt of a request for a copy of the documents adopting or amending the plan, including the diagrams and text, accompanied by payment for the reasonable cost of copying, the clerk shall furnish the requested copy to the person making the request.

(d) A city or county may charge a fee for a copy of a specific plan or amendments to a specific plan in an amount that is reasonably related to the cost of providing that document.

65457.(a) Any residential development project, including any subdivision, or any zoning change that is undertaken to implement and is consistent with a specific plan for which an environmental impact report has been certified after January 1, 1980, is exempt from the requirements of Division 13 (commencing with Section 21000) of the Public Resources Code. However, if after adoption of the specific plan, an event as specified in Section 21166 of the Public Resources Code occurs, the exemption provided by this subdivision does not apply unless and until a supplemental environmental impact report for the specific plan is prepared and certified in accordance with the provisions of Division 13 (commencing with Section 21000) of the Public Resources Code. After a supplemental environmental impact report is certified, the exemption specified in this subdivision applies to projects undertaken pursuant to the specific plan.

(b) An action or proceeding alleging that a public agency has approved a project pursuant to a specific plan without having previously certified a supplemental environmental impact report for the specific plan,

where required by subdivision (a), shall be commenced within 30 days of the public agency's decision to carry out or approve the project.

LOCAL

Sonoma County General Plan

The Sonoma County General Plan 2020 is the guiding document for development in the Plan area. Sonoma County updated its General Plan in September 2008. The County's General Plan provides a comprehensive set of goals, policies, and implementing actions to guide the County's growth through the year 2020. Key Sonoma County General Plan policies that guide development and improvements within Sonoma Valley, which includes the Plan area, include the following (please refer to the referenced General Plan element for policies and actions that implement each goal):

GOAL LU-1: Accommodate Sonoma County's fair share of future growth in the San Francisco Bay Area region as shown on Tables LU-2 and LU-5 in a manner consistent with environmental constraints, maintenance of the high quality of life enjoyed by existing residents, and the capacities of public facilities and services. Achieve a desirable balance between job opportunities and population growth.

GOAL LU-2: Accommodate the major share of future growth within the nine existing cities and their expansion areas and within selected unincorporated communities, which are planned to have adequate water and sewer capacities.

GOAL LU-3: Locate future growth within the cities and unincorporated Urban Service Areas in a compact manner using vacant "infill" parcels and lands next to existing development at the edge of these areas.

GOAL LU-4: Maintain adequate public services in both rural and Urban Service Areas to accommodate projected growth. Authorize additional development only when it is clear that a funding plan or mechanism is in place to provide needed services in a timely manner.

GOAL LU-6: Diversify new residential development types and densities. Include a range of urban densities and housing types in some unincorporated communities, and lower density in rural communities. In rural areas, housing types and densities should meet the needs of agricultural and resource users and provide limited residential development on large parcels.

GOAL LU-7: Prevent unnecessary exposure of people and property to environmental risks and hazards. Limit development on lands that are especially vulnerable or sensitive to environmental damage.

GOAL LU-8: Protect Sonoma County's water resources on a sustainable yield basis that avoids long term declines in available surface and groundwater resources or water quality.

GOAL LU-10: The uses and intensities of any land development shall be consistent with preservation of important biotic resource areas and scenic features.

GOAL LU-11: Promote a sustainable future where residents can enjoy a high quality of life for the long term, including a clean and beautiful environment and a balance of employment, housing, infrastructure, and services.

Policy LU-20a: Avoid urban residential and commercial development within Sonoma's Urban Growth Boundary until annexed by the City.

Policy LU-20d: Recognize certain existing commercial development on the Land Use Map with the "Limited Commercial" land use designation to encourage and facilitate the maintenance, upgrading, and redevelopment of commercial structures within the Sonoma Valley Redevelopment Area.

Policy LU-20e: Recognize certain identified vacant and/or residentially developed parcels along Highway 12 within the Sonoma Valley Redevelopment Area with "Limited Commercial - Traffic Sensitive" land use designation.

Policy LU-20f: Continue to utilize the "Traffic Sensitive" zoning district for the "Limited Commercial" and "Limited Commercial - Traffic Sensitive" categories that limit the uses allowed to specified traffic impact levels. Apply this zoning to all such designated parcels in order to limit new or expanded commercial uses to those that would result in traffic levels consistent with the Circulation and Transit Element.

Policy LU-20i: Use the "Limited Commercial" and "Limited Commercial - Traffic Sensitive" categories for commercial lands in communities with urban services, including Boyes Hot Springs/El Verano/Agua Caliente, Glen Ellen and Kenwood. Require that new uses meet the following criteria:

- (1) The size, scale, and intensity of the use is consistent and compatible with the character of the local community,
- (2) Capacities of public services are adequate to accommodate the use and maintain an acceptable level of service,
- (3) Design and siting are compatible with the scenic qualities and local area development guidelines of the local area, and
- (4) Siting of structures is compatible with planned infrastructure improvements such as roadway widening and under grounding of public utilities.

Policy LU-20j: Encourage the development or redevelopment of existing commercial land as a greater priority than designation of additional lands for new commercial uses. Approve new commercial designations only if they meet the following minimum criteria and where applicable comply with Policies LU-20g and LU-20i:

- (1) The lands are in an Urban Service Area or in Kenwood,
- (2) The existing supply of commercial land is insufficient to meet projected needs, and
- (3) Service capacities, including water and sewer systems and roads, are adequate to accommodate the additional development.

Policy LU-20p: The General Commercial designation is applied to the Clemente Inn property only to accommodate a proposal to renovate the former hotel. It is the intent of the Board of Supervisors that if the Clemente Inn building were to be removed, the property be returned to the "Urban Residential 8 units/ac" designation (APN 056-251-038).

Policy LU-20t: APNs 056-201-62, -66, -67 and -76 are designated "Urban Residential" partly because the 1989 General Plan EIR does not address the traffic impacts of 6.4 acres of "General Commercial" uses in the area. The Board would consider a General Plan amendment to a commercial land use category provided that the proposal is accompanied by adequate

environmental information and proposes a traffic sensitive commercial use.

Policy LU-20jj: Notwithstanding the Urban Residential one dwelling unit per acre land use designation of APN 127-101-002, a seven-unit Bed and Breakfast (B&B) Inn comprised of a four-bedroom primary dwelling identified as the “Chalet Farmhouse” and three “cottages” with bathrooms operating in conformance with PRMD File Number ORD05-0005 is considered conforming with the General Plan and is a transitional use between the open space and agricultural uses to the east and residential uses to the south, west and north. Such B & B uses and structures may be remodeled, repaired and reconstructed to continue in perpetuity, but cannot be expanded in terms of additional guest units or square footage dedicated to guest services. Should this site be subdivided to separate a second existing primary dwelling unit from the B & B uses, this policy would only apply to the portion of the site containing the B & B.

Sonoma County Zoning Code

The Sonoma County zoning code sets forth specific land use regulations and standards that establish the pattern and character of development in the County. The zoning code establishes various districts within the unincorporated county and designates the uses permitted in each district as well as the standards for development. In addition, the Zoning Code requires that all projects be consistent with both the General Plan and any adopted Specific or Area Plan (Article 2, Section 26-02-040).

Springs Highway 12 Design Guidelines

The Springs Highway 12 Design Guidelines were adopted in 1994 and provide a vision and a design vocabulary intended to lead to a beautification of the Highway 12 corridor, through both public and private efforts. The document is organized into three parts: Corridor Overview, Design Guidelines, and Site Elements Appendix.

The Corridor Overview includes information the design goals for the Springs area, an analysis of existing setting and an overall design concept for the enhancement of the Corridor. Included in the design concept are sketch plans for key study areas which illustrate potential public and private improvement collaborations. The Design Guidelines include design criteria for private development to ensure the consistency of each individual project with the overall character of the corridor. The Site Elements Appendix provides a palette of street furniture, fencing, lighting, and landscape materials which have been selected for their appropriateness to the country character of the corridor in the Springs Area.

These Guidelines will be superseded upon adoption of the proposed Specific Plan.

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on land use and planning if it will:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; and/or

- Conflict with any applicable habitat conservation plan or natural community conservation plan.

IMPACTS AND MITIGATION MEASURES

Impact 3.9-1: Implementation of the Project would not physically divide an established community (Less than Significant)

The overall purpose of the Project is to identify the community's vision for the future growth, development, and community resources within the Plan area in a manner consistent with the quality of life desired by residents and businesses.

The land uses allowed under the Project (Figures 2.0-8 and 2.0-9 in Chapter 2.0, Project Description) provide opportunities for cohesive new growth within existing urbanized areas of the County, as well as new infill growth adjacent to existing urbanized areas, but would not create physical division within the community. New development and redevelopment projects would be designed to complement the character of the existing community and neighborhoods and provide connectivity between existing development and new development. The Project does not include any new areas designated for urbanization or new roadways, infrastructure, or other features that would divide existing communities. The Project would have a **less than significant** impact associated with the physical division of an established community.

Impact 3.9-2: Implementation of the Project may conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate an environmental effect (Less than Significant)

STATE PLANS

The proposed Specific Plan was prepared in conformance with State laws and regulations associated with the preparation of specific plans. Discussion of the Project's consistency with State regulations, plans, and policies associated with specific environmental issues (e.g., air quality, traffic, water quality, etc.) is provided in the relevant chapters of this Draft EIR. Highway 12, which traverses the Plan area, is a State-owned highway facility. The State would continue to have authority over any State-owned lands in the vicinity of the Plan area, such as Highway 12, and the Project would not conflict with continued application of State land use plans, policies, and regulations adopted to avoid or mitigate environmental effects.

COUNTY PLANS

In September 2008, Sonoma County completed and adopted a comprehensive update to the General Plan. The Sonoma County General Plan 2020 is the overarching policy document that guides land use, housing, transportation, infrastructure, community services, and other policy decisions. The Land Use Element of the General Plan establishes land uses for the Plan area. As shown in Figure 2.0-6 in Chapter 2.0, the Plan area is currently designated General Commercial/Limited Commercial, Public/Quasi-Public, Recreation/Visitor-Serving Commercial, and Urban Residential by the Sonoma County General Plan Land Use Map.

The land uses as proposed are not consistent with the General Plan. When land uses are not consistent with a General Plan there are two courses of action: 1) the uses are not allowed due to the inconsistency, or 2) the land uses are changed through an amendment to the General Plan to create consistency.

The proposed Specific Plan would require amendments to the General Plan land use map and to land use policies to create consistency with the document. As shown in Figure 2.0-9 in Chapter 2.0, the proposed land uses for the Plan area would include Urban Residential, General Commercial, Public/Quasi-Public, and Recreation & Visitor-Serving Commercial. Although an amendment would be required to change the General Plan land uses in the area, the proposed location and type of uses are similar to the existing uses. For example, the core of the Highway 12 corridor is currently designated for General Commercial/Limited Commercial, Public/Quasi-Public, and Urban Residential land uses, while the proposed Highway 12 core would be designated for General Commercial, Public/Quasi-Public, and Urban Residential land uses. Additionally, the southeastern portion of the Plan area (off Donald Street) is currently designated for Urban Residential land uses, and the proposed land use designation for this area is also Urban Residential. The change in land use designations would allow for increased land use intensities and increased residential densities. These changes in land use designations remove the “Limited Commercial – Traffic Sensitive” designation from the Plan area.

In addition to the changes to the General Plan Land Use Map, the Project will result in text amendments to the General Plan Land Use Element and the Circulation Element. The Land Use Element changes include:

- Amend Policy LU-20e to note that the Limit Commercial Traffic Sensitive zoning will not apply to parcels in the Plan Area;
- Revise Policy LU-20i to remove reference to the Springs/El Verano/Agua Caliente area as uses, public services, design, and siting of development in this area would be addressed by the Specific Plan,
- Remove Policy LU-20p, which addresses the Clemente Inn property and is no longer applicable as the Clemente Inn building has been demolished, and
- Remove Policy LU-20t as several referenced parcels no longer exist ((APNs 056-201-67 and 056-201-76)) and any changes to land use designations for the remaining parcels (APNs 056-201-67 and 056-201-76) would require a General Plan Amendment and a Specific Plan Amendment, including associated CEQA documentation to address the proposed changes.

The Circulation Element changes include:

- Revise Policy CT-7II to remove reference to the Highway 12 Design Guidelines, which will be superseded by adoption of the proposed Specific Plan, and
- Remove Policy CT-7mm as the Traffic Sensitive designation and zoning will be removed by the proposed Specific Plan.

Traffic impacts associated with implementation of the proposed Specific Plan, including associated changes to the General Plan and the growth in the Plan area that would be accommodated with these changes, are described in Chapter 3.13, Transportation and Circulation. This Draft EIR addresses the environmental impacts associated with development allowed under the Project, including impacts associated with an increase in population, jobs, and development allowed under the Specific Plan, including development accommodated by changes to General Plan land use designations, General Plan text requirements, and zoning. The proposed zoning districts would establish permitted uses and standards for each zone. Upon approval of the requested General Plan amendment, the Plan would be consistent with the County General Plan.

The proposed Specific Plan contains detailed development standards, design guidelines, distribution of uses, infrastructure requirements, and goals and policies for the development of a specific geographic area. The Land Use Chapter of the Specific Plan establishes the General Plan and zoning designations for

the Plan area, describes key land use concepts in the Plan, identifies the Plan's development capacity, and provides the goals and policies to guide future land use. These designations implement both the Specific Plan and the County's General Plan vision, policies, and land use classifications for the project area.

The proposed Specific Plan carries forward and enhances policies and measures from the County's existing General Plan that were intended for environmental protection and would not remove or conflict with County plans, policies, or regulations adopted for environmental protection.

The Project would require modifications to the County's Zoning Ordinance to provide consistency between the General Plan and proposed Specific Plan zoning; however, these modifications will not remove or adversely modify portions of the Sonoma County Code that were adopted to mitigate an environmental effect. The Project would also require amendments to the adopted General Plan land use map. Once the requested amendment is approved, the Project would be consistent with the County's General Plan.

CONCLUSION

Subsequent development projects within the Plan area would be required to be consistent with all applicable policies, standards, and regulations, including those land use plans, policies, and regulations adopted to mitigate environmental effects by the County as well as those adopted by agencies with jurisdiction over components of future development projects. Approval of the General Plan amendment would ensure that the Project would be substantially consistent with the Sonoma County General Plan land use requirements and would have a **less than significant** impact relative to land use and planning.

The Project could result in potential adverse environmental impacts, including those related to traffic, noise, water quality, biological resources, aesthetics, agricultural resources, drainage and water quality, air quality, hazards, geology/soils, and cultural resources. Impacts to these resources, including consistency with applicable plans, policies, and regulations, are evaluated in the appropriate sections of this EIR.

Impact 3.9-3: Implementation of the Project may conflict with an applicable habitat conservation plan or natural community conservation plan (No Impact)

No natural community conservation plans or habitat conservation plans have been adopted in Sonoma County. The Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Implementation of the Project would have **no impact** relative to this topic.

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This section provides a discussion of the anticipated growth that would result from Project implementation, an analysis of the Project's consistency with relevant planning documents and policies related to population and housing, the regulatory setting, and an impact analysis. Information in this section is derived primarily from California Department of Finance Population and Housing Estimates and the U.S. Census.

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.11.1 ENVIRONMENTAL SETTING

ACRONYMS

ABAG	Association of Bay Area Governments
RHNA	Regional Housing Needs Allocation
RHNP	Regional Housing Needs Plan

SPECIFIC PLAN AREA

The approximate population within the proposed Springs Specific Plan area (Plan area) is 1,803. This is based on the number of residential dwelling units currently located within the Plan area, as provided by the Assessor's data and updated to reflect projects under construction, and household data from the U.S. Census for Sonoma County (U.S. Census Bureau, 2014b).

REGIONAL DATA

The Plan area encompasses portions of three U.S. Census tracts: 1502.02, 1503.05, and 1503.06. The three census tracts that include the Springs reflect a range of demographics, as shown in Tables 3.11-1, 3.11-2, and 3.11-3. Census tract 1503.5 is the most urban of the census tracts and encompasses the Specific Plan area that is west of SR 12 and north of Agua Caliente Creek. Census tract 1502.02 includes both urban (a portion of the City of Sonoma) and rural areas and includes the Plan area that is south of Agua Caliente Cree, including the Donald St./Verano Ave. neighborhood that is north of the City of Sonoma. Census tract 1503.06 is a mixture of urban and rural development and includes the Specific Plan area that is north of Agua Caliente Creek and east of SR 12.

Existing population, housing units, and households in these census tracts, as provided by the U.S. Census Bureau, are depicted in Table 3.11-1.

TABLE 3.11-1: POPULATION, HOUSING, AND HOUSEHOLDS – SPRINGS AREA (2017 5-YEAR ESTIMATE)

AREA	POPULATION	HOUSING UNITS	HOUSEHOLDS	PERSONS PER HOUSEHOLD
Census Tract #1502.02	4,557	2,767	2,203	2.04
Census Tract #1503.05	6,068	2,005	1,831	3.78
Census Tract #1503.06	4,206	1,909	1,700	2.47
Total of the three Census Tracts	14,831	6,681	5,734	2.76

SOURCE: UNITED STATES CENSUS BUREAU, AMERICAN FACTFINDER: 2013-2017 AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES (U.S. CENSUS BUREAU, 2017).

3.11 POPULATION AND HOUSING

HOUSING STOCK

Family households represent 4,159 of the 5,981 total households within the three census designated areas listed above. This represents an aggregate average of approximately 70% of households within these areas. Married-couple families represent approximately 55% of total households.

An average of 59% of housing in the three local Census Tracts (1502.02; 1503.05; and 1503.06) is owner-occupied, with remainder renter-occupied. The average family size within the three Census Tracts is 2.25 persons. The area also includes 17% households with their own children under 18 years of age. Additionally, approximately 32% of all householders live alone, and approximately 40% of households include an individual 65 years of age or older.

Additionally, Tables 3.11-2 and 3.11-3 below provide further population and housing statistics for the aforementioned three U.S. Census Tracts. Information on tenure, median household income, and per capita income is shown in Table 3.11-2. Information on working age population in the labor force, working age population employed, and unemployment rate are shown in Table 3.11-3.

TABLE 3.11-2: HOUSEHOLD TENURE, MEDIAN HOUSEHOLD INCOME, AND PER CAPITA INCOME, SPRINGS AREA (2017 ACS ESTIMATE)

AREA	% OF HOUSING OWNER-OCCUPIED	MEDIAN HOUSEHOLD INCOME	PER CAPITA INCOME
Census Tract #1502.02	63.2%	\$94,280	\$68,519
Census Tract #1503.05	44.1%	\$66,510	\$27,327
Census Tract #1503.06	63.2%	\$68,180	\$41,940

SOURCE: UNITED STATES CENSUS BUREAU, AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES (U.S. CENSUS BUREAU, 2019)

TABLE 3.11-3: PERSONS IN LABOR FORCE, EMPLOYED PERSONS, AND UNEMPLOYED PERSONS, SPRINGS AREA (2017 ACS ESTIMATE)

AREA	WORKING AGE POPULATION IN LABOR FORCE	WORKING AGE POPULATION EMPLOYED	UNEMPLOYMENT RATE
Census Tract #1502.02	2,878	2,578	10.4%
Census Tract #1503.05	3,104	3,078	.8%
Census Tract #1503.06	2,452	2,369	3.3%

SOURCE: U.S. CENSUS BUREAU (2015-2019). EMPLOYMENT STATUS FOR THE POPULATION 16 YEARS AND OVER AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES. RETRIEVED FROM <[HTTPS://CENSUSREPORTER.ORG](https://censusreporter.org)>

PERSONS PER DWELLING UNIT

The average number of persons residing in a dwelling unit in Sonoma County is 2.64 (California Department of Finance, 2018). According to the Market and Feasibility Analysis completed for the Springs Specific Plan (New Economics & Advisory, 2016), the average household size in the Plan area is 2.8.

3.11.2 REGULATORY SETTING

Plan Bay Area 2040

Plan Bay Area 2040 is a focused update to the 2013 Plan Bay Area. Plan Bay Area 2040 is a Regional Transportation Plan and Sustainable Communities Strategy for the nine-county Bay Area. Plan Bay Area

2040 projects expected household and employment growth in the Bay Area over a 24-year period, providing a roadmap for expected growth connected to a regional transportation investment strategy.

Regional Housing Needs Plan

California General Plan law requires each city and county to have land zoned to accommodate a fair share of the regional housing need. The share is known as the Regional Housing Needs Allocation (RHNA) and is based on a Regional Housing Needs Plan developed by councils of government. The Association of Bay Area Governments (ABAG) is the lead agency for developing the Housing Needs Plan for the nine-county area that includes Sonoma County. The County’s fair share of the adopted RHNA for 2013-2023, including the share for all of its cities, is summarized in Table 3.11-4.

TABLE 3.11-4: REGIONAL HOUSING NEEDS ALLOCATION - 2015-2023

	VERY LOW INCOME	LOW INCOME	MODERATE INCOME	ABOVE MODERATE INCOME	TOTAL
Sonoma County (All Jurisdictions)	1,818	1,094	1,355	4,177	8,444
Sonoma County (Unincorporated)	126	37	160	192	515

SOURCE: ABAG, 2015.

The County is not required to ensure that adequate development to accommodate the RHNA occurs; however, the County must facilitate housing production by ensuring that land is zoned for housing and that unnecessary development constraints have been removed. The County’s Housing Element, adopted in 2014, provides for the accommodation of the 2015-2023 RHNA.

The combined RHNA for the next housing cycle allocates 14,562 housing units for all Sonoma County jurisdictions, and the unincorporated County’s assigned share of that RHNA is 3,881 units, or nearly eight times the share of the County’s share of the current RHNA (515 total).

Sonoma County General Plan

The existing Sonoma County General Plan identifies the following goals, objectives, and policies related to population and housing:

LAND USE ELEMENT

GOAL LU-1: Accommodate Sonoma County’s fair share of future growth in the San Francisco Bay Area region as shown on Tables LU-2 and LU-5 in a manner consistent with environmental constraints, maintenance of the high quality of life enjoyed by existing residents, and the capacities of public facilities and services. Achieve a desirable balance between job opportunities and population growth.

Objective LU-1.1: Correlate development authorized by the Land Use Plan with projected population and employment growth as shown on Tables LU-2 and LU-5. Provide an adequate but not excessive supply of residential, commercial and industrial lands to accommodate this projected growth, taking into account projected city annexations.

Objective LU-1.2: Encourage the major share of commercial and industrial growth in the cities but accommodate a limited amount of this growth in unincorporated communities with urban services.

Objective LU-1.3: Designate lands within the various land use categories to make available residential and employment opportunities and to achieve a balance between job opportunities and population

3.11 POPULATION AND HOUSING

growth countywide, subject to any constraints of environmental suitability, protection of agriculture and other resource protection, and availability of public services.

GOAL LU-2: Accommodate the major share of future growth within the nine existing cities and their expansion areas and within selected unincorporated communities, which are planned to have adequate water and sewer capacities.

GOAL LU-3: Locate future growth within the cities and unincorporated Urban Service Areas in a compact manner using vacant "infill" parcels and lands next to existing development at the edge of these areas.

GOAL LU-6: Diversify new residential development types and densities. Include a range of urban densities and housing types in some unincorporated communities, and lower density in rural communities. In rural areas, housing types and densities should meet the needs of agricultural and resource users and provide limited residential development on large parcels.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on the standards established by Appendix G of the CEQA Guidelines, the Project will have a significant impact on population and housing if it will:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere;
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: Implementation of the Project would not induce substantial population growth (Less than Significant)

The Project accommodates future growth in the Plan area, including new businesses and new residential uses. Infrastructure and services would need to be extended to accommodate future growth. While no specific development projects are proposed as part of the Project, the Springs Specific Plan will accommodate future growth in the Plan area, including new businesses, expansion of existing businesses, and new residential development. As described in Chapter 2.0, Project Description, of this Draft EIR, buildout of the Springs Specific Plan could yield up to 706 dwelling units, up to 120 hotel rooms, and up to 276,903 square feet of non-residential uses, including:

- 168,029 square feet of commercial uses;
- 82,226 square feet of office uses; and
- 26,648 square feet of recreation uses.

Given the historical and current population, housing, and employment trends, growth in the County, as well as the entire state, is inevitable. The primary factors that account for population growth are natural

increase and net migration. According to the California Department of Finance, Demographic Research Unit, the average annual birth rate for California is expected to be 10 births per 1,000 population. Additionally, according to the Public Policy Institute of California, California is expected to attract more than one third of the country's immigrants. Other factors that affect growth include the cost of housing, the location of jobs, the economy, the climate, and transportation.

Plan Bay Area 2040 states that by 2040 the Bay Area is projected to add 2.1 million people, increasing total regional population from 7.2 million to 9.3 million, an increase of 30 percent or roughly 1 percent per year. From 2010 through 2040, Plan Bay Area 2040 anticipates 33,200 new households in Sonoma County, including 3,000 households in the unincorporated area, and 40,900 new employees, including 10,100 employees in the unincorporated area. During this same period, the California Department of Finance projected that Sonoma County's population would increase by 99,976 persons countywide. While the 2040 Plan Bay Area does not include community-specific growth projections, the 2013 Plan Bay Area projected that The Springs would grow by 1,150 households and 480 jobs. The Project would accommodate up to 706 new households (up to approximately 1,977 new residents) and up to 632 new employees. Overall, the growth associated with the Project is within the level of growth planned for the County and Bay Area.

Future development under the Project is anticipated to be primarily infill development as well as redevelopment and intensification of existing uses, since the Plan area is substantially built-out. In order to accommodate the planned growth, surrounding infrastructure (i.e., water, sewer, and storm drainage facilities) would be extended to vacant infill sites from nearby and/or adjacent roadways or developments. Additionally, some internal access roadways may be required for future infill development. The plan would not extend infrastructure to areas outside of the Plan area that are not currently served by infrastructure and does not increase capacity of infrastructure beyond that necessary to accommodate the growth anticipated for the Project. Growth under the Project is anticipated to remain within the general growth levels projected statewide, as well as locally, and would not be anticipated to exceed any applicable growth projections or limitations that have been adopted to avoid an environmental effect. The proposed Specific Plan is intended to assist in accommodating the County's fair share of statewide housing needs, which are allocated by the Association of Bay Area Governments, based on regional numbers provided by the California Department of Housing and Community Development on a regular basis (every five to eight years).

The existing Sonoma County General Plan includes goals, objectives, and policies that mitigate environmental impacts associated with growth, such as air quality, noise, traffic, water supply, and water quality effects. The Sonoma County General Plan does not establish any growth caps or thresholds, but rather sets a vision for growth in the County, with a focus on growth occurring in and around the cities and in unincorporated communities with adequate water and sewer capacity. Additionally, this Draft EIR includes mitigation measures, where appropriate, to reduce or eliminate potentially significant impacts associated with specific environmental issues associated with growth. Chapters 3.1 through 3.14 and 4.0 provide a discussion of environmental effects associated with development allowed under the proposed Specific Plan.

With adherence to the existing General Plan goals, objectives, and policies intended to guide growth to appropriate areas and provide services necessary to accommodate growth, development of the land uses allowed under the proposed Specific Plan and the infrastructure anticipated to accommodate such development would be consistent with the long-range growth planned for the County and Bay Area and would not induce growth that would exceed adopted thresholds. Therefore, population and housing growth associated with the Project would result a **less than significant** impact.

Impact 3.11-2: Implementation of the Project would not displace substantial numbers of people or existing housing (Less than Significant)

There are approximately 557 existing residences (approximately 347 single-family units and 210 multi-family units) located within the Plan area. As buildout of the Plan area progresses, it is likely that some of the existing housing units would be remodeled, renovated, expanded on, demolished, or otherwise removed or replaced with new development. However, the proposed Specific Plan does not require the removal of any housing. The Project would accommodate up to 706 new housing units. New development allowed under the Project would significantly increase the available housing stock in the County. Therefore, Project implementation would not displace substantial numbers of people or housing units. Therefore, impacts associated with displacement would be **less than significant**.

This section describes and evaluates potential impacts associated with the provision of police protection, fire protection and emergency services, schools, parks and recreation, and other services for the Project. Impacts associated with solid waste and wildfires are discussed in Section 3.14, Utilities, and Section 3.7, Hazards and Hazardous Materials, respectively.

Comments were received during the public review period or scoping meeting for the Notice of Preparation (NOP) regarding this topic from the following: DP&F Attorneys at Law (July 2018), and an anonymous member of the public during the NOP Scoping Meeting (July 2018). These comments pertain to parks/open space, community health, and the location of land zoned for recreation. Each of the comments related to this topic are addressed within this section.

3.12.1 ENVIRONMENTAL SETTING

ACRONYMS

CDE	California Department of Education
OES	Office of Emergency Services
SVFD	Sonoma Valley Fire District

FIRE PROTECTION

The Sonoma Valley Fire District (SVFD) provides all-risk fire, rescue, and paramedic level emergency medical services to the communities of Agua Caliente, Boyes Hot Springs, City of Sonoma, Diamond-A, El Verano, Fetters Hot Springs, Glen Ellen, Mayacamas, Temelec, and Seven Flags.

On February 1, 2002, the City of Sonoma and Valley of the Moon Fire Protection District entered into a Joint Powers Agreement creating a public entity known as the Sonoma Valley Fire & Rescue Authority. The purpose of the Authority was to eliminate duplication of equipment, personnel and resources, control costs, and provide higher levels of fire and rescue services to both communities.

On December 19, 2011, the City of Sonoma signed a contract for fire and emergency medical services with the Valley of the Moon Fire Protection District to further eliminate duplication of administrative services. The Fire District served as the employer of both employee groups.

On July 1, 2020, the Sonoma Valley Fire District was formed through a consolidation of the Valley of the Moon and Glen Ellen Fire Districts as well as the Mayacamas Volunteer Fire Company service area. The new District's formation went through the LAFCO re-organization process that included public hearings and legal requirements. The consolidation is intended to provide benefits to citizens and taxpayers by employing common equipment, resources, and personnel under a single administration and operations.

The District maintains four career-staffed fire stations and four volunteer-staffed stations, an administrative office, and a maintenance facility. The District staffs six companies: four Paramedic Engine Companies and two ALS Ambulances. The District also staffs an assortment of specialized equipment through the supplemental staffing of 41 dedicated volunteer firefighters. This equipment includes a Ladder Truck, two Rescues, three Water Tenders, and nine additional Fire Engines, including six specialized wildland engines.

3.12 PUBLIC SERVICES AND RECREATION

The District, including the City, serves an area of approximately 74 square miles with a resident population of approximately 48,000. The District also provides ambulance service to the greater Sonoma Valley, an area of approximately 100 square miles.

The Sonoma Valley Fire District is an autonomous Special District, as defined under the Fire Protection District Law of 1987, Health and Safety Code, Section 13800, of the State of California. A seven-member Board of Directors, elected at-large by their constituents, and each serving a four-year term, govern the District. The Fire Chief oversees the general operations of the District in accordance with the policy direction prescribed by the Board of Directors.

FIRE RESPONSE TIMES

Response times in different cities vary greatly depending on the size of the jurisdiction and department, geographical location and levels of crime. Smaller cities usually have faster response times, due simply to the geography.

According to the SVFD, in 2017, 34 percent of the district's calls were in the Plan area. Response times from Station 2 to East Thompson Avenue were approximately seven minutes and 46 seconds. Response times from Station 3 to Verano Avenue were approximately seven minutes and 21 seconds. Calls for service based on a fairly stable population have risen from approximately 4,500 in 2013 to 5,400 in 2018, a 20 percent increase.

POLICE PROTECTION

The Plan area is served by the Sonoma County Sheriff's Department. The Sonoma Valley Substation provides patrol services to the entire Sonoma Valley from Pythian Road to San Pablo Bay. The Substation is located at 810B Grove Street and is staffed with two Sergeants, sixteen Deputy Sheriffs and one Community Services Officer.

Table 3.12-1 presents crime statistics for the Plan area and its general vicinity between March 2015 and March 2016. As shown on the table, the majority of crimes within the area (41.7%) consist of drug and narcotics related offences. Other common offences include: vandalism (13.5%), theft (12.2%), aggravated assault (10.6%), and burglary (7.6%).

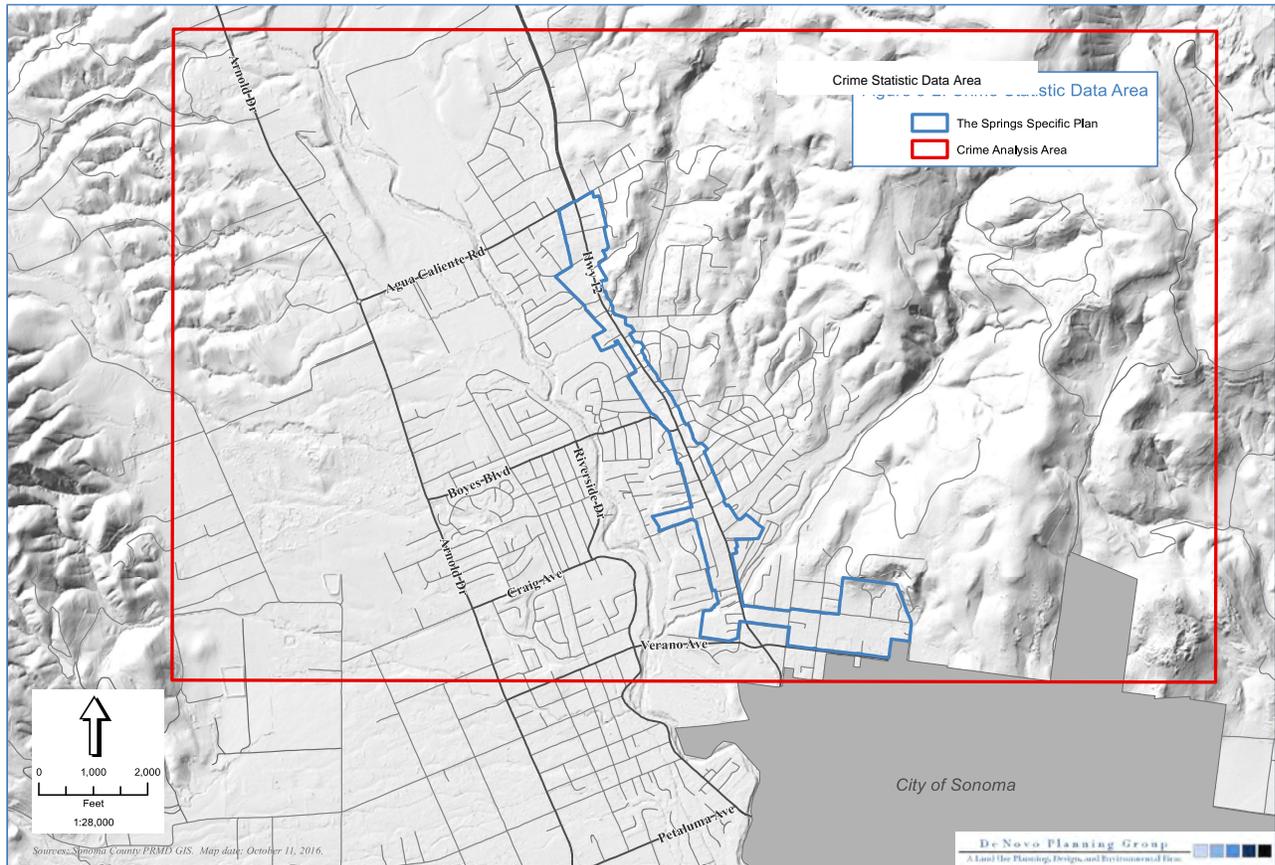
The Plan area and general vicinity where the above-mentioned crimes occurred is shown in Figure 3.12-1.

TABLE 3.12-1: CRIMES WITHIN THE VICINITY OF THE PLAN AREA

CRIME CLASS	NUMBER OF CRIMES	PERCENT OF CRIMES
Drug/Narcotics Violations	130	41.7%
Vandalism	42	13.5%
Theft	38	12.2%
Aggravated Assault	33	10.6
Burglary	24	7.6%
Sexual Assaults	18	5.8%
DUI	14	4.5%
Shoplifting	7	2.2%
Robbery (Individual)	3	1.0%
Arson	1	0.3%
Motor Vehicle Theft	1	0.3%
Homicide	1	0.3%

SOURCE: BAIR ANALYTICS 1 YEAR CRIME STATISTICS AND CRIME MAPPING DATA MARCH 2015 THROUGH FEBRUARY 2016.

FIGURE 3.12-1: CRIME ANALYSIS AREA FOR VICINITY OF THE PLAN AREA (TABLE 3.12-1)



POLICE RESPONSE TIMES

As noted above, response times in different cities vary greatly depending on the size of the jurisdiction and department, geographical location and levels of crime. Smaller cities usually have faster response times, due simply to the geography. Calls for service are prioritized into two general categories.

- Priority 1 calls involve an immediate threat to life or crimes that are in progress.
- Priority 2 calls are high priority but do not elevate to the level of an emergency.

The Sheriff’s Department had 50 Priority 1 events and 295 Priority 2 events in the Plan area between January 1, 2018 and December 30, 2018. During this time period, the median response time was 1 minutes and 30 seconds for Priority 1 calls and 2 minutes and 36 seconds for Priority 2 calls.

SCHOOLS

The Sonoma Valley Unified School District (School District) includes the City of Sonoma and the communities of El Verano, Boyes Hot Springs, Agua Caliente, Eldridge, and Glen Ellen. The district serves approximately 4,600 students in grades K through 12 located on 11 campuses throughout the valley.

