

4.P Public Services

Introduction

This section of the EIR describes existing fire protection, police, school, and library facilities and services within the City of St. Helena and the potential impacts on these facilities and services that may result from development allowed by the proposed General Plan Update.

Setting

Fire Protection

The City of St. Helena Fire Department provides fire protection services within the city limits, including fire suppression, fire prevention, education, emergency medical and rescue services, and response to incidents involving hazardous materials.

The St. Helena Fire Department provides fire suppression, prevention, education, emergency medical and rescue services, and response to hazardous materials incidents.

Staffing

The Fire Department is based at 1480 Main Street in St. Helena. The Fire Department is authorized to maintain a roster of a maximum of 30 paid-per-call firefighters. Currently the staff consists of 26 paid-per-call firefighters, however, there is one qualified applicant in the process of joining the department. The department has a full-time administrative assistant, a part-time paid Fire Chief, as well as a part-time Fire Marshal. As a paid-per-call department, firefighters respond to the station when they receive a page, leaving the station unoccupied throughout the day. Currently the Fire Department is adequately staffed to accomplish its missions and goals (Sorensen, 2015).

The firefighters are trained to provide emergency medical services at various levels. Presently, half of the firefighters are trained to the First Responder level; other half are certified as EMT-1s. One firefighter is trained to the Paramedic level. The Fire Department responds simultaneously with the ambulance dispatch, and generally arrives on scene concurrently with the ambulance company (Sorensen, 2015).

Equipment

Equipment includes two Type 1 engines, one Type 1, 85-foot aerial ladder truck, one Type 1 water-tender, one Type 6 engine, one Type 2 rescue vehicle, and one Type 2 engine. The Fire Department also has one command vehicle and one utility vehicle (Sorensen, 2015).

Service Calls and Response Times

The Fire Department has a response time of 5.5 minutes.

The Fire Department has a response time of 5.5 minutes and responds to each call with an average of twelve firefighters. This includes the number of firefighters who respond by leaving on a rig and arriving at the scene, as well as remaining firefighters who are available if necessary, upon instruction from the scene.

The department has set a goal for a maximum response time of 8 minutes within the St. Helena city limits (Sorensen, 2015).

In 2014, the Fire Department received a total of 745 calls. Of these calls, 60 percent were for emergency medical services, 4 percent were for fire services, and the remaining 36 percent were other types of calls (e.g., false alarms, hazardous conditions, and other types of service calls) (Sorensen, 2015).

The St. Helena Fire Department is part of the Napa County mutual aid automatic aid agreement. Depending on the needs of the incident, all fire departments in the county will respond as requested or required. Napa County Station 26 (St. Helena) and Napa County Station 12 (Yountville) provide automatic aid on all residential and commercial structure fires (Sorensen, 2015).

Emergency Access Issues

Traffic congestion on Highway 29 and other city streets can interfere with Fire Department response to fires.

Traffic congestion on Main Street and other city streets can interfere with the Fire Department's response to emergencies, including delaying firefighters responding to the station. The congestion also poses challenges for the City's collaboration with neighboring municipalities and agencies seeking to establish and implement regionally coordinated disaster planning for fire, emergency medical, and police services (City of St. Helena, 2015).

ISO

In 2010 the Insurance Services Office (ISO) fire insurance rating increased from a level 5 to a level 4. In 2015, the ISO rating increased again, from a level 4 to a level 3. ISO fire insurance ratings heavily impact the residential and commercial insurance rates.

Wildland Fire Issues

In accordance with California Public Resource Code Sections 4201-4204 and Government Code Sections 51175-51189, the California Department of Forestry and Fire Protection (CDF) has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), represent the risks

associated with wildland fires. Under State law (Government Code, Section 511182), areas within very high fire hazard risk zones must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas. No portion of St. Helena is classified as very-high fire risk. In the western uplands of the City of St. Helena are areas classified as having moderate to high wildfire risk, the eastern uplands are mostly classified as moderate, adjacent to high hazard wildland risk. However, narrow access roads and steep terrain will make firefighting more difficult. The remainder of St. Helena is either classified as urban un-zoned or non-wild land/non urban, representing minimal wildfire risk. Both the western and eastern uplands are considered wildland urban interface “WUI” and as such fall under those specific building guide lines. (CalFire, 2009) (see Figure 4.L-1).

Emergency Water

Fire hydrant placement throughout the city is consistent with National Fire Protection Association (NFPA) standards, which the St. Helena Fire Department enforces in all new construction. Many residential areas of the city have low emergency water flows (“fire flows”) or water pressure. Fire flows in these areas, while below standard, would be adequate for a single residential fire. However, they would be insufficient for multiple residential fires (i.e., a major conflagration).

Hazardous Materials Remediation

The St. Helena Fire Department is the first responder to hazardous materials incidents in the city. The Fire Department’s procedure is to call in the Napa County Hazardous Response Team, as Napa County maintains the equipment, supplies, and trained personnel to mitigate hazardous spills. Hazardous materials issues are discussed in more detail in Section 4.L, Hazards and Hazardous Materials, of this EIR.

Development Review Procedures

The St. Helena Fire Department routinely reviews development applications to address requirements for fire sprinklers, emergency access, and other fire-related concerns (City of St. Helena, 2015).

Police

The St. Helena Police Department provides police services within the city limits. The Police Department maintains 24-hour security patrol throughout the community (City of St. Helena, 2015).

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Staffing

The Police Department is based at 1480 Main Street in St. Helena. The Police Department consists of 18 full-time employees (including the Chief of Police and sworn officers) and one part-time employee. The Police Department maintains a staffing ratio of approximately two police officers for every 1,000 residents and is not understaffed (Castillo, 2015).

Equipment

The Police Department maintains five patrol cars, a motorcycle unit, bike patrol, and a canine unit (City of St. Helena, 2015).

Service Calls and Response Times

In 2008, the Police Department had an average response time of 2 minutes, 45 seconds.

In 2008, the Police Department had an average response time of 2 minutes, 45 seconds. The Police Department’s goal is to maintain an average response time of three minutes or less. In 2009, the Police Department handled 4,234 calls for service (City of St. Helena, 2015).

Emergency Access Issues

In addition to the emergency access issues described under “Fire Protection” above, the Police Department has noted that the 2300 block to the 2600 block of Vallejo Street is a dirt road that can pose problems for emergency vehicle access during inclement weather (City of St. Helena, 2015).

Schools

The St. Helena Unified School District maintains a primary school, elementary school, middle school, high school, and alternative high school.
The St. Helena Unified School District maintains a primary school, elementary school, middle school, high school,

The St. Helena Unified School District provides public school service in St. Helena. Students from two nearby elementary districts also attend the district’s schools.

The district maintains four schools: a primary school, an elementary school, a middle school, a high school, (see Figure 4.P-1 and Table 4P-1). Figure 4/P=1 also shows the general location of a number of private educational facilities in St. Helena, including but not limited to, the Culinary Institute of America (Greystone) in the northern portion of the community a satellite campus of Napa Valley College located just south of Pope Street near the Napa River.

**TABLE 4.P-1
EXISTING ST. HELENA UNIFIED SCHOOL DISTRICT SCHOOLS,
GRADES SERVED, AND ATTENDANCE**

School	Grades Served	Attendance
St. Helena Primary School	Transitional Kindergarten- 2nd grade	235

St. Helena Elementary School	3rd-5th grade	228
Robert Louis Stevenson Middle School	6th-8th grade	284
St. Helena High School	9th-12th grade	489
Total		1,236

SOURCE: St. Helena Unified School District, 2015

As of 2015, the district’s schools served a total of 1,236 students in Transitional Kindergarten through 12th grade (see Table 4P-1). With a total capacity of 1,236 students and declining enrollment in recent years, the district anticipates adequate capacity in the near term (St. Helena Unified School District, 2015).

Since 1997, the district has received community support for three General Obligation Bond programs that have funded a variety of facility projects over the years. A new aquatic center, vocational education complex, district maintenance building, and various classroom modernization works are among the bond-funded projects completed in recent years. Current projects include a new performing arts facility on the high school campus, technology infrastructure upgrades district-wide, sport/playfield/play structure improvements at various sites, and building/window renovations at the elementary schools St. Helena Unified School District, 2015).

Libraries

The George and Elsie Wood Public Library contains approximately 82,000 books, DVDs, CDs, newspapers, magazines and other media. The library also houses the archives of the Napa Valley Wine Library and the St. Helena Historical Society. The Robert Louis Stevenson Museum is also located on the library site (see Figure 4.P-1).

St. Helena’s library consistently ranks as one of the top public libraries in the state.

St. Helena’s library consistently ranks as one of the top public libraries in the state and offers a wide variety of services for residents of all ages. Per capita, the library enjoys the highest circulation and percentage of cardholders in the state.

The library receives public funds and is also sustained by the fundraising efforts of the Friends & Foundation, St. Helena Public Library. This 501 (c)(3) not for profit public benefit corporation has subsidized the library’s budget for materials and provided for its programming.

The Library had 120,000 visitors and circulated 313,046 items in fiscal year 2014/15. The existing library facility does not adequately house the Children’s department, provide enough private study areas for students, or

offer sufficient space for hosting events, which were attended by over 17,000 (Kreiden, 2015)

Existing St. Helena General Plan

The existing St. Helena General Plan, adopted in 1993, outlines policies, standards, and programs that together provide a comprehensive, long-term plan for physical development within the city. Individual development projects proposed within the city must demonstrate general consistency with the goals and policies outlined within the General Plan, which articulates and implements the city's long-term vision, including provisions for public services and facilities.

The proposed project analyzed in this EIR is the St. Helena General Plan Update (General Plan), which is an update of the existing General Plan. Once the General Plan Update is adopted, future developments within the city will be subject to policies outlined in the updated document.

City of St. Helena Public Safety Impact Fees

The City of St. Helena collects public safety impact fees to provide for police and fire protection facilities.

In accordance with Municipal Code Section 3.32.050, the City of St. Helena collects public safety impact fees to provide for adequate police and fire protection facilities. The fees are currently set at \$1.10 per square foot of new development or conversions. The same impact fee rate applies to both residential and non-residential construction (City of St. Helena, 2015).

City of St. Helena Civic Improvement Impact Fees

In accordance with Municipal Code Section 3.32.060, the City of St. Helena collects civic improvement impact fees to provide for adequate civic improvements, including the city's library and administrative facilities. The fees are currently set at \$2.06 per square foot of new residential development and conversions (City of St. Helena, 2015),

School Impact Fees

Pursuant to California Education Code Section 17620(a)(1), the governing board at any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities. The standard fees are \$3.20 per square foot of residential development and \$0.51 per square foot of commercial or industrial development, as specified in California Government Code Section 65995(b). As provided in California Government Code Section 65996, the payment of

such fees is deemed to fully mitigate the impacts of new development on school services (City of St. Helena, 2015).

Impacts and Mitigation Measures

Significance Criteria

Appendix G of the CEQA Guidelines provides that a project would 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 governmental facilities, 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 public services:
 - Fire protection;
 - Police protection;
 - Schools; or
 - Other public facilities.

For fire protection/emergency medical and police services, Appendix G further provides that a project would have a significant impact if it would:

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Relevant Policies

Fire Protection

The following relevant policies and implementing actions of the General Plan Update address fire protection services:

LU2.D. Continue to require residential developers to contribute toward the provision of community facilities and services (e.g. parks, recreation facilities and programs, education facilities, traffic and transportation facilities and services), consistent with State law requiring a nexus between project impacts and required mitigation.

LU6.1. Provide a wide-range of high-quality public facilities, including parks, multi-use trails, schools, fire and police services, water and wastewater systems, and community centers.

LU6.A. Update the zoning ordinance and map to be compatible with the General Plan use maps and designation and public facilities and services element.

LU6.B. Pursue sites for future public facilities, including parks, consistent with projected growth.

ES1.3. Ensure the long-term infrastructure needs and priorities of the community are met as part of an economic approach to economic vitality and sustainability.

PS4.1. Maintain a transitional zone around industrial areas to protect the health and safety of residential neighborhoods.

PS4.2. Limit development in hillside areas where wildfire hazard is high to very low intensity, or maintain them as open space in order to prevent the loss of lives, injuries and property damage due to wildfires.

PS4.3. Protect St. Helena residents from health and safety impacts related to the use, storage, manufacture and transport of hazardous materials.

PS4.4. Discourage new uses that rely extensively on the use of hazardous materials.

PS4.5. Facilitate communication and education about fire safety, non-point source pollution, household hazardous waste disposal and recycling opportunities.

PS4.6. Ensure that all streets and roads are adequate in terms of width, turning radius and grade in order to facilitate access by City firefighting apparatus, and to provide alternative emergency routes of ingress and egress.

PS4.A. Designate areas in St. Helena that are prone to fire hazards and make this information available to the community.

PS4.B. Develop an ordinance to regulate development and building methods and materials used in fire-prone areas. Integrate best practices in fire resistance for all new and remodeled structures. Continue to require fire-resistant building materials and automatic sprinkler systems to be used in all new structures located in these areas.

PS4.C. Require all structures in high wildfire hazard areas to maintain a clearance of flammable vegetation away from structures, and to use fire-resistant ground covers. The minimum clearance distance should be 30 feet.

PS4.D. Require all new development to meet the minimum fire flow rates specified by the City's Fire Code.

PS4.E. Require all new development plans to be approved by the Fire Department prior to the issuance of building permits, grading permits or final map approval.

PS4.F. Develop a program to inform and educate the community about potential risks, resources and roles and responsibilities for addressing fire safety in St. Helena. Inform residents of homes adjacent to public lands of their responsibility to provide fire breaks adjacent to their homes.

PS4.G. Review all new development proposals for their potential to introduce the production, use, storage and/or transport of hazardous materials, and require reasonable controls on such materials.

PS4.H. Develop a Hazardous Materials Response Plan that includes guidelines, protocols and strategies to respond to a local hazardous materials spill.

PS4.I. Strengthen regulations for the safe production, transport, handling, use and disposal of hazardous materials that may cause air, water or soil contamination. Require buffers for operations which handle substantial amounts of hazardous materials. When siting new facilities or expanding existing facilities, require buffer zones between hazardous materials facilities and residential uses, parkland, trails and open space facilities.

PS6.I. Ensure that City emergency procedures are adequate in the event of potential natural or man-made disasters.

PS6.A. Maintain and periodically update the City's Emergency Response Plan.

PS6.B. Conduct periodic emergency response exercises to test the effectiveness of City emergency response procedures.

PS6.C. Continue to collaborate with regional agencies and neighboring jurisdictions to develop and implement a regional emergency coordination plan and agreement for police, fire and emergency medical services.

Police

The following relevant policies and implementing actions of the General Plan Update address police services:

LU2.D. Continue to require residential developers to contribute toward the provision of community facilities and services (e.g. parks, recreation facilities and programs, education facilities, traffic and transportation facilities and services), consistent with State law requiring a nexus between project impacts and required mitigation.

LU6.I. Provide a wide-range of high-quality public facilities, including parks, multi-use trails, schools, fire and police services and community centers.

LU6.A. Update the zoning ordinance and map to be compatible with the General Plan use maps and designation and public facilities and services element.

LU6.B. Pursue sites for future public facilities, including parks, consistent with projected growth.

ES1.3. Ensure the long-term infrastructure needs and priorities of the community are met as part of an economic approach to economic vitality and sustainability.

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PS6.A. Maintain and periodically update the City's Emergency Response Plan.

PS6.B. Conduct periodic emergency response exercises to test the effectiveness of City emergency response procedures.

PS6.C. Continue to collaborate with regional agencies and neighboring jurisdictions to develop and implement a regional emergency coordination plan and agreement for police, fire and emergency medical services.

Schools

The following relevant policies and implementing actions of the General Plan Update address school services:

LU2.D. Continue to require residential developers to contribute toward the provision of community facilities and services (e.g. parks, recreation facilities and programs, education facilities, traffic and transportation facilities and services), consistent with State law requiring a nexus between project impacts and required mitigation.

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LU6.A. Update the zoning ordinance and map to be compatible with the General Plan use maps and designation and public facilities and services element.

LU6.B. Pursue sites for future public facilities, including parks, consistent with projected growth.

ES1.3. Ensure the long-term infrastructure needs and priorities of the community are met as part of an economic approach to economic vitality and sustainability. (Also see the Public Facilities and Services Element)

PF5.1. Support and cooperate with the St. Helena Unified School District in maintaining high quality education as a community priority.

PF5.2. Promote the efficient use of school facilities for before and after-hour programs that benefit both school-age children and the community at large.

PF5.3. Ensure that children have access to safe routes to school, especially by bicycle and walking.

PF5.4. Require that the approval of residential, commercial or industrial development be contingent upon the mitigation of the impact of such development on the St. Helena Unified School District's ability to serve school-age children.

PF5.A. Assist the School District in collecting school facility development fees generated by new development. Partner with the District to identify, establish and implement additional measures to ensure that the highest quality of education is provided.

PF5.B. Develop a Safe Routes to School Program to improve walking and bicycling access to schools and after-school programs. The program can promote bicycling and walking to benefit students' health, decrease automobile traffic near schools, and support local efforts to improve the environment. Align this program with the City's bicycle and pedestrian trail systems.

PF5.C. Develop a City-sponsored internship program for St. Helena Unified School District students in order to provide high-quality job skills training and support the School District's educational goals.

Libraries

The following relevant policies and implementing actions of the General Plan Update address library services:

LU2.D. Continue to require residential developers to contribute toward the provision of community facilities and services (e.g. parks, recreation facilities and programs, education facilities, traffic and transportation facilities and services), consistent with State law requiring a nexus between project impacts and required mitigation.

LU6.1. Provide a wide-range of high-quality public facilities, including parks, multi-use trails, schools, fire and police services and community centers.

LU6.A. Update the zoning ordinance and map to be compatible with the General Plan use maps and designation and public facilities and services element.

LU6.B. Pursue sites for future public facilities, including parks, consistent with projected growth.

ES1.3. Ensure the long-term infrastructure needs and priorities of the community are met as part of an economic approach to economic vitality and sustainability. (Also see the Public Facilities and Services Element)

PF5.5. Encourage continued support for the St. Helena public library efforts to ensure that it maintains high-quality services for all St. Helenans.