According to the School District’s attendance boundaries, students living in the northern portion of the Plan area would generally attend Flowery Elementary while students living in the south would attend Sassarini Elementary. El Verano Elementary school serves students living to the west of Sonoma Creek. Two charter schools are in the District’s boundaries, Sonoma Charter School and Woodland Star Charter School, which are open to all K through 8 students. Altimira Middle School also serves grades 6 through 8. Local high school students attend Sonoma Valley High School located within the City of Sonoma. Local schools are listed below on Table 3.12-2.

TABLE 3.12-2: SCHOOLS SERVING THE PLAN AREA AND VICINITY

SCHOOL	ADDRESS	SCHOOL DISTRICT	GRADES	STUDENT POPULATION
Altimira Middle School	17805 Arnold Drive	Sonoma Valley Unified	6-8	557
Flowery Elementary	17600 Sonoma Hwy	Sonoma Valley Unified	K-5	348
Sassarini Elementary	652 Fifth St	Sonoma Valley Unified	K-5	378
Sonoma Charter	17202 Sonoma Hwy	Sonoma Valley Unified	K-8	219
Sonoma Valley High School	20000 Broadway	Sonoma Valley Unified	9-12	1,312
El Verano Elementary	18606 Riverside Dr	Sonoma Valley Unified	Preschool-5	446
Woodland Star Charter	17811 Arnold Dr	Sonoma Valley Unified	K-8	249

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION, EDUCATIONAL DEMOGRAPHICS UNIT, CALIFORNIA PUBLIC SCHOOL ENROLLMENT-SCHOOL REPORT (2014-2015)

LIBRARY SERVICES

Sonoma County provides public library services throughout the County. The Plan area of is served by the Sonoma Valley Regional Library located approximately one mile south of the Plan area at 755 West Napa Street in the City of Sonoma. The library offers programs for children and families, adults and teens. The library holds book sales and book discussion forums. Sonoma County also operates library branches in

Santa Rosa, Cloverdale, Forestville, Guerneville, Healdsburg, Occidental, Petaluma, Rohnert Park, Sebastopol, and Windsor.

MUSEUMS

There are no museums located within the Plan area. However, there are many museums within Sonoma County, and the neighboring City of Sonoma. Museums located within the City of Sonoma are described below.

The **Sonoma Valley Museum of Art (Museum of Art)**, located at 551 Broadway in the City of Sonoma, was founded and incorporated as a 501 (c)(3) nonprofit organization to promote the creation, exhibition, and collection of fine arts from around the world and provide educational opportunities to people of all ages.

Since 1999, Museum of Art has staged more than 70 exhibitions attracting over 130,000 visitors. It occupies an 8,000-square-foot space just one-half block south of the historic Sonoma Town Plaza, approximately 1.25 miles southeast of the Plan area. The museum purchased the building in early 2001, and extensive renovations, including the addition of a new façade, were completed in March 2004. In 2010, classroom space was installed. With a membership of more than 1,000 households, SVMA is the largest visual arts organization in the San Francisco North Bay region (Sonoma, Marin, Napa and Solano Counties). In recent years, the curatorial mission has evolved to feature modern and contemporary work, bringing a new perspective to the area.

The **Depot Park Museum** is located in the City of Sonoma. The City of Sonoma acquired the old Northwestern Pacific depot and adjacent land to prevent the loss of the historic site. In 1975, fire destroyed the historic train depot. A major fund-raising drive by the Sonoma Valley Historical Society, along with a grant from the city, provided funding to rebuild the depot as a community museum. The adjacent land was dedicated as Depot Park. The museum and park opened in 1979.

OTHER COMMUNITY FACILITIES

The **Sonoma Community Center** is housed on the campus of the historic Sonoma Grammar School at 276 East Napa Street in the City of Sonoma (outside the Plan area). Its mission is to enrich the lives of Valley residents and visitors with a broad range of cultural, educational, recreational and community service activities. Additionally, the Center puts on many community events throughout the year including Sonoma's nationally acclaimed Old Fashioned 4th of July Parade & Celebration, the Plaza-packing City Party, the free-to-all Thanksgiving Dinner and many other events throughout the community.

The **Teen Center**, located at 17440 Sonoma Highway (SR 12) outside of the Plan area, is a free drop-in center provided by Teen Services Sonoma. The Center offers caring adult supervision, free snacks and meals, and a place for teens to connect and build friendships. Services include a homework assistance program, GED preparation assistance, credit recovery help, and job referrals. Activities include art and cooking classes, athletic and fitness activities, and participation in outdoor adventure fieldtrips. The Teen Center hosts a weekly girls' support group..

Art Escape, located at 17474 Sonoma Highway (SR 12) outside of the Plan area, is a non-profit art center. Art Escape's mission is to provide a vibrant, stimulating place where the diverse population of Sonoma Valley can gather to discover and explore their creative potential. Art Escape offers free and affordable programs to the community, including art projects and after-school classes for students.

The **Sonoma State Historic Park** is located in the City of Sonoma (outside the Plan area) and includes multiple historical locations in the vicinity of the Sonoma Plaza. The park includes historical features including the Sonoma Mission, Blue Wing Inn, Mission San Francisco Solano de Sonoma Complex, Sonoma Barracks, Adobe Indian House, and General Vallejo's Home and associated outbuildings. Sonoma Petaluma Parks is a non-profit organization that provides docent and supportive services to further the interpretive and educational functions of the Sonoma State Historic Park.

A **U.S Post Office**, also known as the Boyes Hot Springs Post Office, is located within the Plan area at 18092 Sonoma Highway.

PARKS AND RECREATION SYSTEM

The Sonoma County Regional Parks system includes more than 50 parks and trails from Petaluma to Gualala and Sonoma to Bodega Bay. Many offer natural, undeveloped landscapes. Others feature sports fields, playgrounds, campgrounds, swimming beaches and boat launches. The Sonoma County Regional Parks Department also manages ocean marinas and the county's largest environmental education center.

The Sonoma County Regional Parks Department manages several parks within the vicinity of the Plan area including:

Larson Park, totaling 7.59 acres, is located at 329 DeChene Avenue, adjacent to Flowery School. Larson Park features a community garden and lovely views of the riparian habitat along Sonoma Creek. It is also a great family spot, with an accessible playground, a picnic area, restrooms, a baseball/softball field, basketball court, soccer/multi-use field, and four tennis courts.

Ernie Smith Community Park, totaling 10.38 acres, is located at the corner of Arnold drive and Craig Avenue (18776 Gillman Drive). This park provides an athletic field for little league and softball, a basketball court, children's accessible play area, 1/2-acre dog park with picnic tables, wheelchair-accessible group picnic area, and a paved trail.

Maxwell Farms Regional Park, totaling 78.82 acres, is located at 100 Verano Avenue, adjacent to the southern portion of the Plan area, has fields for soccer and baseball, tennis and volleyball courts, an accessible playground and picnic sites, and 2.5 miles of nature trails winding through 40 acres of backcountry. Maxwell Farms Regional Park also features:

- **Macdougald Skateboard Park.** This park was built through local grants and donations. The city of Sonoma manages the skateboard park.
- **The Valley of the Moon Boys and Girls Club.** The Boys and Girls Club offers the children of Sonoma Valley a variety of educational and recreational activities such as sports, computer skills, tutoring and art. This facility also was built with local grants and donations.

The **Sonoma Valley Trail** is a 13-mile paved trail along the scenic Highway 12 corridor between Santa Rosa and Sonoma proposed for construction by Sonoma County Regional Parks. The scenic corridor currently lacks a safe and separated pathway for pedestrians and bicyclists traveling north and south. A feasibility study was completed in February 2016 to help facilitate the trail development. This trail project would develop a separated pathway connecting Sonoma with Santa Rosa. Sonoma County Regional Parks is currently searching for funding opportunities to complete the Sonoma Valley Trail.

As shown in Table 3.12-3, three area parks are located in the vicinity of the Plan area, totaling 96.79 acres of parklands.

TABLE 3.12-3: PARKS IN THE PLAN AREA AND VICINITY

<i>PARK NAME</i>	<i>AGENCY</i>	<i>TYPE</i>	<i>TOTAL ACREAGE</i>
Larson Park	Sonoma County Regional Parks Dept	Open Access	7.59
Ernie Smith Park	Sonoma County Regional Parks Dept	Open Access	10.38
Maxwell Farms Regional Park	Sonoma County Regional Parks Dept	Open Access	78.82

SOURCE: SONOMA COUNTY REGIONAL PARKS DEPARTMENT; CALIFORNIA DEPARTMENT OF PUBLIC HEALTH MAPPING TOOL

Policy PS-2c of the Sonoma County General Plan outlines the following park standard: “Use the following standards for determination of park needs: Twenty acres of regional parks per 1,000 residents countywide and five acres of local and community parks per 1,000 residents in unincorporated areas. A portion of State parklands may be included to meet the standard for regional parks.”

The Plan area encompasses portions of three U.S. Census tracts: 1502.02, 1503.05, and 1503.06. The total population for these three U.S. Census tracts is 15,335¹. With 96.79 acres of parkland, the Plan area currently provides 6.3 acres of parkland for every 1,000 people, which is slightly above the County’s goal of 5.0 acres for every 1,000 people.

3.12.2 REGULATORY SETTING

FEDERAL

Federal Highway Administration Section 4(f)

Section 4(f) refers to the original section within the U.S. Department of Transportation Act of 1966 which provided for consideration of park and recreation lands, wildlife and waterfowl refuges, and historic sites during transportation project development. The law, now codified in 49 U.S.C. §303 and 23 U.S.C. §138, applies only to the U.S. Department of Transportation and is implemented by the Federal Highway Administration and the Federal Transit Administration through the regulation 23 Code of Federal Regulations 774. Section 4(f) applies to projects that receive funding from or require approval by an agency of the U.S. Department of Transportation. Before approving a project that uses Section 4(f) property, the Federal Highway Administration must determine that there is no feasible and prudent alternative that avoids the Section 4(f) properties and that the project includes all possible planning to minimize harm to the Section 4(f) properties; or, Federal Highway Administration makes a finding that the project has a de minimis impact on the Section 4(f) property. .

¹ American Community Survey 5-year estimates. Retrieved from Census Reporter Profile page for Census Tract 1502.02, Sonoma, CA <<http://censusreporter.org/profiles/14000US06097150202-census-tract-150202-sonoma-ca/>>

STATE

Fire Protection and Emergency Response

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

EMERGENCY RESPONSE/EVACUATION PLANS

The State passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standardized Emergency Management System program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with Standardized Emergency Management System could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

FIRE PROTECTION

The California Fire Code contains regulations relating to construction and maintenance of buildings and the use of premises. Topics addressed in the Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, industrial processes, and many other general and specialized fire safety requirements for new existing buildings and premises.

UNIFORM FIRE CODE

The Uniform Fire Code with the State of California Amendments contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Fire Code contains specialized technical regulations related to fire and life safety.

CALIFORNIA HEALTH AND SAFETY CODE

State fire regulations are set forth in Sections 13000, et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

Parks and Recreation

QUIMBY ACT

The Quimby Act (California Government Code Section 66477) states that “the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map.” Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development.

Schools

CALIFORNIA CODE OF REGULATIONS

California public school districts are authorized to assess development fees within their boundaries under California Education Code Section 17620, et seq. Such fees are subject to the limitations and requirements of California Government Code Sections 65995-65998(h). Under these provisions, the payment of school fees is deemed to be full and complete mitigation of the impacts of land use approvals involving the planning, use, or development of real property with regard to the provision of adequate school facilities.

CALIFORNIA DEPARTMENT OF EDUCATION

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations.

Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between developed grounds area around the buildings and building areas. The CDE SFPD believes that when the grounds exceed this ratio by an appreciable amount, the maintenance costs for landscaping increase beyond the budget of the average school district. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Certain health and safety requirements for school site selection are governed by state regulations and the policies of the SFPD relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

THE KINDERGARTEN-UNIVERSITY PUBLIC EDUCATION FACILITIES BOND ACT OF 2002 (PROP 47)

This act was approved by California voters in November 2002 and provides for a bond issue of \$13.05 billion to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted at areas of greatest need and must be spent according to strict accountability measures. Funds will also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California in order to provide adequate higher education facilities to accommodate growing student enrollment.

LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (SB 50)

The “Leroy F. Greene School Facilities Act of 1998,” also known as Senate Bill 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district’s authority to levy school impact fees. This comprehensive legislation, together with the \$9.2 billion education bond act approved by the voters in November 1998 known as “Proposition 1A”, reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- **Level I** fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.
- **Level II** fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district’s bonding capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district’s teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.
- **Level III** fees are outlined in Government Code Section 65995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

LOCAL

Fire Protection and Emergency Response

SONOMA VALLEY FIRE & RESCUE AUTHORITY 2015-2020 STRATEGIC PLAN

The Sonoma Valley Fire & Rescue Authority 2015-2020 Strategic Plan addresses the organization’s mission, values, and vision, and sets forth a continuous improvement plan. The Strategic Plan also contains

goals and strategies which aim to achieve the mission of the Authority (now the District), and input received from stakeholders (internal and external).

SONOMA COUNTY FIRE SAFETY ORDINANCE

Chapter 13 of the Municipal Code contains the Sonoma County Fire Safety Ordinance. The Fire Safety Ordinance outlines the County Fire Code, adopts the California Fire Code (with amendments), and summarizes the County's fire safe standards. Under Section 13-15 of the Code, the County fire chief "shall be responsible for plan checking and inspection of new construction and alterations subject to the county fire code, Chapter 13 within both those portions of the unincorporated area of the county not in a local fire protection district and those portions of the unincorporated area of the county in a local fire protection district which has adopted the county fire code, unless a local fire protection district notifies the county fire chief in writing that it has elected to have the local fire chief exercise those responsibilities within its jurisdictional area, whether according to the county fire code or the district's amendment of the county fire code adopted per subsection (d). Any such action shall only be effective if it is thereafter approved by the board of directors of the local fire protection district."

Sonoma County General Plan

The Sonoma County General Plan contains the following goals, objectives, and policies that are relevant to public services:

PUBLIC FACILITIES AND SERVICES ELEMENT

GOAL PF-2: Assure that park and recreation, public education, fire suppression and emergency medical, and solid waste services, and public utility sites are available to the meet future needs of Sonoma County residents.

Objective PF-2.1: Provide an adequate supply and equitable geographic distribution of regional and local parks and recreation services based on population projections.

Objective PF-2.2: Use the National Recreation and Parks Administration (NRPA) standards as the minimum standards for determining park needs.

Objective PF-2.3: Assist school districts in developing more precise estimates of population growth within their attendance areas.

Objective PF-2.4: Use estimates by school districts of new school site needs as the basis for applying school site designations on land use plan maps.

Objective PF-2.5: Promote cooperation among fire and emergency service agencies in the area of public education and awareness, especially in those areas isolated from emergency service providers either by distance or topography.

Objective PF-2.6: Integrate fire protection systems into new structures as a means of improving fire protection services through adoption of a County ordinance.

Objective PF-2.7: Encourage more effective use of existing emergency and medical services by emphasizing an integrated Countywide response system.

3.12 PUBLIC SERVICES AND RECREATION

Objective PF-2.8: Continue to coordinate fire protection services and planning with all other related agencies.

Policy PF-2a: Plan, design, and construct park and recreation, fire and emergency medical, public education, and solid waste services and public utilities in accordance with projected growth, except as provided in Policy LU-4d.

Policy PF-2b: Work with the Cities to provide park and recreation, public education, fire and emergency medical, and solid waste services as well as public utilities. Use proposed annexations, redevelopment agreements, revenue sharing agreements, and the CEQA process as tools to ensure that incorporated development pay its fair share toward provision of these services.

Policy PF-2c: Use the following standards for determination of park needs: Twenty acres of regional parks per 1,000 residents countywide and five acres of local and community parks per 1,000 residents in unincorporated areas. A portion of State parklands may be included to meet the standard for regional parks.

Policy PF-2d: Provide community parks as needed in Urban Service Areas until the area incorporates, are annexed, or another service providing entity is established.

Policy PF-2e: In the event that a proposed park or school site is designated on the GP 2020 Land Use Maps (Figures LU-5a through 5i) or Open Space and Resource Conservation Maps (Figures OSRC-5a through 5i), consider the designation as applying to a general area rather than a particular parcel, unless and until a particular site is acquired and approved for public use development authorized by the land use plan.

Policy PF-2f: Adopt and implement a new Outdoor Recreation Plan with parks and recreation facilities necessary to meet the needs of GP2020.

Policy PF-2g: Require dedication of land or in-lieu fees as a means of funding park and fire services and facilities.

Policy PF-2h: Consider establishing a land acquisition reserve fund to purchase park or recreation lands in areas lacking adequate park facilities.

Policy PF-2i: Consider user fees in County park areas where special facilities are available. Offer discounts to County residents.

Policy PF-2j: Where there is an unmet need for local park facilities, encourage the formation of County service areas or other special districts to meet the need, if economically feasible.

Policy PF-2k: Assist school districts in estimating the amount, rate and location of projected population growth within their attendance areas.

Policy PF-2l: Continue to implement State law pertaining to school impact mitigation that allows for the dedication of land, the payment of fees, or both, as a condition of approval for development projects.

Policy PF-2m: Prepare a Fire Services Master Plan for urban and rural areas in cooperation with the Cities, State, and other fire service agencies. The minimum contents necessary for an adequate master plan are:

- (1) A statement of objectives, policies and programs,
- (2) A forecast of growth,
- (3) Projected fire and emergency medical service needs, and
- (4) A level of service assessment.

Policy PF-2n: Require prior to discretionary project approval written certification that fire and related services customarily provided to comparable uses are available or will be available prior to occupancy for projects within the service area of the applicable fire agency.

Policy PF-2o: The Department of Fire Service shall review and comment on any proposed changes in the boundaries of areas of State and local responsibility for wildland fire protection and the service boundaries of local fire districts and volunteer companies.

Policy PF-2x: Utilize development fees to require that new development pay for its share of needed infrastructure as identified in existing and future Capital Improvement Plans prepared by the County.

The Sonoma County General Plan contains the following goals, objectives, and policies that are relevant to public safety:

PUBLIC SAFETY ELEMENT

GOAL PS-3: Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires.

Objective PS-3.1: Continue to use complete data on wildland and urban fire hazards.

Objective PS-3.2: Regulate new development to reduce the risks of damage and injury from known fire hazards to acceptable levels.

Objective PS-3.3: Use the Sonoma County Hazard Mitigation Plan to help reduce damages from wildland fire hazards.

Policy PS-3a: Continue to use available information on wildland and structural fire hazards.

Policy PS-3b: Consider the severity of natural fire hazards, potential damage from wildland and structural fires, adequacy of fire protection and mitigation measures consistent with the Public Safety Element in the review of projects.

Policy PS-3i: Encourage and promote fire safe practices and the distribution of fire safe educational materials to the general public, permit applicants, and local planning agencies.

Policy PS-3k: Work with the California Department of Forestry and Fire Protection (CalFire) to identify areas of high fire fuel loads and take advantage of opportunities to reduce those fuel loads, particularly in Very High or High Fire Hazard Severity Zones.

Policy PS-3l: Require automatic fire sprinkler systems or other on-site fire detection and suppression systems in all new residential and commercial structures, with exceptions for detached utility buildings, garages, and agricultural exempt buildings.

Policy PS-3m: Consider additional impact or mitigation fees, or a benefit assessment, to offset the impact of new development on fire services.

Policy PS-3d: Refer projects and code revisions to the County Department of Fire and Emergency Services and responsible fire protection agencies for their review and comment.

Policy PS-3e: The County Department of Fire and Emergency Services shall offer assistance to local agencies in adoption and enforcement of fire safety regulations and shall work with local agencies to develop proposed improvements to County codes and standards.

Policy PS-3f: Encourage strong enforcement of State requirements for fire safety by the California Department of Forestry and Fire Protection.

Policy PS-3g: Encourage continued operation of California Department of Forestry and Fire Protection (CalFire) programs for fuel breaks, brush management, controlled burning, re-vegetation, and fire roads.

Policy PS-3h: Develop a program to improve and standardize the County street addressing system in order to reduce emergency service response times. Where applicable, coordinate the program with the cities.

The Sonoma County General Plan contains the following goals, objectives, and policies that are relevant to open space and resource conservation:

OPEN SPACE AND RESOURCES CONSERVATION ELEMENT

GOAL OSRC-17: Establish a countywide park and trail system that meets future recreational needs of the County's residents while protecting agricultural uses. The emphasis of the trail system should be near urban areas and on public lands.

Objective OSRC-17.1: Provide for adequate parklands and trails primarily in locations that are convenient to urban areas to meet the outdoor recreation needs of the population, while not negatively impacting agricultural uses.

Policy OSRC-17a: Apply the "Public-Quasi Public/Park" designation to all existing local, County, and State parklands.

Policy OSRC-17b: Apply the "Planned Parks" designation to indicate general areas where a need exists for parks.

Policy OSRC-17c: Consider requiring dedication of public access by fee or easement from a public roadway to a navigable stream (Subdivision Map Act), the ocean, public lakes, and major reservoirs as a condition of approval for major subdivisions if the project blocks an existing public access point or it results in the need for additional access, and other reasonable access is not available.

Policy OSRC-17d: The trails on Figure OSRC-3 make up the County's designated plan for trails. Trail locations [which apply to the Plan area] are approximate and are described below. Roadways may be used where access cannot be obtained through private property.

- **Hood Mountain Trail North.** The proposed trail links Hood Mountain County Park to a 240-acre Bureau of Land Management holding to the east at the Sonoma/Napa county line.
- **Valley of the Moon Trail.** The proposed trail traverses the Valley of the Moon between Jack London State Park and the Sonoma/Napa County line and links Sonoma Valley Regional Park to the Glen Ellen community.
- **Sonoma Trail.** The proposed trail follows the right-of-way of the Northwestern Railroad from the City of Sonoma to Highway 121/12.

Classify potential trails as follows:

- (1) **Recreational Waterways.** Recognize boating and canoeing activities on designated waterways. Limit hiking trails to connections between urban areas, parks and the waterway.
- (2) **Hiking and Equestrian Trails.** Locate a trail system along the Sonoma County/Napa County boundary. Link existing and proposed State and County parks adjacent to urban areas.
- (3) **Multiple Use Trails.** Use railroad rights-of-way and water agency channels as multiple use trails for hiking, equestrian and bike use. Use existing roadways as alternative routes if access cannot be obtained.

Policy OSRC-17e: Encourage private organizations to assist in the construction and maintenance of trails.

Policy OSRC-17f: Consider requiring a dedication in fee or by easement for trails as a condition of approval of subdivisions. There must be a need identified on Figure OSRC-3 and the project must either block an existing access or result in the need for additional recreational opportunities. Locate and fence trails to minimize impacts on agricultural uses.

Policy OSRC-17h: Identify and evaluate alternative sites in the Boyes Hot Springs area to meet the projected need for a regional park facility in Sonoma Valley.

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on public services if it would result in:

- Substantial adverse physical impacts associated with the provision of new or physically altered government facilities, and/or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
 - Fire Protection;
 - Police Protection;
 - Schools;
 - Parks; and/or
 - Other Public Facilities.
- Increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Recreational facilities or the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: Implementation of the Project could result in adverse physical impacts on the environment associated with governmental facilities and the provision of public services (Less than Significant)

Development accommodated under the Project would result in additional residents and businesses in the County, including new residential, office, and commercial uses. As described in Chapter 2.0, full buildout of the proposed Specific Plan Land Use Map within the Plan area would result in up to:

- 706 dwelling units; and
- 276,903 SF of non-residential uses, including:
 - 168,029 SF of commercial uses;
 - 82,226 SF of office uses; and
 - 26,648 SF of recreation uses; and
- 120 hotel rooms

This new growth may increase the County's population by approximately 1,977 residents.²

Development and growth facilitated by the Project would result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services.

As the demand for services increases, there will likely be a need to address acceptable service ratios, response times, and other performance standards. New or expanded service structures (e.g., offices, maintenance and administrative buildings, schools, parks, fire facilities, libraries, etc.) will be needed to provide for adequate staffing, equipment, and appropriate facilities to serve growth in the County. Impacts to parks are discussed in detail in Impact 3.12-2, and impacts to schools are discussed in detail in Impact 3.12-3. Police and fire services are discussed in detail below.

POLICE SERVICES

The Project would facilitate an increase in population in the Sheriff's services area. According to the Sheriff's office, future development within the Plan area would require approximately 0.44 deputies to support the increased population. This is based on the Sheriff Department's current level of service with 117 field service deputies patrolling a population of 500,675. The Department did not identify other needs that would result from the Project (i.e., new facilities or equipment).

The Specific Plan includes policies and guidelines which require development projects to offset impacts to community services, including police services, to ensure that service levels for existing uses are not impaired or significantly impacted. Policy CF-1e requires development projects to install off-site infrastructure or pay appropriate in-lieu fees. Additionally, Policy CF-c requires all development, infrastructure, and long-term planning projects to be consistent with all applicable County and service provider infrastructure master plans. Compliance with these policies would ensure that the proposed Specific Plan does not result in adverse physical impacts on the environment associated with police protection facilities.

FIRE SERVICES

The Project would facilitate an increase in the population in the SVFD. According to the SVFD, implementation of the Specific Plan would result in the need for new equipment (i.e., ladder truck) and personnel (i.e., one full time employee). An impact fee was adopted by the Sonoma County Board of Supervisors on March 23, 2021 which requires future development in the SVFD to pay a one-time fee to ensure that the SVFD fire facilities and apparatus fleet will meet or exceed current service levels. Policy CF-1e requires development projects to install off-site infrastructure or pay appropriate in-lieu fees, including the applicable impact fee.

As noted above, the Specific Plan includes policies and guidelines which require development projects to offset impacts to community services, including fire services, to ensure that service levels for existing uses are not impaired or significantly impacted. Policy CF-1f requires all new utilities in the Plan area to be installed underground, including electricity utilities. This would eliminate the potential for future power

² Calculated using the the average household size for the Plan area of 2.8, based on the Market and Feasibility Analysis completed for the Springs Specific Plan (New Economics & Advisory, 2016) .

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lines to start fires in the Plan area. Additionally, Policy CF-c requires all development, infrastructure, and long-term planning projects to be consistent with all applicable County and service provider infrastructure master plans. Compliance with these policies would ensure that the proposed Specific Plan does not result in adverse physical impacts on the environment associated with fire protection facilities.

CONCLUSION

As future development and infrastructure projects (including potential new public facilities) within the Plan area and serving the Plan area are considered by the County, each project will be evaluated for conformance with the Specific Plan, Sonoma County General Plan, Sonoma County Municipal Code, and other applicable regulations.

This Draft EIR addresses the potential impacts of development that may occur under the Project, including residential, commercial, office, recreation, and a range of other uses, including infrastructure improvements. In order to address impacts, the proposed Specific Plan identifies policies to reduce the impact associated with public services.

The Sonoma County General Plan includes a range of objectives and policies to ensure that public services are provided in a timely fashion, are adequately funded, are coordinated between the County and appropriate service agency, and that new development funds its fair share of services. The Sonoma County General Plan includes policies to ensure that fire protection and law enforcement services keep pace with new development and that schools and governmental services are adequately planned and provided. For example, Policy PF-2g requires dedication of land or in-lieu fees as a means of funding park and fire services and facilities. Policy PF-2n requires written certification that fire and related services customarily provided to comparable uses are available or will be available prior to occupancy for projects within the service area of the applicable fire agency. Subsequent development projects proposed within the Plan area would be subject to these policies. Further, the proposed Specific Plan includes Policy CF-1d, which requires development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development. Therefore, this impact is considered **less than significant** and no additional mitigation is necessary.

SPECIFIC PLAN POLICIES THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Policy CF-1b: Prepare a water system maintenance and upgrade plan that programs improvements to ensure that water lines meet current design standards and adequate levels of service are maintained under existing and buildout conditions.

Policy CF-1c: Require development, infrastructure, and long-term planning projects to be consistent with all applicable County and service provider infrastructure master plans.

Policy CF-1d: Require development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development.

Policy CF-1e: Require development projects to install off-site infrastructure or pay appropriate in-lieu fees to ensure adequate infrastructure capacity to serve the project.

Policy CF-1f: Require new utilities in the Plan area to be installed underground.

Impact 3.12-2: Implementation of the Project may result in adverse physical impacts associated with the deterioration of existing parks and recreation

facilities or the construction of new parks and recreation facilities (Less than Significant)

Growth accommodated under the Project would include a range of uses (including commercial, office, recreation, and hotel uses) that would increase the population of the county and also attract additional workers and tourists to the county. This growth would result in increased demand for parks and recreation facilities. It is anticipated that over the life of the Specific Plan, use of regional parks, trails, and recreation facilities would increase, due to new residents, as well as tourists visiting the region. Use of neighborhood parks would also increase. The level of increase would be less pronounced since the proposed Specific Plan accommodates and encourages public and semipublic spaces throughout the Plan area, such as pocket parks, parklets, and a centrally-located community plaza. Additionally, future residential projects within the Plan area would be required to provide in-lieu fees to ensure that adequate parks and recreation facilities are provided within the County to serve the development. These in-lieu fees would be used for park and recreation facilities.

As notes previously, Policy PS-2c of the Sonoma County General Plan outlines the following park standard: “Use the following standards for determination of park needs: Twenty acres of regional parks per 1,000 residents countywide and five acres of local and community parks per 1,000 residents in unincorporated areas. A portion of State parklands may be included to meet the standard for regional parks.”

The Plan area encompasses portions of three U.S. Census tracts: 1502.02, 1503.05, and 1503.06. The total population for these three U.S. Census tracts is 15,335. With 96.79 acres of parkland, the Plan area currently provides 6.3 acres of parkland for every 1,000 people, which is slightly above the County’s goal of 5.0 acres for every 1,000 people.

Additionally, Policy OSRC-17h of the Sonoma County General Plan outlines the following park site evaluation goal: “Identify and evaluate alternative sites in the Boyes Hot Springs area to meet the projected need for a regional park facility in Sonoma Valley.” Although the proposed Specific Plan does not provide capacity for a new regional park facility, as noted above, the Project accommodates public and semipublic spaces throughout the Plan area. The existing Maxwell Farms Regional Park located south of W. Verano Avenue and the Sonoma Valley Regional Park north of the Plan area currently serve the Sonoma Valley.

The provision of new park and recreational facilities is required by Sonoma County General Plan Policy PS-2g. The additional demand on existing parks and recreational facilities, particularly regional facilities, would increase the need for maintenance and improvements. These improvements could have environmental impacts, although the exact impacts cannot be determined since the potential improvements are unknown. These impacts would be addressed in future environmental review for any given park project.

The provision of new parks and recreation facilities would reduce the potential for adverse impacts and physical deterioration of existing parks and recreation facilities, by providing additional facilities to accommodate the demand for parks and recreation facilities. The Project anticipates, and the proposed Specific Plan zoning allows for, a new pocket park provided in the Donald/Verano neighborhood as well as park and recreation improvements to enhance and provide greater connectivity to Larson Park. Additional new facilities would likely be provided at a pace and in locations appropriate to serve new development, as required by Sonoma County General Plan Policies PS-2a, PS-2d, PS-2g, OSRC-17c, OSRC-17e, and OSRC-17f; however, details of any specific improvements associated with implementation of these policies are not known at this time. Subsequent development projects proposed within the Plan

area would be subject to all relevant General Plan objectives and policies that provide protections for park and recreation facilities.

As future parks and recreation projects that serve the Plan area are considered by the County, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Parks and recreation projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The Sonoma County General Plan establishes the objectives and policies to ensure that existing parks and recreation facilities are improved and maintained, by providing for a range of improvements appropriate to serve growth and ensure on-going improvement and maintenance of existing facilities, and includes provisions to ensure that adequate parks and recreational facilities are provided at a pace adequate to serve new population growth.

This Draft EIR addresses the potential impacts of development that may occur under the Project, including residential, commercial, recreation facilities, and a range of other uses. In order to address impacts, the proposed Specific Plan identifies policies to ensure adequate community services and facilities. Significant adverse environmental impacts associated with deterioration of recreational facilities or construction of new recreational facilities are not anticipated to occur. Therefore, this impact is considered **less than significant** and no mitigation is necessary.

SPECIFIC PLAN POLICY THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Policy CF-1d: Require development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development.

Impact 3.12-3: Implementation of the Project may increase demand for schools and result in the need to construct new schools (Less than Significant)

Implementation of the Project would indirectly lead to new population growth within the county, which would increase the demand for schools and school facilities. The Plan area is served by the Sonoma Valley Unified School District. The Project does not include any new or expanded school facilities.

The General Plan includes Objective PF-2.3, which assists school districts in developing more precise estimates of population growth within their attendance areas. Additionally, Policy PS-2k assists school districts in estimating the amount, rate and location of projected population growth within their attendance areas. Policy PS-2l requires implementation of State law pertaining to school impact mitigation that allows for the dedication of land, the payment of fees, or both, as a condition of approval for development projects. Furthermore, Policy PS-2x requires utilization of development fees to require that new development pay for its share of needed infrastructure as identified in existing and future Capital Improvement Plans prepared by the County.

Subsequent development projects proposed within the Plan area would be subject to all relevant General Plan objectives and policies that provide provisions related to schools.

In order to further assist the local school districts in the acquisition of suitable sites for future facilities, the County's General Plan includes Objective PF-2.4, which requires the use of estimates by school districts of new school site needs as the basis for applying school site designations on land use plan maps. This ensures that there are ample sites throughout all areas of the County which are suitable for the

construction of future schools to meet demands associated with buildout of the General Plan, which includes the proposed Plan area.

The Sonoma Valley Unified School District collects developer fees in order to assist in funding facility needs at their sites, and to acquire and develop new school sites to meet increased demand for schools and school facilities. Additionally, in accordance with Section 65995(h) of the California Government Code, the payment of statutory fees "...is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." Subsequent development projects proposed within the Plan area would be subject to the applicable school facility impact fees.

This Draft EIR addresses the potential impacts of development that may occur under the Specific Plan, including residential, commercial, recreation facilities, and a range of other uses. Significant adverse environmental impacts associated with school facilities are not anticipated to occur. In order to address impacts, the proposed Specific Plan identifies policies to ensure adequate community services and facilities. Consistent with Specific Plan Policy CF-1d, future projects within the Plan area would be required to pay the statutory fees adopted by the Sonoma Valley Unified School District, which would mitigate impacts associated with the provision of adequate school facilities under Government Code Section 65995(h). For these reasons, implementation of the Project would have a **less than significant** impact related to school facilities.

SPECIFIC PLAN POLICY THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Policy CF-1d: Require development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development.

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This section describes the anticipated impacts to the multimodal transportation system associated with adoption and implementation of the Springs Specific Plan. This section is based on information provided by W-Trans, a traffic engineering consultant, to address the transportation and circulation impacts of the Springs Specific Plan. The impact analysis examines the roadway, transit, bicycle, and pedestrian components of the proposed project. To provide a context for the impact analysis, this section begins with the regulatory framework influencing and/or governing the transportation system and providing the basis for impact significance thresholds used in the impact analysis, followed by an overview of the analysis methodologies that were used. The transportation setting, which is a description of the existing physical and operational conditions for the transportation system, is then discussed along with an overview of existing and future conditions without the Specific Plan. The section concludes with a description of the Specific Plan and the impact analysis findings.

ACRONYMS

ADA	Americans with Disabilities Act
DD	Deputy Directive
LOS	Level of Service
MTC	Metropolitan Transportation Commission
SCT	Sonoma County Transit
SCTA	Sonoma County Transportation Authority
TAZ	Traffic Analysis Zone
TCR	Transportation Concept Report
V/C	Volume-to-Capacity
VMT	Vehicle Miles Traveled

METHODOLOGY

Vehicle Miles Traveled

A common indicator used to quantify the amount of motor vehicle travel is Vehicle Miles Traveled, or VMT. VMT represents the number of daily miles driven and can be expressed in different ways such as total regional VMT, VMT per capita (for residential uses), and VMT per employee (for employment uses). Many factors affect VMT including the average distance residents commute to work, school, and shopping, as well as the proportion of trips that are made by non-automobile modes. Areas that have a diverse land use mix and ample facilities for non-automobile modes of travel, including transit, tend to generate lower VMT than auto-oriented suburban areas.

Sophisticated travel demand models are typically used to produce VMT estimates, particularly for larger projects or programmatic land use plans such as the Springs Specific Plan. The SCTM\15 travel demand model operated by SCTA has the capacity to estimate VMT and was used for the analysis. Custom runs of the model were used to produce project specific VMT data. The model estimates the VMT associated with the aggregate land uses in each “traffic analysis zone” (TAZ) in consideration of the countywide land use pattern and transportation infrastructure, including travel beyond the county’s boundary. The Specific Plan area is encompassed by TAZs 167, 168, 170, 172,

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and 182 of the SCTA model. An assessment of both the project's VMT per capita and VMT per employee was chosen in accordance with guidance provided in the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, California Governor's office of Planning and Research (OPR), December 2018 (referred to herein as the "OPR Technical Advisory.") VMT related to retail uses is not specifically analyzed since all potential retail uses in the Specific Plan area would be local-serving and substantially smaller than 50,000 square feet, meeting retail screening guidance provided in the OPR Technical Advisory.

Residential VMT per capita represents the VMT associated with home-based trips divided by the population in the corresponding geographical area. Employment VMT per employee represents the VMT associated with home-based employment trips (commute trips) divided by the number of employees. The OPR Technical Advisory indicates that residential and employment VMT in unincorporated county areas should be compared to a regional average, which for Sonoma County corresponds to the nine-county Bay Area overseen by the Metropolitan Transportation Commission and Association of Bay Area Governments. While the SCTM\15 travel demand model is generally consistent with the MTC regional model, it is not a direct subset of the MTC model and includes a much finer-grained level of detail within Sonoma County. The Springs Specific Plan's VMT was estimated using the SCTM\15 model and compared to regional thresholds based on the MTC model. Further information on the applied VMT significance thresholds is provided in the Thresholds of Significance section below.