Impact Analysis

Adoption and implementation of the General Plan Update would result in the following impacts to public services.

Impact SVCS-1. Potential development under the General Plan Update could require new or expanded fire protection facilities.

As discussed in Chapter 3, Project Description, the General Plan Update would allow for development that would add an estimated 632 residents and 875 jobs in the city by 2030. This increase in resident and employee population would increase demands for fire protection services but is not currently expected to create a need for new or expanded fire protection facilities based on discussions with the St. Helena Fire Department (Sorenson, 2015). The General Plan Update contains policies and implementing actions for monitoring the need for additional public facilities, pursuing sites for future facilities consistent with projected growth, and ensuring that new development contributes toward the provision of community facilities and services (Policies LU6.1 and ES1.3 and Implementing Actions LU2.D, LU6.A, and LU6.B). In addition, individual development projects would be subject to Fire Department review and approval and would be required to pay the City's standard public safety impact fees. The effect of the General Plan Update on the need for new or expanded fire protection facilities is therefore considered a less-than-significant impact.

Impact SVCS-2. Potential development under the General Plan Update could require new or expanded police facilities.

The increase in resident and employee population associated with the General Plan Buildout would increase demands for police services but is not currently expected to create a need for new or expanded police facilities (St. Helena Police Chief, 2015) 2015). The General Plan Update contains policies and implementing actions for monitoring the need for additional public facilities, pursuing sites for future facilities consistent with projected growth, and ensuring that new development contributes toward the provision of community facilities and services (Policies LU6.1 and ES1.3 and Implementing Actions LU2.D, LU6.A, and LU6.B). In addition, individual development projects would be subject to Police Department review and

approval and would be required to pay the City's standard public safety impact fees. The effect of the General Plan Buildout on the need for new or expanded police facilities is therefore considered a less-than-significant impact.

Impact SVCS-3. Potential development under the General Plan Update could require new or expanded public school facilities.

While development in accordance with the General Plan Update may increase enrollment in public schools, developer payment of standard school impact fees would cover a fair share of any need for new or altered school facilities. The effect of the General Plan Update on the school services would therefore be considered a less-than-significant impact.

St. Helena Unified School District schools currently have capacity to serve additional students and are experiencing declining enrollment. The increased student population associated with the General Plan Update is not anticipated to create a need for new or expanded school facilities. The General Plan Update contains policies and implementing actions for monitoring the need for additional public facilities, pursuing sites for future facilities consistent with projected growth, and ensuring that new development contributes toward the provision of community facilities and services (Policies LU6.1 and ES1.3 and Implementing Actions LU2.D, LU6.A, and LU6.B). The General Plan Update also contains provisions for tying development approvals to mitigation of impacts on schools, collecting school impact fees, and identifying other measures as necessary (Policy PF5.4 and Implementing Action PF5.A).

Developers of future individual projects constructed under the auspices of the General Plan Update would be required to pay the school impact fees that are in effect at the time that building permits are issued. As provided by California Government Code Section 65996, the payment of such fees is deemed to fully mitigate the impacts of new development on schools services.

For these reasons, the effect of the General Plan Update on the need for new or expanded school facilities is considered a less-than-significant impact.

Impact SVCS-4. Potential development under the General Plan Update could require new or expanded library facilities.

The increase in resident and employee population associated with the General Plan Update would increase demands for library services and could create a need for new or expanded library facilities (Kreiden, 2015). The General Plan Update contains policies and implementing actions for monitoring the need for additional public facilities, pursuing sites for future

facilities consistent with projected growth, and ensuring that new development contributes toward the provision of community facilities and services (Policies LU6.1 and ES1.3 and Implementing Actions LU2.D, LU6.A, and LU6.B). In addition, future individual development projects would be subject to the City's standard civic improvement impact fees, which help to fund library facilities. The effect of adopting and implementing the General Plan Update on the need for new or expanded library facilities is therefore considered a less-than-significant impact.

Impact SVCS-5. Potential development under the General Plan Update could expose people and structures to wildland fire hazards.

Development in accordance with the General Plan Update, especially at the western and eastern edges of the city, has the potential to expose people or structures to wildland fire risks. However, the General Plan Update contains provisions for limiting development in hillside areas where wildfire hazard is high, imposing requirements to reduce fire hazards in buildings in fire-prone areas, requiring Fire Department approval of all new development plans, and informing the community of fire hazards in these areas (Policy PS4.2 and Implementing Actions PS4.A, PS4.B, PS4.C, PS4.E, and PS4.5). These provisions would effectively reduce wildland fire risks. Exposure to wildland fire hazards under the General Plan Update is therefore considered a less-than-significant impact.

References – Public Services

- Kreiden, Chris, Interim Library Director, City of St. Helena. 2015. E-mail communication.
- XXX, Police Chief, City of St. Helena. 202015. E-mail communication. May 5.
- City of St. Helena. 2007. *Infrastructure, Community Services and Facilities General Plan Update Working Paper*. November.
- City of St. Helena. 2015. *St. Helena General Plan Update 2030, Chapter Four, Public Facilities and Services*, Public Draft. February.
- City of St. Helena. 2015. *St. Helena General Plan Update 2030, Chapter Nine, Public Health, Safety and Noise*, Public Draft. February.
- Sorenson, John, Fire Chief, City of St. Helena. 2015. E-mail communication. June 29.

St. Helena Unified School District. 2015. Website,
<http://shusd.schoolwires.com/shusd/site/default.asp>, .

4.Q Recreation

Introduction

This section of the EIR describes park and recreation facilities within the City of St. Helena and the potential impacts on these facilities that may result from development allowed by the proposed General Plan Update.

Setting

City of St. Helena Parks

Existing Parks

As shown in Table 4.Q-1 and Figure 4.Q-1, the City of St. Helena maintains eight public parks:



View of Jacob Meily Park

- Crane Park, a 12-acre park located on Crane Avenue 500 feet south of the Crane Avenue/Grayson Avenue intersection and containing 6 lighted tennis courts, 8 lighted bocce ball courts, 2 Little League baseball fields, horse shoe pits, a children's playground, individual and group picnic areas, 2 restrooms, and a skate park;
- Jacob Meily Park, a 4-acre park located on Pope Street and containing a play field, heritage orchard, picnic area, children's playground, and restroom;
- 6.2-acre Wappo Park, which has been developed as a primarily passive park with a trail, dog park and picnic facilities. The park is located on the south side of Pope Street and east of College Avenue;
- 1.0-acre Lyman Park, located in the 1300 block of Main Street between Pine and Adams streets;
- Mary Fryer Park, a 1-acre park located on Mitchell Drive between Voorhees Circle and St. James Drive and containing picnic tables and play equipment;
- Baldwin Park, a 1-acre park located on 1591 Spring Street between St. James Drive and North Crane Avenue that is predominantly grass and has 2 picnic tables;
- Stonebridge Park, a park of less than a quarter-acre located on Pope Street along the Napa River;
- Stephen C. McCullagh Park is a 6,000 square foot neighborhood park located on Crinella Drive. It has been improved with a picnic table, rock and rope structure, play area and benches; and
- Lewis Station, a "pocket park" located on the corner of Church Street and Hunt Avenue.

The parks provide a total of approximately 25.6 acres of parkland, or approximately 19.4 acres of parkland if the currently undeveloped Wappo Park is excluded from the total (City of St. Helena, 2010).

**TABLE 4.Q-1
EXISTING CITY OF ST. HELENA PARKS**

Category	Park	Number of Acres	Characteristics
Mini	Baldwin Park	1.00	Mowed grass; picnic tables; handicapped-accessible from Voorhees Circle
	Lewis Station	0.13	"Pocket park" with picnic tables, benches, and restroom
	Lyman Park	1.00	Picnic tables; grassy areas; children's play area; gazebo for events; one restroom
	Mary Fryer Park	1.00	Picnic tables; play equipment designed for pre-school-aged children
	Stonebridge Park	0.25	Located on the Napa River; grassy areas with limited parking
Neighborhood	Jacob Meily Park	4.00	Play field; heritage orchard; picnic area; children's playground; restroom
	Wappo Park	6.20	Trail and picnic facilities
Community	Crane Park	12.00	Six lighted tennis courts; six lighted bocce courts; two Little League baseball fields; horseshoe pits; children's playground; two restrooms; picnic areas; Farmer's Market; skate park
Total		25.58	

SOURCE: City of St. Helena, 2010

Possible Future Parks

As shown in Figure 4.Q-1, sites identified by the City of St. Helena for future park improvements include the following: (1) the 21.65-acre, City-owned "Lower Reservoir" property; and (2) a 15-acre flood control project site that is envisioned to include provisions for passive open space use, such as pathways and interpretive trails.

Compliance with Municipal Park Standards

Currently, St. Helena's public park acreage does not meet applicable standards for the amount of parkland provided per 1,000 residents. Assuming a current population of approximately 6,100 residents, the City's total developed park acreage (25.58 acres) translates to 3.86 acres per 1,000 residents (or 3.86 acres per 1,000 residents).

This ratio is below both (1) the National Park and Recreation Association municipal parklands standard of 6.0 to 10.5 acres per 1,000 residents, and (2) the City of St. Helena currently requires a lower standard of 5.0 acres per 1,000 residents, as provided in the 1993 St. Helena General Plan. The current dedication requirement remains in place; however, the City goal for providing parkland is 10.5 acres of parks per 1,000 residents.