The assessment completed for the Specific Plan analyzes the project's effects on VMT in the Springs area, specifically the five SCTA model TAZs that encompass the Plan area boundaries. The project's potential impacts are considered in the context of baseline conditions using efficiency metrics including VMT per capita and VMT per employee, consistent with guidance provided in the OPR Technical Advisory. With respect to cumulative impacts, the Technical Advisory states "A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa."

3.13.1 EXISTING SETTING

The existing physical and operational conditions for the Springs Specific Plan's transportation system are based on review of local and regional transportation plans, as well as a physical review of the existing transportation system, as described below. Descriptions are organized by transportation system component beginning with roadways and intersections, and followed by the pedestrian and bicycle network, transit system, and truck routes.

EXISTING CIRCULATION NETWORK

Roadway Network

This section describes the characteristics of the roadway network in the Springs. Highway 12 forms a "spine" that runs centrally down the length of the Specific Plan area and is the defining roadway feature in the area. Most of the other arterial and local streets in the Specific Plan area run

perpendicular to and feed into Highway 12. Figure 3.13-1 depicts the existing roadway network within the Plan area.

ROADWAY DESCRIPTIONS

Highway 12 is the primary route connecting the Springs to the City of Sonoma to the south and the City of Santa Rosa to the northwest. Within the Springs, Highway 12 currently serves as the community's "main street" and generally runs north-south with one through travel lane in each direction. With the recently-completed highway project, nearly the entire length of the corridor includes a center two-way left-turn lane, with the only exception being an approximately 200-foot long segment over Agua Caliente Creek. Vehicular travel lanes are approximately 11-foot wide with eight-foot bike lanes. No on-street parking exists on Highway 12 within the plan area. The roadway is maintained by Caltrans. Within the Specific Plan area, Highway 12 is designated by the Sonoma County General Plan 2020 as an Urban Principal Arterial. Existing daily traffic on the highway in the central part of the Specific Plan area averages 12,300 vehicles per day.

Agua Caliente Road is a two-way County road primarily serving residential neighborhoods within the plan area. Approximately 300-foot long segments along the south side of Agua Caliente Road on each side of Highway 12 are within the boundary of the Specific Plan. Existing traffic on this roadway to the west of Highway 12 is approximately 4,300 vehicles per day, with this segment classified as an Urban Minor Arterial by the County of Sonoma. To the east of Highway 12 Agua Caliente is a local street with volumes of approximately 630 vehicles per day. The street generally includes 11-foot wide travel lanes with variable shoulder widths of two to four feet, with discontinuous sidewalks to the west of Highway 12 and no sidewalks to the east.

Boyes Boulevard is a two-way roadway which provides connections to residential neighborhoods and the Springs' commercial core. An approximately 300-foot long segment of the street lies within the Specific Plan boundaries. Boyes Boulevard generally runs east-west with one lane in each direction. This roadway has an average volume of 4,500 vehicles per day. Sonoma County classifies this roadway as an Urban Major Collector. The segment of the street within the plan area includes 11- to 12-foot wide lanes with two-foot shoulders, and has no parking except for three spaces on the north side of the street near Highway 12. Continuous sidewalks exist on the south side of the street while discontinuous sidewalks exist on the north side.

Verano Avenue is a two-way roadway that runs east-west, connecting the northern portion of the City of Sonoma to Arnold Drive. An approximately 1,900-foot segment of the street to the east of Highway 12 (specifically to the east of Lomita Avenue) forms the southern boundary of the Specific Plan. This segment is a local street with volumes averaging 4,700 vehicle per day near Highway 12, with 12-foot travel lanes, eight-foot parking areas, and continuous sidewalks. To the west of Highway 12, Verano Avenue is designated as an Urban Minor Arterial by the County of Sonoma, with average daily traffic of approximately 9,500 vehicles.

All remaining streets within the Specific Plan boundaries are designated as **Local Streets** by the County of Sonoma. Because the Specific Plan largely follows the Highway 12 corridor, the segments of local streets between Agua Caliente Road and Verano Avenue generally extend 200 to 400 feet on either side of the Highway. Exceptions include West Thompson Avenue, where an "arm" of the Specific Plan extends approximately 1,000 feet to the west of Highway 12, and Donald Street in the southern Plan area which extends approximately 3,000 feet to the east of Highway 12. All local

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streets within the Plan boundaries include one travel lane in each direction with 10- to 12-foot vehicle lane widths. Few of the streets include curb, gutter, and/or sidewalk. Shoulder widths vary greatly but are generally unpaved, with informal parking occurring in most areas on the sides of the paved width (both within and outside of the street rights-of-way).

Additional information and mapping related to the existing vehicular circulation network in the plan area is included in the *Springs Specific Plan Existing Conditions Report*.

VEHICLE MILES TRAVELED

Based on modeling completed by MTC, the existing average home-based VMT per capita in the nine-county Bay Area is 15.0. For employment uses, MTC's reported average home-based commute VMT in the nine-county Bay Area is 21.8 VMT per employee.¹

Bicycle and Pedestrian Network

The following section describes the bicycle and pedestrian network in the Springs. Additional information and mapping pertaining to the pedestrian and bicycle facilities currently existing within the plan area is included in the *Springs Specific Plan Existing Conditions Report*. Bicycle and pedestrian volumes were collected at ten study intersections within the Specific Plan area during the same peak periods that vehicle counts were obtained. The pedestrian and bicycle volume data was then normalized using factors obtained from the National Bicycle & Pedestrian Documentation Project count adjustment factors published in 2009 (see <http://bikepeddocumentation.org>), and converted to both peak hour (the hour of the day with the highest level of pedestrian activity) and daily averages. The resulting bicycle and pedestrian volumes are shown in Figure 3.13-2.

PEDESTRIAN FACILITIES

The Springs experiences a significant amount of pedestrian activity throughout the day, especially in the commercial areas between Boyes Boulevard and Verano Avenue on Highway 12. Within this commercial corridor, pedestrian-scale street lighting, street trees, 6- to 8-foot wide sidewalks, and ADA-accessible curb ramps exist. Pedestrian facilities are continuous north of the commercial core to Agua Caliente Road. However, sidewalk gaps exist on Highway 12 south of Encinas Lane and on most of the side streets that serve adjacent residential neighborhoods. Side streets that *do* include sidewalks within the Specific Plan boundary include:

- Vailetti Drive (south side)
- Depot Road (south side)
- Lichtenberg Avenue (south side)
- Boyes Boulevard (south side)
- Vallejo Avenue
- Sierra Drive (within 120 feet of Hwy 12)
- East Thompson Ave (north side within 110 ft of Hwy 12)
- West Thompson Avenue (south side)
- Siesta Way (south side and north side within 200 ft of Hwy 12)
- Encinas Lane

¹ W-Trans, 2021. Springs Specific Plan VMT Findings and Mitigation Strategy. August 18, 2021.

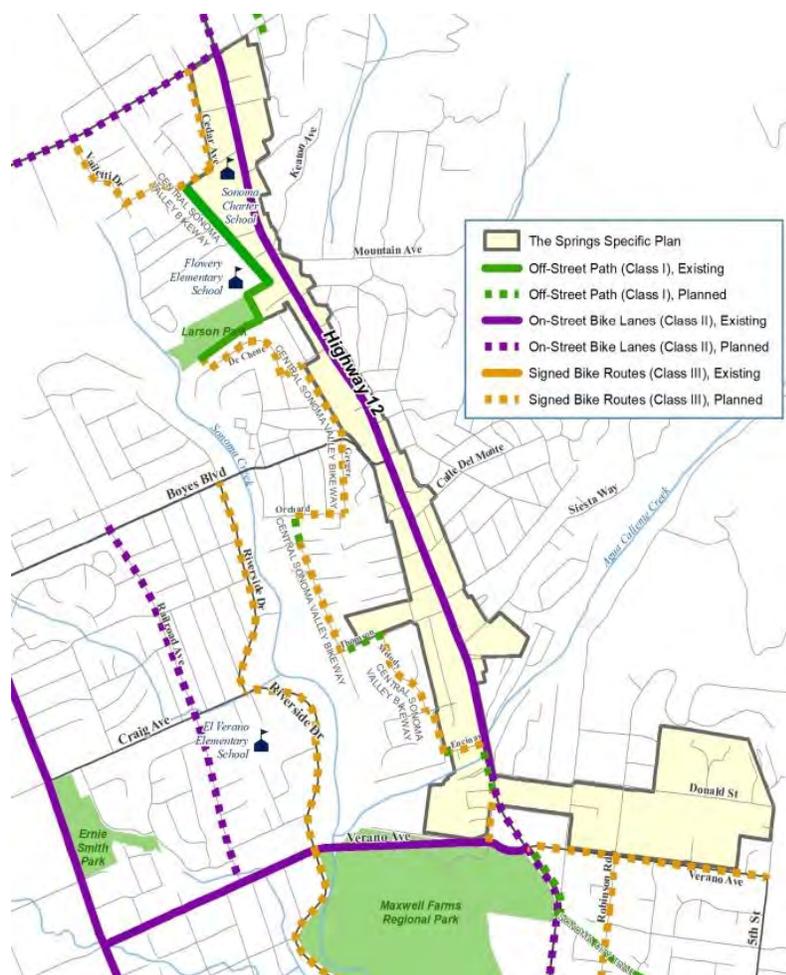
Schools have a major influence on pedestrian activity levels in the Specific Plan area. Flowery School and Sonoma Charter School on Highway 12 generate school-age pedestrian traffic on school days, particularly from 7:30 to 8:30 in the morning and 2:45 to 3:45 in the afternoon. Larson Park and Maxwell Farms Regional Park are also generators of pedestrian activity.

There are currently nine marked crosswalks to facilitate pedestrian and bicycle crossings of Highway 12 between Agua Caliente Road and Verano Avenue. These are located at Agua Caliente Road (signalized), Depot Road (signalized), Waterman Avenue, Central Avenue, Boyes Boulevard/ Vallejo Avenue (signalized), Sierra Drive, West Thompson Avenue (signalized), Siesta Way (signalized), and Verano Street (signalized).

BICYCLE FACILITIES

The Sonoma County Bicycle and Pedestrian Plan classifies bikeways into three categories:

1. Class I Bikeways are also known as multi-use paths. Class I bikeways provide bicycle travel on an all-weather surface within a right-of-way that is for exclusive use by pedestrians, bicyclists and other non-motorized modes. Class I bikeway surface must be compliant with provisions of the Americans with Disabilities Act (ADA). These bikeways are intended to provide superior safety, connectivity, and recreational opportunities as compared to facilities that share right-of-way with motor vehicles.
2. Class II Bikeways are often referred to as “bike lanes” and provide a striped and stenciled lane for one-way travel on either side of a street or highway. Unlike Class III bikeways (below), Class II bikeways have specific width and geometric standards.
3. Class III Bikeways are intended to provide continuity to the County bicycle network. Bike routes are established along through routes not served by Class I or II bikeways or to connect discontinuous segments of Class I or Class II bikeways.



EXISTING AND PLANNED BICYCLE FACILITIES IDENTIFIED IN THE 2010 SONOMA COUNTY BICYCLE AND PEDESTRIAN PLAN

Continuous Class II bike lanes exist on Highway 12 between Agua Caliente Road and Donald Street. The bike lanes are generally eight feet wide along the segment. Future extensions of these bike lanes to the Sonoma Plaza are shown in the bicycle plan. Just outside of the Plan area, on-street bicycle lanes exist on Verano Avenue between Sonoma Highway and Arnold Drive, and future bike lanes are planned on Agua Caliente Road. A signed bike route is planned on Verano Avenue to the east of Highway 12.

The Central Sonoma Valley Trail is a project being overseen by Sonoma County Regional Parks that will provide a trail parallel to Highway 12 for pedestrians and bicyclists between Agua Caliente Road and Verano Avenue. The first segment of the trail was completed in 2011 and extends from DeChene Avenue through Larson Park. In 2016, additional trail segments were completed between Vailetti Drive and Depot Road as well as through the Flowery School property.

Transit Network

Sonoma County Transit (SCT) is the primary transit provider in the Springs planning area and provides regularly-scheduled fixed-route service to major activity centers and transit hubs within the County.

TRANSIT ROUTES

Three SCT routes serve the Springs. Bus routes in and surrounding the Specific Plan area are shown in Figure 3.13-3.

Route 30 travels between Santa Rosa, Oakmont/Kenwood, Glen Ellen, and Sonoma Valley/ Sonoma. The route operates Monday through Friday between 6:15 a.m. and 8:31 p.m. with approximately hour-and-a-half to two-hour headways. Weekend service operates between 6:45 a.m. and 5:00 p.m. with approximately three-hour headways.

Route 32 is the Sonoma Valley Local Service, referred to as the “Sonoma Shuttle,” and runs Monday through Friday between 7:30 a.m. and 4:09 p.m. with approximately 45-minute headways. Saturday service operates between 8:00 a.m. and 4:09 p.m. The route operates throughout Sonoma Valley with connections to the City of Sonoma. Rides on the Sonoma Shuttle are currently free to all users.

Route 34 connects Santa Rosa and the City of Sonoma. It operates Monday through Friday during the a.m. and p.m. peak commute hours. Route 34 operates along Highway 12 and Boyes Boulevard in the Springs.

BICYCLE ACCOMMODATION

Front loading bicycle racks, which typically accommodate two bicycles, are provided on all fixed route transit buses that operate in Sonoma County. Bicycle rack spaces are available on a first come, first served basis. When the front-loading racks are full, drivers can accommodate bicycles inside the bus at their discretion.

TRANSIT SUPPORT FACILITIES

Transit amenities at bus stops in the Springs planning area include signs, benches, and bus shelters. Most stops include a sign and bench. Shelters are present at the stop on Agua Caliente at Highway 12, the Fiesta Plaza stop at Siesta Way, and at Highway 12/Central Avenue.

PARATRANSIT

Paratransit, also known as dial-a-ride or door-to-door service, is available for those that are unable to independently use the transit system due to a physical or mental disability. Individuals must be registered and certified as Americans with Disabilities Act (ADA) eligible before using the service. Paratransit operators are required by the ADA to service areas within three-quarters of a mile of their respective, public fixed-route service. Volunteer Wheels serves as the ADA paratransit operator for Sonoma County Transit and the City of Sonoma. Service hours are Monday through Friday from 5:00 a.m. to 11:00 p.m. and Saturday and Sunday from 7:00 a.m. to 9:00 p.m. Ride reservations can be scheduled daily.

TAXI SERVICE AND RIDESHARING SERVICE

Taxi service in Sonoma is provided by private operators that serve the greater Sonoma County area and beyond. Taxi service is available 24 hours a day, seven days a week by calling in a service request. Additional ridesharing services, such as Uber and Lyft, are also available in the Springs.

3.13.2 REGULATORY SETTING

The Sonoma County General Plan along with a variety of regional, state and federal plans, legislation, and policy directives provide guidelines for the safe operation of streets and transportation facilities in the Springs. While the County of Sonoma has primary responsibility for the maintenance and operation of transportation facilities within the Springs, Highway 12 is under the jurisdiction of the California Department of Transportation (Caltrans). County staff also works on a continual basis with regional agencies including the Sonoma County Transportation Authority (SCTA) and Metropolitan Transportation Commission (MTC) to maintain, improve, and balance the competing transportation needs of the community and the region.

STATE

Caltrans

DEPUTY DIRECTIVE 64-R1: COMPLETE STREETS – INTEGRATING THE TRANSPORTATION SYSTEM

In 2001, Caltrans adopted Deputy Directive (DD) 64; a policy directive related to non-motorized travel throughout the state. In October 2008, DD 64 was strengthened to reflect changing priorities and challenges. DD 64-R1 states:

The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system. Providing safe mobility for

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all users, including motorists, bicyclists, pedestrians and transit riders, contributes to the Department's mission/vision: "Improving Mobility across California."

DIRECTOR'S POLICY 22: "DIRECTOR'S POLICY ON CONTEXT SENSITIVE SOLUTIONS"

Director's Policy 22, a policy regarding the use of "Context Sensitive Solutions" on all State highways, was adopted by Caltrans in November of 2001. The policy reads:

The Department uses "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.

The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed.

VEHICLE MILES TRAVELED-FOCUSED TRANSPORTATION IMPACT STUDY GUIDE

Caltrans has not established formal VMT significance thresholds, though in May 2020 released the *VMT-Focused Transportation Impact Study Guide* (TISG) that refers to guidance provided in the OPR Technical Advisory, which recommends VMT per capita or per employee thresholds 15% below existing city or regional levels. The Caltrans TISG also refers to OPR's guidance on the types of projects that can be presumed to have a less than significant transportation impact. Caltrans also reiterates that automobile delay is no longer considered a significant impact on the environment within CEQA transportation analysis, indicating that the agency's Local Development-Intergovernmental Review (LD-IGR) program will focus on VMT consistent with the CEQA guidelines.

STATE ROUTE 12 (WEST) TRANSPORTATION CONCEPT REPORT

The State Route 12 (West) Transportation Concept Report (TCR) was published in 2014 and provides an evaluation of the current and projected conditions together with a vision for future development along the state route. The TCR was developed with goals of increasing safety, improving mobility, providing stewardship, and meeting community and environmental needs along the corridor. Unlike Caltrans planning documents of the past that placed a heavy emphasis on the need for vehicular capacity, this plan has a strong multimodal focus and recognizes the different community and "place" types that the highway traverses. Regarding the role of Highway 12 through the Springs, the TCR states:

SR 12 is a "Main Street" not only in the City of Sonoma, but also within Agua Caliente, Fetters Springs and Boyes Hot Springs. Work is already underway to provide sidewalks and bike lanes north of Sonoma, but overall the road varies in width, number of lanes, and bike/pedestrian facilities. These communities could be developed as a Compact Community with parking, pedestrian, bicycle and local traffic given precedence over through traffic. Thought should

be given to traffic calming in areas with high business/retail presence, including removing turn lanes, where appropriate, to minimize pedestrian crossing distances.

The route concept and strategy for the highway through the Springs is to “maximize Smart Mobility benefits over vehicle throughput,” pursuing the planned Sonoma Valley Trail parallel to the highway as well as future enhanced transit service. With respect to traffic capacity, the plan indicates that Highway 12 along with Arnold Drive are expected to provide sufficient capacity into the future.

Senate Bill 743

Senate Bill (SB) 743, signed into law in 2013, requires CEQA lead agencies to shift from using traditional level of service (LOS) standards and automobile delay to determine significant traffic impacts. As a result of SB 743, the State Office of Planning and Research has updated CEQA guidelines and criteria to use VMT as the metric for evaluating the significant traffic impacts. Pursuant to Public Resources Code Section 21099(b)(2), “automobile delay, as described solely by level of service of similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment.” The OPR Technical Advisory (December, 2018) provides details on VMT assessment, methodologies, and suggested metrics.

REGIONAL

Metropolitan Transportation Commission

The current Regional Transportation Plan produced by MTC, Plan Bay Area, was adopted in 2013. Plan Bay Area sets forth regional transportation policy and provides capital program planning for all regional, State, and Federally funded projects. In addition, Plan Bay Area provides strategic investment recommendations to improve regional transportation system performance over the next 25 years. Investments in regional highway, transit, local roadway, bicycle, and pedestrian projects are recommended. Plan Bay Area includes no roadway improvement projects within the Springs area, though it does include regional funding to implement Sonoma County’s Safe Routes to School program, implement bicycle and pedestrian improvements countywide, and enhance bus service frequencies in the County.

Sonoma County Transportation Authority

COMPREHENSIVE TRANSPORTATION PLAN FOR SONOMA COUNTY

The SCTA is the agency that provides planning, project management, finance, grant administration, and other important functions related to the transportation network in Sonoma County. In 1997, SCTA relinquished its position as the County Congestion Management Agency under new state legislation that made this function optional. SCTA now serves as the coordinating and advocacy agency for transportation funding for Sonoma County, managing Measure M funds and prioritizing state and federal funds for roadway, transit, bicycle, and pedestrian projects. Measure M, or the Traffic Relief Act for Sonoma County, was passed by Sonoma County voters in 2004 in order to provide multi-modal transportation improvement projects throughout the county. These projects include, among others, improving local street operations and building safe bicycle and pedestrian routes. SCTA partners with Caltrans on the State Highway System and manages transportation improvement projects.

3.13 TRANSPORTATION AND CIRCULATION

There is currently no adopted regional congestion management program in Sonoma County; however, SCTA has adopted and is implementing the Comprehensive Transportation Plan: Moving Forward 2050, which serves as the primary long-term regional transportation planning document for Sonoma County. Moving Forward 2050 establishes goals for a transportation system that is connected and reliable, safe and well-maintained community-oriented and place-based, and zero emission. Moving Forward 2050 includes projects 62 to 83 to support transportation in the Springs area, including additional and more frequent bus routes, expanded paratransit service, safe routes to schools, and expanded and enhanced bicycle and pedestrian facilities in the Plan area.

SCTA's Countywide Bicycle and Pedestrian Master Plan was updated in 2014 and establishes a goal and broad objectives for the development and maintenance of a comprehensive countywide bicycle and pedestrian transportation system.

THE SPRINGS COMMUNITY BASED TRANSPORTATION PLAN

SCTA produced the Springs Community Based Transportation Plan in 2010, which provides a guide for decision makers relative to transportation improvements needed in the Specific Plan area based on input received from public outreach. The plan identifies specific solutions to transportation challenges ranked by high, medium, and low priority. The following solutions relevant to the Specific Plan area are included:

High Priority

- Increase frequency of Route 32 buses to/from the Springs and Sonoma
- Safe Routes to Schools Program
- Maintain existing levels of transit service
- Enhance pedestrian crossings on Highway 12 at various locations
- Install more shelters, benches, and bike racks at bus stops

Medium Priority

- Increase frequency of Route 40 buses to/from the Springs
- Increase frequency of Route 30 buses to/from the Springs, Santa Rosa, and Sonoma

Lower Priority

- Later afternoon and/or evening bus service and expanded ADA paratransit service
- Pedestrian lighting on Highway 12 from Donald Street to Verano Avenue
- Provide incentives for businesses to provide safe and convenient bicycle parking

LOCAL

Sonoma County General Plan

Sonoma County adopted its General Plan in September 2008. The County's General Plan provides a comprehensive set of goals, policies, and implementing actions to guide the County's growth through the year 2020. The following excerpts from the Circulation Element of the General Plan,

which was updated to include goals, objectives, and policies established by the 2010 Sonoma County Bicycle and Pedestrian Plan, are particularly relevant to transportation and circulation in the Springs.

GOAL CT-1: Provide a well-integrated and sustainable circulation and transit system that supports a city and community centered growth philosophy through a collaborative effort of all the Cities and the County.

Objective CT-1.4: Reduce the need for future automobile use by a combination of improvements and land development policies that give equal favor to alternate modes as to automobile use.

Objective CT-1.5: Reduce greenhouse gas emissions by minimizing future increase in VMT, with an emphasis on shifting short trips by automobile to walking and bicycling trips.

GOAL CT-2: Increase the opportunities, where appropriate, for transit systems, pedestrians, bicycling and other alternative modes to reduce the demand for automobile travel.

Objective CT-2.8: Provide bicycle and pedestrian links from bus stops and other transit facilities to residential areas, employment centers, schools, institutions, parks, and the greater roadway system in general, especially focusing on short trips that could result in a mode shift away from automobile travel.

GOAL CT-3: Establish a viable transportation alternative to the automobile for residents of Sonoma County through a safe and convenient bicycle and pedestrian transportation network, well integrated with transit, that will reduce greenhouse gas emissions, increase outdoor recreational opportunities, and improve public health.

Objective CT-3.1: Design, construct and maintain a comprehensive Bikeways Network that links the County's cities, unincorporated communities, and other major activity centers including, but not limited to, schools, public facilities, commercial centers, recreational areas and employment centers.

Objective CT-3.2: Reduce Sonoma County's greenhouse gas emissions by achieving a non-motorized trips mode share of 5% for all trips and 10% for trips under five miles long by 2020.

Objective CT-3.3: Encourage pedestrian, bicycle, and transit-oriented development.

Objective CT-3.4: Increase use of non-motorized modes for commute trips by providing safe, convenient routes and adequate end of trip facilities at workplaces, with an emphasis on facilities that have potential to close gaps in the network and/or reduce shorter trips.

Objective CT-3.5: Provide incentives for business and government to increase the use of walking and bicycling by employees for both commuting and daily operations.

Objective CT-3.6: Reduce bicycle and pedestrian accidents per mile traveled by at least 2% per year.

Objective CT-3.7: Provide a diverse range of recreational opportunities through a well-designed network of bikeways, multi-use trails, sidewalks, and related support facilities.

3.13 TRANSPORTATION AND CIRCULATION

Objective CT-3.8 Increase the safety, convenience, and comfort of all pedestrians and bicyclists, by eliminating the potential obstacles to this mode choice that is associated with the lack of continuous and well-connected pedestrian walkways and bicycle facilities, and the lack of safe crossing facilities, especially focusing on short trips that could result in a decrease in automobile travel.

Objective CT-3.9: Develop alternative mode trip and accident databases, to improve safety, allow regional coordination of improvements, and travel model development to improve the level of quantitative evaluation.

2010 SONOMA COUNTY BICYCLE AND PEDESTRIAN PLAN

The *Sonoma County Bicycle and Pedestrian Plan*, adopted in 2010, was prepared to plan for primary facilities that serve Sonoma County's unincorporated communities. The Plan establishes bicycle and pedestrian policy along with bicycle and pedestrian infrastructure projects and a prioritized set of programmatic improvements. The principal goal is identified below; objectives from the Sonoma County Bicycle and Pedestrian Plan are reflected in the General Plan.

Goal: Establish a viable transportation alternative to the automobile for residents of Sonoma County through a safe and convenient bicycle and pedestrian transportation network, well integrated with transit, that will reduce greenhouse gas emissions, increase outdoor recreational opportunities, and improve public health.

COMPLETE STREETS POLICY

In 2015, the Sonoma County Board of Supervisors adopted a resolution finding that the General Plan Circulation Element is consistent with the complete streets policies and principles required by the Complete Streets Act of 2008.

3.13.3 IMPACTS AND MITIGATION MEASURES

This section identifies the thresholds of significance used to identify environmental impacts to the transportation and circulation system, the Specific Plan project characteristics related to the transportation system, and environmental impacts associated with implementation of the Specific Plan.

THRESHOLDS OF SIGNIFICANCE

The following standards of significance are based on Appendix G of the CEQA Guidelines, in addition to criteria set forth by the County of Sonoma and Caltrans. The Springs Specific Plan would result in a significant impact on transportation if it would:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system including transit, roadway, bicycle and pedestrian facilities;
2. Conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b) concerning significance of transportation impacts in terms of vehicle miles traveled?
3. Substantially increase hazards due to a geometric design feature or incompatible use; or
4. Result in inadequate emergency access.

VMT Thresholds of Significance

VMT thresholds for this analysis were established based on guidance provided in the OPR Technical Advisory as well as direction from the County of Sonoma. The applied significance thresholds are as follows:

A significant VMT impact would occur if the Plan results in:

- Residential VMT per Capita within the Planning Area exceeding a level of 15 percent below the regional average VMT per capita; or
- Employment VMT per Employee within the Planning Area exceeding a level of 15 percent below the existing regional average VMT per employee.

Based on modeling completed by MTC, the existing average home-based VMT per capita in the nine-county Bay Area is 15.0². The applicable significance threshold for residential uses is 15 percent below this value, or 12.8 home-based VMT per capita. For employment uses, MTC's reported average home-based commute VMT in the nine-county Bay Area is 21.8 VMT per employee³, which translates to an applicable significance threshold of 18.5 home-based commute VMT per employee.

It should be noted that some future development projects in the Springs Specific Plan area would qualify for VMT screening, which is a process described in the OPR Technical Advisory that identifies certain types of projects that can be presumed to result in a less than significant VMT impact and thereby do not need to perform a VMT analysis. Such projects would include 100 percent affordable residential developments as well as projects that are expected to generate fewer than 110 automobile trips per day. Given the programmatic nature of the proposed Specific Plan, all potential future development within the Plan boundaries is included in the VMT analysis. In other words, no residential "screening" has been included in the analysis even though some of the future development may, individually, qualify for screening from VMT analysis.

W-trans coordinated with SCTA to run the SCTM\15 travel demand model to identify the home-based and employee-based VMT per capita for the Project. W-trans presented the results and discussion of potential mitigation measures in the Springs Specific Plan VMT Findings and Mitigation Strategy memo dated August 18, 2021 (see Appendix F).

SPECIFIC PLAN PROJECT CHARACTERISTICS

Buildout of the Specific Plan includes the construction of new roadways, intersections, and transit, pedestrian, and bicycle facilities to effectively manage traffic generated by the various land use changes within the Specific Plan area boundaries. Buildout of the Specific Plan also includes a circulation system that aligns with the surrounding existing networks.

² <http://analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerCapita>, accessed June 21, 2021

³ <http://analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerWorker>, accessed June 21, 2021

Specific Plan Circulation Improvements

The street network within the Specific Plan area is aligned along the Highway 12 corridor, including the highway itself, as well as local and collector streets within one to two blocks, plus several local streets in the southeastern Plan area. The pedestrian and bicycle networks generally coexist with the street network, though also include off-street segments of the Central Sonoma Valley Bikeway.

PEDESTRIAN AND BICYCLE NETWORK IMPROVEMENTS

The Specific Plan includes several new marked crosswalks on Highway 12, some of which would have pedestrian refuge islands, and some of which would have pedestrian warning lights. The Plan also includes new sidewalks on side streets that fill the gaps in the existing pedestrian network, as shown in Table 3.13-1 below.

The Specific Plan’s bicycle improvements include enhancing the existing bike lanes on Highway 12 with painted buffers between bicycle and vehicle traffic, using green-colored bike lanes in areas where bike and vehicle traffic interact. The Specific Plan also incorporates and expands upon the planned completion of the Central Sonoma Valley Bikeway, including new bicycle route connections between the Bikeway and Highway 12. A summary of the pedestrian and bicycle improvements identified in the Specific Plan is shown in Table 3.13-1. Maps from the Specific Plan depicting the pedestrian and bicycle networks are shown in Figures 3.13-4 and 3.13-5, respectively.

TABLE 3.13-1: SPECIFIC PLAN PEDESTRIAN AND BICYCLE NETWORK IMPROVEMENTS

<i>PEDESTRIAN CROSSING IMPROVEMENTS</i>	
Central Avenue	New warning lights at existing crosswalk
Fetters Avenue	New crosswalk (south side), bulb-out (west side)
Vailletti Drive	New crosswalk (north side), bulb-outs, warning lights
Lichtenberg Avenue	New crosswalk (north side), bulb-outs, warning lights
Waterman Avenue	New bulb-outs at existing crosswalk
Arroyo Road	New crosswalk (north side), bulb-outs, median refuge, warning lights
Sierra Drive	Remove crosswalk upon signalization of Calle del Monte intersection
Calle del Monte	New crosswalk once intersection is signalized
Hawthorne Avenue	New crosswalk (south side), bulb-outs, median refuge, warning lights
Encinas Lane	New crosswalk, bulb-outs, warning lights (post bridge widening)
Donald Street	New crosswalk (south side), bulb-outs, warning lights (occurs after sidewalks completed on Highway 12 and Donald Street)
Marin Avenue	New crosswalk (north side), bulb-outs, median refuge, warning lights; this new crosswalk is identified in the Specific Plan as optional
Mulford Lane	New crosswalk (north side), bulb-outs, warning lights; this new crosswalk is identified in the Specific Plan as optional
South of Grange Hall	New crosswalk, bulb-outs, warning light
<i>SIDEWALK IMPROVEMENTS</i>	
Highway 12	Complete sidewalk (Encinas Lane to Harley Street) Widen bridge over Agua Caliente Creek Widen sidewalks
Side Streets	Add sidewalks adjacent to new on-street parking

Donald-Verano Area	Fill sidewalk gaps
<i>BICYCLE LANE SAFETY IMPROVEMENTS</i>	
Green Bike Lanes	Use at locations where vehicle and bike traffic interact, such as near intersections and major driveways
Bicycle Lane Buffers	Hwy 12: Convert existing 8-foot wide bike lanes to 5-foot wide bike lanes with a 3-foot striped buffer between bicycle and vehicle lanes
<i>BIKE PATHS AND ROUTES</i>	
New Off-Street Bike Paths	West Thomson Avenue between Happy Lane and Hwy 12 West of Highway 12 between Encinas Lane and Main Street Verano Avenue between Main Street and Hwy 12 West end of Encinas Lane between Fairview Lane and Encinas Lane North end of Happy Lane between Orchard Avenue and Happy Lane
New On-Street Bike Routes	Valetti Drive, between Hwy 12 and Lake Street Lichtenberg Avenue Boyes Boulevard, between Hwy 12 and Greger Street Melody Lane Encinas Lane

AUTOMOBILE NETWORK IMPROVEMENTS

The Plan maintains the existing single travel lanes in each direction along the Highway 12 corridor. Traffic flow, as well as pedestrian and bicycle safety, would be improved by consolidating and/or removing private driveways along Highway 12, reorienting access to side streets and alleys wherever feasible. On two segments of Highway 12 where the existing two-way left-turn lane is not needed to provide left-turn access to and from public side streets, Waterman to Central and Calle del Monte to West Thomson, the highway would be modified to eliminate the center turn lane and create on-street parking on one side of the street. Improvements to local streets would include modifying portions of Lichtenberg Avenue, Hawthorne Avenue, and West Thomson Avenue to create sidewalks and new on-street parking supplies. Other local streets would be modified as fronting parcels redevelop to include sidewalks and formalized on-street parking on one side of the street; in some areas that are constrained by physical or environmental constraints, the on-street parking and/or landscaping zones of these streets could be eliminated.

A summary of the automobile network improvements identified in the Specific Plan is shown in Table 3.13-2, and the Specific Plan map depicting the vehicle network is shown in Figure 3.13-3.

TABLE 3.13- 2: SPECIFIC PLAN AUTOMOBILE NETWORK IMPROVEMENTS

<i>HIGHWAY 12</i>	
Driveway Consolidation	Consolidate driveways New development is required to provide rear access and eliminate driveways on the highway whenever possible
Left turns at Intersections	Left turns permitted at all public street intersections except Arroyo Road to allow for a new crosswalk with median refuge at that location
Left Turns at Driveways	Use painted median to prohibit left turns to and from private driveway in areas with on-street parking
Traffic Signals	New signal at Highway 12/Calle del Monte New signal at Highway 12/Donald Street Coordinate timing of traffic signals along Highway 12 within the Specific Plan area

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On-Street Parking	Add spaces to one side of Highway 12 in the following areas: Waterman to Central (approximately 9 spaces) Calle del Monte to West Thomson (approximately 20 spaces)
<i>SIDE STREETS</i>	
Typical cross-section	44-foot Right-of-way: two 5-foot wide sidewalks with 4-foot planting strips, two 9-foot wide travel lanes and one 8-foot wide parking lane 28-foot Right-of-way: two 5-foot wide sidewalks and two 9-foot wide travel lanes. No on-street parking.
New traffic controls	Install all-way stop controls or mini-roundabout at Donald Street/Robinson Road
On-Street Parking	Add parking on the following side streets: Lichtenberg (approximately 6 spaces) Hawthorne (approximately 12 spaces) West Thomson (approximately 25 spaces)

TRANSIT IMPROVEMENTS

The Specific Plan identifies numerous physical amenities that enhance the comfort and convenience of using transit, including shelters, benches, route information signs, bike racks, and lighting. The Plan has also been structured to prioritize new and enhanced pedestrian facilities in the areas near transit stops. With respect to transit service, the Specific Plan includes policies supporting increased frequencies (headways) on Sonoma County Transit routes serving the Springs communities and continuing a public awareness campaign to encourage transit ridership.

Impact 3.13-1: Implementation of the Project would conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b) concerning significance of transportation impacts in terms of vehicle miles traveled (VMT) (Significant and Unavoidable)

The VMT modeling results produced by the SCTM\15 travel demand model indicate that residential uses in the Springs area would on average generate 22.4 VMT per capita with implementation of the Plan, which is a decrease from the existing average of 24.2 VMT per capita. The VMT per capita associated solely with the incremental increase in residents would be 14.7. While these shifts reflect improvement in residential VMT per capita compared to existing development, they would still fall short of the applied 12.8 VMT per capita threshold corresponding to a level of 15 percent below the regional average. This would be a **significant impact**.

Employment VMT modeling results indicate that employment-based uses in the Springs area would on average generate 18.4 home-based commute VMT per employee with implementation of the Plan, which is a decrease from the existing average of 20.1 VMT per employee. The home-based commute VMT per employee associated with the project's incremental increase in employees would be 15.8. Both the areawide and project VMT per employee ratios would fall below the applied 18.5 VMT per employee significance threshold that corresponds to a level of 15 percent below the regional average. This would be a **less than significant impact**.

A summary of the VMT analysis for residential and employment uses is shown in Table 3.13-3.