St. Helena's public park acreage does not meet applicable standards for the amount of parkland provided per 1,000 residents.

Figure 4.Q-1
Parks and Recreation



Legend

- City Limits
- Urban Limit Line
- Parks and Recreation Areas
- Streams
- Waterbodies
- Future Park Improvements



To meet the City standard of 5.0 acres per 1,000 residents, the City would need 30.5 total acres, or approximately 4.92 additional acres of parkland. To meet the national standard of 6.0 to 10.5 acres per 1,000 residents, the City would need 36.6 to 64.1 total acres, or approximately 11.02 to 38.52 additional acres.

State Parks

State parks in the vicinity include the 1,900-acre Bothe-Napa Valley State Park and the adjoining Bale Grist Mill State Historic Park.

Other parks in the vicinity include two state parks located on the west side of Highway 29 north of the city: the 1,900-acre Bothe-Napa Valley State Park, which offers camping, picnicking, swimming, and hiking trails; and the adjoining 0.75-acre Bale Grist Mill State Historic Park, the site of a water-powered grist mill that was built in 1846 (California State Parks, 2010).

Regulatory Framework

Existing St. Helena General Plan

The existing St. Helena General Plan, adopted in 1993, outlines policies, standards, and programs that together provide a comprehensive, long-term plan for physical development within the city. Individual development projects proposed within the city must demonstrate general consistency with the goals and policies outlined within the General Plan, which articulates and implements the city's long-term vision, including provisions for parks and recreational facilities.

The proposed project analyzed in this EIR is the St. Helena General Plan Update (proposed General Plan Update), which is an update of the existing General Plan. Once the General Plan Update is adopted, future developments within the city will be subject to policies outlined in the updated document.

City of St. Helena Civic Improvement Impact Fees

In accordance with Municipal Code Section 3.32.060, the City of St. Helena collects civic improvement impact fees to provide for adequate civic improvements, including parks and recreation facilities, to serve new development. The fees are currently set as: \$7.55 per square foot of new residential development and conversions and \$12.85 per square foot of new commercial/retail development and conversions (City Fee Schedule, 2015).

Municipal Park Standards

As discussed in the Setting subsection above, the National Park and Recreation Association recommends a municipal parklands standard of 6.0 to 10.5 acres per 1,000 residents. The 1993 St. Helena General Plan provides

for a slightly lower standard of 5.0 acres per 1,000 residents. The updated General Plan proposes a new significantly higher standard of 10.5 acres per 1000 population.

Impacts and Mitigation Measures

Significance Criteria

Appendix G of the CEQA Guidelines provides that a project would have a significant impact on parks and recreational facilities if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 public services:
- –Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Relevant Policies

The following relevant policies and implementing actions of the General Plan Update address park and recreation facilities and services:

(NOTE: See Section 4.C, Transportation and Traffic, of this EIR for General Plan policies and implementing actions for pedestrian and bicycle trails.)

LU2.D. Continue to require residential developers to contribute toward the provision of community facilities and services (e.g. recreation facilities and programs, education facilities, traffic and transportation facilities and services), consistent with State law requiring a nexus between project impacts and required mitigation.

LU6.1. Provide a wide-range of high-quality public facilities, including parks, multi-use trails, schools, fire and police services and community centers.

LU6.B. Pursue sites for future public facilities, including parks, consistent with projected growth.

ES1.3. Ensure the long-term infrastructure needs and priorities of the community are met as part of an economic approach to economic vitality and sustainability.

CD4.1. Encourage the development of public spaces for formal and informal gatherings, such as plazas, seating and small performance areas.

CD4.2. Integrate open space, including parks, community gardens, natural areas and agriculture into the community to strengthen the connection to St. Helena's agricultural heritage and provide a sense of openness.

CD4.A. Require private development to incorporate public open space into new projects.

OS2.3. Preserve open space for recreational uses, including a bicycle and pedestrian trail system along creek corridors when compatible with riparian vegetation and wildlife habitat. Where possible, integrate stream corridors with trails and other recreational open space, provided that the vegetation, habitat value and water quality is not significantly impacted.

OS2.B. Adopt a land dedication ordinance that requires developers to provide land and improvements, such as trails and revegetation, along both sides of creek corridors as a condition of subdivision approval. The width of dedicated corridors should be established in consultation with the California Department of Fish and Wildlife.

OS 2.C. Pursue easements to open space areas that do not have adequate access for maintenance and management purposes.

OS2.D. Provide for open space opportunities by including passive and active public recreation areas within projects as they develop.

OS2.E. Explore the possibility of public use or agricultural option of the wastewater treatment plant spray field in the form of trails and passive open space or other agricultural option.

CCI.L. Develop parks and open spaces in support of efforts to create walkable, bikeable mixed-use neighborhoods, especially to complement higher-density development and connect lower-density areas.

PR1.1. Retain the park standard from the 1993 General Plan of 5.0 acres of parkland per 1000 residents, while striving for the nationally recommended standard of 10.5 acres per 1000 residents.

PR1.2. Enhance the community's quality of life and ensure a widely accessible environment through the provision of a citywide system of parks and open spaces. Identify and develop linkages, corridors and other connections to provide an aesthetically pleasing and functional network of parks, open space areas and bike paths throughout the City.

PR1.3. Identify park land opportunity sites to ensure that the City can meet or exceed its standard of 10.5 acres per 1,000 residents. Locate new parks to ensure that City park facilities are equitably distributed throughout all areas of the City and residents can access them safely and conveniently.

PRI.4. Require park land dedications or civic improvement fees on all new residential, commercial and industrial developments to meet the standard of 5.0 acres of parks per 1,000 residents.

PRI.5. Ensure adequate funding to acquire new park lands as they become available.

PRI.6. Develop new parks only after existing parks have received adequate funding and maintenance.

PRI.A. Develop a comprehensive , long-range Parks and Recreation Master Plan to aid the City in creating an integrated systems of parks. The plan should be updated periodically to address changing recreation interests, trends, needs and priorities. The Parks and Recreation Master Plan should:

- Identify long-term goals for the Parks and Recreation Department and community;
- Describe current and future needs interesters and community preferences for improving new parks and community facilities and expanding or initiating new programs and services;
- Present a long-range plan for physical park andcommunity facility programs;
- Refine performance standards and further develop park design guidelines and criteria;
- Prioritize projects’
- Identify the proportion of Civic Improvement Fees that will be contributed to the development and maintenance of parks and recreational facilities;
- Outline funding mechanisms and strategies for managing the City’s commitments so that new requests and initiatives are considered in light of existing commitments.

Subsequent actions in this Element may be included in the Parks and Recreation Master Plan.

PRI.B. Create opportunities to develop additional parks at the following locations:

- The City-owned land along the Napa River and Pratt Avenue for passive recreational uses;
- Land adjacent to York and Sulphur Creeks, as well as the Napa River levee;
- The water treatment plant site;

- The Lower Reservoir area for a water-oriented community recreation facility.
- Ensure that new parks are developed to include bicycle and pedestrian trails.

PR1.C. Identify a variety of funding sources for new parks and park improvements, including parkland dedication, in-lieu fees, and regional, state and federal grant programs, public/private partnerships with the SHUSD, conservation easements for public use, as well as other City funding sources.

PR1.D. Strive to acquire additional park land to meet or exceed the City's 5.0 acres of developed park land per the 1,000 residents standard..

PR1.E. Develop a comprehensive network of bicycle and pedestrian trails that links the City's parks and enhances bicycle and pedestrian connectivity throughout the City and the region.

PR1.F. Mandate City park land dedication requirements for new infill projects. Include specific park acreage and use requirements according to the type, scale and population and increase of new development. Consider in-lieu fees for small infill projects.

PR2.1. Distribute parks and recreational facilities throughout the City to ensure that all residents have convenient access to parks and recreational programs and facilities.

PR2.2. Construct new parks and recreation facilities to accommodate community needs.

PR2.3. Ensure that parks and recreation programs have safe and convenient access.

PR2.A. Prioritize the construction of new parks and recreation facilities to ensure that they are distributed equitably to all areas of the City. Park and recreation facility development studies should include the potential impacts of development on surrounding natural resources and agricultural areas.

PR2.B. Encourage the inclusion of pocket parks that include amenities, such as picnic tables, restrooms, shade and recreation spaces near retail, commercial and industrial areas.

PR2.C. Locate parks and recreation facilities in areas that are easily accessible by public transportation, as well as cars, bicycles and pedestrians.

PR2.D. Where possible, ensure that recreation programs and access to facilities are provided at costs affordable to all St. Helena residents.

PR2.E. Develop and implement a list of planned parks and recreation facilities.

PR2.F. Identify community locations that are not within a 10-minute walk of a park or recreation facility. Develop parks in the identified areas to ensure an equitable distribution of parks citywide.

PR2.G. Encourage the development of parklets throughout the City.

PR2.H. Encourage the development of linear parks throughout the City.

PR3.1. Ensure that the design and development of parks and recreation facilities preserves viewsheds and creates a buffer between urban and agricultural uses, where necessary.

PR3.2. Protect sensitive habitat, agricultural land and open space when planning and maintaining City park lands.

PR3.3. Support local wildlife conservation efforts by incorporating habitat elements in urban/agricultural interface areas and ensuring the protection of migration corridors.

PR3.A. Develop design guidelines for recreational facilities that preserve viewsheds and maintain a transition buffer between urban and agricultural uses. Include specific design criteria regarding recreational trails and picnic areas adjacent to agricultural uses.

PR3.B. Identify locations where new recreational programs and facilities may be constructed.

PR3.C. Design and locate new parks to minimize noise and activity impacts on nearby agricultural and residential uses. This includes requiring context-sensitive site designs that minimize negative impacts on surrounding uses, such as pathway and picnic area locations, ball field usage and park lighting.

PR3.D. Provide habitat elements in urban/agricultural interface areas. Habitat elements may include roosting trees and nesting boxes for birds, bats and other wildlife, as appropriate.

PR4.1. Develop systematic and comprehensive plans to guide the development and operation of City parks and recreational programs.

PR4.2. Balance between preservation, education, recreation and public health and safety in park and open space planning.

PR4.3. Provide park areas for residents of all ages to meet a variety of recreational and social needs, including: seniors, formal, active uses; passive uses that allow for interaction with natural landscapes; and interpretive programs that highlight geomorphology, ecology, cultural resources, agricultural heritage and historic preservation.

PR4.4. Ensure that all parks and recreational facilities are attractive, safe and well-maintained with adequate lighting.

PR4.5. Prioritize park acquisitions and improvements that expand and enhance St. Helena's active recreation facilities and programs to accommodate diverse community needs and interests.

PR4.B. Promote design guidelines for the development of parks and recreation facilities. Design parks and recreation facilities that are attractive, safe and easy to maintain. This action may be included in a Parks and Recreation Master Plan.

PR4.C. Identify locations to accommodate active recreational uses to meet citywide needs. Potential locations include:

- Bicycle and pedestrian trails, interpretive areas, trail heads, and comfort stations along York and Sulphur creeks and the Napa River; and
- A community park at the City-owned Lower Reservoir area.

PR4.F. Provide multi-purpose event spaces for events in the park system, where possible.

PR4.H. Encourage the development of soccer fields, multi-sport facilities and a new community pool.

PR4.I. Identify key improvements to existing parks, such as parking, picnic facilities, restrooms, tot lots with play structures and multi-modal access points. This action may be included in a Parks and Recreation Master Plan.

PR5.1. Encourage partnerships with local organizations and the private sector to provide, develop and maintain parks, recreation facilities and programs.

PR5.2. Ensure that a broad cross-section of St. Helena stakeholders participates in the planning, design and maintenance of parks and recreational amenities.

PR5.3. Encourage volunteerism, mutual responsibility and community spirit to set the tone that St. Helena's public parks and open spaces belong to everyone.

PR5.A. Emphasize joint planning and cooperation with all public agencies as the preferred approach to meeting St. Helena's parks, facilities and program needs.

PR5.B. Mandate City parkland dedication requirements for new infill projects. Include specific park acreage and use requirements to the type, scale and population and increase of new development. Consider in-lieu fees for small infill projects.

PR5.C. Provide local organizations, the St. Helena Unified School District and the private sector with opportunities and support for creating

and implementing solutions to meet the City's parks and recreation facilities needs.

PR5.D. Cooperate with local groups in designing and constructing recreation facilities. Where possible, coordinate recreation and child care programs and facilities with school district programs.

PR5.E. Negotiate joint-use agreements for recreation facilities with the St. Helena Unified School District.

PR5.F. Involve the private sector in providing and maintaining parks and recreation facilities through formal agreements with the City and in sponsoring increased volunteerism.

PR5.G. Investigate the feasibility of creating a non-profit foundation to seek and receive funds for the support of parks and recreation programs. Look to St. Helena's successful library foundation as a local model.

PR5.H. Foster neighborhood park planning committees, including neighborhood residents, business owners and representatives from local groups to help plan, design and maintain parks and recreational facilities.

PR5.I. Work with community members and representatives of local sports organizations to define facilities needs as community needs change with time.

PR5.J. Develop a public outreach program to involve community members in park maintenance and upkeep, and in mitigating vandalism. Create park signage to encourage responsible use of parks, and partner with the police force to support enforcement efforts.

Impact Analysis

Less-than-Significant Impacts

The proposed General Plan Update provides for new parks and recreational facilities, the construction of which could have adverse environmental effects. Numerous proposed General Plan Update policies and implementing actions provide for development of new parks, recreational facilities, and other recreational opportunities (see Relevant Policies subsection above). Potential new park sites specifically identified in the General Plan Update (Implementing Actions and LU6.B and PR1.B) include the 5.6-acre, City-owned Adams Street parcel and the 21.65-acre, City-owned "Lower Reservoir" property (see Figure 4.Q-1).

The potential environmental impacts of the park development provisions of the General Plan Update are analyzed throughout Chapter 4 of this EIR. The proposed General Plan Update contains policies and implementing actions that would ensure that the design and development of parks and recreational facilities would avoid noise and other impacts on nearby agricultural and

residential uses (Implementing Action PR3.C); protect viewsheds (Policy PR3.1 and Implementing Action PR3.A), agricultural lands (Policies PR3.1 and PR3.2 and Implementing Action PR3.A), and sensitive habitat and open space (Policies PR3.2 and PR3.3 and Implementing Action PR3.D); and address preservation, public health and safety issues (Policies PR4.2 and PR4.4 and Implementing Action PR4.B) (see Relevant Policies subsection above). These General Plan Update provisions would ensure that the environmental impacts of park development would be reduced to a less-than-significant level.

The anticipated General Plan buildout and associated increase in population would increase demands on existing parks and recreational facilities. The increased demand could lead to physical deterioration of these facilities, particularly since the city's existing public park acreage does not meet applicable standards for the amount of parkland provided per 1,000 residents (see Setting subsection above).

Potential impacts on existing facilities would be offset by the extensive list of General Plan Update policies and implementing actions providing for maintenance and improvement of existing parks and development of new parks, recreational facilities, and other recreational opportunities (see Relevant Policies subsection above). Potential new park sites specifically identified in the General Plan Update (Implementing Actions and LU6.B and PR1.B) include the 5.6-acre, City-owned Adams Street parcel and the 21.65-acre, City-owed "Lower Reservoir" property (see Figure 4.Q-1). Change Area 1 (Adams Street) identified by the General Plan Update includes provisions for park development (see Chapter 3, Project Description). These parkland opportunities (totaling approximately 30 acres) may not be sufficient to offset existing plus projected parkland needs, which could range from 14.8 to 52.5 acres.

References – Recreation

- City of St. Helena. 2007. Infrastructure, Community Services and Facilities General Plan Update Working Paper. November.
- City of St. Helena. 2015. St. Helena General Plan Update 2035, Chapter Twelve, Parks and Recreation, Public Draft. February.

City of St. Helena Development Fee Schedule, 2015

California State Parks. 2010. Website, www.parks.ca.gov, viewed March 29.

4.R Utilities and Service Systems

Introduction

This section of the EIR describes existing water, wastewater, and solid waste disposal facilities and services within the City of St. Helena and the potential impacts on these facilities and services that may result from development allowed by the proposed General Plan Update.

The water and wastewater facility analysis in this section is based on a technical memorandum and a final City of St. Helena Water Supply Plan prepared by West Yost Associates, Consulting Engineers, for the City of St. Helena (West Yost Associates, 2010a, 2010b, 2012¹). These documents are available for review at the City of St. Helena Planning Department, 1480 Main Street, St. Helena.

Setting

Water

The City of St. Helena provides water service within and outside the city limits. The City's water infrastructure includes two reservoirs, three groundwater wells, three pump stations, six storage tanks, and a network of distribution pipelines (City of St. Helena, 2015).

Water Supply

The City receives water from four sources: Bell Canyon Reservoir, Lower York Creek Reservoir (Lower Reservoir)², groundwater wells, and purchased water through a contract with the City of Napa (City of St. Helena, 2015). Table 4.R-1 summarizes potable water production from these sources for the period 1990-2014, and Table 4.R-2 shows estimated current potable water supply.

The following discussion provides an overview of the City's water supply system. Additional detail is provided in the draft City of St. Helena Water Supply Plan (West Yost Associates, 2012) available for review at the City of St. Helena Planning Department.

Bell Canyon Reservoir

Bell Canyon Reservoir is the City's primary potable water supply source. The City's two water right permits, which had allowed it to divert and store up to 3,800 acre-feet per year plus directly divert an additional 1 cubic foot per second (cfs) from November 15 through

Bell Canyon Reservoir is the City's primary water supply source.

¹ See references at end of section.

² Water from Lower Reservoir is for non-potable water only.

April 15, expired in December 2010. The City has recently received approval for licenses from the State Water Resources Control Board (SWRCB) (S. Palmer, City Engineer, 2016) and has documented that it has perfected Permit 9157 for 1,800 acre-feet diverted to storage and beneficially used, plus 1 cfs of direct diversion. The City has also documented an additional 181 acre-feet diverted to storage and beneficially used under water rights Permit 14810. The reservoir's actual constructed storage capacity in Bell Canyon Reservoir is approximately 2,400 acre-feet.