TABLE 3.13-3: VEHICLE MILES TRAVELED ANALYSIS SUMMARY

	RESIDENTIAL VMT PER CAPITA	EMPLOYMENT VMT PER EMPLOYEE
Regional Baseline		
Baseline Regional Average	15.0	21.8
Significance Threshold (average minus 15%)	12.8	18.5
Specific Plan Area		
Base Year (No Project)	24.2	20.1
Base Year plus Project	22.4	18.4
Project Increment		
Vehicle Miles Traveled	29,062	9,988
Residents or Employees	1,977	632
Project VMT Rate	14.7	15.8
Impact	Yes	No

NOTES: REGIONAL BASELINE REFLECTS NINE-COUNTY BAY AREA; RESIDENTIAL VMT INCLUDES ALL HOME-BASED VEHICLE TRIPS; EMPLOYMENT VMT INCLUDES ALL HOME-BASED COMMUTE VEHICLE TRIPS

SOURCE: W-TRANS, 2021

CONCLUSION

Implementation of Specific Plan Policies SC-2b, SC-2d, SC-2h, SC-2i, and SC-2k support provision of pedestrian and bicycle amenities and facilities in the Plan area to support these non-vehicle travel modes. Implementation of Specific Plan Policy SC-3g (which would maintain fare-free service on the Sonoma Shuttle Route 32) and Specific Plan Policy SC-1h (specifying TDM requirements), would reduce the VMT generated by new development in the Springs, including residential home-based VMT per capita. Uncertainty remains, however, as to whether implementation of these measures can achieve the 12.0 percent reduction in residential VMT per capita required to reduce impacts to a level of less than significant. Continuation of subsidized rides on Route 32 in perpetuity would require a substantial funding commitment from the County of Sonoma or private development that may not realistically be achievable all years. Beyond the subsidized transit, the ability for residential development to achieve an additional 8.0 percent reduction in VMT per capita may also be infeasible, as the effectiveness of TDM can be limited outside of major urbanized areas, and some projects (particularly smaller developments) may be unable to fund offsite improvements to non-auto networks. Further, while regional strategies such as VMT mitigation fees, exchanges, and banks hold much promise, they have yet to be implemented and their structures and resulting effectiveness remain uncertain. As a result, impacts would remain **significant and unavoidable**.

SPECIFIC PLAN POLICIES THAT REDUCE THE POTENTIAL FOR IMPACTS

Policy SC-1h: *Development projects that exceed ten (10) residential units or 5,000 square feet of non-residential development shall reduce VMT through implementation of a Transportation Demand Management (TDM) plan. Development projects shall be subject to the TDM conditions below, which require applicable projects to provide a foundational set of strategies plus one additional measure. A project may propose construction or funding of offsite pedestrian, bicycle, and transit infrastructure and/or participation in future regional or countywide VMT reduction programs, in lieu*

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of a TDM plan if demonstrated to the satisfaction of the PRMD Director that the associated reduction in vehicle travel would be comparable to the TDM requirements.

A. *Foundational Measures: Development projects must implement all of the following TDM measures at a minimum:*

- *On-site or contracted TDM coordinator*
- *TDM marketing*
- *Rideshare matching*
- *Onsite bicycle amenities*
- *Emergency Ride Home Program (applies to nonresidential uses)*

B. *Additional Measures: Development projects must implement at least one additional TDM measure. The measure must be approved by the County and can be chosen from the strategies below. The enumerated list does not preclude a project from implementing other TDM measures if desired or required by County Code.*

Nonresidential development

- *Transit/vanpool subsidies*
- *Parking cash-out*
- *VMT Mitigation Bank (if available)*
- *Off-Site Physical Non-Auto Mode Improvement(s)*

Residential development

- *Transit subsidies*
- *School-pool matching*
- *Unbundled parking*
- *VMT Mitigation Bank (if available)*
- *Off-Site Physical Non-Auto Mode Improvement(s)*

Policy SC-2b: *Improve pedestrian and bicycle linkages and facilities throughout the Springs to improve mobility; provide safe routes to schools and transit stops; make the area more inviting to pedestrians and bicyclists; and improve connectivity to nearby communities and regional destinations. See Figures 5 and 6 and Tables 3 and 4.*

The ultimate configuration of any new pedestrian crossings shall be evaluated and determined by the Sonoma County Department of Transportation and Public Works, in collaboration with Caltrans on crossings along Highway 12, and in consideration of the physical characteristics and best design practices that exist at the time the design is initiated.

Policy SC-2d: *Require that adjacent developments be connected by safe, direct walkways. Ensure that projects are designed to anticipate and accommodate future street and sidewalk connections to new development on adjacent lands.*

Policy SC-2g: *Provide new and improved bicycle lanes and enhance bicycle safety through signs, bicycle lane buffers, and green colored pavement, as shown in Figure 6. Priority should be given to intersections when making safety improvements.*

Policy SC-2h: *Prioritize crosswalk, sidewalk, and bicycle lane improvements near schools, parks, transit stops, and the Springs plaza.*

Policy SC-2j: *Require development projects along Highway 12 to provide increased sidewalk widths, consistent with the cross-sections identified in this chapter and the setback requirements set forth in the Design Guidelines chapter.*

Policy SC-3a: *Coordinate with Sonoma County Transit to improve local bus service by increasing the frequency of bus service in the Springs and decreasing travel times.*

Policy SC-3b: *Support the creation of a public awareness campaign to promote transit use. Provide easy to understand schedule and bus pass information in English and Spanish.*

Policy SC-3c: *Coordinate with Sonoma County Transit to promote the local shuttle service (route 32) which runs between the Springs and the City of Sonoma, including continuing the branding of route 32 as a shuttle, creating a distinct look for shuttle vehicles, and updating transit signage for route 32. Sonoma County Transit is also encouraged to allocate marketing resources to publicize the shuttle route to residents, employees, and visitors.*

Policy SC-3d: *Work with Sonoma Transit to improve bus stops by providing well-lit shelters, benches, bicycle racks, and trash cans. Provide schedule information at each bus shelter location.*

Policy SC-3f: *In conjunction with road or development projects, review whether a bus turnout is appropriate in locations where transit shelters exist or are planned.*

Policy SC-3g: *Maintain fare-free service on the Sonoma County Transit local route serving the Springs area (currently route 32 Sonoma Shuttle).*

Impact 3.13-2: Implementation of the Project would not substantially increase hazards due to a geometric design feature or incompatible use (Less than Significant)

The County of Sonoma maintains improvement standards that guide the construction of new transportation facilities to minimize design hazards for all users of the system. The Springs Specific Plan is within the jurisdiction of the County of Sonoma, with Highway 12 under the jurisdiction of Caltrans, and is subject to all design standards which minimize hazards due to design features. The proposed land use changes that are estimated to add traffic to the surrounding street network would be evaluated through the development review process. If needed, individual projects would be conditioned to construct or provide funding for improvements that minimize or eliminate potential hazards. Typical improvements include shoulder widening, adding turn pockets, adding sidewalks or crosswalks, realigning sharp curves, and prohibiting certain turning movements, among other options. As part of the entitlement process for individual development projects, the County of Sonoma requires traffic impact studies to be prepared that address specific topic areas related to circulation design and safety. Such criteria, outlined in the County's *Guidelines for Traffic Impact Studies*, include analysis of on-site roads and frontage improvements including design features, accommodation of alternative transportation modes, analysis of vehicle queuing at intersections,

and analysis of warrants for new turn lanes. New development within the Specific Plan would be subject to this review, and acceptance of the findings by the County would be required prior to project approval.

Newly constructed and upgraded roadways needed to accommodate new development would be designed according to applicable State and local design standards, with design reviews and approvals overseen by the County of Sonoma (as well as Caltrans for improvements affecting Highway 12). The Specific Plan also establishes policies intended to enhance the safety and comfort of pedestrian and cyclists, as shown below. Specifically, Policy SC-1b of the Specific Plan aims to ensure that circulation improvements result in attractive, functional roadways, bicycle lanes, sidewalks, pathways, transit stops, and parking areas that enhance access and safety for all users. Policy SC-2b aims to improve the pedestrian and bicycle linkages and facilities throughout the Springs to improve mobility; provide safe routes to schools and transit stops; make the area more inviting to pedestrians and bicyclists; and improve connectivity to nearby communities and regional destinations. Policy SC-2g requires provision of new and improved crosswalks. This policy also prioritizes safety features, such as pedestrian warning lights and bulb-outs (curb extensions), that improve visibility and create a more comfortable pedestrian environment, particularly in the vicinity of schools and parks.

New development allowed within the Specific Plan area would include new streets, access points, pathways, and other circulation improvements that would be reviewed and checked for compliance with design and safety standards as part of the entitlement process conducted by the County of Sonoma, or as required during the encroachment permit process overseen by Caltrans. Therefore, this impact would be **less than significant**.

SPECIFIC PLAN POLICIES THAT REDUCE THE POTENTIAL FOR IMPACTS

Policy SC-1b: *Ensure that circulation improvements result in attractive, functional roadways, bicycle lanes, sidewalks, pathways, transit stops, and parking areas that enhance access and safety for all users.*

Policy SC-2b: *Improve pedestrian and bicycle linkages and facilities throughout the Springs to improve mobility; provide safe routes to schools and transit stops; make the area more inviting to pedestrians and bicyclists; and improve connectivity to nearby communities and regional destinations.*

Policy SC-2g: *Provide new and improved crosswalks. Prioritize safety features, such as pedestrian warning lights and bulb-outs, that improve visibility and create a more comfortable pedestrian environment, particularly in the vicinity of schools and parks.*

Impact 3.13-3: Implementation of the Project would not result in impacts related to emergency access (Less than Significant)

Buildout of the proposed Specific Plan would result in increased development densities and land use intensities within the Specific Plan area. As a result of the intensified land use mix, the volume of users accessing the transportation network within the Specific Plan area is expected to increase. Emergency access along proposed and existing roadways must be accommodated in conjunction within the expected population and employment growth. Plans submitted for individual

developments to be constructed in the Specific Plan area would be reviewed for compliance with emergency access requirements by public safety officials during the County's entitlement process.

Roads and emergency access requirements are governed by existing State and local law. Development in the State Responsibility Area (SRA) is governed by the State Board of Forestry and Fire Protection Regulations (14 CCR 1270 et seq.) and development in the Local Responsibility Area (LRA) is governed by the County's Fire Safe Standards (Sonoma County Code Chapter 13 Article V) (see more on the SRA and LRA in Section 3.16, Wildfire). Regulations govern road surfaces, grades, curves, intersections, and widths and provide specific requirements for two-way, one-way, and dead-end roads. The roadway cross sections identified in the Specific Plan have been configured to meet these requirements.

Additionally, the proposed Specific Plan includes Policies SC-1e, SC-1g, and SC-2e, listed below, which address roadway design and site access. Specifically, Policy SC-1e requires implementation of the roadway cross-sections included in this Specific Plan which are designed to accommodate all modes of transportation including walking, bicycling, transit, and driving. Policy SC-1g requires monitoring of traffic patterns on Highway 12 and collaboration with Caltrans periodically to adjust traffic signal timing to improve the flow of traffic. Policy SC-2e prohibits cul-de-sacs and dead end streets, except where existing conditions require them. If cul-de-sacs are necessary, this policy requires walkways connecting to adjacent streets and future development.

General Plan Policy CT-4j requires that the County design roads for reasonable access by emergency vehicles. Traffic signal communications equipment, including any new signals constructed within the Specific Plan area, would utilize OPTICOM pre-emption devices for emergency responders. Streets within the Specific Plan area are generally interconnected, providing multiple points of access by emergency vehicles. The configuration of Highway 12, including bike lanes, buffers, and the center turn lane, also provides space for automobile drivers to safely pull over and allow emergency responders to pass. Given these conditions, any impacts to emergency access are anticipated to be **less than significant**.

SPECIFIC PLAN POLICIES THAT REDUCE THE POTENTIAL FOR IMPACTS

Policy SC-1e: *Implement the roadway cross-sections included in this Specific Plan which are designed to accommodate all modes of transportation including walking, bicycling, transit, and driving.*

Policy SC-1g: *Monitor traffic patterns on Highway 12 and collaborate with Caltrans periodically to adjust traffic signal timing to improve the flow of traffic.*

Policy SC-2e: *Prohibit cul-de-sacs and dead end streets, except where existing conditions require them. If cul-de-sacs are necessary, require walkways connecting to adjacent streets and future development.*

Impact 3.13-4: Implementation of the Project would not conflict with a program, plans, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, or pedestrian facilities (Less than Significant)

CONSISTENCY WITH ADOPTED CIRCULATION PLANS, INCLUDING PEDESTRIAN AND BICYCLE PLANS AND POLICIES

Implementation of the Specific Plan would be consistent with, and would expand upon, the pedestrian and bicycle network identified in the *Sonoma County General Plan Circulation Element*, the *Sonoma County 2010 Bicycle and Pedestrian Plan*, and the *SCTA Moving Forward 2050 Sonoma County Comprehensive Transportation Plan*. The Specific Plan would improve the existing bicycle and pedestrian circulation infrastructure within the Specific Plan area, building upon the improvements made by the recent Highway 12 improvements project while also improving convenience and safety for people crossing the highway and traversing the corridor by walking and bicycling. The Plan would also support and strengthen connections to the Central Sonoma Valley Bikeway. The Plan requires future development to be connected by walkways, constructing new or widened sidewalks in many areas as redevelopment activity occurs. The proposed Specific Plan supports and expands upon current policies regarding transportation, including Sonoma County's General Plan 2020 and the *2010 Bicycle and Pedestrian Plan* and does not include components that would conflict with or impede implementation of adopted plans and requirements addressing the circulation system. Accordingly, implementation of the Specific Plan would result in **less than significant** impacts with respect to consistency with adopted policies, plans, or programs.

PEDESTRIAN FACILITIES

As shown in Table 3.13-1 and Figure 3.13-4, and as described in the Circulation Chapter of the Specific Plan document, the Specific Plan calls for filling all gaps in the sidewalk network and establishing several new off-street path segments, which would be expected to have beneficial impacts to pedestrian circulation and safety. The Plan also identifies 11 locations on the Highway 12 corridor where new crosswalks would be installed, many of which would include enhancements such as pedestrian warning lights and/or treatments like curb extensions and raised medians that reduce pedestrian crossing distances and exposure to vehicle traffic. Most of these new crossing locations are in the existing commercial district and/or adjacent to transit stops, and already experience substantial pedestrian activity including legal crossings at intersections with unmarked crosswalks. Other locations on Highway 12 in the Plan area do not currently encounter high levels of pedestrian activity but would be expected to as future development permitted by the Specific Plan occurs, and the number of people living, working, and visiting such areas increases. The determination of when to install new pedestrian crossings as well as their ultimate configuration must be carefully considered in order create the safety benefits that the crossings are intended to provide. Table 3 in the Specific Plan's circulation chapter identifies which improvements should be considered near-term versus long-term. The new pedestrian crossings are inherently intended to improve pedestrian safety. As required by Specific Plan Policy SC-2b, the ultimate configuration of any new pedestrian crossing would be evaluated and determined by the County's Department of Transportation and Public Works, in collaboration with Caltrans regarding improvements along Highway 12, with consideration of the physical characteristics and best design practices that exist at the time the design is initiated.

The sidewalk gaps on side street throughout the Plan area will be filled over time as funding allows and as development and/or improvements on individual parcels occurs. In the northern and central portions of the Specific Plan, the plan's boundaries generally extend one to two parcels on each side of Highway 12. As such, the potential for significant traffic increases to adversely affect pedestrian safety on side streets is limited, even in cases where a gap in the sidewalk network between the project site and Highway 12 would result. In the southern plan area including the Donald Street neighborhood, the plan generally designates lower density residential uses, and side street traffic volumes are anticipated to remain low. In these areas, pedestrian circulation currently takes place on the shoulders of existing streets and, while not optimal, such a configuration is not anticipated to reflect an adverse safety condition for pedestrians during the periods prior to completion of the sidewalk network.

There may be certain cases such as with projects anticipated to generate higher pedestrian volumes where the sidewalk gaps occurring prior to Plan buildout *could* present pedestrian safety concerns. The circumstances unique to each individual development project will be considered by the County of Sonoma during the entitlement process, and if deemed necessary, projects would be required to construct offsite pedestrian facilities to fill gaps in the walking network. The County currently maintains the authority to determine the need for and require such improvements and would maintain that authority with implementation of the Specific Plan.

Implementation of the Specific Plan would fill gaps in the pedestrian network, establish enhanced pedestrian crossings on Highway 12, and improve pedestrian connectivity through provision of new off-street paths. While sidewalk gaps existing prior to buildout of the plan are generally not anticipated to result in adverse pedestrian safety concerns, the County of Sonoma will continue to review individual development projects for location- and use-specific impacts, and would require sidewalk gaps to be filled where deemed necessary to enhance pedestrian safety. As a result, the Specific Plan is expected to result in **less than significant** impacts to pedestrians.

BICYCLE FACILITIES

The proposed bicycle network is depicted on the Bicycle Circulation Plan (Figure 6 in the Springs Specific Plan document and included herein as Figure 3.13-5). The Specific Plan includes new bike facilities that are consistent with those identified in the *Sonoma County Bicycle and Pedestrian Plan*, including completion of the Central Sonoma Valley Bikeway that runs parallel to Highway 12 through the community. Additional bicycle connections newly-proposed by the Specific Plan include a multi-use path connection between Highway 12 and Larson Park, and bike route designations on Lichtenberg Avenue and Boyes Boulevard between Highway 12 and the Central Sonoma Valley Bikeway.

The Specific Plan also proposes to modify the existing bicycle lanes on Highway 12 to include a striped buffer between the bike lane and vehicle lanes, and to use green-colored bike lanes in areas where bicycle and vehicle traffic interacts (such as near intersections). These enhancements would be expected to improve the visibility of cyclists to drivers, thereby improving bicyclist safety.

The intensification of land uses within the Plan will add vehicular and bicyclist traffic to side streets, though because the Plan boundaries are generally located within 400 feet of Highway 12 (typically one to two parcels) throughout much of the Specific Plan, the potential for any individual side street to be so impacted by traffic as to create a safety concern for bicyclists is limited. Where the Plan

boundaries extend farther from Highway 12, such as in the Donald Street neighborhood, the proposed intensification of land uses is relatively low, again resulting in little potential for adverse impacts to bicyclists to occur. Vehicular speeds on side streets within the Plan area are currently low and are anticipated to remain so based on existing and proposed roadway configurations and increased activity associated with new development. Bicyclists traveling longer distances will have convenient access to the proposed buffered bike lanes on Highway 12, as well as the lower-volume streets and paths that comprise the Central Sonoma Valley Bikeway.

The new bicycle facilities identified in the Specific Plan are anticipated to increase bicyclist comfort and safety, supporting travel by non-auto modes, and would be expected to result in a **less than significant** impact.

TRANSIT

Implementation of the proposed Specific Plan is expected to increase population and employment within the Specific Plan area. The corridor-based configuration of the Specific Plan aligns with existing transit routes operated by Sonoma County Transit, and the Specific Plan includes policies to coordinate with SCT to increase transit frequencies in the future. The Specific Plan also emphasizes pedestrian and bicyclist connectivity to transit facilities and includes policies that prioritize transit stop enhancements. The Plan's transit orientation would reduce reliance on travel by single-occupant vehicles, creating a shift in mode share from autos to transit that would be expected to result in increased transit ridership and system efficiency. Specifically, the demand for SCT transit service is expected to increase as it provides access to local and regional activity centers including those in the cities of Sonoma and Santa Rosa.

Given the Specific Plan's strong focus on creating a transit-supportive circulation network, in addition to policies supporting transit enhancements within the Specific Plan area, impacts related to public transit are considered **less than significant**.

SPECIFIC PLAN POLICIES THAT REDUCE THE POTENTIAL FOR IMPACTS

Policy SC-2b: *Improve pedestrian and bicycle linkages and facilities throughout the Springs to improve mobility; provide safe routes to schools and transit stops; make the area more inviting to pedestrians and bicyclists; and improve connectivity to nearby communities and regional destinations.*

The ultimate configuration of any new pedestrian crossings shall be evaluated and determined by the Sonoma County Department of Transportation and Public Works, in collaboration with Caltrans, and in consideration of the physical characteristics and best design practices that exist at the time the design is initiated.

Policy SC-2d: *Require that adjacent developments be connected by safe, direct walkways. Ensure that projects are designed to anticipate and accommodate future street and sidewalk connections to new development on adjacent lands.*

Policy SC-2h: *Provide new and improved bicycle lanes and enhance bicycle safety through signs, bicycle lane buffers, and green colored pavement. Priority should be given to intersections when making safety improvements.*

Policy SC-2i: *Prioritize crosswalk, sidewalk, and bicycle lane improvements near schools, parks, transit stops, and the Springs plaza.*

Policy SC-2k: *Require development projects along Highway 12 to provide increased sidewalk widths, consistent with the cross-sections identified in this chapter and the setback requirements set forth in the Design Guidelines chapter.*

Policy SC-3a: *Coordinate with Sonoma County Transit to improve local bus service by increasing the frequency of bus service in the Springs and decreasing travel times.*

Policy SC-3d: *Work with Sonoma Transit to improve bus stops by providing well-lit shelters, benches, bicycle racks, and trash cans. Provide schedule information at each bus shelter location.*

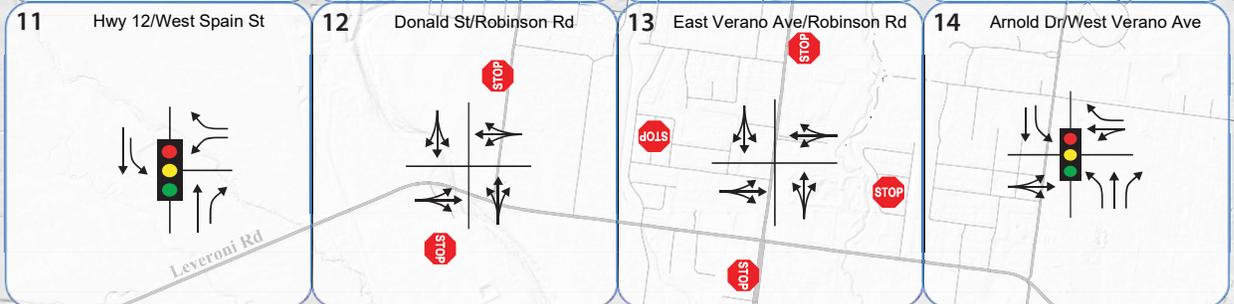
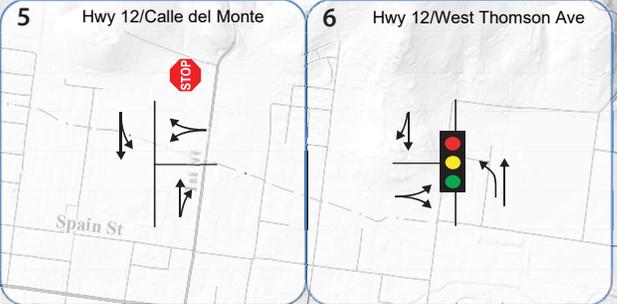
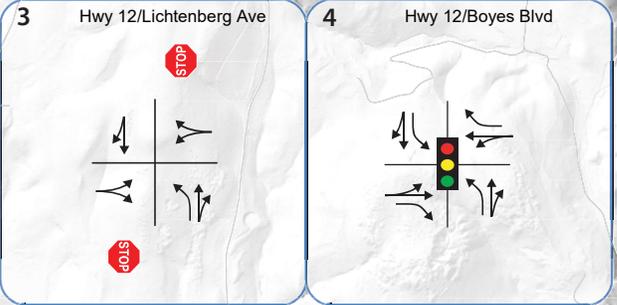
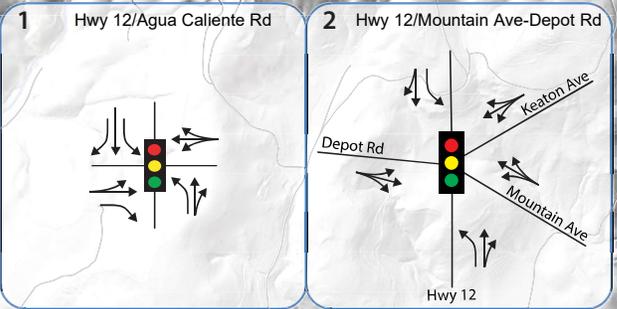
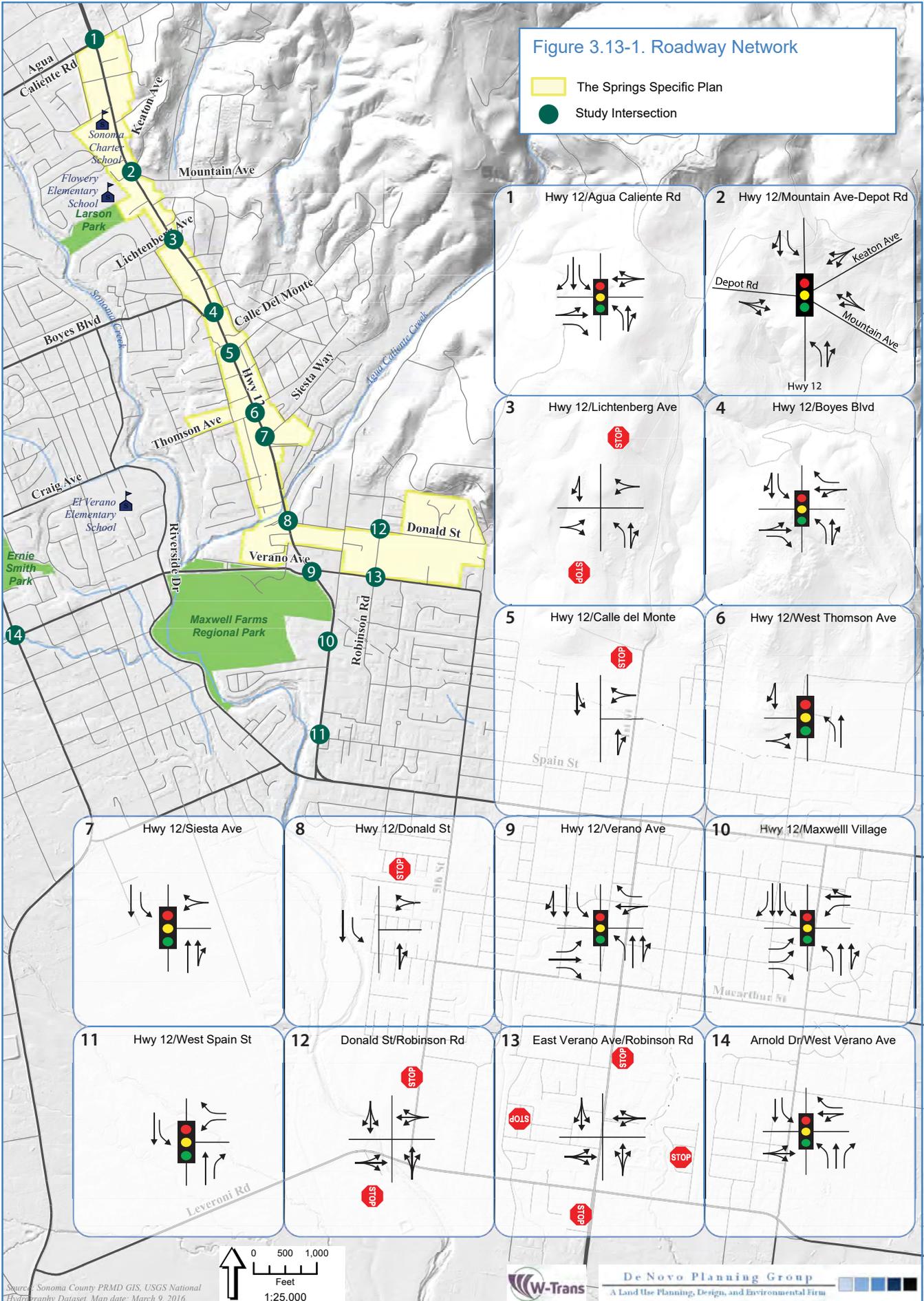
Policy SC-3f: *In conjunction with road or development projects, review whether a bus turnout is appropriate in locations where transit shelters exist or are planned.*

Policy SC-3g: *Maintain fare-free service on the Sonoma County Transit local route serving the Springs area (currently route 32 Sonoma Shuttle).*

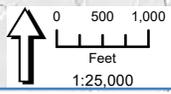
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Figure 3.13-1. Roadway Network

-  The Springs Specific Plan
-  Study Intersection



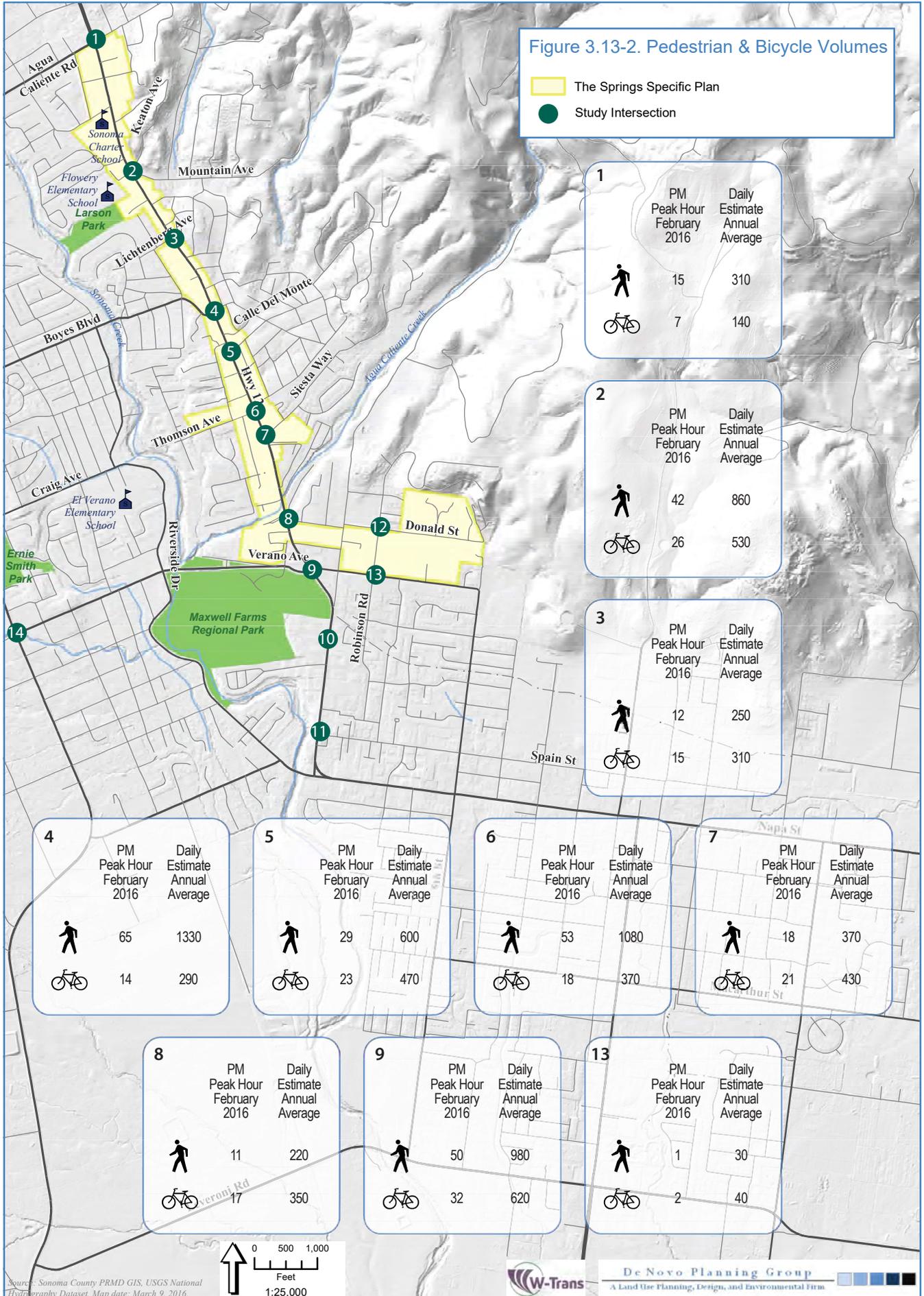
Source: Sonoma County PRMD GIS, USGS National Hydrography Dataset. Map date: March 9, 2016.



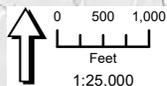
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Figure 3.13-2. Pedestrian & Bicycle Volumes

The Springs Specific Plan
 Study Intersection



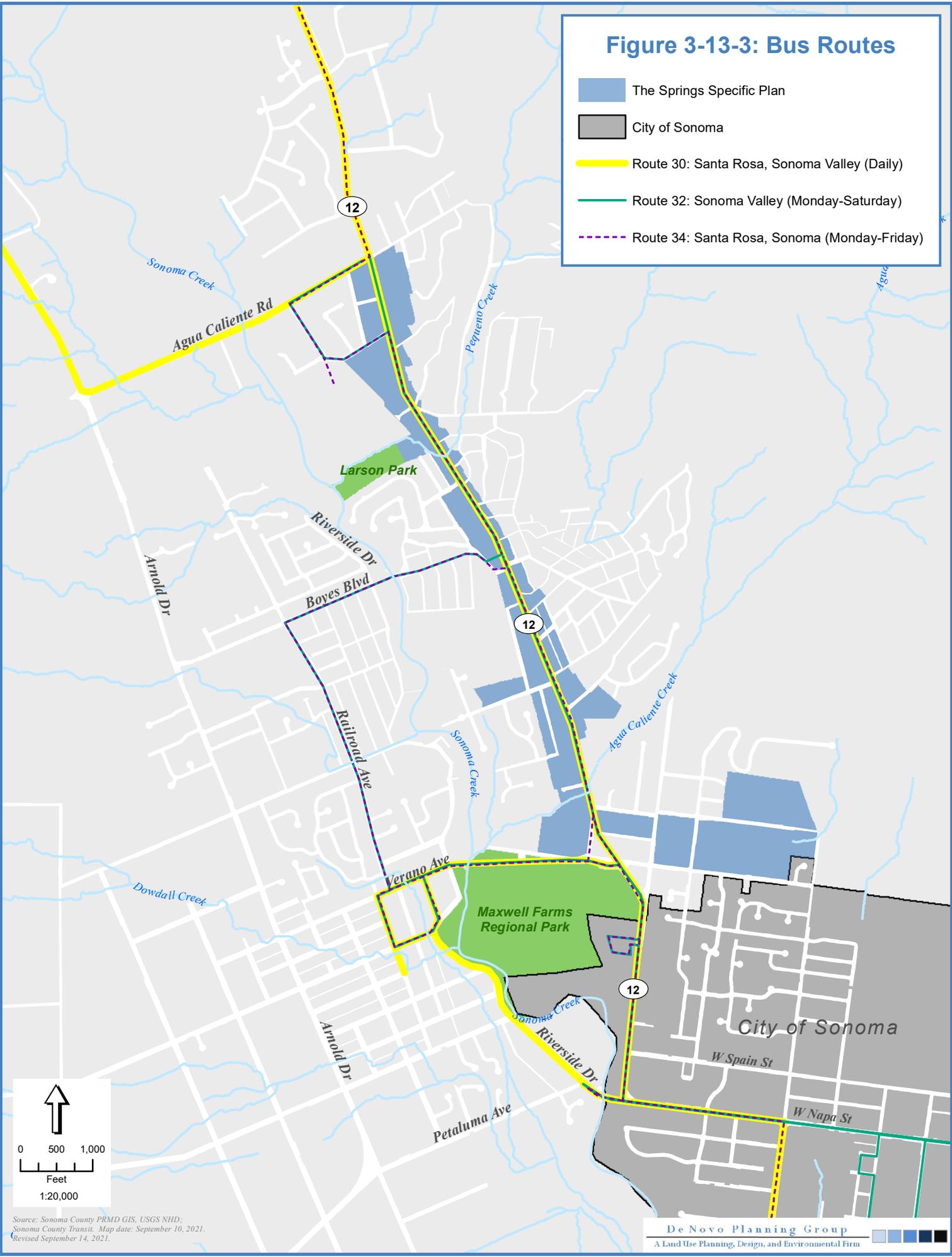
Source: Sonoma County PRMD GIS, USGS National Hydrography Dataset, Map date: March 9, 2016.