**TABLE 4.R-1
POTABLE WATER SUPPLY, 2000-2014**

Calendar Year	Bell Canyon Reservoir (acre-feet)	Stonebridge Wells (acre-feet)	City of Napa Water (acre-feet) ¹	Total Water Supplied (acre-feet)	Percent Groundwater
2000	1,524	373	---	1,897	20%
2001	1,647	467	---	2,114	22%
2002	1,942	349	---	2,290	15%
2003	1,681	476	---	2,157	22%
2004	1,741	499	---	2,240	22%
2005	1,725	382	---	2,107	18%
2006	1,827	410	---	2,237	18%
2007	1,147	521	452	2,120	25%
2008	1,396	479	326	2,201	22%
2009	1,200	508	314	2,022	25%
2010	1,257	325	285	1,867	17%
2011	874	228	644	1,746	13%
2012	975	182	635	1,792	10%
2013	877	526	570	1,973	27%
2014	743	317	540	1,600	20%

¹ Before 2007, use of City of Napa water was for emergency water purposes. In 2007 and after, use of City of Napa water was through the City of Napa water agreement.

SOURCE: West Yost Associates, 2015b for 2000 through 2014; City Daily Worksheet Excel files for 2010-2014.

**TABLE 4.R-2
ESTIMATED CURRENT POTABLE WATER SUPPLY**

Water Supply Source	Wet Year Supply (acre-feet)	Normal Year Supply (acre-feet)	Below Normal Year Supply (acre-feet)	Dry Year Supply (acre-feet)	Critical Dry Year Supply (acre-feet)
Bell Canyon Reservoir	1,100	1,000	800	600	500
Napa Water Agreement ¹	600	600	600	600	600
Groundwater ²	425	400	350	514	471
Total	2,125	2,000	1,750	1,714	1,571

¹ The amended Napa water agreement provides for 600 acre-feet under all hydrologic conditions.

² Assumes groundwater will be 20 percent of total supply in most years and 30 percent of total supply in Dry and Critical Dry Years.

SOURCE: West Yost Associates, 2010b; City of St. Helena 2015

The City currently has the right to divert and store 3,800 acre-feet at the reservoir. The City has been able to withdraw approximately 1,900 acre-feet of the water from storage for beneficial use (West Yost Associates, 2010b).

Average historical yield from the reservoir is 1,500 acre-feet per year, but actual yields have been as high as 1,942 acre-feet in 2002 (see Table 4.R-1). Sustainable yield (i.e., the maximum amount of water that the City could withdraw from the reservoir each year and be confident that it could withdraw the same amount every year) ranges from approximately 500 acre-feet in critically dry years to approximately 1,100 acre-feet in wet years (West Yost Associates, 2010b).

The Bell Canyon Reservoir water supply is treated at the Louis Stralla Treatment Plant. The Stralla Plant is located adjacent to Bell Canyon Reservoir at 412 Crystal Springs Road. It filters and disinfects water drawn from the Bell Canyon reservoir with a treatment capacity of 4.5 million gallons per day (mgd). The peak demand on the plant has been 3.5 mgd. The plant typically operates at less than peak demand. (City of St. Helena, 2016).³

Groundwater Wells

The City has three groundwater wells.

The City has three groundwater wells. Two of the wells produce water that is then made potable through treatment, while the third well provided untreated water for irrigation. The non-potable well is located nearby at Jacob Meily Park. The two water wells have a combined capacity of approximately 650 gallons per minute. The City maintains a groundwater level monitoring program in the area that monitors groundwater levels. (City of St. Helena, 2010; West Yost Associates, 2010b).

City of Napa Water

The City of St. Helena is under contract with the City of Napa for additional water supply.

The City of St. Helena entered into a long-term water supply agreement with the City of Napa in 2006 and the delivery terms were revised in December 2011. The initial term of the contract expires on December 31, 2035. In the initial term under the contract delivery terms, Napa is required to deliver and St. Helena is required to purchase 400 acre-feet in all years. Depending on Napa's allocation of water from the State Water project (SWP) as set forth in a notice of projected delivery on or before April 15 of each year, Napa is required to deliver and St. Helena is required to purchase 200 acre-feet (above the 400 acre-feet). The additional water may not be available in Dry or Critically Dry Years, although it should be available in most years. Again, depending on the Napa noticed SWP allocation, St. Helena may exercise the option to purchase 200 acre-feet (above the 600 acre-feet). The purchase

³ At 3.5 mgd, this equates to the capacity to treat 3,924 acre-feet per year (running continuously). The treatment plant has capacity to treat the summertime maximum day demand, which is greater than the annual average (West Yost Associates, 2010c).

option should be available to St. Helena in Wet Years. Also, Napa could receive a revised SWP allocation, revising upward its allocation as stated in the notice received on or before the April 15 deadline and could decide to offer an additional amount to St. Helena. The contract is to be renegotiated in 2035.

The water is received from the City of Napa water transmission system at the City of St. Helena's Rutherford Pump Station. The maximum delivery rate allowed is 1 million gallons per day (mgd) (700 gpm), and the annual maximum volume is 600 acre-feet per year.

Lower Reservoir

Lower Reservoir has a capacity of approximately 200 to 225 acre-feet. The City has a pre-1913 claim to store up to 160 acre-feet at this reservoir.

Lower Reservoir is a source of non-potable water only.

Lower Reservoir is a source of non-potable water only. Up to 50 acre-feet per year of untreated water from Lower Reservoir is used for irrigation at Robert Louis Stevenson Middle School and at the Spring Mountain Winery. Untreated water is also provided to local contractors for construction purposes (City of St. Helena, 2010; West Yost Associates, 2010b). Lower Reservoir is also an important source of water in case of a major fire; water may be pumped directly from the reservoir or helicopters may airlift water from the reservoir in the event of a local wildland fire (City of St. Helena Water & Sewer Subcommittee, 2010). (See also "Emergency Water" below.)

Expansion of the reservoir's capacity is not considered feasible because of the reservoir's small size and the age of the dam. To be potable, water from Lower Reservoir would require treatment, which would involve significant capital costs (City of St. Helena Water & Sewer Subcommittee, 2010).

Water Distribution System

The existing water distribution network covers a large area within and outside the city limits.

The existing water distribution network covers a large area within and outside the city limits. The network extends from Lodi Lane, two miles north of the City, to Niebaum Lane, three miles south. The City has approximately 1,964 water connections within the city limits, serving approximately 6,000 people. The City also serves about 348 connections outside the city limits, providing water to an additional estimated population of 775 people (City of St. Helena, 2015).

The City has implemented an aggressive leak detection and repair program in its water distribution system. The City has a rate of "unaccounted-for"

water⁴ in the range of 12-16 percent of total water produced (West Yost 2015b).

Water Recycling Project

The City of St. Helena has considered a recycled water project that would involve upgrading and expanding the existing wastewater treatment facilities to provide up to 1,200 acre-feet of recycled water, meeting Title 22 tertiary, unrestricted reuse standards by the year 2025. The 1,200 acre-feet of recycled water would be used to offset the current use of potable water for irrigation of school grounds, parks, other City properties, and vineyards. This water would also be used to enhance drought and fire protection supplies.

To date, the City has not implemented its recycled water project due to logistical and financial constraints. Key issues include a lack of recycled water distribution system to deliver recycled water to users; insufficient demand for use of recycled water for irrigation purposes, particularly among wineries; and lack of seasonal storage capacity for the water (City of St. Helena, 2015).

Emergency Water

The City's emergency water supply sources are the same as the City's regular supply. The water agreement with the City of Napa indicates that Napa will provide emergency water supply to St. Helena beyond the contracted 600 acre-feet per year if Napa has water available. This emergency water provision does not include providing water to St. Helena during droughts.

Water Demand

Total existing demand for potable water averages about 1,874 acre-feet per year.

Total existing metered potable water demand averages about 1,790 acre-feet per year in normal water supply years, but has declined in recent years due to improved water use efficiency and short-term demand reductions. Table 4.R-3 lists average annual water demand for land uses within the city limits, and outside City limits. The inside City limit land uses accounted for an average metered potable water demand of approximately 1,483 acre-feet per year for fiscal years 2002-2008. For land uses outside the city limits, metered potable water demand averaged 307 acre-feet per year for fiscal years 2002-2008. Over the same time period, metered potable water demand for landscape irrigation (not including Lower Reservoir non-potable water use) averaged 84 acre-feet per year (West Yost Associates, 2010b).

⁴ "Unaccounted-for water" is the difference between the amount of water produced or purchased by the City and the amount of water sold to all City customers. This water is a resource that has been consumed but not metered due to leaks, unauthorized use, firefighting, system maintenance, inaccurate meters, and other unmetered consumptions.

**TABLE 4.R-3
ESTIMATED ANNUAL WATER DEMAND BY LAND USE**

Land Use	Total Existing Units ¹	Average Annual Metered Water Demand (acre-feet) ²	Annual Unit Water Demand (acre-feet per unit)
Inside City Limits			
Residential	2,402.0	958	0.40
Commercial, Retail, Institutional	1,186.3	371	0.31
Industrial	518.9	154	0.30
	Subtotal	1,483	
Outside City Limits		307	
	Total	1,790	

¹ "Units" are occupied dwelling units for residential land use areas and thousand square feet of floor space for commercial, retail, institutional, and industrial land use areas. The quantity of units was provided by the City and represents the average values for 2002-2008. These numbers differ from those in Table 3-10 in Chapter 3 because they consider only occupied (not total) residential units and non-residential floor space is considered rather than parcel size.