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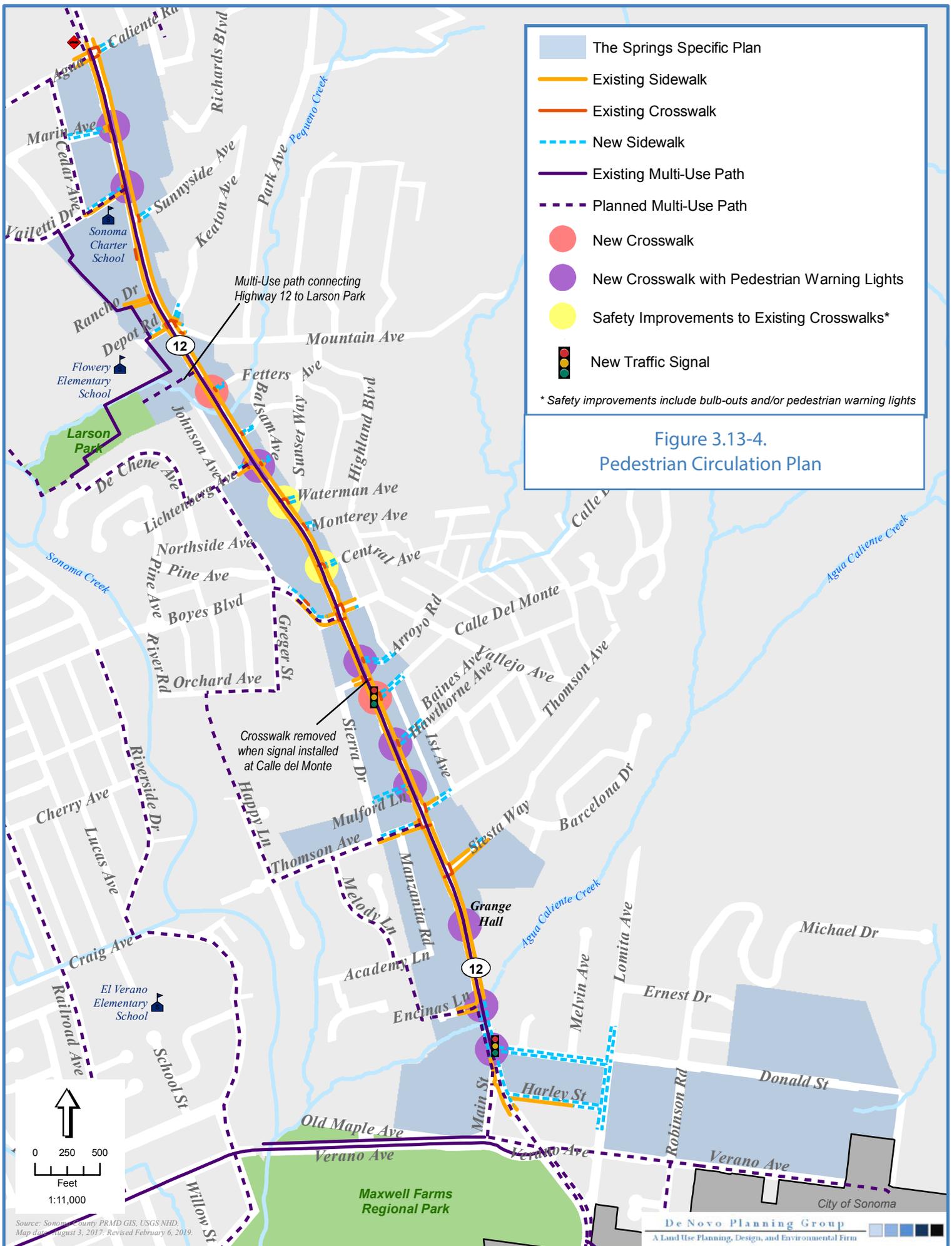
Figure 3-13-3: Bus Routes

- The Springs Specific Plan
- City of Sonoma
- Route 30: Santa Rosa, Sonoma Valley (Daily)
- Route 32: Sonoma Valley (Monday-Saturday)
- Route 34: Santa Rosa, Sonoma (Monday-Friday)

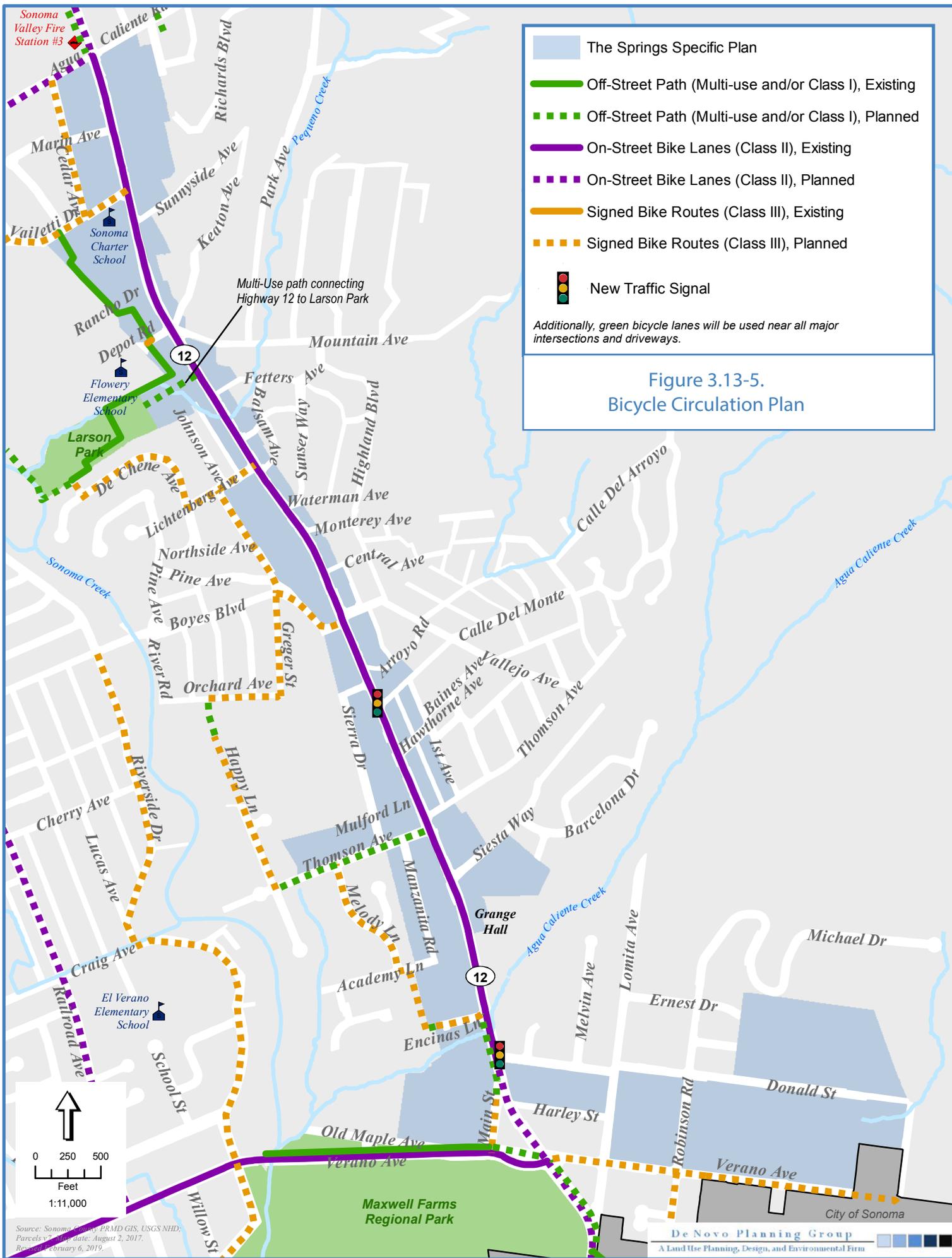


Source: Sonoma County PRMD GIS, USGS NHD;
 Sonoma County Transit. Map date: September 10, 2021.
 Revised September 14, 2021.

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The Springs Specific Plan

- Off-Street Path (Multi-use and/or Class I), Existing
- - - Off-Street Path (Multi-use and/or Class I), Planned
- On-Street Bike Lanes (Class II), Existing
- - - On-Street Bike Lanes (Class II), Planned
- Signed Bike Routes (Class III), Existing
- - - Signed Bike Routes (Class III), Planned
- New Traffic Signal

Additionally, green bicycle lanes will be used near all major intersections and driveways.

**Figure 3.13-5.
Bicycle Circulation Plan**

0 250 500
Feet
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Source: Sonoma County PRMD GIS, USGS NHD; Parcels v. 2017; date: August 2, 2017. Revised: February 6, 2019.

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This section describes the regulatory setting, impacts associated with wastewater services, water services, and solid waste disposal that are likely to result from implementation of the Project, and policies to reduce potential impacts to wastewater, water supplies, storm drainage, and solid waste facilities. A discussion of the Project's storm drainage and flood control facilities is included in Section 3.8, Hydrology and Water Quality. Therefore, storm water drainage and infrastructure are not addressed in this EIR section. This section is based in part on the following documents, reports and studies: *California's Groundwater* (California Department of Water Resources, 2015), *CalRecycle Solid Waste Information System, CalRecycle Jurisdiction Diversion/Disposal Rate Summary*, *Sonoma Valley County Sanitation District Sanitary Sewer Assessment and Master Plan* (Sonoma County Water Agency, 2016), *Sonoma Valley County Sanitation District Sewer System Management Plan* (Sonoma County Water Agency, 2016), *Sonoma County Water Agency 2015 Urban Water Management Plan, Technical Memorandum, Subject: Sanitary Sewer Capacity Evaluation for the Springs Specific Plan* (Sonoma County Water Agency, 2019), *The Springs Specific Plan Utility Infrastructure Needs Report* (EBA Engineering, 2019), and *Springs Specific Plan Water Supply Assessment* (Maddaus Water Management, Inc., 2019).

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.14.1 WASTEWATER SERVICES

ACRONYMS

I&I	Inflow & Infiltration
gpd	gallons per day
mgd	million gallons per day
NPDES	National Pollutant Discharge Elimination System
RWQCB	Regional Water Quality Control Board, San Francisco Bay Region
SCWA	Sonoma County Water Agency (Sonoma Water)
SECAP	System Evaluation and Capacity Assurance Plan
SWRCB	State Water Resources Control Board
SVCS	Sonoma Valley County Sanitation District

ENVIRONMENTAL SETTING

The SVCS provides wastewater collection, treatment, and disposal services within the Plan area. SVCS's service area covers approximately 4,500 acres and serves approximately 17,548 single family dwelling equivalents.

SVCS's treatment plant provides tertiary treatment for a permitted average daily dry weather influent flow capacity of up to three mgd. SVCS's treatment plant currently treats approximately 2.7 mgd during dry weather conditions (average dry weather flow) and an average 11 mgd wintertime maximum treatment. According to the Sonoma Valley County Sanitation District Sanitary Sewer Capacity Assessment and Master Plan Final Report (MPFR) created by RMC Water and Environment Inc., dated April 2016, the existing collection system base wastewater flow estimate for peak flow on a non-rainfall wintertime day including groundwater infiltration is 4.9 mgd and peak wet weather flow for a 10-year 24-hour design storm event is approximately 20.7 mgd.

The SVCSD sanitary sewer collection system includes sewer pipelines ranging in size from 4 to 42 inches in diameter. The larger pipes, primarily the 10-inch and larger sewers and a portion of the smaller diameter pipes, comprise the trunk sewer system, which is the primary network for conveying wastewater flows to the treatment plant.

Current reuse of wastewater treated by SVCSD includes wetland habitat enhancement, vineyard and pasture irrigation, water for construction, and a small amount of water used for residential landscape irrigation. In recent years, the SVCSD has explored the feasibility of expanding recycled water use to offset local groundwater pumping or imported Russian River water in addition to reducing or eliminating discharges to San Pablo Bay.

Potential Issues with Existing Infrastructure

According to the SVCSD, the trunk and relief mains in Vista Drive are scheduled to be replaced by 2024. The SVCSD has identified issues with inflow and infiltration (I&I) in their existing sewer infrastructure throughout the Sonoma Valley, including locations within the Plan area. Inflow and infiltration are terms used to describe the ways that clean groundwater or stormwater flow into the sewer system through cracked sewer lines, leaky holes, improper storm drain connections, and other means. Most inflow comes from stormwater and most infiltration comes from groundwater. The exact locations of the problem areas were not provided. The Utility Infrastructure Needs Report prepared for the Specific Plan identifies existing issues with sewer overflows during large rain events involving the sewer mains in Vailetti Drive near State Highway 12 and the sewer trunk line located in the Rancho Vista Trailer Park.

Per the SCVSD, many of the pipes in the Plan area are more than 50 years old. During heavy rain events the system overloads and sewage can flow into local creeks and other waterways. One of the major contributing factors to sewer system overflow is I&I of stormwater runoff and groundwater through seepage into existing deteriorated laterals and sewer mains, resulting in a substantial increase in the amount of water flowing to the SCVSD treatment facility during storm events.

In 2015 and 2019, due to system overflows, SVCSD was issued a Cease and Desist Order (Order) by the RWQCB. The Order requires that the District construct the remaining trunk sewer replacement projects identified in a 2002 study that have not yet been completed; prepare a Sewer Capacity Study, to identify, prioritize, and develop a schedule for completing projects necessary to reduce or eliminate recurring system overflows; and implement those projects per the schedule. As a result of the Order, the SVCSD prepared the Sanitary Sewer Capacity Assessment and Master Plan, most recently updated April 2021, which addresses current and future projected capacity of the SVCSD system and identifies projects necessary to address system overflows and accommodate planned development. A 24-hour duration, 10-year return period storm event based on historical rainfall statistics was selected as the design event for evaluating system capacity and sizing required system improvements, if needed.

REGULATORY SETTING

Clean Water Act / National Pollutant Discharge Elimination System Permits

The Clean Water Act is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and

biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The Clean Water Act regulates discharges from "non-point source" and traditional "point source" facilities, such as municipal sewage plants and industrial facilities. Section 402 of the Act creates the NPDES regulatory program that makes it illegal to discharge pollutants from a point source to the waters of the United States without a permit. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes the U.S. Environmental Protection Agency, a tribe, or a territory). NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, storm water associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain thresholds.

Permit requirements for treatment are expressed as end-of-pipe conditions. This set of numbers reflects levels of three key parameters: (1) biochemical oxygen demand, (2) total suspended solids, and (3) pH acid/base balance. These levels can be achieved by well-operated sewage plants employing "secondary" treatment. Primary treatment involves screening and settling, while secondary treatment uses biological treatment in the form of "activated sludge."

All so-called "indirect" dischargers are not required to obtain NPDES permits. An indirect discharger is one that sends its wastewater into a city sewer system, so it eventually goes to a sewage treatment plant. Although not regulated under NPDES, "indirect" discharges are covered by another Clean Water Act program called pretreatment. "Indirect" dischargers send their wastewater into a city sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering surface water.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State is required to adopt policies, plans, and objectives that will protect the State's waters for the use by and enjoyment of Californians. In California, the SWRCB has the authority and responsibility for establishing policy related to the State's water quality. Regional authority is delegated by the SWRCB to a RWQCB. The Porter-Cologne Act authorizes the SWRCB and RWQCB to issue NPDES permits. The Plan Area is located in the San Francisco Bay RWQCB jurisdiction.

Sonoma Valley County Sanitation District Sanitary Sewer System Master Plan (2016)

At the onset of the Springs Area Specific Plan planning process, staff utilized the most recent available data provided in the Master Plan published in 2016. In 2019, staff requested and received from Sonoma Water a supplemental analysis based on the proposed growth potential from the Springs Area Specific Plan. Since then, an updated Master Plan has been published in 2021 and any changes in environmental impact have been reflected.

The Sewer System Master Plan is intended to meet the requirements of the Statewide Waste Discharge Requirements and is organized consistent with the SWRCB guidelines. The Sewer System Master Plan includes eleven elements, as listed below. Each of these elements forms a section of the document.

1. Goals
2. Organization
3. Legal Authority
4. Operations and Maintenance program
5. Design and Performance Provisions
6. Overflow Emergency Response Plan (“OERP”)
7. Fats, Oils, and Grease Control Program
8. System Evaluation and Capacity Assurance Plan (“SECAP”)
9. Monitoring, Measurement and Program Modifications
10. Sewer System Master Plan Program Audits
11. Communications Program

Sonoma Valley County Sanitation District Private Sewer Lateral Ordinance

The Private Sewer Lateral Ordinance, which went into effect on March 8, 2017, addresses inflow and infiltration (“I&I”) from private homes and businesses, and requires property owners of homes and businesses that are 30 years or older to have private sewer laterals inspected, and repaired if necessary, to prevent sewer overflows. Inflow and infiltration occurs when storm water or groundwater enters the sanitary sewer system through defects in pipes and manholes (infiltration) or direct drainage connections (inflow). The SVCSO facilitates free inspections of private sewer laterals, rebates of up to \$1,000 for repairs, and a low interest loan program to aid property owners in paying for repairs.

Sonoma County General Plan

The Sonoma County General Plan identifies the following goals, objectives, and policies related to wastewater services:

PUBLIC FACILITIES AND SERVICES ELEMENT

GOAL PF 1: Assure that water and wastewater services are available where necessary to serve planned growth and development without promoting unplanned growth.

Objective PF 1-1: Operate County water and wastewater facilities in accordance with planned growth and in compliance with applicable State and Federal standards.

Objective PF 1-2: Help resolve water problems resulting from proliferation of small water systems.

Objective PF 1-3: Limit extension of public water and sewer services into rural areas.

Objective PF 1-4: Plan for wastewater facilities adequate to serve the growth projected in the General Plan.

Policy PF-1a: Plan, design, and construct sewer services in accordance with projected growth except as provided in Policy LU-4d.

Policy PF-1b: Prepare or encourage the preparation of master plans or equivalent documentation for all wastewater management systems prior to approval of project facilities. Design and construct all facilities in accordance with General Plans of the applicable jurisdictions. In the event that a master plan or monitoring fails to show adequate facilities or supplies for planned growth, consider moratoria on plan

amendments, zoning changes, building permits or other entitlements in order to protect services to existing residents. The minimum contents necessary for an adequate master plan or equivalent documentation are:

- (1) Maps showing future service area boundaries,
- (2) Forecasted growth that reflects all potential sources of future demand for facilities and the relationship to General Plan projections and limits,
- (3) Projected service and facility needs,
- (4) Estimated costs and revenues for needed improvements,
- (5) System design parameters and assumptions,
- (6) A program for water use reduction,
- (7) A program to reduce storm water infiltration, and
- (8) A program to monitor and account for amendments of the General Plan Land Use Map over time.

Policy PF-1c: Give the highest priority for water and sewer improvement planning to those service providers whose capacity for accommodating future growth is most limited. These include the Occidental County Sanitation District, the Geyserville Water Works and Geyserville Sanitation Zone, the Sweetwater Springs Water District, Monte Rio, the Town of Windsor (water supply to the Airport Industrial Area), the California American Water Company (Larkfield-Wikiup), the Airport-Larkfield-Wikiup County Sanitation Zone, the Valley of the Moon Water District, and the Sonoma Valley Sanitation District, or any entities which may succeed these service providers.

Policy PF-1d: Require as part of discretionary project applications within a water or sewer service area written certification that either existing services are available or needed improvements will be made prior to occupancy.

Policy PF-1e: Avoid General Plan amendments that would increase demand for water supplies or wastewater treatment services in those urban areas where existing services cannot accommodate projected growth as indicated in Table LU-1 or any adopted master plan.

Policy PF-1f: Avoid extension of public sewer services outside of either a sphere of influence or Urban Service Area. To the extent allowed by law, consider exceptions to this policy only:

- (1) Where necessary to resolve a public health hazard resulting from existing development, or
- (2) Where appropriate to allow farmworker housing or an affordable housing project providing exclusively lower income housing on properties adjoining urban service boundaries.

Policy PF-1g: Use the following guidelines for any exception allowed by Policy PF-1f:

- (1) The property must adjoin the Urban Service Boundary or the proposed connection to a public sewer system must be no more than 200 feet from the Urban Service Boundary,
- (2) Size sewage facilities to serve development consistent with the General Plan, and

- (3) Require written certification that adequate service capacity is available for the use to be connected to the system.

Policy PF-1h: Avoid extension of public water service to a property that is outside of both the Urban Service Area and sphere of influence of the water provider. Consider exceptions to this policy, to the extent allowed by law, only:

- (1) Where necessary to resolve a public health hazard resulting from existing development such as failing wells or groundwater contamination, or
- (2) Where water service is to be extended for a property which is located within a water district boundary in effect in November, 2003, or
- (3) Where appropriate to allow an affordable housing project providing exclusively lower income housing on properties adjoining Urban Service Boundaries.

Policy PF-1i: Use the following guidelines for any exception allowed by Policy PF-1h:

- (1) Size facilities to serve development consistent with the General Plan,
- (2) Require written certification that adequate service capacity is available for the use to be connected to the system or planned to be connected in the future, and
- (3) Utilize out-of-service area agreements rather than annexations.

WATER RESOURCES ELEMENT

GOAL WR 1: Protect, restore and enhance the quality of surface and groundwater resources to meet the needs of all reasonable beneficial uses.

Objective WR 1-1: Work with the Regional Water Quality Control Boards (RWQCB) and interested parties in the development and implementation of RWQCB requirements.

Objective WR 1-2: Avoid pollution of stormwater, water bodies and groundwater.

Policy WR-1l: Consider development or expansion of community wastewater treatment systems in areas with widespread septic system problems that are a health concern and cannot be addressed by on-site maintenance and management programs.

Policy WR-1m: Consider on-site wastewater management districts in areas with septic problems.

Policy WR-1n: Initiate a review of any sewer systems when they persistently fail to meet applicable standards. If necessary to assure that standards are met, the County may deny new development proposals or impose moratoria on building and other permits that would result in a substantial increase in demand and may impose strict monitoring requirements.

Policy WR-1o: Require that commercial and industrial uses reduce and pretreat wastes prior to their entering sewer systems.

Policy WR-1p: Actively pursue the abatement of failing septic systems that have been demonstrated as causing a health and safety hazard.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on the environment associated with Utilities if it will:

- Require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects; and/or
- Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the projects projected demand in addition to the providers existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: Implementation of the Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project’s projected demand in addition to the provider’s existing commitments, or require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects (Less than Significant)

WASTEWATER GENERATION AND CAPACITY

The SVCSD is operated by the SCWA. The SVCSD’s treatment plant provides tertiary treatment for a permitted average daily dry weather flow capacity of 3.0 mgd. The SVCSD’s treatment plant currently treats approximately 2.7 mgd during dry weather conditions and an average 11 mgd wintertime maximum treatment, with winter flows peaking at 22 mgd.

As the Plan area develops in the future, there will be an increased need for water and wastewater services, including a reliable source of recycled water. These needs have been addressed in the SCWA’s and SVCSD’s master plans and will require that the water agency and district continue to implement phased improvements to some pump stations, sewer mains, and the wastewater treatment plant when triggered by growth.

As shown in Table 2.0-4 in Chapter 2.0, the Project would result in up to 706 units, up to 276,903 square feet of non-residential uses, and up to 120 hotel rooms. The Utility Infrastructure Needs Report indicates that the total wastewater flow increase generated by the Project would be up to 166,655 gpd, or 0.17 mgd, as shown in Table 3.14-1. An increase of 0.17 mgd would not result in exceedance of the SVCSD’s treatment plant capacity of 3.0 mgd.

TABLE 3.14-1: PROJECT WASTEWATER FLOW INCREASE

<i>LAND USE CATEGORY</i>	<i>WASTEWATER FLOW (GPD)</i>	<i>NET NEW DEVELOPMENT</i>	<i>WASTEWATER FLOW INCREASE</i>
Single Family Units	200 per unit	88	17,600
Multifamily Units	160 per unit	461	73,760
Work/Live & Mixed Use Units	160 per unit	157	25,120
Commercial SF	0.19 per SF	168,029	31,926

3.14 UTILITIES

LAND USE CATEGORY	WASTEWATER FLOW (GPD)	NET NEW DEVELOPMENT	WASTEWATER FLOW INCREASE
Office SF	0.076 per SF	82,226	6,249
Hotel Rooms	100 per room	120	12,000
Recreation SF	0 per SVCSD	26,648	-
Wastewater Flow Increase (gpd)			166,655
Wastewater Flow Increase (mgd)			0.17

NOTE: SF = SQUARE FEET

SOURCE: EBA ENGINEERING, 2019; DE NOVO PLANNING GROUP, 2021.

The Sonoma County General Plan includes objectives and policies that would reduce impacts related to wastewater treatment. These relevant objectives and policies are listed above under the Regulatory Setting.

Additionally, the proposed Specific Plan includes infrastructure policies aimed to support the private development and public improvements which would result from implementation of the Project. For example, Policy CF-1a requires preparation of a sewer maintenance and upgrade plan that programs improvements to ensure that adequate levels of service are maintained under existing and buildout conditions. Policy CF-1d requires development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development. Further, Policy CF-1e requires development projects to install off-site infrastructure or pay appropriate in-lieu fees when applicable. Subsequent development projects proposed within the Plan area would be subject to these policies. The project would have a **less than significant** impact on the capacity of the wastewater treatment provider to serve the Project's projected demand in addition to their existing commitments.

WASTEWATER FACILITIES AND INFRASTRUCTURE

The Project growth estimates for the Plan area were analyzed and documented by Woodard and Curran in the SCWA Collection System Hydraulic Modeling Support technical memorandum, dated March, 2019. The sewer system model previously analyzed in the 2016 SVCSD Master Plan Final Report was used to analyze the Plan area in the 2019 System Hydraulic Modeling Support technical memorandum. The sewer system model analyzed existing and future system capacity needs for a 10-year, 24-hour design storm event under peak dry weather flow and peak wet weather flow conditions.

According to the 2016 SVCSD Master Plan Final Report, no deficiencies were identified within the system under peak dry weather flow conditions, and several recommended Capital Improvement Projects were proposed to correct capacity deficiencies identified under peak wet weather flow conditions. Of the recommended Capital Improvement Projects identified, project nos. 1, 3, 4, 5, and 14 are within the vicinity of the Plan area. See Table 3-3 of the Utility Infrastructure Needs Report (Appendix G of this Draft EIR) prepared for the Project for the detailed list of Capital Improvement Projects.

The 2019 System Hydraulic Modeling Support technical memorandum analyzed the system under the future scenario conditions, which included additional growth due to the Project. No deficiencies were found under future peak dry weather flow conditions. No new deficiencies were identified under future peak wet weather flow conditions, with minor exception to Capital Improvement Project #5. Deficiencies associated with Capital Improvement Project #5 have now been identified as impacting 164 additional feet of pipe for a total impact of 1,144 feet of the system.

The sewer system Capital Improvement Projects scheduled/identified within the Plan area in the 2016 SVCSD Master Plan Final Report were sized to accommodate the projected growth at that time. The subsequent 2019 System Hydraulic Modeling Support technical memorandum analysis of the Plan area, under a future growth scenario from the Project, confirmed that the recommended Master Plan Final Report Capital Improvement Projects #'s 1, 3, 4, 5, and 14 within the Plan area with an additional extension to Capital Improvement Project #5, will be sufficient to accommodate the increased flow from buildout of the Project. The extension to Capital Improvement Project #5 would require the project (replacement of existing deficient pipe) to be extended by an additional 164 feet. This extension would replace existing pipe within the existing right-of-way in an urbanized, developed neighborhood and would result in temporary air quality and noise impacts associated with construction activities; these impacts would be mitigated to less than significant with adherence to the Bay Area Air Quality Management District Basic Construction Mitigation Measures and adherence to the standard Best Management Practices, including measures that address air quality, dust control and equipment emissions, management of hazardous materials, and adherence to the applicable noise control standards for construction projects would address potential impacts.

As development occurs throughout the Plan area, each project will need to be analyzed on a project-by-project basis to determine the extents of the localized sanitary sewer infrastructure upgrades needed. Factors that will determine the extents of the improvements will include, at a minimum:

- Age and type of existing laterals/infrastructure;
- The type and size of the project;
- Any known I&I issues associated with the greater area where a project is proposed;
- The location of the project in relation to the existing infrastructure; and
- The capacity of the existing infrastructure to account for the planned upstream development.

Sewer system conveyance shall be designed in accordance with accepted engineering principles and shall conform to the SVCSD's Standard Plans and specifications. The project would have a **less than significant** impact on the environment in regards to potential effects from the relocation or construction of new or expanded wastewater facilities to accommodate the Project.

CONCLUSION

While full buildout of the Project would increase the demand on treatment infrastructure, in addition to anticipated growth throughout other areas of the district, the County's General Plan and the Project include provisions to ensure that new development cannot be approved until it can be demonstrated that adequate capacity is available to serve it. As described above, the SVCSD must also periodically review and update its master plan, and as growth continues to occur within the Plan area, the SVCSD will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development. Future sewer system upgrades would be subject to the SVCSD and SCWA Sanitation Code and Design and Construction Standards.

Development under the Project would result in increased wastewater flows, resulting in the need for additional or expanded wastewater treatment facilities and conveyance infrastructure, as described above. The infrastructure and facilities necessary to serve new growth would involve development of some facilities on-site, extension of some facilities off-site within roadway rights-of-way, and may also involve improvements to existing facilities and disturbance of existing rights-of-way.

3.14 UTILITIES

The majority of the required wastewater conveyance infrastructure will be constructed on-site in conjunction with development and redevelopment of individual parcels within the Plan area. Wastewater conveyance infrastructure would be located underground, within the right-of-way footprint of future roadways in the Plan area, and must be constructed to meet the requirements contained in the SVCSD Codes and Standards.

Wastewater treatment and conveyance facilities would be evaluated at the project-level in association with subsequent development projects. However, the facilities would be provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. Impacts associated with temporary construction activities may include air quality, drainage, and noise, and impacts associated with operation including traffic, noise, air quality, hazards, and land stability. These impacts would generally occur as described in the relevant chapters (Chapters 3.1 through 3.14, and 4.0) of this Draft EIR.

Other impacts that may occur include short-term direct visual impacts associated with construction activities; potential direct impacts on a variety of biological resources, including wetlands and riparian resources; loss of trees and other sensitive habitats; and loss or disturbance of special status plant and animal species. Additionally, during construction air quality emissions of particulate matter, greenhouse gases, oxides of nitrogen, and reactive organic gases may be generated. Where potentially significant or significant impacts are identified, this Draft EIR identifies mitigation measures in the relevant chapter to reduce the impacts and discloses which impacts cannot be reduced to less than significant levels. As discussed in Sections 3.1 through 3.13, there are no significant and unavoidable impacts associated with construction activities.

As future development and infrastructure projects are considered by the County, each project will be evaluated for conformance with the Specific Plan, General Plan, County Code, and other applicable regulations.

The County's General Plan includes objectives and policies designed to ensure adequate wastewater treatment capacity is available to serve development, to minimize the potential adverse effects of wastewater treatment, and to ensure that development does not move forward until adequate wastewater capacity exists. Policy PF-1d requires all discretionary development projects to obtain written certification that either existing services are available or needed improvements will be made prior to occupancy.

Additionally, as noted previously, the proposed Specific Plan includes infrastructure and public services policies to support the private development and public improvements which would result from implementation of the Project. For example, Policy CF-1d requires development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development. As discussed throughout this Draft EIR, the Specific Plan includes policies to reduce the potential for impacts to air quality, biological resources, noise, traffic, and other environmental topics. Subsequent development projects proposed within the Plan area that are required to connect to existing sewer facilities or replace or upgrade facilities would be subject to these policies. The project would have a **less than significant** impact on the capacity of the wastewater treatment provider to serve the Project's projected demand in addition to their existing commitments and the project would have a **less than significant** impact on the environment in regards to potential effects from the relocation or construction of new or expanded wastewater facilities to accommodate the Project.

SPECIFIC PLAN POLICIES THAT REDUCE THE POTENTIAL FOR IMPACTS

Policy CF-1a: Review updates to the Sonoma Valley County Sanitation District sewer plans to ensure that adequate levels of service are maintained under existing and buildout conditions.

Policy CF-1c: Require development, infrastructure, and long-term planning projects to be consistent with all applicable County and service provider infrastructure master plans.

Policy CF-1d: Require development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development.

Policy CF-1e: Require development projects to install off-site infrastructure or pay appropriate in-lieu fees to ensure adequate infrastructure capacity to serve the project.

Policy CF-1f: Require new utilities in the Plan area to be installed underground.

Policy CF-1f: Require all future development projects sized beyond existing size and density to obtain written verification of availability of water and wastewater capacity.

3.14.2 WATER SUPPLIES

ACRONYMS

AFY	acre-feet per year
cfs	cubic feet per second
DWR	Department of Water Resources
GSA	Groundwater Sustainability Agency (a County agency)
mgd	million gallons per day
NPDES	National Pollutant Discharge Elimination System
RWQCB	Regional Water Quality Control Board
SCWA	Sonoma County Water Agency
SGMA	Sustainable Groundwater Management Act
SWRCB	State Water Resources Control Board
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan

ENVIRONMENTAL SETTING

The Valley of the Moon Water District (Water District) provides water services to development in the Plan area. The Water District's service area extends from the Trinity Oaks Subdivision in the north to the Temelec Subdivision in the south. The service area encompasses approximately 11.8 square miles and includes residential and commercial customers. The 2015 UWMP indicates that the Water District service area population is projected to increase from 23,782 (2015) to 26,300 persons by 2040. At the time of the Notice of Preparation, the Water District was in the process of updating its UWMP. The Springs Draft EIR was prepared based on the most recent plan (2015 UWMP) that was available at the time of preparation. Staff requested and received a supplemental memo from Sonoma Water in 2019 that included updated analysis based on projected proposed growth in the Springs Area Specific Plan. Since then, the 2020 UWMP was subsequently adopted in June, 2021. The 2020 UWMP expands the forecast population through 2040 to 31,081, which is based on the forecasted buildout of the Project in addition to other factors.

WATER SUPPLIES

The Water District manages the distribution, operation, and maintenance of the water supply system that would serve the Project. Its water sources, treatment facilities, and distribution system are described in this section.

SCWA Wholesale Water

As reported in its 2015 UWMP, the Water District primarily relies upon surface water purchased from the SCWA to meet customer demands. Local groundwater production from wells owned and leased by the District comprises the remaining portion of the District's water supply portfolio. Under normal conditions, approximately 85 percent of the District's water supply is surface water purchased from the SCWA. The District does not have any recycled water sources to supplement its supply.

The SCWA is currently authorized by the SWRCB to store up to 245,000 AFY of water in Lake Sonoma and up to 122,500 AFY in Lake Mendocino. Per a series of four permits issued by the SWRCB, the SCWA may divert and redivert 180 cubic feet per second (cfs) of water, up to a maximum of 75,000 AFY, from the Russian River at the SCWA's Wohler and Mirabel facilities and other points of diversion.

The SCWA storage and transmission system is supplied water from the natural flow of the Russian River. This water is stored in Lake Sonoma, behind Warm Springs Dam, and in Lake Mendocino, behind Coyote Dam. The design water supply pool capacities of Lake Sonoma and Lake Mendocino are 245,000 AFY and 122,500 AFY, respectively. The SCWA uses approximately 14 miles of the natural channel of Dry Creek and approximately eight miles of the Russian River to convey water from Lake Sonoma to its diversion facilities. The diverted river water percolates through sand and gravel and only needs the addition of chlorine to meet the California Drinking Water Program quality standards.

The SCWA also owns and operates three groundwater supply wells located in the Santa Rosa Plain Subbasin of the Santa Rosa Valley Groundwater Basin. These groundwater wells are located along the Russian River-Cotati Intertie Pipeline and are used to supplement the SCWA water supply.

The Water District's water supply is conveyed through ten turnouts (where water is released) from the Sonoma Aqueduct, which is owned and operation by the SCWA. The District's distribution system contains approximately 92 miles of water mains ranging in size from less than 2 inches to 14 inches in diameter, with more than 95 percent between 4 and 12 inches in diameter.

The Water District's water distribution system has 11 pressure zones. The majority of the Water District's customers that are located on the valley floor are served from the SCWA aqueduct pressure, while customers in the higher elevations of the Sonoma Valley are served by separate pressure zones. The District's infrastructure assets include 10 turnouts from the Sonoma aqueduct owned and operated by the SCWA, 7 groundwater wells, 10 pumping stations, and 15 storage tanks. The Water District's water supply is conveyed through these 10 turnouts. Pressure for the aqueduct in this region is provided by Sonoma Booster Pump Stations No. 1 and No. 2, located on the east side of Spring Lake.

Groundwater

The Water District is located within the Sonoma Valley Groundwater Subbasin 2-002.02 and is a subbasin of the Napa-Sonoma Valley Groundwater Basin (DWR 2-002). The Basin is not adjudicated and has not been identified by the DWR as a critically over-drafted groundwater basin.

The SGMA of 2014, the first comprehensive groundwater legislation in California history, was enacted on September 16, 2014. The legislation provides a framework for the sustainable management of groundwater by local agencies, with an emphasis on the preservation of local control. The state agencies primarily responsible for implementing SGMA are DWR and the SWRCB. At the time of publication of the NOP for this DEIR, the Napa-Sonoma Basin was listed as a medium priority basin and therefore subject to the requirements of SGMA. In the 2019 prioritization update, DWR designated the Sonoma Valley Groundwater Subbasin as high priority. The Sonoma Valley GSA is a public agency formed to sustainably manage groundwater in the Sonoma Valley Groundwater Basin. The agency was formed in June 2017 and has a Board of Directors, an administrator, and an advisory committee. The development of a Groundwater Sustainability Plan is scheduled to be completed by January 31, 2022 and is currently in process.

Analysis of groundwater data has highlighted two groundwater depression zones in the Sonoma Valley. Management efforts in these areas to date have included informational meetings with impacted parties,

community messaging, and voluntary conservation. It is expected that, as the groundwater management program moves from voluntary to mandatory, additional actions will be required to address these areas.

Supply Source and Contractual Provisions

The Water District is one of eight Water Contractors that hold water supply contracts with the SCWA under the Restructured Agreement for Water Supply. The Restructured Agreement was executed in 2006 and generally provides for the finance, construction, and operation of existing and new diversion facilities, transmission lines, storage tanks, booster pumps, conventional wells, and appurtenant facilities. The term of the Restructured Agreement is through 2037 and can be extended by amendment.

Under the Restructured Agreement, the Water District is entitled to 3,200 AFY, with an average daily rate of flow during any month of 8.5 mgd. Provided the supply is available, the Restructured Agreement permits the District to take delivery of water in excess of its entitlement during a given month, provided specific conditions from the Agreement are met.

Emergency Connections

In accordance with the Emergency Services Act, the Water District has developed an Emergency Operations Plan that guides response to unpredicted catastrophic events which might impact water delivery, including regional power outages, earthquakes, and other disasters. The Emergency Operation Plan outlines standard operating procedures for all levels of emergency, from minor accidents to major disasters. The Emergency Operation Plan has been coordinated with the SCWA and neighboring water purveyors. However, emergency connection infrastructure is missing and may be needed in the future.

Water transfers between SCWA's Water Contractors are authorized under the Restructured Agreement. Such transfers have been utilized in the past out of necessity and may be needed in the future.

Service Area Information and Population Projections

The Water District's service area is in Sonoma County, approximately 50 miles north of San Francisco, and is adjacent to the City of Sonoma. The service area encompasses approximately 11.8 square miles and includes residential and commercial customers. Elevations in the service area range from approximately 90 feet to 1,190 feet above mean sea level.

The Water District's service area climate is typical of the Napa and Sonoma County areas, characterized by summers that are dry and warm, and winters that are relatively mild with most rainfall occurring during this season. Average annual evapotranspiration is 46.1 inches and average annual rainfall is 29.4 inches. The temperature ranges from an average minimum of 44.2 °F to an average maximum of 73.7 °F.

The water supply assessment (WSA) prepared for the Project (Appendix D of this Draft EIR) uses the population projections contained in the Water District's 2015 UWMP, whereby the District's 2015 and 2020 service area population was estimated to be 23,782 and 24,873, respectively. The District's year 2015 and projected service area population is summarized in Table 3.14-2 in five-year increments through the year 2040. The percent increases for the population growth are also listed.

TABLE 3.14-2: DISTRICT CURRENT AND PROJECTED POPULATION

	2015 ¹	2020 ²	2025 ²	2030 ²	2035 ²	2040 ²
Service Area Population	23,782	24,873	25,229	25,586	25,943	26,300
Population Increase (%)	--	4.6%	1.4%	1.4%	1.4%	1.4%

NOTES:

¹ 2015 DATA IS CALCULATED BASED ON A PERSONS-PER-CONNECTION METHOD.

² PROJECTED POPULATIONS ARE BASED ON SONOMA COUNTY DRAFT GENERAL PLAN 2005 ESTIMATES.

SOURCE: MADDAUS WATER MANAGEMENT, 2019; EBA ENGINEERING, 2019.

Water Supply Projections

The Water District purchases potable water from the SCWA to meet most of the water demands within the service area. The District owns and/or operates a total of seven municipal production wells, five of which are currently active, with capacities ranging from 90 gpm to 300 gpm. The District will continue to use its wells to supplement its purchased SCWA water but plans to decrease the use of the wells over time as the District implements additional water conservation programs. Groundwater production will be expanded to meet demands in the case of a drought or a decrease in SCWA water supply.

The Water District plans to continue to purchase wholesale water from SCWA, while monitoring its production of groundwater. The District does not anticipate developing additional long-term water supplies from other sources in the near future. Water supplies from the SCWA through 2040 are projected to be equivalent to the District’s entitlement of 3,200 AFY, established in the Restructured Agreement and effective through 2037. The District has the capacity to meet the demands of its customers in wet and normal years based on supplies from SCWA and groundwater.

During periods of shortage, Section 3.5 of the SCWA Restructured Agreement provides a method for allocating water among the various Water Contractors and other customers of the SCWA water supply. On April 18, 2006, SCWA’s Board of Directors adopted Resolution No. 06-0342, which approved a methodology for allocating water in the event of a water supply shortage or in the event of a temporary impairment of the capacity of SCWA’s transmission system. This methodology first restricts the delivery of surplus water and then caps water deliveries to each Water Contractor at its respective annual entitlement. If further reductions are required, Section 3.5 of the Restructured Agreement provides a guaranteed supply to each Water Contractor equal to the quantity of water required for human consumption, sanitation, and fire protection. The remaining water is then allocated to each Water Contractor proportionately based up their respective annual entitlements, up to a maximum equal to its “reasonable requirement.” SCWA supply and Water District groundwater projections for normal years are presented in Table 3.14-3.

TABLE 3.14-3: WATER DISTRICT CURRENT AND PROJECTED WATER SUPPLIES

	2015 ¹	2020 ²	2025 ²	2030 ²	2035 ²	2040 ²
<i>SURFACE WATER SUPPLIES</i>						
Total SCWA Supplies (AFY)	1,947	3,200	3,200	3,200	3,200	3,200
Percent Normal (%)	N/A	100%	100%	100%	100%	100%

3.14 UTILITIES

	2015 ¹	2020 ²	2025 ²	2030 ²	2035 ²	2040 ²
<i>GROUNDWATER SUPPLIES</i>						
Total Groundwater Supplies (AFY)	581	450	327	232	100	100
Percent Normal (%)	N/A	100%	100%	100%	100%	100%
Total Supplies	2,528	3,650	3,527	3,432	3,300	3,300
Percent of Normal	N/A	100%	100%	100%	100%	100%

NOTES:

¹ 2015 DATA IS CALCULATED BASED ON ACTUAL NUMBERS FROM THE DISTRICT'S 2015 UWMP.

² PROJECTIONS ARE FROM THE DISTRICT'S 2015 UWMP, TABLE 6-2.

SOURCE: MADDAUS WATER MANAGEMENT, 2019; EBA ENGINEERING, 2019.

The SCWA and its Water Contractors are in the process of updating the water shortage allocation methodology. The water supply reliability projections presented in this Plan reflect the new methodology as it is likely to govern supply allocations during periods of water shortage over the forecast timeframe. The updated methodology utilizes the same allocation principles established under the Restructured Agreement but refines the calculation of the human health demands and reasonable requirements. Under the proposed revised methodology, the District's human health, sanitation, and fire flow needs are determined to be 1,716 AFY, whereas its reasonable requirement is 2,908 AFY. Based on the annual entitlements included in the Restructured Agreement, the District's Annual Entitlement of 3,200 AFY represents 4.1 percent of the total entitlements of all Water Contractors (77,445 AFY). Therefore, in the event of a water supply reduction imposed by SCWA, the District will receive its human health needs of 1,716 AFY plus 4.1 percent of the remaining water supply, up to a maximum of 2,908 AFY. The SCWA provided the District with water supply reliability projections for use in its UWMP.

The District's SCWA water supply represents its anticipated supply allocations based upon the allocation methodology described previously. Per the allocation methodology, the District is expected to receive its reasonable requirement of 2,908 AFY during the projected supply reductions occurring after 2025. The District anticipates receiving between 91 and 100 percent of its total projected water supply in single dry years over the forecast timeframe.

No SCWA supply reductions and no groundwater supply reductions are projected to occur during multiple dry years over the forecast timeframe. The Water District anticipates receiving 100 percent of its total projected water supply in all multiple dry year scenarios during this time.

Table 3.14-4 shows projected supply for the Water District for a normal year, single dry year, and for five consecutive dry years, as reported in the Water Supply Assessment prepared for the Project. During the periods of supply reductions, specifically, a single dry year, the District will have to implement the Water Shortage Contingency Plan (WSCP) to reduce demand. The District WSCP describes the triggering levels and actions to be considered for each stage of demand reduction. As detailed in the next section, the plan has four stages with each stage set to respond to increasingly more severe conditions. Therefore, the system demand will decrease to meet the reduced allocations by SCWA.

TABLE 3.14-4: DISTRICT PROJECTED WATER SUPPLIES PER 2015 UWMP

	2015 ¹	2020 ²	2025 ²	2030 ²	2035 ²	2040 ²
<i>SINGLE DRY YEARS</i>						
<i>SURFACE WATER SUPPLIES</i>						
Total SCWA Supplies (AFY)	1,947	3,200	2,908	2,908	2,908	2,908
Percent Normal (%)	N/A	100%	91%	91%	91%	91%

	2015 ¹	2020 ²	2025 ²	2030 ²	2035 ²	2040 ²
<i>GROUNDWATER SUPPLIES</i>						
Total Groundwater Supplies (AFY)	581	450	327	232	100	100
Percent Normal (%)	N/A	100%	100%	100%	100%	100%
Total Supplies	2,528	3,650	3,235	3,140	3,008	3,008
Percent of Normal	N/A	92%	91%	91%	91%	91%
<i>MULTIPLE DRY YEARS (YEARS 1-4)³</i>						
<i>SURFACE WATER SUPPLIES</i>						
Total SCWA Supplies (AFY)	1,947	3,200	3,200	3,200	3,200	3,200
Percent Normal (%)	N/A	100%	100%	100%	100%	100%
<i>GROUNDWATER SUPPLIES</i>						
Total Groundwater Supplies (AFY)	581	450	327	232	100	100
Percent Normal (%)	N/A	100%	100%	100%	100%	100%
Total Supplies	2,528	3,650	3,527	3,432	3,300	3,300
Percent of Normal	N/A	100%	100%	100%	100%	100%

NOTES:

¹ 2015 DATA IS CALCULATED BASED ON ACTUAL NUMBERS FROM THE DISTRICT'S 2015 UWMP.

² PROJECTIONS ARE FROM THE DISTRICT'S 2015 UWMP, TABLES 6-4 AND 6-6.

³ THE WATER SUPPLY NUMBERS FOR YEARS 1-4 ARE THE SAME AND INCLUDE THE MULTIPLE DRY YEARS FIRST YEAR SUPPLY.

SOURCE: MADDAUS WATER MANAGEMENT, 2019; EBA ENGINEERING, 2019.

District Water Shortage Contingency Plan

The Water District WSCP was revised on April 7, 2015 to address day per week water restrictions that were mandated by the SWRCB. Among other revisions, the current version of the WSCP includes a new tier for residential billing and provides minor modifications to the water shortage stages. The updated WSCP also gives the District additional flexibility to address supply shortfalls that may result from, but are not limited to: droughts, extreme weather events, natural disasters, extended power outages, reduced deliveries from the SCWA, and regulatory droughts.

The District's increasingly stringent stages of action for responding to reduced supply in a water shortage are summarized below. Stages 2, 3, and 4 of the District's WSCP are enacted through the adoption of a resolution by the District's Board of Directors.

Stage I: This is the normal stage that includes voluntary prohibitions with the goal of up to 25 percent overall reduction. This stage is a continuing effort to conserve water and includes actions such as: (a) limiting irrigation to between 8 pm and 6 am; (b) requiring a hose-end shut-off nozzle for garden or utility hoses; (c) prohibiting street washing using potable water; (d) prohibiting washing of sidewalks, patios, driveways and other hardscapes, unless for public health and safety; (e) and requiring construction dust control to use recycled water.

Stage II: This stage is mandatory with the goal of 25 percent overall reduction in water use. This stage includes actions such as: (a) adopting a rationing ordinance assigning Stage 2 allotment to each water service; (b) adopting a resolution to implement Stage 2 Water Shortage Charges; (c) increasing District staffing support, including adding a temporary position to staff phone lines, performing patrols for water waste violations, and conducting customer water use audits; and (d) increasing public education and outreach campaigns.

3.14 UTILITIES

Stage III: This stage is mandatory with the goal of 35 percent overall reduction in water use. This stage includes actions such as: (a) adopting a rationing ordinance assigning Stage 3 allotment to each water service; (b) adopting a resolution to implement Stage 3 Water Shortage Charges; (c) increasing public education and outreach campaigns; (d) establishing a construction water demand offset program; and (e) expanding efforts to patrol for water waste violations and conducting customer water use audits.

Stage IV: This stage is mandatory with the goal of 50 percent overall reduction in water use. This stage includes actions such as: (a) adopting a rationing ordinance assigning Stage 4 allotment to each water service; (b) adopting a resolution to implement Stage 4 Water Shortage Charges; (c) increasing public education and outreach campaigns; (d) promoting participation in a construction water demand offset program; and (e) expanding efforts to patrol for water waste violations and conducting customer water use audits.

Depending on the extent of the water waste, the District may, after written notification to customer and a reasonable time to correct the violation as solely determined by the District, take action to enforce the District's water waste prevention ordinance (Ordinance No. 1007¹) or the WSCP. Penalties, fees, and charges are established by a resolution adopted by the District's Board of Directors. While Stages 2, 3, and 4 of the WSCP are in place, customers are subject to potential enforcement action if their water use exceeds the established allotment over two consecutive billing cycles or exceeds the established allotment in three billing cycles within a twelve-month period.

Because the District has based its planning on the SCWA's current water rights and because these current water rights are more restrictive than the multiple dry year condition, a multiple dry year 3-year minimum water supply analysis would be identical to the normal water year analysis.

WATER DEMAND

Table 3.14-5 shows the future system demand projections and the difference (excess supply allocation) until 2040. As shown, available supplies are sufficient to meet system demand projections in a normal year.

The District's water demand projections were conducted as part of its 2015 UWMP Water Demand Analysis and Water Conservation Measures Update that was produced by Maddaus Water Management on July 1, 2015 and published in Appendix C of the District's 2015 UWMP. The land use and population assumptions that underpin the water use projections are based on the 2008 Sonoma County General Plan (General Plan)². The population and job forecasts provided in the General Plan were relied upon for the demand projections conducted in the Maddaus Water Management demand analysis.

TABLE 3.14-5: FUTURE SYSTEM DEMAND PROJECTIONS (WITHOUT ADDITIONAL PROJECTS)

	2015 ¹	2020	2025	2030	2035	2040
District Supplies (AFY ²)	2,528	3,650	3,527	3,432	3,300	3,300
Demand Projections with Passive and Active Conservation Savings (AFY ³)	2,528	2,937	2,905	2,850	2,846	2,850
Annual Excess (AFY)	n/a	713	622	582	454	450
Percent Excess (%)	n/a	20%	18%	17%	14%	14%

NOTES:

¹ Valley of the Moon Water District. (2000). Water Waste Prohibition Ordinance No. 1007.

² Sonoma County. 2008 General Plan, accessed July 2019: <https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/General-Plan/>

¹ 2015 DATA IS BASED ON ACTUAL DEMAND NUMBERS FROM THE DISTRICT'S 2015 UWMP.

² VALUES ARE CONSISTENT WITH 2015 UWMP TABLE 5.10 WATER SUPPLIES

³ DEMAND VALUES ARE CONSISTENT WITH THE DISTRICT'S 2015 UWMP APPENDIX C WATER DEMAND ANALYSIS AND WATER CONSERVATION MEASURES UPDATE.

SOURCE: MADDAUS WATER MANAGEMENT, 2019; EBA ENGINEERING, 2019.

Projected demands include both active and passive conservation. Passive conservation refers to water savings resulting from actions and activities that do not depend on direct financial assistance or educational programs from the District. These savings result primarily from: (1) the natural replacement of existing plumbing fixtures with water-efficient models required under current plumbing code standards and (2) the installation of water-efficient fixtures and equipment in new buildings and retrofits as required under CALGreen Building Code Standards. Active conservation measures undertaken by the District may include rebates; these are presented in Section G of the WSA (Appendix D of this Draft EIR).

Potential Issues with Existing Infrastructure

The Valley of the Moon Water District has summarized the recommended Capital Improvement Projects needed within their service area boundary in the 2019 Water Master Plan. The recommended Capital Improvement Projects are defined to solve supply and storage deficiencies, hydraulic capacity deficiencies, and replace infrastructure that has reached the end of its useful life to facilitate the SSP. Five of the 24 connections associated with recommended capital improvement project P1 of the 2019 Water Master Plan will be replaced within the Plan area. Table 2-2 of the WSA summarizes the recommended capital improvement projects located within the Plan area.

REGULATORY SETTING

Safe Drinking Water Act

The federal Safe Drinking Water Act as passed in 1974 and amended in 1986 and 1996. It is the Country's primary law regulating drinking water quality and is implemented by the U.S. Environmental Protection Agency. The Safe Drinking Water Act authorizes the U.S. Environmental Protection Agency to set national health-based standards for drinking water and requires actions to protect drinking water and its sources. Additionally, it provides for treatment, monitoring, sampling, analytical methods, reporting, and public information requirements. Implementation of the Act, in California, is under the jurisdiction of the California Department of Public Health, Division of Drinking Water and Environmental Management. Drinking Water regulations are set forth in the CCR, Titles 7 and 22.

Sustainable Groundwater Management Act

The SGMA directs DWR to identify groundwater basins and subbasins that are in conditions of critical overdraft. This designation is determined based upon the presence of "undesirable impacts" such as seawater intrusion, land subsidence, groundwater depletion, and chronic lowering of groundwater levels. As noted previously, the District is located within the Sonoma Valley Groundwater Subbasin 2-02.02 and is a subbasin of the Napa-Sonoma Valley Groundwater Basin (DWR 2-02). The Basin is not adjudicated and has not been identified by the DWR as a critically-over-drafted groundwater basin.

Water Conservation Projects Act

California's requirements for water conservation are codified in the Water Conservation Projects Act of 1985 (California Water Code Sections 11950 – 11954). Consistent with California Water Code Sections

11950 – 11954, the District has implemented various water conservation efforts, as well as WSCP that identifies actions that can be taken to respond to catastrophic interruption of water supply.

California Water Code

Water Code Section 10910(f) states:

10910(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.

10910(f)(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

10910(f)(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long term overdraft condition.

10910(f)(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

10910(f)(4) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.

A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

Senate Bill 610

Senate Bill (SB) 610 was adopted in 2001 and reflected a growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act, as well as the California Water Code Section 10910, et seq. The foundation document for compliance with SB 610 is the UWMP, which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well as a WSA required under SB 610.

Development accommodated under the Project exceeds the threshold amount identified to be subject to the WSA requirement established by SB 610 because it contemplates development of includes more than 500 residential units. The Project has not been the subject of a previously adopted WSA and has not been included in an adopted WSA for a larger project. Thus, a WSA, as required by these criteria under SB 610, has been prepared for the Project. The WSA is included in Appendix D of this EIR.

Sonoma County Water Agency 2015 Urban Water Management Plan

The purpose of the SCWA 2015 UWMP is to address the SCWA water transmission system. The UWMP includes a description of SCWA's water supply sources, historical and projected water use, and a comparison of water supply to water demands during normal, single-dry, and multiple-dry years. The UWMP complies with the Urban Water Management Planning Act (California Water Code Section 10610, et seq.), the Water Conservation Act of 2009 (California Water Code Section 10608), and the 20x2020 Water Conservation Plan, which are being implemented by the California DWR.

SCWA adopted a 2020 UWMP in June 2021. Consistent with CEQA requirements, this DEIR relies on data from the 2015 UWMP because that was the document that was available at the time the Notice of Preparation was published for this DEIR.

Valley of the Moon Water District 2015 Urban Water Management Plan

The purpose of the Water District's 2015 UWMP is to address the existing and future water needs of the Water District. The UWMP includes a description of the Water District's water supply sources, historical and projected water use, and a comparison of water supply to water demands during normal, single-dry, and multiple-dry years. The UWMP complies with the Urban Water Management Planning Act (California Water Code Section 10610, et seq.), the Water Conservation Act of 2009 (California Water Code Section 10608), and the 20x2020 Water Conservation Plan, which are being implemented by the California DWR.

The Water District adopted a 2020 UWMP in June 2021. Consistent with CEQA requirements, this DEIR relies on data from the 2015 UWMP because that was the document that was available at the time the Notice of Preparation was published for this DEIR.

Sonoma County General Plan

The Sonoma County General Plan identifies the following goals, objectives, and policies related to water supplies:

PUBLIC FACILITIES AND SERVICES ELEMENT

GOAL PF 1: Assure that water and wastewater services are available where necessary to serve planned growth and development without promoting unplanned growth.

Objective PF 1-1: Operate County water and wastewater facilities in accordance with planned growth and in compliance with applicable State and Federal standards.

Objective PF 1-2: Help resolve water problems resulting from proliferation of small water systems.

Objective PF 1-3: Limit extension of public water and sewer services into rural areas.

Objective PF 1-4: Plan for wastewater facilities adequate to serve the growth projected in the General Plan.

Policy PF-1a: Plan, design, and construct sewer services in accordance with projected growth except as provided in Policy LU-4d.

Policy PF-1b: Prepare or encourage the preparation of master plans or equivalent documentation for all wastewater management systems prior to approval of project facilities. Design and construct all facilities in accordance with General Plans of the applicable jurisdictions. In the event that a master plan or monitoring fails to show adequate facilities or supplies for planned growth, consider moratoria on plan amendments, zoning changes, building permits or other entitlements in order to protect services to existing residents. The minimum contents necessary for an adequate master plan or equivalent documentation are:

- (1) Maps showing future service area boundaries,
- (2) Forecasted growth that reflects all potential sources of future demand for facilities and the relationship to General Plan projections and limits,
- (3) Projected service and facility needs,
- (4) Estimated costs and revenues for needed improvements,
- (5) System design parameters and assumptions,
- (6) A program for water use reduction,
- (7) A program to reduce storm water infiltration, and
- (8) A program to monitor and account for amendments of the General Plan Land Use Map over time.

Policy PF-1c: Give the highest priority for water and sewer improvement planning to those service providers whose capacity for accommodating future growth is most limited. These include the Occidental County Sanitation District, the Geyserville Water Works and Geyserville Sanitation Zone, the Sweetwater Springs Water District, Monte Rio, the Town of Windsor (water supply to the Airport Industrial Area), the California American Water Company (Larkfield-Wikiup), the Airport-Larkfield-Wikiup County Sanitation Zone, the Valley of the Moon Water District, and the Sonoma Valley Sanitation District, or any entities which may succeed these service providers.

Policy PF-1d: Require as part of discretionary project applications within a water or sewer service area written certification that either existing services are available or needed improvements will be made prior to occupancy.

Policy PF-1e: Avoid General Plan amendments that would increase demand for water supplies or wastewater treatment services in those urban areas where existing services cannot accommodate projected growth as indicated in Table LU-1 or any adopted master plan.

Policy PF-1h: Avoid extension of public water service to a property that is outside of both the Urban Service Area and sphere of influence of the water provider. Consider exceptions to this policy, to the extent allowed by law, only:

- (1) Where necessary to resolve a public health hazard resulting from existing development such as failing wells or groundwater contamination, or
- (2) Where water service is to be extended for a property which is located within a water district boundary in effect in November, 2003, or
- (3) Where appropriate to allow an affordable housing project providing exclusively lower income housing on properties adjoining Urban Service Boundaries.

Policy PF-1i: Use the following guidelines for any exception allowed by Policy PF-1h:

- (1) Size facilities to serve development consistent with the General Plan,
- (2) Require written certification that adequate service capacity is available for the use to be connected to the system or planned to be connected in the future, and
- (3) Utilize out-of-service area agreements rather than annexations.

WATER RESOURCES ELEMENT

GOAL WR 2: Manage groundwater as a valuable and limited shared resource.

Objective WR 2.1: Conserve, enhance and manage groundwater resources on a sustainable basis that assures sufficient amounts of clean water required for future generations, the uses allowed by the General Plan, and the natural environment.

Objective WR 2.2: Develop a scientifically based program to collect the data needed to assess and understand groundwater conditions.

Objective WR 2.3: Encourage new groundwater recharge opportunities and protect existing groundwater recharge areas.

Objective WR 2.4: Increase institutional capacity and expertise within the County to competently review hydrogeologic reports and data for critical indicators and criteria.

Policy WR-2a: Encourage and support research on and monitoring of local groundwater conditions, aquifer recharge, watersheds and streams where needed to assess groundwater quantity and quality.

Policy WR-2b: Initiate and support educational programs to inform residents, agriculture, businesses and other groundwater users of best management practices in the areas of efficient water use, water conservation, and increasing groundwater recharge.

Policy WR-2c: Work with well drillers and other parties familiar with groundwater conditions in Sonoma County to develop well permit standards in order to:

- (1) Improve the data obtained from well permit applications on locations, depths, yield, use, flow direction where appropriate, and water levels of proposed and existing wells on the site.
- (2) Establish standards to reduce the potential for well interference and drawdown.

- (3) Ensure sufficient groundwater quantity and quality for existing and proposed uses using the subject well through standards for pump tests, well yields, pollutant levels, and water storage, particularly for higher capacity wells.
- (4) In areas where a groundwater management plan has been approved and has been accepted by the County, require the issuance of well permits and any limitations imposed on well permits to be consistent with the adopted plan.

Policy WR-2d: Continue the existing program to require groundwater monitoring for new or expanded discretionary commercial and industrial uses using wells. Where justified by the monitoring program, establish additional monitoring requirements for other new wells.

Policy WR-2e: Require proof of groundwater with a sufficient yield and quality to support proposed uses in Class 3 and 4 water areas. Require test wells or the establishment of community water systems in Class 4 water areas. Test wells may be required in Class 3 areas. Deny discretionary applications in Class 3 and 4 areas unless a hydrogeologic report establishes that groundwater quality and quantity are adequate and will not be adversely impacted by the cumulative amount of development and uses allowed in the area, so that the proposed use will not cause or exacerbate an overdraft condition in a groundwater basin or subbasin. Procedures for proving adequate groundwater should consider groundwater overdraft, land subsidence, saltwater intrusion, and the expense of such study in relation to the water needs of the project.

Policy WR-2f: Require that discretionary projects in Urban Service Areas maintain the site's pre-development recharge of groundwater to the maximum extent practicable. Develop voluntary guidelines for rural development that would accomplish the same purpose.

Policy WR-2g: In cooperation with Sonoma County Water Agency (SCWA), DWR, and other public agencies and well owners, support the establishment and maintenance of a system of voluntary monitoring of wells throughout the county, utilizing public water system wells and private wells where available. Encourage participation in voluntary monitoring programs, and, if funds are available, consider funding of well monitoring where determined necessary in order to stimulate participation.

Policy WR-2h: In cooperation with SCWA, DWR and other public agencies, support the establishment and maintenance of a groundwater data base from available application data, well tests, monitoring results, study reports and other sources; analyze the data collected in an annual report to the Board; provide the data to DWR; and use the data along with other available information to refine the mapping of groundwater availability classifications. Protect the proprietary nature of well drilling data and release it only in summary form.*

Policy WR-2i: In order to identify areas where groundwater supplies may be declining, in the annual report review well permit data, monitoring data and reported problems and recommend to the Board of Supervisors areas where comprehensive groundwater studies are needed. As part of the first annual report, consider the recommendations of the recently completed groundwater studies in the Joy Road, Mark West Springs, and Bennett Valley areas, as well as the Sonoma Valley Groundwater Management Plan. In each such special study area that is approved by the Board

following a public hearing, develop a comprehensive groundwater assessment that includes the following:

- (1) An existing system of monitoring wells and stream gauges,
- (2) Locations of water wells,
- (3) Available data on groundwater and surface water levels and contamination,
- (4) Maps and graphs that show past and present data and changes in precipitation, imports, groundwater levels, groundwater quality, rates of extraction, and the relationship of groundwater to surface water,
- (5) Drillers' logs, geologic data and monitoring data needed to estimate water yields in the area,
- (6) Estimated future rates of imports, recharge, extraction, exports, changes in groundwater levels, and possible changes in groundwater quality,
- (7) A water budget for the area that estimates the total amount of water gain or loss in the area,
- (8) Any needed changes in well monitoring, data collection and reporting, and
- (9) Provisions for applicant fees and other funding of County costs.

If an area assessment, as defined above, demonstrates a need for additional management actions to address groundwater problems, prepare a plan for managing groundwater supplies pursuant to the California Water Code or the County's land use or other legal authority. Include involvement by the affected water users, well drillers, local agencies, private water companies and landowners. In recognition of concerns regarding the potential for overdraft condition in the south Santa Rosa Plain groundwater basin, give a high priority to preparation of a groundwater assessment and adoption of a management plan or other appropriate actions in this area prior to approval of any city annexations and changes in land use or density in this area of the county.

Policy WR-2j: Cooperate with the incorporated Cities, SCWA, DWR, US Geological Survey, well drillers, and all water users and purveyors in the development of a comprehensive groundwater assessment for each major groundwater basin in the county and the priorities, sequence and timing for such studies. Prepare such assessments to meet the applicable requirements of the California Water Code for a "groundwater management plan" and, where appropriate, include the following:

- (1) Computer models of groundwater recharge, storage, flows, usage and sustainable yield,
- (2) Assessment of nitrates, boron, arsenic, saltwater and other water quality contaminants,
- (3) Analysis of resource limitations and relationships to other users for wells serving public supply systems and other large users,
- (4) Opportunities for changing the sources of water used for various activities to better match the available resources and protect groundwater,
- (5) Possible funding sources for monitoring, research, modeling and development of management options, and
- (6) Provisions for applicant fees and other funding of County costs.

If a basin assessment indicates that future groundwater availability, water quality and surface water flows may be threatened and there may be a need for additional management actions to address groundwater problems, prepare a plan for managing groundwater supplies which may require limitations on water extraction and use and other special standards for allowed development, wells, extraction or use. Consideration of new management actions shall include

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involvement by the interests and parties stated above in development of alternatives addressing specific problems and a review of legal and fiscal issues for each alternative.

Policy WR-2k: Encourage and support comprehensive studies of long term changes in climate and precipitation patterns in the county and region.

Policy WR-2l: Increase institutional capacity and expertise within the County to competently review hydrogeologic reports and data for critical indicators and criteria.

Policy WR-2m: Work with SWRCB, DWR, California Department of Health Services (DHS), CalEPA, public water suppliers, and applicable County and City agencies to seek and secure funding sources for development of groundwater assessment, protection, enhancement and management programs.

Policy WR-2n: Where area studies or monitoring find that land subsidence has occurred, support analysis of how the subsidence is related to groundwater extraction and develop a groundwater management plan or other appropriate actions, where practicable, to avoid further subsidence.

GOAL WR 3: Encourage public water systems and their sources to provide an adequate supply to meet long term needs that is consistent with adopted general plans and urban water management plans and that is provided in a manner that maintains water resources for other water users while protecting the natural environment.

Objective WR 3.1: Assist public water suppliers in the collection and dissemination of surface and groundwater data and the assessment of available water supplies and protection of water quality.

Objective WR 3.2: Work with public water suppliers in the development and implementation of long term plans for water supply, storage, and delivery necessary to first meet existing water demands and, secondly, to meet planned growth within the designated service areas, consistent with the sustainable yield of water resources.

Objective WR 3.3: Work with public water suppliers to balance reliance on groundwater and surface water to assure the sustainability of both resources.

Policy WR-3a: Work with public water suppliers in assessments of the sustainable yield of surface water, groundwater, recycled water and conserved water, including during possible drought periods. This work should include the exploration of potentially feasible alternative water supplies. Surface and groundwater supplies must remain sustainable and not exceed safe yields.

Policy WR-3b: Support to the extent feasible the actions and facilities needed by public water suppliers to supply water sufficient to meet the demands that are estimated in adopted master facilities plans, consistent with adopted general plans, urban water management plans and the sustainable yields of the available resources and in a manner protective of the natural environment.

Policy WR-3c: Request technical assistance and water resource data from public water suppliers and share available water resource information with them and the public.

Policy WR-3d: Assist public water suppliers in complying with Federal and State water quality standards by assuring that water sources used for public water systems are not contaminated by land uses or pollutants in the watershed, by supporting continued study and monitoring of water quality, and by encouraging acquisition of critical watershed areas by the suppliers or the Sonoma County Agricultural Preservation and Open Space District.

Policy WR-3e: Work with public water suppliers in developing and implementing wellhead protection plans.

Policy WR-3f: Support water conservation and education programs with measurable targets for public water suppliers.

Policy WR-3g: Assist public water suppliers in assuring that proposed water supplies and facilities are consistent with adopted general plans, that all planning jurisdictions are notified of and consider potential water supply deficiencies during the preparation of such plans, and that adopted general plans accurately reflect secure water sources.

Policy WR-3h: Help public water suppliers to disseminate and discuss information on the limits of available water supplies, how the supplies can be used efficiently, the possible effects of drought conditions, acceptable levels of risk of shortage for various water users, priorities for allocation of the available water supply, conditions for use of limited supplies, and limits of alternate sources that could be used or developed.

Policy WR-3i: Prepare or encourage the preparation of master facilities plans, and urban water management plans where required by State law, for all public water suppliers to design and construct all facilities in accordance with sustainable yields and the general plans of applicable jurisdictions. A master facilities plan should contain but not be limited to the following:

- (1) Maps showing future service area boundaries,
- (2) Forecasted growth and relationship to General Plan projections and limits,
- (3) Projected service and facility needs,
- (4) Estimated costs and revenues for needed improvements,
- (5) System design parameters and assumptions,
- (6) Monitoring and mitigation measures to assure long-term adequacy of sources, including during possible drought conditions, and
- (7) Water conservation measures.

In the event that a master plan or monitoring fails to show adequate public water facilities or supplies for planned growth, consider moratoria on plan amendments, zoning changes, building permits or other entitlements in order to protect services to existing residents.

Policy WR-3j: Seek to maintain consistency between the Sonoma County General Plan, adopted groundwater management plans and the master facilities plans of public water suppliers through meetings between staff of PRMD and public water suppliers, PRMD review of proposed master facilities plans, and referral of General Plan changes to all public water suppliers.

Policy WR-3k: Cooperate with public water suppliers in the planning, development and construction of the storage and transmission facilities needed to supply water pursuant to adopted General Plan policies, urban water management plans, water supply agreements, master facilities plans, and, where applicable, programs to mitigate identified groundwater overdraft conditions.

Policy WR-3l: Pursuant to the requirements of Government Code 65400-65402, request that local public agencies that are public water suppliers, including cities, county-dependent districts, special districts and other local public agencies, consult with the County prior to acquiring a site or developing any well or facilities for public water supplies in the unincorporated area and request a determination of consistency with the Sonoma County General Plan.

Policy WR-3m: Encourage public water suppliers that are developing or have adopted groundwater management plans to monitor and report groundwater levels, yields and other information on groundwater conditions.

Policy WR-3n: Encourage public water suppliers who currently utilize water from the SCWA system to balance their use of surface water and groundwater so that environmental impacts and impacts on other legal water users are minimized.

Policy WR-3o: Encourage public water suppliers to avoid or minimize significant adverse impacts on the environment resulting from water supply, storage and transmission facilities, including impacts on other water users.

Policy WR-3p: Involve public water suppliers in any development of area studies, groundwater management plans and general plans in order to assure full compliance by suppliers with the groundwater management plans and mitigation measures.

Policy WR-3q: Support cooperative inter-regional planning efforts by the public water suppliers, their contractors, other existing water users and Sonoma County to consider future demand projections concurrently with the availability of sustainable water supplies.

Policy WR-3r: Work with the SCWA in the following ways to provide an adequate water supply for its contractors consistent with this element:

- (1) Support SCWA participation in proceedings of the Federal Energy Regulatory Commission, California Public Utilities Commission, and State Water Resources Control Board involving the Potter Valley Project to ensure that the interests of all water users in Mendocino, Sonoma, and Marin Counties receive consideration and that decisions on the use of Eel River water are made on a sound scientific basis.
- (2) Encourage SCWA to work cooperatively with Mendocino County interests to resolve water resource issues, including assessment of water resource projects, water supply alternatives, and use of recycled water.
- (3) Work with all water users along the Russian River and its tributaries to encourage development of water supply alternatives for existing water users.

Policy WR-3s: Cooperate with public water suppliers in the planning, development and construction of the storage and transmission facilities needed to serve projected demand consistent with adopted general plans.

Sonoma County Code

Pursuant to Government Code section 65591 et seq., Chapter 7D3 of the County Code adopts the California Department of Water Resources' Model Water Efficient Landscape Ordinance as the Sonoma County Water Efficient Landscape Regulations. The intent of the Water Efficient Landscape Regulations ordinance is to:

- (1) promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;
- (2) establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects;
- (3) establish provisions for water management practices and water waste prevention for existing landscapes;
- (4) use water efficiently without waste by setting a Maximum Applied Water Allowance as an upper limit for water use and reduce water use to the lowest practical amount;
- (5) promote the benefits of consistent landscape ordinances with neighboring local and regional agencies;
- (6) encourage local agencies and water purveyors to use economic incentives that promote the efficient use of water, such as implementing a tiered-rate structure; and
- (7) encourage local agencies to designate the necessary authority that implements and enforces the provisions of the Model Water Efficient Landscape Ordinance or its local landscape ordinance.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on the environment associated with Utilities if it will:

- Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects; and/or
- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-2: Implementation of the Project would not require or result in the relocation of new or expanded water facilities, and would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years (Less than Significant)

Implementation of the Project would result in increased population and employment growth within the Plan area, and a corresponding increase in the demand for additional water supplies. A WSA was prepared to determine the Project's water demand and to address the adequacy of the Water District's water supply to serve the Project. The Project's projected water demand is based on its proposed land uses, as summarized in Table 3.14-6.

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TABLE 3.14-6: PROJECT WATER DEMAND (AFY)

LAND USE CATEGORY	CONNECTION FACTOR	WATER DEMAND PER CONNECTION (AFY)	NET NEW DEVELOPMENT	PROJECTED CONNECTIONS	NET WATER DEMAND INCREASE
Single Family Units	1 per unit	0.26681	88 units	88	23.5
Multifamily Units	1 per 10 units	1.13296	461units	46	52.2
Work/Live & Mixed Use Units	1 per 12 units	1.13296	157 units	13	14.8
Commercial Square Feet	1 per 4,000 s.f.	1.14525	168,029 sf	42	48.1
Office Square Feet	1 per 3,500 s.f.	1.14525	82,226 sf	23	26.9
Hotel Rooms	1 per 0.525 rooms	0.26681	120 rooms	63	16.8
Recreation Square Feet	1 per 4,450 s.f.	1.6258	26,648 sf	6	9.6
Mixed Use Irrigation	3 total	1.6258	-	3	4.9
Commercial Irrigation	6 total	1.4898	-	6	8.9
TOTAL DEMAND					205.8

SOURCE: MADDAUS WATER MANAGEMENT, 2019; EBA ENGINEERING, 2019; DE NOVO PLANNING GROUP, 2021

Complete buildout of the Plan area under the Project is estimated to be developed according to the following approximate schedule:

- 25 percent between 2020 and 2025;
- 25 percent between 2025 and 2030;
- 25 percent between 2030 and 2035;
- 25 percent between 2035 and 2040.

The complete buildout of the Plan area is estimated to require approximately 205.8 AFY of additional water demand. Development is expected to occur gradually over the next 20 years. Table 3.14-7 shows the total projected annual additional demand generated from future buildout of the Plan area.

TABLE 3.14-7: ANNUAL ADDITIONAL FUTURE WATER DEMANDS FROM PROJECT (AFY)

	2020	2025	2030	2035	2040
Project Future Water Demand	-	51.2	102.4	154.6	205.8

NOTE: THIS IS THE TOTAL NET INCREASE IN DEMAND DUE TO THE PROJECT. THE REMOVAL OF THREE EXISTING SINGLE-FAMILY UNITS IS INCLUDED IN THIS ESTIMATE

SOURCE: MADDAUS WATER MANAGEMENT, 2019; EBA ENGINEERING, 2019.