² Average water demand for fiscal years 2002-2008.

SOURCE: West Yost Associates, 2015

Wastewater

The City of St. Helena provides wastewater collection and treatment service in St. Helena. The City’s wastewater infrastructure includes a wastewater treatment plant, a wastewater collection system that uses 8- and 24-inch pipe and trunk lines, and one wastewater lift station (City of St. Helena, 2007).

Existing Wastewater Generation

Table 4.R-4 lists average, minimum, and maximum wastewater flows in St. Helena for the period 2000-2014. The average dry weather flow is used to project wastewater flow rates because it most truly represents the flow contribution from customers, without excessive dilution from inflow and infiltration, although some groundwater infiltration into the collection system persists throughout the summer. As shown in the table, average annual dry weather flow was 0.43 million gallons per day (mgd) over the 2000-2014 period. Minimum average annual dry weather flow was 0.36 mgd, and the maximum average dry weather flow was 0.51 mgd (West Yost Associates, 2010a, City of St. Helena 2015).

**TABLE 4.R-4
WASTEWATER FLOWS, 2000-2014**

Year	Average Annual Flow (million gallons per day)	Average Dry Weather Flow (million gallons per day)	Average Wet Weather Flow (million gallons per day)	Maximum Wet Weather Flow (million gallons per day)
2000	0.56	0.43	0.75	2.73
2001	0.61	0.45	0.64	1.82
2002	0.60	0.45	1.02	2.91
2003	0.67	0.51	1.07	3.25
2004	0.65	0.46	1.12	3.26
2005	0.70	0.49	0.97	2.66
2006	0.72	0.48	1.13	3.73
2007	0.49	0.42	0.61	1.62
2008	0.53	0.41	0.84	2.57
2009	0.49	0.40	0.57	2.28
2010	0.62	0.41	0.77	2.77
2011	0.57	0.42	0.84	2.06
2012	0.57	0.38	0.43	1.34
2013	0.40	0.38	0.75	2.95
2014	0.47	0.36	0.43	1.85
Average	0.58	0.43	0.80	2.52
Maximum	0.72	0.51	1.13	3.73
Minimum	0.40	0.36	0.43	1.34

SOURCE: West Yost Associates, 2015a

Wastewater Collection System

More than 2,000 customers are served by the City's sewer system within the present city limits.

More than 2,000 customers are served by the City's sewer system within the present City limits. About 300 dwelling units and three wineries are on individual disposal systems, most of them too remote to reach the City's sewer system.

With the exception of the original town site, which has four-inch sewer lines, most of the City is served by pipes adequately sized for dry weather flows. During the winter rainy season, surface water and groundwater infiltration increases flows by eight times. In several areas of the City, the sewer system suffers from defects issues that prevent free flow of sewage, resulting in backwater in the system.

One lift station exists at the Crinella development in the northeast quadrant east of Main Street. The rest of the sewer system operates by gravity (City of St. Helena, 2015).

Wastewater Treatment Plant

The City's wastewater treatment plant, located at the southeast end of the City, is a low maintenance, integrated pond system that stores treated effluent and disposes effluent by spray irrigation onto a 90-acre grass field.

Wastewater is treated to a secondary level. When pond storage capacity is exceeded during the winter rains, treated effluent may be discharged into the Napa River, under strict regulation. Because the Napa River fluctuates with the rains, the discharge periods are limited.

The National Pollutant Discharge Elimination System (NPDES) permit currently limits the wastewater treatment plant capacity to 0.5 million gallons per day.

The National Pollutant Discharge Elimination System (NPDES) permit currently limits the treatment plant's average dry weather influent flow to 0.5 million gallons per day (mgd) until the year 2010. The plant is currently operating near its maximum permitted capacity. Inflow and infiltration of stormwater appear to be a large portion of the wet season sewage flow. The City is currently working with the San Francisco Bay Regional Water Quality Control Board (RWQCB) to extend the wastewater treatment plant permit (City of St. Helena, 2015; West Yost Associates, 2010a).

The City is evaluating potential expansion of the treatment plant's capacity, along with potential sewer repair and replacement projects.

Solid Waste Disposal

Upper Valley Disposal Disposal & Recycling provides solid waste services to residents and businesses in the City of St. Helena. The agency company provides an extensive recycling program and a variety of waste reduction programs. A single-stream recycling program accommodates a wide array of

wastes including plastic, glass, steel, tin, aluminum, and most types of paper and cardboard. The agency company also conducts public education to teach residents and businesses about composting and its recycling and electronic waste disposal programs. In 2006, the agency company diverted approximately 67 percent of collected waste away from landfills (City of St. Helena, 2015; Abreu, 2010).

Solid waste is disposed of at the Clover Flat Landfill, located on the Silverado Trail north of St. Helena.

Solid waste is disposed of at the Clover Flat Landfill, located on the Silverado Trail north of St. Helena and is also operated by Upper Valley Disposal Company. The existing and projected amount of solid waste received at the landfill is 50,000 tons per year. The landfill has a permitted capacity of 5.1 million cubic yards. In 2009, the landfill had a remaining capacity of approximately 3.33 million cubic yards. The landfill's estimated closure date is 2047. The landfill has 10 years remaining on its existing franchise agreement with Napa County but has an estimated capacity to last approximately 30 years (City of St. Helena, 2015; Abreu, 2015).

The Clover Flat Landfill revised its Solid Waste Facility Permit in 2010 to comply with provisions of the State of California's *Climate Change Scoping Plan* (see "Regulatory Framework" below). The changes will provide for mandated commercial recycling processing services, production of organic feedstocks for composting, and renewable energy generation .

Regulatory Framework

Existing St. Helena General Plan

The existing St. Helena General Plan, adopted in 1993, outlines policies, standards, and programs that together provide a comprehensive, long-term plan for physical development within the city. Individual development projects proposed within the city must demonstrate general consistency with the goals and policies outlined within the General Plan, which articulates and implements the city's long-term vision, including provisions for utilities and service systems.

The proposed project analyzed in this EIR is the St. Helena General Plan Update (General Plan Update), which is an update of the existing General Plan. Once the General Plan Update is adopted, future developments within the city will be subject to policies outlined in the updated document.

City of St. Helena Water Impact Fees

In accordance with Municipal Code Section 3.32.070, the City of St. Helena collects water impact fees to provide for adequate water facilities and services. In 2013, the City of St. Helena reviewed and updated its

development impact fees (Colgan, 2013). Impact fees have risen slightly since the study was conducted in 2013. Per the Municipal code downloaded on July 17, 2015, the fees are currently set at \$3.05 22 per square foot of single-family residential development, \$2.47 61 per square foot of multi-family residential development, \$6.06 39 per square foot of commercial development, \$3.14 31 per square foot of office development, and \$4.18 41 per square foot of industrial development. These fees are collected at the time of new construction or conversions of development from one use to a new use.

City of St. Helena Sewer Impact Fees

The City of St. Helena collects water and sewer impact fees to provide for adequate facilities and services.

In accordance with Municipal Code Section 3.32.080, the City of St. Helena collects sewer impact fees to provide for adequate wastewater facilities and services. As with water impact fees, the sewer impact fees were reviewed in 2013 (Colgan, 2013) and have risen slightly since that time. Per the Municipal Code downloaded on July 17, 2015, the fees are currently set at \$0.47 per square foot of single-family residential development, \$0.70 per square foot of multi-family residential development, \$0.93 per square foot of commercial development, \$0.46 per square foot of office development, and \$0.62 per square foot of industrial development.

Other Municipal Code Provisions

Municipal Code Chapter 13.04 establishes City of St. Helena requirements for water service connections, water main extensions, water rates, procedures during water shortages, and other water-related requirements. Chapter 13.12 establishes water use efficiency guidelines, including water conservation measures required in new development.

Chapter 13.20 establishes requirements for sewer main connections, sewer charges, and other wastewater-related requirements.

State Integrated Waste Management Act

The California Integrated Waste Management Act requires cities and counties to promote source reduction, recycling, and safe disposal or transformation.

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) was enacted to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible. Specifically, AB 939 required city and county jurisdictions to identify an implementation schedule to divert 50 percent of the total waste stream from landfill disposal by the year 2000. AB 939 also requires each city and county to promote source reduction, recycling, and safe disposal or transformation. California cities and counties are required to submit annual reports to the California Integrated Waste Management Board (CIWMB) on their progress toward AB 939 goals.

State Climate Change Scoping Plan

In accordance with the California Global Solutions Act of 2006 (AB 32), the California Air Resources Board prepared the 2008 *Climate Change Scoping Plan*, which includes a series of recommendations regarding recycling and waste. Key recommendations include reducing methane emissions at landfills; increasing waste diversion, composting, and other beneficial uses of organic materials; and mandating commercial recycling.