Table 3.14-8 shows the total system demand projected for the District including the demand from the Project. The total system demand is calculated by adding the net demand generated from the Project from Table 3.14-7 to the system demand projections.

TABLE 3.14-8: TOTAL SYSTEM DEMAND WITH ADDED PROJECT, NO DROUGHT

	2015 ¹	2020	2025	2030	2035	2040
Demand Projection for District with Passive and Active Conservation (AFY)	2,528	2,937	2,905	2,850	2,846	2,850
Net Demand from Additional Project (AFY)	N/A	-	51.2	102.4	154.6	205.8
Total System Demand (AFY)	2,528	2,937	2,956.2	2,952.4	3,000.6	3,055.8
Supply Assurance (AFY)	2,528	3,650	3,527	3,432	3,300	3,300
Estimated Remaining Supply (AFY)	N/A	713	570.8	479.6	299.4	244.2

	2015 ¹	2020	2025	2030	2035	2040
Est. Remaining Supply Reliability (%)	N/A	20%	16%	14%	9%	7%

NOTE: 2015 DATA IS BASED ON ACTUAL NUMBERS FROM THE DISTRICT'S 2015 UWMP.

SOURCE: MADDAUS WATER MANAGEMENT, 2019; EBA ENGINEERING, 2019.

COMPARISON OF SUPPLY VERSUS DEMAND

Table 3.14-9 shows a comparison of the supply allocations from Table 3.14-4 and projected total system demands from Table 3.14-8, through the 20-year planning horizon as required by SB 610.

As discussed previously (Table 3.14-4), the Water District anticipates receiving between 91 and 100 percent of its total projected water supply in single dry years over the forecast timeframe. Furthermore, no SCWA supply reductions and no groundwater supply reductions are projected to occur during multiple dry years over the forecast timeframe. To meet the reductions in a single dry year, the Water District will have to cut back its consumption in kind by implementing the WSCP based on the severity of the drought. The Water District's WSCP describes the triggering levels and actions to be considered for each stage of demand reduction. The plan has four stages with each stage set to respond to increasingly severe conditions.

As shown in Table 3.14-9, there will continue to be sufficient supplies to meet all projected demand, including the additional demand generated from the Project, in the future condition scenarios. This conclusion is dependent on the Water District implementing the mandatory demand reductions as outlined in the District's WSCP and in the WSA.

In the event of drought conditions, the Water District would implement the WSCP, which would result in reduced water demand of up to 50 percent within the service area. The WSCP would ensure an adequate water supply within the Water District service area if SCWA reduces water deliveries by up to 10 percent (as could occur during a single drought year). For instance, a two percent reduction in water demand would reduce the overall demand during a single dry year to approximately 2,998 AFY in 2040, with the new projects built out, as shown in Table 3.14-9. The anticipated supply that year, considering the reduction in water supplies from SCWA, would be 3,008 AFY, as shown in Table 3.14-4. Thus, even under a single dry year scenario starting in 2040, the District would be estimated to provide adequate water to all existing and anticipated development and maintain a small estimated water surplus of 10 AFY. However, as stated, no such SCWA or groundwater supply reductions are projected to occur during multiple dry years over the forecast timeframe.

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TABLE 3.14-9: ANNUAL SUPPLY ALLOCATION VS. MULTIPLE DRY YEARS DEMAND INCLUDING DEMAND REDUCTIONS

YEAR		NORMAL YEAR (AFY)	SINGLE DRY YEAR (AFY)	MULTIPLE DRY YEARS (AFY)				
				YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
				DEMAND REDUCTION (%)				
			2%	0%	0%	0%	0%	0%
2020	Supply Assurance	3,650	3,650	3,650	3,650	3,650	3,650	3,650
	Demand (NOT including Project)	2,937	2,879	2,937	2,937	2,937	2,937	2,937
	Demand (including Project)	2,937	2,879	2,937	2,937	2,937	2,937	2,937
	Excess (NOT including Project)	713	771	713	713	713	713	713
	<i>Excess (including Project)</i>	<i>713</i>	<i>771</i>	<i>713</i>	<i>713</i>	<i>713</i>	<i>713</i>	<i>713</i>
2025	Supply Assurance	3,527	3,235	3,527	3,650	3,650	3,650	3,650
	Demand (NOT including Project)	2,905	2,847	2,905	2,905	2,905	2,905	2,905
	Demand (including Project)	2,957	2,898	2,957	2,957	2,957	2,957	2,957
	Excess (NOT including Project)	622	388	622	745	745	745	745
	<i>Excess (including Project)</i>	<i>570</i>	<i>337</i>	<i>570</i>	<i>693</i>	<i>693</i>	<i>693</i>	<i>693</i>
2030	Supply Assurance	3,432	3,140	3,432	3,432	3,432	3,432	3,432
	Demand (NOT including Project)	2,850	2,793	2,850	2,850	2,850	2,850	2,850
	Demand (including Project)	2,955	2,896	2,955	2,955	2,955	2,955	2,955
	Excess (NOT including Project)	582	347	582	582	582	582	582
	<i>Excess (including Project)</i>	<i>477</i>	<i>244</i>	<i>477</i>	<i>477</i>	<i>477</i>	<i>477</i>	<i>477</i>
2035	Supply Assurance	3,300	3,008	3,300	3,300	3,300	3,300	3,300
	Demand (NOT including Project)	2,846	2,789	2,846	2,846	2,846	2,846	2,846
	Demand (including Project)	3,002	2,942	3,002	3,002	3,002	3,002	3,002
	Excess (NOT including Project)	454	219	454	454	454	454	454
	<i>Excess (including Project)</i>	<i>298</i>	<i>66</i>	<i>298</i>	<i>298</i>	<i>298</i>	<i>298</i>	<i>298</i>
2040	Supply Assurance	3,300	3,008	3,300	3,300	3,300	3,300	3,300
	Demand (NOT including Project)	2,850	2,793	2,850	2,850	2,850	2,850	2,850
	Demand (including Project)	3,059	2,998	3,059	3,059	3,059	3,059	3,059
	Excess (NOT including Project)	450	215	450	450	450	450	450
	<i>Excess (including Project)</i>	<i>241</i>	<i>10</i>	<i>241</i>	<i>241</i>	<i>241</i>	<i>241</i>	<i>241</i>

SOURCE: MADDAUS WATER MANAGEMENT, 2019; EBA ENGINEERING, 2019.

SUPPLY AND DEMAND CONCLUSION

The WSA demonstrates that the water demand associated with the Project could be accommodated during a single dry year through implementation of the mandatory demand reductions as outlined in the District's WSCP. The WSCP allows for up to 50 percent demand reduction. After year 2035, in a single dry year, the projected water demand, including existing customers, forecasted development, and the Project, may require a two percent reduction in use by Water District customers to balance supply and demand. In order to achieve a two percent reduction in use during a single dry year, the District will have to implement the WSCP to reduce demand. The District WSCP describes the triggering levels and actions to be considered for each stage of demand reduction.

The Project's water demand would be within the anticipated supply range for the Water District and would not lead to insufficient water supplies in existing entitlements and resources or require new or expanded entitlements.

WATER FACILITIES AND INFRASTRUCTURE

The Water District's water utility infrastructure generally appears adequate to support the increased density of the Plan area over the next 20 years. The Water District has evaluated their water system, identified recommended capital improvement projects, and produced cost estimates on a project-by-project basis in their 2019 Water Master Plan for the district as a whole. It is noted that these improvements would address projected water supply for the Water District, including existing needs and projected development within the entire Water District including its service area outside of the Plan area. The recommended Capital Improvement Projects relevant to the Plan area are summarized in the Utility Infrastructure Needs Report prepared for the Project (Appendix G of this Draft EIR) based on the data in the 2019 Water Master Plan and include Boyes Boulevard Bridge Pipeline Replacement, Steel Pipe Replacement (replacement of steel water main and conversion of steel pipe laterals at three locations), East Thomson Commercial Fire Flow Improvement (replace existing 4-inch steel water mains with new 8-inch PVC water mains and replace one existing fire hydrant), Arroyo Road Commercial Fire Flow Improvement (install new 8-inch water main between Highway 12 and Madera Road along Arroyo Road), Hooker Avenue Fire Flow Improvement (install new 8-inch water main between Highway 12 and Hooker Ave), Lomita Avenue Commercial Fire Flow Improvement (replace existing 6-inch water main with new 12-inch water main along Lomita Avenue, replace two service connections, and replace one hydrant). In general, water system facilities will be designed in accordance with accepted engineering principles and will conform to the Water Districts' Standard Plans and Specifications.

Table 2-3 of the Utility Infrastructure Needs Report summarizes further recommendations and notes where existing infrastructure is adequate or where new infrastructure should be considered to adequately service the Project. Future water infrastructure to serve the Plan area is anticipated to include replacement of existing mains, replacement of connections, and provision of new connections to complete the grid distribution system. As development occurs throughout the Plan area, each future project will need to be analyzed on a project-by-project basis to determine the extent of specific water infrastructure upgrades needed. Water infrastructure for future projects may include: connection to existing infrastructure, replacement of aging water pipes in the vicinity serving the future project, and increasing pipe sizes of water pipes in the vicinity serving the future project. The following factors will be used to inform the type and extent of improvements required for new projects through the review of building permits for new development:

- The type and size of the project;

3.14 UTILITIES

- Any known pressure issues associated with the greater area where a project is proposed;
- The location of the project in relation to the existing infrastructure; and
- The capacity of the existing infrastructure to account for the planned development.

CONCLUSION

As noted above, the Project water demand (205.8 AFY) would be within the anticipated supply range for the District and would not lead to insufficient water supplies in existing entitlements and resources or require new or expanded entitlements.

Future development in the Plan area would be required to connect to existing water distribution infrastructure in the vicinity of each site, pay the applicable water system connection fees, and pay the applicable water usage rates. Future projects may be required to implement site specific and limited off-site improvements to the water distribution system in order to connect new project sites to the County's existing water infrastructure network. The specific impacts of providing new and expanded water distribution infrastructure cannot be determined at this time, as the Project does not propose any specific development projects or include details on any future development projects. However, any future improvements to the existing water distribution infrastructure would be primarily provided on sites with land use designations that allow for urbanized land uses, or involve water infrastructure within existing road rights-of-way, and the environmental impacts of constructing and operating the new water distribution infrastructure would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the Project. These impacts are described in the relevant chapters (Chapters 3.1 through 3.14, and 4.0) of this Draft EIR.

Additionally, the County's General Plan includes a range of objectives and policies designed to ensure an adequate water supply for development and to minimize the potential adverse effects of increased water use. Policy PF-1d requires discretionary development projects to obtain written certification that either existing services are available or needed improvements will be made prior to occupancy. Additionally, Policy WR-3s encourages cooperation with public water suppliers in the planning, development and construction of the storage and transmission facilities needed to serve projected demand consistent with adopted general plans. Further, Policy WR-3q supports the inter-regional planning efforts by the public water suppliers, their contractors, other existing water users and Sonoma County to consider future demand projections concurrently with the availability of sustainable water supplies. Subsequent development projects proposed within the Plan area would be subject to all applicable General Plan objectives and policies that reduce impacts related to water supplies.

Further, the proposed Specific Plan includes infrastructure and public services policies aimed to support the private development and public improvements which would result from implementation of the Project. For example, Policy CF-1d requires development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development. Additionally, Policy CF-1e requires development projects to install off-site infrastructure or pay appropriate in-lieu fees when appropriate. Subsequent development projects proposed within the Plan area would be subject to these policies.

Because the Project would not lead to insufficient water supplies in existing entitlements and resources or require new or expanded entitlements, and future projects would be required to connect to existing water distribution infrastructure in the vicinity of each site, pay the applicable water system connection fees, and pay the applicable water usage rates, impacts associated with water supplies are **less than**

significant. The policies listed below would further assist in ensuring that adequate water supplies are available to serve new growth projected under the Project.

SPECIFIC PLAN POLICIES THAT REDUCE THE POTENTIAL FOR IMPACTS

Policy CF-1b: Review updates to the Valley of the Moon Water District plans to ensure that water lines meet current design standards and adequate levels of service are maintained under existing and buildout conditions.

Policy CF-1c: Require development, infrastructure, and long-term planning projects to be consistent with all applicable County and service provider infrastructure master plans.

Policy CF-1d: Require development projects to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development.

Policy CF-1e: Require development projects to install off-site infrastructure or pay in-lieu fees to ensure adequate infrastructure capacity to serve the project.

Policy CF-1f: Require new utilities in the Plan area to be installed underground.

3.14.3 SOLID WASTE

ACRONYMS

CalRecycle	California Department of Resources Recycling and Recovery
PPD	pounds per day

ENVIRONMENTAL SETTING

Various entities have jurisdictional responsibility for solid waste management in Sonoma County. The Sonoma County Waste Management Agency (also known as Zero Waste Sonoma) was formed by a joint powers agreement between the County of Sonoma and the nine cities in order to implement waste diversion programs as required by State law. The Waste Management Agency currently provides waste diversion programs, household hazardous waste disposal, education and outreach, and planning and reporting.

The County owns the Sonoma County Central Disposal site which includes the active landfill in addition to facilities for recycling, material reuse, and natural gas and electrical generation. It also owns five transfer stations, oversees the regulation of two commercial hauling companies, and maintains closed landfills.

Republic Services of Sonoma County, Inc. operates the County's Central Disposal Site as well as four transfer stations located in Annapolis, Guerneville, Healdsburg, and Sonoma under a Master Operations Agreement with the County, which the Department of Transportation and Public Works oversees. Solid waste collection within the Plan area is currently provided by Redwood Empire Disposal.

Solid Waste Generation Rates and Volumes

CalRecycle has established a per resident disposal target rate of 7.1 PPD and a per employee disposal rate of 18.3 PPD for the Waste Management Agency. The Waste Management Agency has met and exceeded these targets in recent years, achieving a disposal rate of 3.6 PPD per resident and 9.4 PPD per employee in 2014.

In 2014, the Waste Management Agency completed a study to characterize the municipal solid waste disposed by single-family residential, commercial (including multifamily) and self-hauled sources. Since the Agency's last waste characterization study in 2007, the composition of the waste stream has changed, including a 30 percent decrease in the quantity of material disposed. Currently, of the approximate 262,500 tons disposed of in Sonoma County annually, approximately two-thirds (66%), can be classified as divertible, potentially divertible, or compostable. The most prevalent waste from both residential and commercial sources is organics.

In the overall waste stream, plastic has increased substantially in relative proportion of the waste stream since 2006/07, almost doubling from 7.4 percent to 14.8 percent. All plastic material categories have increased, with the greatest increase in durable plastic items and recyclable plastic film. Organics have decreased mainly due to a significant decrease in food (from 21.4 percent to 17.3 percent). Most Construction and Demolition materials have decreased with the exception of clean gypsum board and rock/soil/fines.

Waste Collection Services

Redwood Empire Disposal offers weekly garbage service to residential and commercial customers in the Plan area. Included in the residential fee for garbage service is a weekly curbside recycling program and yard waste/compost service. Residents may choose from 20, 32, 68, or 95-gallon rolling garbage carts, which are collected once per week. The cost of the service is based on the size of the garbage cart. Redwood Empire Disposal offers several options for commercial accounts. Recycling is a free service for commercial refuse accounts. Depending on the area, commercial accounts may choose from one and one-half, two, three, four, six cubic yard bins. Commercial collection services are offered up to five times a week. Small commercial generators may subscribe to weekly cart service.

Waste Disposal Facilities

On April 1, 2015, Sonoma County Department of Transportation and Public Works transferred Central Disposal Site and Transfer Station operations to Republic Services. Republic Services is the second largest provider of waste management services nationwide.

CENTRAL DISPOSAL SITE

According to the Waste Management Agency, the Central Disposal Site has a permitted capacity of 32.65 million cubic yards, and permitted daily capacity of 2,500 tons. The area permitted for disposal is approximately 172.8 acres. Average daily tonnage for the Central Disposal Site is 1,250 tons. The Amended Joint Technical Document for the Sonoma Central Disposal Site identifies that the landfill has a remaining capacity of approximately 9.18 million cubic yards, which equates to 7.53 million tons based on a 0.82 tons/cubic yard conversion factor.

DIVERSION FACILITIES

Sonoma County's Central Disposal Site features a full spectrum of waste management programs to serve the 494,285 residents and thousands of businesses in Sonoma County. The 398.5-acre Central Disposal Site integrates reuse & recycling, household hazardous waste management services, solid waste disposal, along with production of electrical energy and vehicle fuel from landfill gas in a coordinated system at a single location. Recyclables such as scrap metal, cardboard, glass, metal and plastic containers, and newspaper can be unloaded at the Reuse & Recycling Center at the Central Disposal Site. Recyclable materials are also accepted at the Annapolis, Guerneville, Healdsburg, and Sonoma transfer stations. Yard debris and food waste is currently being trucked outside the County for composting.

REGULATORY SETTING

AB 939: California's Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (AB 939) set a requirement for cities and counties to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling and composting. In order to achieve this goal, AB 939 requires that each City and County prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 939 also established requirements for cities and counties to develop and implement plans for the safe management of household hazardous wastes. In order to achieve this goal, AB 939 requires that each city and county prepare and submit a Household Hazardous Waste Element.

AB 341 (75 Percent Solid Waste Diversion)

AB 341 requires CalRecycle to issue a report to the Legislature that includes strategies and recommendations that would enable the state to divert 75 percent of the solid waste generated in the state from disposal by January 1, 2020, requires businesses that meet specified thresholds in the bill to arrange for recycling services by January 1, 2012, and also streamlines various regulatory processes.

SB 1374 (Construction and Demolition Waste Materials Diversion)

Senate Bill 1374 (SB 1374), Construction and Demolition Waste Materials Diversion Requirements, requires that jurisdictions summarize their progress realized in diverting construction and demolition waste from the waste stream in their annual AB 939 reports. SB 1374 required the California Integrated Waste Management Board to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

California Green Building Standards Code (CALGreen)

CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects.

Sonoma County General Plan

The Sonoma County General Plan includes the following goals, objectives, and policies related to solid waste:

PUBLIC FACILITIES AND SERVICES ELEMENT

GOAL PF-2: Assure that park and recreation, public education, fire suppression and emergency medical, and solid waste services, and public utility sites are available to the meet future needs of Sonoma County residents.

Objective PF-2.9: Use the CoWMP, and any subsequent amendments thereto, as the policy document for solid waste management in the County.

Policy PF-2a: Plan, design, and construct park and recreation, fire and emergency medical, public education, and solid waste services and public utilities in accordance with projected growth, except as provided in Policy LU-4d.

Policy PF-2b: Work with the Cities to provide park and recreation, public education, fire and emergency medical, and solid waste services as well as public utilities. Use proposed annexations, redevelopment agreements, revenue sharing agreements, and the CEQA process as tools to ensure that incorporated development pay its fair share toward provision of these services.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact on the environment associated with Utilities if it will:

- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; and/or

- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-3: The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (Less than Significant)

Development under the Project may increase the population within the Plan area by approximately 1,977 residents. Implementation of the Project would result in an increase in solid waste generation.

CalRecycle provides an average per-capita solid waste disposal rate for residents. For the Sonoma County Waste Management Agency, CalRecycle estimates a solid waste disposal rate of 13.6 pounds per person per day. Using this rate, the Project would generate approximately 26,084.8 pounds (4.8 tons) per day of solid waste, or 1,760.5 tons per year.

The additional solid waste generated under buildout of the Project (i.e., 1,760.5 tons per year) would not exceed the capacity of the Central Disposal Site, nor would it result in exceedance of the capacity prior to the estimated cease operation date. As previously described, the Central Disposal Site has a permitted capacity of 32.65 million cubic yards, and remaining capacity of the 7.53 million tons. While the estimated cease operation date is January 2034, the Amended Joint Technical Document for the Sonoma Central Disposal Site identifies that the landfill has a remaining site life of 24.5 years. The addition of the volume of 1,760.5 tons per year (or 4.8 tons per day) of solid waste generated by the Project to the Central Disposal Site would not exceed the landfill's remaining capacity or result in exceedance of the capacity prior to the estimated cease operation date. Should the Central Disposal Site cease operations in 24.5 years, the County will need to secure a new location of disposal of all solid waste generated in the County when the Central Disposal Site is ultimately closed. There are several options that the County may consider for solid waste disposal, such as expansion of existing landfill facilities, development of new landfill facilities, or agreements with existing facilities with capacity, at that time.

The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. This is a **less than significant** impact.

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This section has been prepared in accordance with CEQA Guidelines Section 15064.5 and considers potential impacts to Tribal Cultural Resources (TCR). This section includes a brief summary of TCR background information and a summary of consultation conducted by the County with local Native American groups. Potential impacts to cultural resources are addressed in Section 3.4, Cultural Resources. Information in this section is derived primarily from the Cultural Resource Assessment for the Springs Specific Plan, Sonoma County, California (Peak & Associates, Inc., 2016).

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.15.1 SETTING

ACRONYMS

AB	Assembly Bill
CHRIS	California Historical Resources Information System
CRHR	California Register of Historic Resources
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
SB	Senate Bill
TCR	Tribal Cultural Resource
USGS	U.S. Geological Survey

PREHISTORY

Four primary prehistorical patterns are generally recognized in the North Coast Ranges. The earliest pattern is the Borax Lake Pattern; the millingstone (i.e. metate) and mano are common in this period and sites from this period are often located above 5000 feet. The Mendocino Aspect began no earlier than 3000 B.C. and was characterized by Concave Base and Willits Side Notch projectile points, manos and metates, and also the mortar and pestle. Sites generally occur in low elevation. The late Borax Lake Aspect, which continued to occupy the northern end of the lake, was characterized by Wide Stem and Concave Base points and manos and metates, with no mortar and pestle. Around 1 B.C., on the east side of the lake basin, the Mendocino Aspect is replaced or assimilated by the Houx Aspect of the Berkeley Pattern, which emanated from the shores of San Francisco Bay to the south. The Houx Aspect completely replaced the Mendocino Aspect, identified by Meighan in 1955, in southern Sonoma County. However, within northern Sonoma County there is a mixture of Houx Aspect and Mendocino Aspect traits. The characteristic artifacts of the Houx Aspect of the Berkeley Pattern are the Excelsior point series, Houx Wide Stems, “burinated flakes,” and the heavy use of the bowl mortar and pestle. The Houx Aspect endured until the beginning of the Emergent Period -- circa A.D. 500. The Emergent Period was characterized by changes consisting of relative, if not absolute, population increase due to influxes of new peoples and a reduced resource base. The adaptational strategy changed from “foraging” to “collecting.” The Emergent Period is characterized by the appearance of small comer-notched, side-notched, and triangular projectile points; the hopper mortar and pestles; clam shell disc beads; and smoking pipes -- all traits of the Augustine Pattern.

ETHNOLOGY

The Coast Miwok at time of contact by Europeans had a territory that extended from modern day Marin County north into southern Sonoma County, including the Springs Specific Plan area (Plan area). Ethnographic studies conducted in the early part of the 20th century identified a number of named village sites including one within The Springs Study Area, *huchi*, and two others, *wuki liwa* and *temblek*, in the immediate vicinity.

There is extensive coastline in this territory and resources from the sea and salt marshes were important in Coast Miwok subsistence, however, the resources available in the interior of their territory were by no means ignored. Sea mammals were not part of the diet but various species of fish were taken with nets, seines, weirs, spears and line-with-gorge technologies, as appropriate. Even more important in the diet were clams and some species of mussel, resulting in the characteristic coastal shell middens familiar through archeology.

Villages were situated so as to be handy to food resources at various times of year. The Coast Miwok moved among residences on the coast, around salt or freshwater marshes and on interior streams so that they would be close to the most abundant food supply available at a particular season. Dwellings were conical brush-on-frame structures capable of sheltering up to ten individuals. Other structures included semi-subterranean sweathouses which served as something of a men's club, and--at major villages--a dancehouse for religious ceremonies. The dancehouse was basically the same construction as the sweathouse only larger. An excavation about two feet deep and fifteen in diameter formed the floor and a timber framework supported a brush dome capped with earth.

Archeology has provided an extensive collection of the stone tools that were used, but it is clear from ethnology that basketry and cordage were used for the majority of utilitarian objects. These materials do not preserve well, so they are uncommon in archeological sites. Basket making was a highly developed skill and baskets were woven tightly enough to hold water and cooking of acorn mush was accomplished by dropping hot rocks into baskets containing the mush. Cordage was used for the variety of nets used in taking fish, birds and small mammals.

In terms of socio-political organization, the term Coast Miwok is primarily a convenience for anthropologists, denoting a group speaking the same language and occupying a contiguous territory. In fact, there was no overall political control of this group and the real basis of social organization was the main village. Within the village group, close ties were maintained through the extensive religious/ceremonial life and through kinship ties.

Through much of aboriginal California, shell beads served as a form of currency. As a coastal people, the Coast Miwok had access to the raw material and bead manufacture was an important industry because it provided currency to trade for goods from neighboring groups. The Coast Miwok used imported obsidian in making arrowheads and other edged tools and chert to form more utilitarian edged implements.

NATIVE AMERICAN CONSULTATION

The CEQA Guidelines defines “tribal cultural resources” as either of the following:

- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.

In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Pursuant to SB 18 and AB 52, initial consultation began with a check of the Sacred Lands files, requested from the NAHC by Peak & Associates in early May 2016. The NAHC responded on May 13, 2016 and noted that the Sacred Lands files search provided negative results. The response letter also included a list of Tribes with traditional lands or cultural places located within the boundaries of the Plan area. The list included the following Tribes: the Cloverdale Rancheria of Pomo Indians, the Kashia Band of Pomo Indians of the Stewarts Point Rancheria, the Lytton Rancheria Band of Pomo Indians, the Federated Indians of Graton Rancheria, the Middletown Rancheria of Pomo Indians, the Mishewal-Wappo Tribe of Alexander Valley, and the Dry Creek Rancheria of Pomo Indians.

As discussed in Section 3.14.2, Regulatory Setting, Senate Bill (SB) 18 outlines tribal consultation requirements for local governments. Specifically, prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to places, features, and objects located on enumerated tribally-affiliated lands within the local government's jurisdiction that are affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).

Additionally, Assembly Bill (AB) 52, adopted in September 2014, creates a formal role for California Native American Tribes in the CEQA process by creating a formal consultation process and establishing that a substantial adverse change to a TCR has a significant effect on the environment.

Pursuant to SB 18 and AB 52, tribal consultation letters were sent to the listed tribes on October 19, 2018. As of the writing of this EIR, two Native American tribal representatives have provided responses: the Lytton Rancheria of California (November 14, 2018), and the Federated Indians of Graton Rancheria (November 19, 2018). The Lytton Rancheria of California noted that the Tribe does not have specific information for inclusion in the EIR. However, the Lytton Rancheria of California response letter did note that the Plan area falls within traditional Pomo territory and there is a potential to find TCR on-site. The letter concludes that the Tribe will further consult on the project with the appropriate lead agency and will get a copy of any surveys once they are completed. The Federated Indians of Graton Rancheria noted that the Plan area is within the Tribe's Ancestral Territory. No further consultation was requested.

On March 3, 2021, tribal consultation letters were again sent to the listed tribes to provide an additional opportunity to consult on the project. A response was received from the Stewarts Point Rancheria, declining consultation. A response was received from the Federated Indians of Graton Rancheria, requesting further consultation. Staff met with representatives of the Tribe on March 23, 2021. No specific issues were raised with the draft Cultural Resources and Tribal Resources discussing in the EIR but it was requested that consultation remain open until release of the public draft EIR.

3.15.2 REGULATORY SETTING

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines Section 15064.5 provides guidance for determining the significance of impacts to archaeological and historical resources. Demolition or material alteration in an adverse manner of a historical resource, including archaeological sites, is generally considered a significant impact.

CEQA also provides for the protection of Native American human remains (CEQA Guidelines Section 15064.5[d]). Native American human remains are also protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001, et seq.), which requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items within their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. This act also requires plans for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony that might be uncovered as a result of development projects overseen or funded by the federal government.

If a prehistoric or historic period cultural resource does not meet any of the four CRHR criteria, it may nonetheless be classified a “unique archaeological resource” as outlined in Public Resources Code Section 21083.2(g), if it is: an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- it has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- it is directly associated with a scientifically recognized important prehistoric or historic event or person.

If the lead agency determines that a project may have a significant effect on a unique archaeological resource, the environmental impact report prepared for the project must address the issue of that resource, per Public Resources Code Section 21083.2(a).

Assembly Bill 978

In 2001, AB 978 was passed to apply the state’s repatriation policy consistently with the provisions of the federal Native American Graves Protection and Repatriation Act of 1990 and established a state commission with statutory powers to assure that federal and state laws regarding the repatriation of Native American human remains and items of patrimony are fully complied with. In addition, AB 978 also included non-federally recognized tribes for repatriation under state law.

Senate Bill 18

The California Government Code establishes responsibilities for local governments to contact, provide notice to, refer plans to, and consult with tribes. The following list briefly identifies the contact and notification responsibilities of local governments, in sequential order of their occurrence.

Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to places, features, and objects located on enumerated tribally-affiliated lands within the local government's jurisdiction that are affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).

Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code Section 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.

Local governments must send notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code Section 65092).

Assembly Bill 52

AB 52, adopted in September 2014, creates a formal role for California Native American Tribes in the CEQA process by creating a formal consultation process and establishing that a substantial adverse change to a TCR has a significant effect on the environment. Tribal cultural resources are defined as:

- 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - A) Included or determined to be eligible for inclusion in the CRHR
 - B) Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)
- 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c). In applying the criteria set forth in Public Resources Code Section 5024.1(c) the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria above is also a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. In addition, a historical resource described in Public Resources Code Section 21084.1, a unique archaeological resource as defined in Public Resources Code Section 21083.2(g), or a "non-unique archaeological resource" as defined in Public Resources Code Section 21083.2(h) may also be a TCR if it conforms to the above criteria.

AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area

that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

LOCAL

Sonoma County General Plan

The existing Sonoma County General Plan identifies the following goals, objectives, and policies related to cultural and tribal resources:

OPEN SPACE & RESOURCE CONSERVATION ELEMENT

GOAL OSRC-19: Protect and preserve significant archaeological and historical sites that represent the ethnic, cultural, and economic groups that have lived and worked in Sonoma County, including Native American populations. Preserve unique or historically significant heritage or landmark trees.

Objective OSRC-19.3: Encourage protection and preservation of archaeological and cultural resources by reviewing all development projects in archaeologically sensitive areas.

Objective OSRC-19.4: Identify and preserve heritage and landmark trees.

Objective OSRC-19.5: Encourage the identification, preservation, and protection of Native American cultural resources, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites. Ensure appropriate treatment of Native American and other human remains discovered during a project.

Objective OSRC-19.6: Develop and employ procedures to protect the confidentiality and prevent inappropriate public exposure of sensitive archaeological resources and Native American cultural resources, sacred sites, places, features, or objects.

Policy OSRC-19a: Designate the County Landmarks Commission to review projects within designated historic districts.

Policy OSRC-19b: Refer proposals for County Landmark status and rezonings to the Historic Combining District to the County Landmarks Commission.

Policy OSRC-19c: The County Landmarks Commission shall review Historic Building Surveys and make recommendations for designation of structures or cemeteries as County landmarks.

Policy OSRC-19j: Develop an archaeological and paleontological resource protection program that provides:

- (1) Guidelines for land uses and development on parcels identified as containing such resources,
- (2) Standard project review procedures for protection of such resources when discovered during excavation and site disturbance, and
- (3) Educational materials for the building industry and the general public on the identification and protection of such resources.

Policy OSRC-19k: Refer applications for discretionary permits to the Northwest Information Center to determine if the project site might contain archaeological or historical resources. If a

site is likely to have these resources, require a field survey and preparation of an archaeological report containing the results of the survey and include mitigation measures if needed.

Policy OSRC-19i: If a project site is determined to contain Native American cultural resources, such as sacred sites, places, features, or objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites, notify and offer to consult with the tribe or tribes that have been identified as having cultural ties and affiliation with that geographic area.

Policy OSRC-19m: Develop procedures for consulting with appropriate Native American tribes during the General Plan adoption and amendment process.

Policy OSRC-19n: Develop procedures for complying with the provisions of State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, if applicable, in the event of the discovery of a burial or suspected human bone. Develop procedures for consultation with the Most Likely Descendant as identified by the California Native American Heritage Commission, in the event that the remains are determined to be Native American.

Sonoma County Code Section 11.14.050

Section 11.14.050, Protection of human remains and archaeological resources, outlines steps to follow should human remains of archaeological resources be discovered during construction, grading, or drainage activities. Specifically, the codes states:

“Where human remains or archaeological resources are discovered during construction grading and drainage, all work shall be halted in the vicinity of the find, the director shall be notified, and the following shall occur before work may be resumed:

- A. Human remains. If human remains or suspected human remains are discovered, the permittee shall notify the county coroner and comply with all state law requirements, including Health and Safety Code section 7050.5 and Public Resources Code section 5097.98, to ensure proper disposition of the human remains or suspected human remains, including those identified to be Native American remains.
- B. Archaeological resources. If archaeological resources or suspected archaeological resources are discovered, the director shall notify the State Historic Preservation Officer and the Northwest Information Center at Sonoma State University, and the permittee shall retain a qualified archeologist to evaluate the find to ensure proper disposition of the archaeological resources or suspected archaeological resources. All costs associated with the evaluation and mitigation of the find shall be the responsibility of the permittee. The director shall provide notice of the find to any tribes that have been identified as having cultural ties and affiliation with the geographic area in which the archaeological resources or suspected archaeological resources were discovered, if the tribe or tribes have requested notice and provided a contact person and current address to which the notice is to be sent. The director may consult with and solicit comments from notified tribes to aid in the evaluation, protection, and proper disposition of the archaeological resources or suspected archaeological resources. The need for confidentiality of information concerning the archaeological resources or suspected archaeological resources shall be recognized by all parties. For the purposes of this section, archaeological resources include historic or prehistoric ruins, burial grounds, pottery, arrowheads, midden, or culturally modified soil deposits. Artifacts associated with prehistoric ruins include humanly modified stone, shell, bone, or other cultural materials such as charcoal, ash, and burned rock indicative of food

procurement or processing activities. Prehistoric domestic features include hearths, fire pits, or floor depressions; mortuary features are typically represented by human skeletal remains.”

3.15.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project is considered to have a significant impact on cultural resources if it will:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:
 - listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
 - a resource determined by a lead agency, in its discretion and supported by substantial evidence, to be significant according to the criteria in Public Resources Code Section 5024.1(c), and considering the significance of the resource to a California Native American Tribe.

IMPACTS AND MITIGATION MEASURES

Impact 3.15-1: Implementation of the Project has the potential to cause a substantial adverse change to a tribal cultural resource as defined in CEQA Guidelines Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or to a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. (Less than Significant)

Seventeen cultural resources have been identified within the Plan area, according to files maintained by the Northwest Information Center (Information Center) of the CHRIS. The CHRIS records search identifies buildings, structures, historic sites, prehistoric sites, and any other cultural resources that have been reported to the Information Center. The Information Center did not indicate that any of the reported resources are included on the California Office of Historic Preservation’s Archaeological Determination of Eligibility list. In addition, none are listed on the CRHR or the NRHP. The results of Sacred Land files search were negative.

As with most projects in the region that involve ground-disturbing activities, there is the potential for disturbance or discovery of an archaeological, historic, or tribal cultural resource.

The Sonoma County General Plan includes policies that would reduce impacts to these resources, as well as policies for the conservation of cultural, historic, and archaeological resources. These relevant policies are listed above under Section 3.4.2, Regulatory Setting.

General Plan Objective OSRC-19.5 encourages the identification, preservation, and protection of Native American cultural resources, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites.

General Plan Policies OSRC-19j, OSRC-19l, OSRC-19m, and ORSC-19n encourage the protection and preservation of cultural and historic resources and consultation with Native American tribal representatives to identify and appropriately address cultural resources and sacred sites during the development review process. Objective OSRC-19.5 encourages the identification, preservation, and protection of Native American cultural resources, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites. Subsequent development projects proposed within the Plan area would be subject to all relevant General Plan policies and objectives that provide protections for cultural, historical, and tribal resources.

The General Plan policies and objectives, described above and listed in the Regulatory Setting subsection, provide a robust framework for ensuring that effects on significant historic, archaeological and tribal cultural resources are reduced. Although ministerial projects are exempt from CEQA and do not require an archaeological records search or survey, Section 11.14.050 (see above) of the County Code outlines steps to take should archaeological resources or human remains be discovered during construction. Furthermore, Public Resources Code Section 5097.993 and Penal Code Section 622.5 explicitly prohibit the removal or destruction of archaeological resources on both public and private lands.

The Specific Plan includes measures TCR-A, B, and C which require resources consultation and coordination for all discretionary projects and avoidance of known resources. Measures Cult-C and Cult-D are protocol for if cultural resources are identified in the project area. These measures are consistent with CEQA Guidelines Section 15064.5 which requires a site-specific cultural or archaeological survey to be performed for all ground-disturbing projects located on sites within the Plan area where a known cultural, archaeological, or cultural resource is located or where the site is sensitive for such resources. With implementation of Measures Cult-A, Cult-B, Cult-C, Cult-D and Cult-E, this impact would be **less than significant**.

SPECIFIC PLAN COMPONENTS THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Measure TCR-A: Tribal Cultural Resources Coordination and Consultation. *If during the implementation of Measure CUL-A, archival research results in the identification of an association between a historical built-environment resource and a local California Native American tribe, the qualified architectural historian or historian shall confer with the local California Native American tribe(s) on the implementation of Measure CUL-B. Throughout the implementation of Measures CUL-C through CUL-I, the qualified archaeologist retained to implement the measures shall confer with local California Native American tribe(s) on the identification and treatment of tribal cultural resources and/or resources of Native American origin not yet determined to be tribal cultural resources through AB 52 consultation. If, during the implementation of Measures CUL-C through CUL-I, a resource of Native American origin is identified, the County shall be notified immediately in order to open consultation with the appropriate local California Native American tribe(s) to discuss whether the resource meets the definition of a tribal cultural resource as defined in AB 52.*

Measure TCR-B: Avoidance of Tribal Cultural Resources. *When feasible, development facilitated by the project shall be designed to avoid known tribal cultural resources. Any tribal cultural resource within 60 feet of planned construction activities shall be fenced off to ensure avoidance. The feasibility of*

3.15 TRIBAL CULTURAL RESOURCES

avoidance of tribal cultural resources shall be determined by the County and applicant in consultation with local California Native American tribe(s).

Measure TCR-C: Tribal Cultural Resources Plan. A Tribal Cultural Resources Plan shall be required for Potential Sites identified as potentially sensitive for tribal cultural resources during consultation with local California Native American tribe(s) during the implementation of TCR-A and/or by the qualified archaeologist during the implementation of CUL-C through CUL-I. Prior to any development facilitated by the project that would include ground disturbance, the project applicant or its consultant, shall prepare a tribal cultural resources treatment plan to be implemented in the event an unanticipated archaeological resource that may be considered a tribal cultural resource is identified during construction. The plan shall include any necessary monitoring requirements, suspension of all earth-disturbing work in the vicinity of the find, avoidance of the resource or, if avoidance of the resource is infeasible, the plan shall outline the appropriate treatment of the resource in coordination with the local Native Americans and, if applicable, a qualified archaeologist. Examples of appropriate treatment for tribal cultural resources include, but are not limited to, protecting the cultural character and integrity of the resource, protecting traditional use of the resource, protecting the confidentiality of the resource, or heritage recovery. As appropriate, the tribal cultural resources treatment plan may be combined with any Extended Phase I, Phase II, and/or Phase III work plans or archaeological monitoring plans prepared for work carried out during the implementation of Measures CUL-D, CUL-F, CUL-G, or CUL-H. The plan shall be reviewed and approved by the County and the appropriate local California Native American tribe(s) to confirm compliance with this measure prior to construction.

Measure TCR-D: Native American Monitoring For Potential Sites identified as potentially sensitive for tribal cultural resources through consultation with local California Native American tribe(s) during the implementation of TCR-A and/or identified as sensitive for cultural resources of Native American origin by the qualified archaeologist during the implementation of CUL-C through CUL-I, the project applicant shall retain a locally affiliated Native American monitor to observe all ground disturbance, including archaeological excavation, associated with development facilitated by the project. Monitoring methods and requirements shall be outlined in a tribal cultural resources treatment plan prepared under Measure TCR-C. In the event of a discovery of tribal cultural resources, the steps identified in the tribal cultural resources plan prepared under Measure TCR-3 shall be implemented.

Measure TCR-E: Sensitive Location of Human Remains. For any development facilitated by the project where human remains are expected to be present based on the results of tribal consultation during the implementation of TCR-A and/or as identified by the qualified archaeologist, the County shall consult with local California Native American tribe(s) on the decision to employ a canine forensics team. If appropriate, the County shall require the use of a canine forensics team to attempt to identify human remains in a noninvasive way (e.g., non- excavation) for the purpose of avoidance, if avoidance is feasible (see Measure TCR-B). Any requirements for the use of a canine forensics team shall be documented in the tribal cultural resources treatment plan prepared under Measure TCR-C. Pending the results of any canine investigations, the tribal cultural resources treatment plan may require revision or an addendum to reflect additional recommendations or requirements if human remains are present.

The purpose of this section is to disclose and analyze the potential impacts associated with wildfire risk related to the Plan area and general vicinity. The requirement to evaluate wildfire hazards was added to the California Environmental Quality Act (CEQA) Guidelines in late 2018.

3.16.1 ENVIRONMENTAL SETTING

ACRONYMS

CALFIRE	California Department of Forestry and Fire Protection
CCR	California Code of Regulations
FHSZ	Fire Hazard Severity Zones
SRA	State Responsibility Area
WUI	Wildland Urban Interface Zone

SETTING

Overview

A wildfire is an uncontrolled fire in an extensive area of combustible vegetation. Wildfires differ from other fires in that they take place in areas of grassland, woodlands, brushland, scrubland, and other wooded areas that can act as a source of fuel, or combustible material. Buildings may become involved if a wildfire spreads to adjacent communities. The primary factors that increase an area's susceptibility to wildfire include slope and topography, vegetation type and condition, and weather and atmospheric conditions. Extreme wildfire events are expected to increase in frequency by 20 percent by 2050 and by 50 percent by the end of the century (Sonoma County 2017). The Office of Planning and Research has recognized that although high-density structure-to-structure loss can occur, structures in areas with low-to intermediate-density housing were most likely to burn during wildfires, potentially due to intermingling with wildland vegetation or difficulty of firefighter access. Fire frequency also tends to be highest at low to intermediate housing density, at least in regions where humans are the primary cause of ignitions (California Natural Resources Agency 2018).

The indirect effects of wildfires can be catastrophic. In addition to stripping the land of vegetation and destroying forest resources, large, intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and enhance siltation of rivers and streams, thereby enhancing flood potential, harming aquatic life, and degrading water quality. Lands stripped of vegetation are also subject to increased debris flow hazards.

Between 1964 and 2015, Sonoma County experienced 18 large or costly wildfires (County of Sonoma 2017). Most recently, the 2017 Sonoma Complex Fires caused 24 deaths, burned over 112,000 acres, and destroyed about 5,300 homes; the 2019 Kincadee Fire burned 77,758 acres, destroyed 374 structures, including 174 residences, and damaged 60 additional structures, including 34 residences (California Department of Forestry and Fire Protection [CAL FIRE] 2019a); the Glass Fire of 2020 burned over 67,000 acres, destroyed 1,555 structures, and damaged an additional 282 structures across both Napa and Sonoma counties (CAL FIRE 2020); and the LNU Lightning Complex fires of 2020 burned over 355,000 acres, destroyed 159 residences, and damaged an additional 10 residences in Sonoma County. Large

portions of the mountainous, highly combustible areas in eastern Sonoma County have a Fire Hazard Severity Zone (FHSZ) ranking of “very high” (CAL FIRE 2007a) and, therefore, are most susceptible to wildfires. Communities near this area include Cloverdale, Geyserville, eastern Santa Rosa, and Sonoma.

Slope and Aspect

According to CAL FIRE, sloping land increases susceptibility to wildfire because fire typically burns faster up steep slopes and they may hinder firefighting efforts (CAL FIRE 2007b). Following severe wildfires, sloping land is also more susceptible to landslide or flooding from increased runoff during substantial precipitation events. Aspect is the direction that a slope faces, and it determines how much radiated heat the slope will receive from the sun. Slopes facing south to southwest will receive the most solar radiation; thus they are warmer and the vegetation drier than on slopes facing a northerly to northeasterly direction, increasing the potential for wildfire ignition and spread (University of California 2018). Steeper slopes (greater than 15 percent) are more likely to experience fast wildfire spread, while flatter slopes (5 percent or less) are not as likely to experience fast wildfire spread. The Springs Plan Area is characterized by low slopes and primarily western aspects. Slopes in the broader vicinity generally share these characteristics, with some increased slopes of greater than 25 degrees east of the plan area along the upper reaches of Agua Caliente Creek on Lomita Drive and between Donald Street and Michael Drive.

Vegetation

Vegetation is fuel to a wildfire and it changes over time with seasonal growth and die-back. The relationship between vegetation and wildfire is complex, but generally some vegetation is naturally fire resistant, while other vegetation is extremely flammable. It is worth noting that some plant types in California landscapes are fire resistant, while others are actually fire dependent for their seed germination cycles. Wildfire behavior depends on the type of fuels present, such as ladder fuels, surface fuels, and aerial fuels. Ladder fuels provide a path for a surface fire to climb upward into the crowns of trees; surface fuels include grasses, logs, and stumps low to the ground; and aerial fuels include limbs, foliage, and branches not in contact with the ground (CAL FIRE 2020a). Weather and climate conditions, including drought cycles, can lead to dry vegetation with low moisture content, increasing its flammability. The Plan Area is generally characterized by existing urban development and hardscape. Most sites contain minimal vegetation, with the exception of scattered trees and landscaping.

Weather and Atmospheric Conditions

Wind, temperature, and relative humidity are the most influential weather elements in fire behavior and susceptibility (National Parks Service 2017). Fire moves faster under hot, dry, and windy conditions. Wind may also blow embers ahead of a fire, causing its spread. Drought conditions lead to extended periods of excessively dry vegetation, increasing the fuel load and ignition potential.

The Western Regional Climate Center maintains numerous weather monitoring stations throughout the County. According to data collected at weather stations located near the Plan Area, most precipitation is received from November through March, with an average annual rainfall ranging between 25 and 47 inches (Western Regional Climate Center 2016). May through September is the driest time of the year and coincides with what has traditionally been considered the fire season in California. However, increasingly persistent drought and climatic changes in California have resulted in drier winters, and fires during the autumn and spring months are becoming more common. Prevailing winds in Sonoma are generally from the northwest to the southeast, though in the autumn, hot, dry easterly wind events can be particularly intense and are often associated with heightened wildfire risk (National Oceanic and Atmospheric Administration 2020).

3.16.2 REGULATORY SETTING

STATE

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) is a fire department of the California Natural Resources Agency in California, responsible for fire protection on approximately 31 million acres of designated areas of state responsibility. In addition CAL FIRE is responsible for administration of forests on public and private lands, as well as the provision of emergency services beyond firefighting in certain jurisdictions. CAL FIRE programs also include the application of fire prevention, engineering, training, education and enforcement regarding wildfire prevention and protection measures. The CAL FIRE unit responsible for state responsibility areas in the County of Sonoma is part of the regional unit containing portions of Lake and Napa Counties as well.

California Board of Forestry

The Board of Forestry and Fire Protection is a government-appointed body within the Department of Forestry and Fire Protection. It is responsible for developing the general forest policy of the state and determining the guidance policies of the Department, including fire safe road regulations, which are codified as part of Title 14 of the California Code of Regulations (CCR). This includes requirements for road width, surface treatments, grade, radius, turnarounds, turnouts, structures, driveways, and gate entrances. These regulations are intended to ensure safe access for emergency wildland fire equipment and civilian evacuation.

State Responsibility Areas

In California, responsibility for wildfire prevention and suppression is shared by federal, state, and local agencies. Federal agencies are responsible for federal lands in Federal Responsibility Areas. The State of California, specifically the California Department of Forestry and Fire Protection (CAL FIRE), is responsible for prevention and suppression of wildfire in designated “state responsibility areas” (SRAs). (Pub. Resources Code, § 4102.) Lands included within SRAs include lands wholly or partly covered by forests or by trees producing or capable of producing forest products; lands covered wholly or partly by timber, brush, undergrowth, or grass, which protect the soil from excessive erosion, retard runoff of water or accelerate water percolation, if such lands are sources of water for irrigation or domestic or industrial use; and lands in areas contiguous to these areas which are which are principally used or useful for range or forage purposes. (Pub. Resources Code, § 4126.) Incorporated areas and unincorporated areas that do not fall into one of the categories included in SRAs are classified as Local Responsibility Areas (LRA).

Fire Hazard Severity Zone

CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. (Public Resources Code Sections 4201-4204 and Government Code Sections 51175-89). As described above, the primary factors that increase an area’s susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE maps fire hazards into zones, referred to as Fire Hazard Severity Zones (FHSZs). CAL FIRE maps three zones: 1) Moderate FHSZs; 2) High FHSZs; and 3) Very High FHSZs. Only Very High FHSZs are also mapped for LRAs. Each of the zones influence how people construct buildings and protect property to reduce risk associated with wildfires.

Under state regulations, areas within Very High FHSZs must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life. Figure 3.7-1 provides the FHSZ designation and distance to the nearest Very High FHSZ for the Plan Area. As shown in Figure 3.7-1, portions of land located at the southeast and northeast sections of the Plan area are located in a "Moderate" and "High" FHSZ respectively. There are no Very High FHSZs within the Plan area.

Local Responsibility Areas

The responsibility for preventing and suppressing wildland fires in the County is shared between local fire protection agencies and the State. Local fire protection agencies have primary responsibility for the prevention and suppression of wildland fire in Local Responsibility Areas. Local Responsibility Areas are generally concentrated in and around the more densely populated areas of Sonoma County. Most of the Plan area is within a Local Responsibility Area and is served by the Sonoma Valley Fire District (SVFD). The District is a newly formed special district created when the Valley of the Moon Fire District, Glen Ellen Fire Protection District and the Mayacamas Volunteer Fire Company joined on July 1, 2020. This new district also provides fire and emergency medical services under contract to the incorporated City of Sonoma. SVFD is governed by a Board of Directors made up of seven elected board members, a president, vice president, treasurer and four directors. See Figure 3.7-1.

California Fire and Building Codes (2019)

The California Fire Code is Chapter 9 of CCR Title 24. It establishes the minimum requirements consistent with nationally-recognized good practices to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structure, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The California Fire Code regulates the use, handling and storage requirements for hazardous materials at fixed facilities. The California Fire Code and the California Building Code (CBC) use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines and specialized equipment. To ensure that these safety measures are met, the California Fire Code employs a permit system based on hazard classification. The provisions of this Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout California.

Within the Fire Code, Title 24, part 9, Chapter 7 addresses fire-resistance-rated construction; CBC (Part 2), Chapter 7A addresses materials and construction methods for exterior wildfire exposure; Fire Code Chapter 8 addresses fire related Interior finishes; Fire Code Chapter 9 addresses fire protection systems; and Fire Code Chapter 10 addresses fire related means of egress, including fire apparatus access road width requirements. Fire Code Section 4906 also contains existing regulations for vegetation and fuel management to maintain clearances around structures. These requirements establish minimum standards to protect buildings located in FHSZs within SRAs and Wildland-Urban Interface (WUI) Fire Areas. This code includes provisions for ignition-resistant construction standards for new buildings.

Wildland-Urban Interface Building Standards

On September 20, 2007, the Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the CCR Title 24, Part 2, known as the 2007 CBC. These codes include provisions for ignition-resistant construction standards in the WUI. Standards vary based on whether the area is considered a Wildland Interface Zone, or Wildland Urban Intermix Zone. Wildland Interface Zones are those which are developed areas that have sparse or no wildland vegetation, but are within close proximity of a large patch of wildland. In contrast, Wildland Intermix Zones, are those areas where houses and wildland vegetation directly intermingle.

The California Fire Plan

The Strategic Fire Plan for California is the State's road map for reducing the risk of wildfire. The most recent version of the Plan was finalized in August 2018 and directs each CAL FIRE Unit to revise and update its locally-specific Fire Management Plan (CAL FIRE 2018). These plans assess the fire situation within each of the 21 CAL FIRE units and six contract counties. These plans address wildfire protection areas, initial attack success, assets and infrastructure at risk, pre-fire management strategies, and accountability within their geographical boundaries.

Governor's Office of Emergency Services

The Governor's Office of Emergency Services (Cal OES) is responsible for overseeing and coordinating emergency preparedness, response, recovery and homeland security activities within the state of California. Cal OES prepares the State of California Multi-Hazard Mitigation Plan (SHMP). The SHMP identifies hazard risks and includes a vulnerability analysis and a hazard mitigation strategy. The Disaster Mitigation Act of 2000 requires a State hazard mitigation plan as a condition of federal disaster assistance.

State Emergency Plan

The foundation of California's emergency planning and response is a statewide mutual aid system which is designed to ensure that adequate resources, facilities, and other support is provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation.

The California Disaster and Civil Defense Master Mutual Aid Agreement (California Government Code Sections 8555–8561) requires signatories to the agreement to prepare operational plans to use within their jurisdiction, and outside their area. These plans include fire and non-fire emergencies related to natural, technological, and war contingencies. The State of California, all State agencies, all political subdivisions, and all fire districts signed this agreement in 1950.

Section 8568 of the California Government Code, the "California Emergency Services Act," states that "the State Emergency Plan shall be in effect in each political subdivision of the state, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof." The Act provides the basic authorities for conducting emergency operations following the proclamations of emergencies by the Governor or appropriate local authority. The provisions of the act are further reflected and expanded on by appropriate local emergency ordinances. The Act further describes the function and operations of government at all levels during extraordinary emergencies, including war.

All local emergency plans are extensions of the State of California Emergency Plan. The State Emergency Plan conforms to the requirements of California’s Standardized Emergency Management System (SEMS), which is the system required by Government Code 8607(a) for managing emergencies involving multiple jurisdictions and agencies (CalOES 2020). The SEMS incorporates the functions and principles of the Incident Command System (ICS), the Master Mutual Aid Agreement, existing mutual aid systems, the operational area concept, and multi-agency or inter-agency coordination. Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs. The SEMS consists of five organizational levels that are activated as necessary, including: field response, local government, operational area, regional, and state. CalOES divides the state into several mutual aid regions. The County of Sonoma is located in Mutual Aid Region II, which includes Del Norte, Humboldt, Mendocino, Sonoma, Lake, Napa, Marin, Solano, Contra Costa, San Francisco, San Mateo, Alameda, Santa Clara, Santa Cruz, San Benito, and Monterey Counties (CalOES, 2019).

Government Code Sections 65302 and 65302.5, Senate Bill 1241 of 2012

Senate Bill (SB) 1241 of 2012 amended Government Code sections 65302 and 65302.5 to require cities and counties to address fire risk in SRAs and Very High FHSZs in the safety element of their general plans. The bill also amended CEQA to direct amendments to the CEQA Guidelines Appendix G environmental checklist to include questions related to fire hazard impacts for projects located in or near lands classified as SRAs and Very High FHSZs. In adopting these Guidelines amendments, the Governor’s Office of Planning and Research recognized that generally, low-density, leapfrog development may create higher wildfire risks than high-density, infill development. (California Office of Administrative Law 2018)

LOCAL

Sonoma County General Plan

The Sonoma County General Plan contains the following goals, objectives, and policies that are relevant to wildfire related impacts:

PUBLIC SAFETY ELEMENT

GOAL PS-3. Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires.

Objective PS-3.1: Continue to use complete data on wildland and urban fire hazards.

Objective PS-3.2: Regulate new development to reduce the risks of damage and injury from known fire hazards to acceptable levels.

Objective PS-3.3: Use the Sonoma County Hazard Mitigation Plan to help reduce damages from wildland fire hazards.

Policy PS-3b: Consider the severity of natural fire hazards, potential damage from wildland and structural fires, adequacy of fire protection and mitigation measures consistent with the Public Safety Element in the review of projects.

Policy PS-3c: Continue to adopt revisions to the Uniform Fire and Building Codes and other standards which address fire safety as they are approved by inspection organizations and the State of California. Review, revise, and/or adopt existing or new local codes, ordinances, and Fire Safe Standards to reflect contemporary fire safe practices.

Policy PS-3e: The County Department of Fire and Emergency Services shall offer assistance to local agencies in adoption and enforcement of fire safety regulations and shall work with local agencies to develop proposed improvements to County codes and standards.

Policy PS-3g: Encourage continued operation of California Department of Forestry and Fire Protection (CalFire) programs for fuel breaks, brush management, controlled burning, re-vegetation, and fire roads.

Policy PS-3i: Encourage and promote fire safe practices and the distribution of fire safe educational materials to the general public, permit applicants, and local planning agencies.

Policy PS-3m: Consider additional impact or mitigation fees, or a benefit assessment, to offset the impact of new development on fire services.

GOAL LU-7. Prevent unnecessary exposure of people and property to environmental risks and hazards. Limit development on lands that are especially vulnerable or sensitive to environmental damage.

Objective LU-7.1: Restrict development in areas that are constrained by the natural limitations of the land, including but not limited to, flood, fire, geologic hazards, groundwater availability and septic suitability.

Policy LU-7d: Avoid new commercial, industrial, and residential land use designations in areas subject to “high” or “very high” fire hazards, as identified in the Public Safety Element, unless the combination of fuel load, access, water supply, or other project design measures will reduce the potential fire related impacts of new development to insignificant levels.

The General Plan Public Safety Element states that the types and intensities of land uses permitted in the County should be limited based on environmental factors, to reduce the risk of fire impacts to people and property. Wildfire hazards may be reduced by mitigation measures such as the removal of vegetation and installation of dependable water systems, but the hazards cannot be eliminated entirely. Rural development should be most restricted where natural fire hazards are high, fire protection is limited, and inadequate road access prevents timely response by firefighting personnel and rapid evacuation by residents. As a result, the General Plan land use densities restrict land uses and density in hazardous areas, thereby limiting the number of people and buildings exposed to hazards.

Sonoma County Hazard Mitigation Plan

Hazard mitigation is the use of long and short term policies, programs, projects and other activities to reduce the death, injury, and property damage that can result from a disaster. The federal Disaster Mitigation Act (DMA) of 2000 requires state and local governments to develop hazard mitigation plans as a condition for federal disaster grant assistance. The County prepared a hazard mitigation plan in 2006 in compliance with the DMA and has updated the document every five years since then. The Sonoma County Multi-Jurisdictional Hazard Mitigation Plan Update 2021 (MJHMP) was adopted by the Sonoma County

Board of Supervisors on December 7, 2021. Previously, the 2016 Sonoma County Hazard Mitigation Plan was approved on April 25, 2017.

The newly adopted MJHMP was developed as Multi-Jurisdictional plan that will serve multiple cities and fire districts, including the City of Sonoma and the Sonoma Valley Fire District that encompasses the Springs Specific Plan Area. The MJHMP serves multiple purposes, including:

- Protect people and minimize loss of life, injury, and social impacts
- Minimize potential for loss of property, economic and social impacts, and displacement due to hazards
- Minimize potential for environmental impacts and consider a broad-range of mitigation solutions including nature-based solutions
- Communicate natural hazard risk to the whole community within Sonoma County
- Support and inform the development of relevant mitigation policies and programs
- Promote an adaptive and resilient Sonoma County that proactively anticipates the future impact of hazards within the county
- Pursue the development and implementation of long-term, cost-effective, and environmentally sound mitigation projects

Enhance the capability/capacity of the Sonoma County planning area to prepare, respond and recovery from the impact of natural hazards.

Community Wildfire Protection Plan

A CWPP is not a regulatory document, but provides wildfire hazard and risk assessments, community descriptions, options for addressing issues of structural vulnerability to wildfire (e.g. home hardening), and provides a prioritized list of projects which, if implemented, can serve to reduce wildfire hazards, reduce risk of loss of life, property loss, and environmental damage. The goal of a Community Wildfire Protection Plan (CWPP) is to enhance efforts to protect communities, watersheds and other at-risk lands from catastrophic wildfire. The County adopted a CWPP in 2016 and is currently working to develop a new document through a collaborative process to prioritize fuel reduction projects and identify recommendations for reducing risk to structures.

Sonoma County Code

Sonoma County Code Chapter 13, Sonoma County Fire Safety Ordinance, outlines the County Fire Code and Fire Safe Standards. The Fire Safe Standards, included as Article V of Chapter 13 of the Code, establishes minimum fire safe standards for development within the unincorporated area of the County located in the LRA; California Department of Forestry and Fire Protection Fire Safety Regulations govern the SRA (California Code of Regulations Title 14, Division 1.5). In addition, local amendments to the California Fire Code are in Sonoma County Code Chapter 13 and apply to both the State Responsibility Area and the Local Responsibility Area when authorized by Sonoma County Fire Code as amended, when not subject to other regulated building standards.

Sonoma County Emergency Operations Plan

The Sonoma County Operational Area Emergency Operations Plan addresses the planned response to extraordinary emergency situations associated with large-scale disasters, and includes all cities, special districts, and unincorporated areas of the County. The Operational Area is the entire county. The Emergency Operations Plan is intended to facilitate coordination between agencies and jurisdictions within Sonoma County while ensuring the protection of life, property, and the environment during disasters. This plan provides the framework for a coordinated effort among local community, county, city, special district, private sectors, regional, state, tribal, and federal partners. Annexes and contingency plans in support of the Emergency Operations Plan provide additional information relevant to a specific threat or response action, including the following: Evacuation Annex, Public Safety Power Shutoff Incidents Annex, Community Alert And Warning Annex, and Wildfire Burn Scar Debris Flow Response Contingency Plan. For purposes of this analysis, the Emergency Operations Plan and its Annexes and Contingency Plans are collectively referred to as the EOP.

Sonoma County Department of Emergency Management

The Sonoma County Department of Emergency Management is responsible for the mitigation, preparedness, planning, coordination of response, and recovery activities related to county emergencies and disasters. It develops and maintains the EOP; supervises and maintains the county/operational area emergency operations center; coordinates disaster preparedness, response, recovery and mitigation; serves as the coordination link between the local government level, the regional, state and federal level, and as liaison between the operational area jurisdictions/agencies, the California Governor's Offices of Emergency Services and Homeland Security, FEMA, and the Federal Department of Homeland Security (DHS); provides training, exercises, and educational outreach to agencies within the operational area; and coordinates resource and information management, public information/warning systems, mutual aid, and damage assessment information.

Sonoma County Fire Prevention Division

The Permit Sonoma Fire Prevention and Hazardous Materials Division is responsible for programs, procedures, and projects for preventing the outbreak of fires within the unincorporated areas of the county. (The Hazardous Materials Unit is discussed in 3.7, Hazards.) The goal of the Division is to minimize the danger to persons and damage to property caused by fires that do occur. In addition to code enforcement, Fire Prevention Division staff are responsible for hazardous materials incident response, fire investigations, emergency scene management support, and review of new development permit applications.

3.16.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

For purposes of this Program EIR, development facilitated by the project may have a significant adverse impact if the Plan area is in or near an SRA or Very High FHSZ and would do any of the following:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan

2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

As discussed above, portions of the Plan area are located in an SRA, and the entire Plan area is located near an SRA. There are no Very High Fire Hazard Severity Zones within the Plan area. The northern end of the Plan area is located approximately .60 miles from the nearest Very High FHSZ.

IMPACTS AND MITIGATION MEASURES

Impact 3.16-1: Implementation of the Project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant)

(Note: The following discussion is associated with potential impacts of the proposed Project on implementation of emergency response plans and/or evacuation plans. Proposed emergency vehicle access to and from the future developments within the Plan area is addressed in Chapter 3.13, Transportation and Circulation.)

As described in the Background section above, the County has an Emergency Operations Plan, Hazard Mitigation Plan, and Community Wildfire Protection Plan. Each of these plans is summarized briefly below, along with the county department responsible for their preparation and dates of planned updates.

Emergency Operations Plan (Sonoma County Department of Emergency Management): an emergency support function based plan that directs emergency response actions countywide. The EOP is an all-hazard plan. Annexes to the EOP provide additional information relevant to a specific threat or response action, when needed. An Evacuation Annex, prepared by the Department of Emergency Management and published in August 2021, outlines the strategies, procedures, and organizational structures to be used in managing coordinated, large-scale evacuations in the Sonoma County Operational Area (countywide).

Sonoma County Multi-Jurisdictional Hazard Mitigation Plan (Permit Sonoma): enhance public awareness, aid in decision-making to address vulnerabilities to future disasters, support eligibility for state and federal grant programs, support coordination of hazard mitigation policies across local jurisdictions. An MJHMP was adopted by the Board of Supervisors on December 7, 2021. The MJHMP is not a regulatory plan and is not intended as an emergency response or emergency evacuation plan.

Community Wildfire Protection Plan (Permit Sonoma): provides wildfire hazard and risk assessments, community descriptions, options for addressing issues of structural vulnerability to wildfire (e.g. home hardening), and provides a prioritized list of projects which, if implemented, can serve to reduce wildfire hazards, reduce risk of loss of life, property loss, and environmental

damage. The Fire Prevention Division of Permit Sonoma began an update process for this plan in 2021. Similar to the MJHMP, the CWPP is not regulatory and is not intended as an emergency response or emergency evacuation plan.

The EOP and its Annexes are not a formally “adopted” plan. However, the EOP functions as the emergency response plan and emergency evacuation plan for the unincorporated County, including for the Plan area. For the reasons discussed below, the Project would not impair implementation of or physically interfere with the EOP.

According to the EOP Evacuation Annex, the County has primary responsibility for emergency evacuation in unincorporated areas, such as the Springs. Any new development in the Plan area, facilitated by this plan, would be accessed by preexisting roadways. No new roads are provided for or contemplated in the Plan. The Specific Plan would not create physical impediments or interfere with the use of the roadways for evacuation or response during an emergency. All future development in the Plan area would be required to meet the most current applicable fire safety and emergency access and egress standards, including those regarding roadway width, turnarounds, and other necessary capacities.

As described in Section 3.12, Public Services, all new construction within the Plan Area would be subject to a Fire Impact Fee, adopted on March 23, 2021. The purpose of the fire impact fee is to fund the cost of fire protection and emergency response facilities, apparatus, and equipment attributable to new residential and nonresidential development in the District. The fire impact fee will ensure that new development will not burden existing development with the cost of expanded facilities, apparatus, and equipment required to accommodate growth as it occurs within the District. (Sonoma Valley, 2022).

The EOP’s Evacuation Annex discusses evacuation methods, routes, and assets. The primary mode of evacuation is assumed to be various forms of ground transport (personal vehicle, bicycle, rail, bus, etc.) for most persons in an evacuation area. Because evacuation routes are situation-specific, the Evacuation Annex does not identify specific routes but states that routes may include interstate, state and surface roads, and will be chosen based on the relative safety of roadway infrastructure and current traffic conditions. Evacuation routes will be selected by law enforcement officials, approved by the Incident Commander at the time of the evacuation decision, then communicated to the EOC.

The Evacuation Annex assumes that the majority of residents can self-evacuate using personal vehicles, and acknowledges that transit-dependent populations (such as those with disabilities and with access and/or functional needs and households without a vehicle) may require public transportation to evacuate. In those cases, Transportation Assembly Points (TAPs) would be used to transport persons who require evacuation assistance to temporary evacuation points and/or shelters in safe areas. The Annex acknowledges that evacuees may arrive at TAPs by foot, bicycle, public transit, paratransit, or private vehicles, and identifies public and private transportation assets (public and private buses) that would be used for evacuation from TAPs. As with evacuation routes, the location of TAPs in a particular emergency will be selected and activated depending on the immediate circumstances.

The Project is proposed in an existing urbanized area. Implementation of the Project would support improvements to transportation systems throughout the Plan area. The Plan identifies future improvements including addition of new crosswalks, bulb-outs and flashing beacons to improve pedestrian visibility at crossings. Sidwalks would be added along portions of Donald Street, Harley Street and smaller segments throughout the Plan area. Furthermore, the plan’s emphasis on improved pedestrian and bicycle infrastructure is intended to support reduced congestion and improved circulation, and may facilitate evacuation, especially for those without access to vehicles who will need to make their

way to the designated TAP for their area in the event of an evacuation. Development facilitated by the Project will use existing roadways. Accordingly, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, nor would it reduce existing levels of emergency response service as discussed above. Implementation of the Project would have a **less than significant** impact with regard to this issue.

Impact 3.16-2: Implementation of the Project has the potential to:

- a) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;**
- b) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or**
- c) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes (Less than Significant)**

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), weather (winds, temperatures, humidity levels and fuel moisture content) and topography (degree of slope). The California Department of Forestry and Fire Protection (CalFIRE) uses these factors to quantify fire hazards and categorizes them as Fire Hazard Severity Zones (FHSZ). Areas are designated as Moderate, High or Very High FHSZ, with areas of significant risk being Very High FHSZ. These areas are fully mapped in State Responsibility Areas, and areas within local jurisdiction (LRAs) are also mapped if they are Very High FHSZ.

Wildland fire hazard and associated risk of loss, injury or death cannot be eliminated entirely but they can be minimized in-part through the planning process. This can be achieved primarily by limiting the presence of people and structures in areas with elevated potential for wildland fire and secondarily by establishing risk reduction measures to reduce risks for existing and proposed development within or adjacent to these areas. This Plan mitigates exposure to wildland fire through both of these approaches.

As noted above, all of the Plan area is near an SRA, and small portions of the Plan area are located within an SRA. A majority of the Plan area is urbanized and located in a Local Responsibility Area (LRA) that is not mapped by CalFIRE as a Very High FHSZ. Small portions of the plan area are in a Moderate or High FHSV, but none of the Plan area is within or adjacent to a Very High FHSZ. (See Figure 3.7-1) The Project does not propose development in or adjacent to Very High FHSZ, which is approximately .6 miles from the northern end of the Plan area at its closest point. Limiting development in Very High FHSZ limits exposure of people or structures to the areas of greatest fire hazard. A majority of the Plan area is in areas of existing urban development with minimal slope, where wildland fuels are low and wildfire hazards are limited. As shown in Figure 3.7-1, a portion of the southeast Plan area is in a Moderate Fire Hazard Zone (15 parcels or approximately 17 acres) and a portion of the northeast plan area is in a High Fire Hazard Zone (46 parcels or approximately 13 acres).

All future projects allowed under the Project would be required to comply with all applicable provisions of Federal, State, and local requirements related to wildland fire hazards, including State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. As future development and infrastructure projects are considered by the County, each project would be evaluated for consistency with all applicable building and safety code sections that reduce fire risk. Compliance with these State and Local regulations would ensure that potential wildland fire hazards are mitigated through requirements for home hardening, automatic fire sprinkler systems or other on-site fire detection and suppression systems in new residential and commercial structures, and ensuring adequate fire protection services.

As discussed in Section 3.7-5 and as required by Specific Plan Policies Wildfire-1 and Wildfire-2, future projects would be subject to the applicable State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. These policies would ensure that future development does not exacerbate fire risk, and that risks to structures in the case of a wildland fire are reduced compared to those subject to less stringent requirements. In addition, because the Plan area encompasses properties with minimal vegetation, in an urbanized setting, projects built within the Plan area do not represent a new encroachment into wildland areas. As a result, the Plan would not introduce new sources of ignition to areas of very high wildfire hazard.

The Project does not propose to install any major new infrastructure that may exacerbate fire risk. Future infrastructure improvements in the Plan area would include the maintenance of existing water, sewer and roadways associated with new development which are typically underground and not located in wildland areas. Specifically, Policy CF-1f of the Plan requires new utilities in the Plan area to be installed underground. As discussed in Section 3.16-1 above, the circulation and road improvements would increase connectivity and may have a beneficial impact on emergency response, and it is expected that improvements to water infrastructure supported by future development would support firefighting capacity as well. The construction of these improvements would comply with State and local fire standards. Thus, the installation and maintenance of the proposed infrastructure would not exacerbate fire risk or result in temporary or ongoing impacts to the environment.

As discussed in the Geology and Soils Section (3.5), hillsides in the County have a medium to high susceptibility for landslides, while the valleys have a low susceptibility. Given the planning area's relatively level slopes, landslide potential is very low for all but a small portion of land located between Fetters and Central Avenue. Landslide potential increases in the foothills and mountains to the east of the Planning Area where wildland fire hazard potential also increases. In addition, development in the Plan area would be set back from watercourses that could channel post-wildfire debris flow.

Severe wildfires can damage the forest or shrub canopy, the plants below, as well as the soil. In general, this can result in increased runoff after intense rainfall, which can put homes and other structures below a burned area at risk of localized floods and landslides. Some of the Plan Area is located downslope from hillside areas, or contains some landslide-susceptible areas, and vegetative wildfire fuels, as described above. If a severe wildfire were to occur adjacent to the Plan Area, structures within the area may be at risk of landslides and could expose project residents to wildfire pollutants. If a fire were to occur in more flat and urbanized areas, the risk of flooding or landslides afterward would be negligible because of the nearly flat topography and because little soil would be exposed due to developed conditions.

Though the Plan area is downslope from areas with elevated landslide or fire hazards, the Plan area is consistent with the pattern of development countywide and due to its predominantly level topography

and surrounding pattern of urbanization and soil cover would not expose people or structures to elevated post-fire risks such as downslope or downstream flooding or landslides.

Future development projects in the Plan area would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the site and does not result in downstream flooding or major drainage changes. Future development projects located within the area covered by the storm water permit boundary would be subject to the Guidelines for the Standard Urban Storm Water Mitigation Plan. Some of the treatment controls in the Guidelines can be used to provide flood control by including additional flood detention storage.

Because existing codes and regulations cannot fully prevent wildfires from damaging structures or occupants, the Project could increase the exposure of new residential development to risk of loss or damage from wildfire. The Specific Plan includes Policy Wildfire-1 to reduce the risk of wildfire for future development associated with the Project. Specific Plan Policies Wildfire-1 and Wildfire-2 would reduce construction wildfire risk and include project siting considerations for future development.

Overall, with implementation of the two proposed Specific Plan policies below, impacts associated with exacerbating wildfire risks, infrastructure that may exacerbate fire risk, and significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would be **less than significant**.

SPECIFIC PLAN POLICIES THAT MINIMIZE THE POTENTIAL FOR IMPACTS

Policy Wildfire-1: In order to reduce fire risk, all projects shall comply with the applicable State fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. All homeowners shall be responsible for clearing out flammable materials, such as brush or vegetation, around their buildings to 100 feet (or the property line) to create a defensible space buffer.

Policy Wildfire-2: New buildings located in the Plan area shall comply with the Wildland-Urban Interface Fire Area Building Standards and Sonoma County Code Chapter 13, which establish minimum standards for materials and provide a reasonable level of exterior wildland fire exposure protection. The standards require the use of ignition resistant materials and design to resist the intrusion of flame or burning embers from a vegetation fire into buildings.

Policy CF-1d: Development projects shall offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not impaired by new development.

Policy CF-1f: New utilities in the Plan area shall be installed underground.