Draft Napa Countywide Community Climate Action Plan Framework

The Napa Countywide Community Climate Action Plan Framework (Napa County Transportation & Planning Agency, 2009) is a draft document prepared with the participation of city and county staff from all Napa County jurisdictions. The document is intended to guide and foster effective collaboration among government, business, and community organizations in achieving state greenhouse gas reduction targets. The County anticipated adoption of this plan in 2015 (Napa County, 2015).

Impacts and Mitigation Measures

Significance Criteria

Water

Appendix G of the CEQA Guidelines provides that a project would have a significant impact on water facilities if it would:

- Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements.

Wastewater

Appendix G provides that a project would have a significant impact on wastewater facilities if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; 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 project's projected demand in addition to the provider's existing commitments.

Solid Waste Disposal

Appendix G provides that a project would have a significant impact on solid waste disposal facilities if it would:

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Not comply with federal, state, or local statutes and regulations related to solid waste.

Relevant Policies

The following relevant policies and implementing actions of the General Plan Update address water facilities and wastewater services:

LU1.2. Allow urban development to occur only within the Urban Limit Line. Consider an exception for on-site employee housing on Agricultural lands. Urban services, such as sewer, water and storm drainage will only be extended to development within the Urban Limit Line.

The Urban Limit Line may only expand when the amount of developable land within the Urban Limit Line is insufficient to implement the General Plan policies or when logical to include developed lands receiving urban services from the City. Expansion outside the Urban Limit Line should first be considered in Urban Reserve Areas. Expansion into other areas outside the Urban Limit Line should be considered only when the proposed land use is found to further the goals and long-term objectives of the City and does not result in adverse impacts to adjacent uses in either the urban or rural areas.

LU2.5. Encourage the development of higher density housing in areas near the center of the City and close to recreation and services, such as transit, retail and public facilities.

LU2.D. Continue to require residential developers to contribute to the provision of community facilities and services (e.g. parks, recreation facilities and programs, education facilities, traffic and transportation facilities and services), consistent with State law requiring a nexus between project impacts and required mitigation.

ES1.3. Ensure the long-term infrastructure needs and priorities of the community are met as part of an economic approach to economic vitality and sustainability.

ES3.B. Develop a revised design review and/or form-based code process for commercial and industrial uses that establish objective design guidelines and restrictions.

PF1.1. Require that the approval of new development be contingent upon the ability of the City to provide water without exceeding the safe annual yield of its water supply system.

PF1.2. Adopt and implement equitable water conservation measures for both residential and non-residential users so that the City can supply water within the safe yield of its water system.

PF1.3. Prohibit water service to new customers outside the City limits unless a potential threat to health and safety can be demonstrated.

PF1.4. Proactively reduce the City's commitment to provide water to uses outside the City limits.

PF1.A. Continue to implement the City's water conservation ordinances and programs that act to reduce per capita water consumption. In addition consider incentives to property owners to install rainwater collection barrels, and continue to require water efficient irrigation systems and drought tolerant landscaping.

PF1.B. implement the following water system improvements:

Replace obsolete, undersized water mains to provide more efficient circulation, higher pressures and lower pipe losses during heavy demand periods.

Continue service of water mains to reduce unaccounted-for water losses.

PF1.C. Continue to aggressively look for new water supply sources adequate to serve St. Helena's population into the future. New sources may include adoption of new technologies, such as effective water recycling.

PF1.D. The City of St. Helena shall should not draw or sell any groundwater beyond that currently allowed until a safe yield of the groundwater system has been identified through a study of the North Main Basin Aquifer by a qualified hydro geologist.

PF1.E. Permit no new development relying on groundwater unless and until it is determined that the incremental production of ground water to support the development will not adversely impact the water production capability of the aquifer supporting the City wells.

PF1.F. Track the drilling of new private wells in and around St. Helena and, if so recommended by the qualified hydrologist hired by the City's water system, request that the County impose a moratorium on new well drilling if needed to protect the production capability of the City wells.

PFI.G. If feasible, adopt a Water Conservation Program that includes the following actions:

Utilize a Water Conservation consultant, as needed;

Update the new construction offset program;

Establish an Irrigation Advisory Service and promote “Smart Irrigation Controllers”;

Adopt new requirements for “ultra-efficient” plumbing fixtures for new development and rebates for existing users;

Reduce average dry weather flow;

Evaluate incentives for replacement of turf; and rainwater catchment, etc.

PFI.H. Ensure that water rates are designed to promote conservation, as well as to ensure that needed capital improvements are made in a timely manner.

PFI.I. Evaluate and adjust as needed “water shortage emergency” phases, recognizing the complexity of the supply system and making use of modeling of historical and future performance.

PFI.J. Develop and adopt regulations to ensure that total potable water usage is not greater than 1950 acre feet per year unless the project includes housing affordable to lower income households and a determination is made pursuant to Government Code 65589.7 that a “sufficient water supply” is available to serve that project and none of the exceptions set forth in 66589.7 (c) apply; or, b) new sources of water are made available to the City. Residential projects that contain affordable housing shall receive priority allocation of water.

PFI.K. Aggressively promote adoption of “best practices” for reducing water usage in the existing housing stock.

PFI.L. Require that all new residential housing projects incorporate “best practices” for minimizing water usage.

PFI.M. Limit any future non-residential development to projects that incorporate “best practices” for water conservation.

PFI.N. Institute an ongoing process of mandatory audits of all existing nonresidential water users to promote adoption of “best practices” for water conservation.

PF1.O. Provide the full-time capability in the City to implement and oversee water conservation policies and to pay for this capability out of water revenues rather than the General Fund.

PF1.P. Collaborate with Napa County (GRAC study) by participating to establish in the ongoing monitoring program to assess the long term viability and recharge capability of the North Main Basin aquifer that supplies the City's wells.

PF1.Q. The City of St. Helena at the earliest opportunity shall work with the City of Napa to extend that Napa water supply contract beyond the expiration of its term at the end of 2035.

PF1.R. Maintain awareness of long-term risks to the City water supply, including potential climate change impacts, impacts on groundwater resources, uncertainties about the Napa water contract renewal in 2035 and Napa water delivery reliability due to impacts on the State Water Project from drought; single pipe delivery system risks, large storms or earthquakes. Allocate surplus water resources among new uses and unallocated reserves to maintain a balance between short term needs and long-term risk mitigation.

PF2.1. Ensure adequate sewage treatment capacity at the City treatment plant to meet the needs of population growth, taking into account the City's Growth Management System, the Regional Housing Needs Allocation and the needs of non-residential users.

PF2.2. Require the extension of the City sewer to areas that are dependent upon septic systems prior to approval of future growth in these areas.

PF2.3. Reduce pumping costs and increase plant capacity by mitigating sewer system infiltration problems and explore alternate energy sources.

PF2.4. Increase sewer collection system efficiency by ensuring proper maintenance of sewer pipes.

PF2.A. Require all new units on parcels less than two acres, except those in Woodlands and Watershed Districts, to connect to the City sewer. All existing units within 200 feet of an existing sewer shall connect to the City sewer whenever feasible. Many of the residential units cannot expand without abandoning on-site septic systems and connecting to the sewer which may, in some cases, require an extension of the sewer.

PF2.B. Continue wastewater treatment system upgrades to reduce the number and scale of implementation constraints on the recycled water program. This can ensure that the system is ready for investment when funding for implementation becomes available.

PF2.C. Urban services such as sewer, water and storm drainage will only be extended to development within the Urban Limit Line. Exceptions

will be permitted when undue hardship can be demonstrated, and when proposed improvements are not found to induce growth.

CD1.4. Strengthen water conservation measures for development or construction that result in significant reductions in local water use and the protection of local water resources.

CD1.B. Adopt a Green Building and Landscaping Ordinance that establishes green building and landscaping site design standards customized to meet the unique climatic context of the community. Partner with third party agencies, such as PG&E, to encourage the inclusion of energy-efficient systems in remodels and retrofits of existing buildings and residences. Offer incentives for improving energy-efficiency in existing buildings. Landscaping standards should limit impervious paving and identify standards and incentives that encourage the use of locally-propagated native, low-water, drought-tolerant planting and integrated pest management practices. OS3.D. Maintain the City's water management program, for implementing water conservation efforts for households, businesses, industries, public infrastructure and agricultural activities. This program should include the following measures:

Identify building, plumbing and landscaping standards and technologies that conserve water, especially ;

- during water shortages;
- Implement standards that require low-flow appliances and fixtures in all new developments; and
- Encourage and model the use of drought tolerant and native vegetation in landscaping.

OS3.E. Promote the installation of drought tolerant and native plants in landscaping throughout the City. Potential measures include:

- An education program that details water conservation measures for use in local landscaping;
- Working with local nurseries to encourage education, demonstration, and sales of drought tolerant and native plants, and water-wise irrigation systems; and,
- Require City parks and properties to be landscaped with drought tolerant native plants that allow for high shade capacity wherever possible, and use water-wise irrigation systems as a model for residents and businesses.

CC4.3. Strengthen water conservation measures that result in significant reductions in local water use and the protection of local water resources.

CC4.H. Adopt landscape ordinances that promote drought resistant plants, and limit or restrict lawns and other high-water-demand plants unless irrigated with reclaimed or grey water systems.

Solid Waste Disposal

The following relevant policies and implementing actions of the General Plan Update address solid waste disposal facilities and services:

ES1.3. Ensure the long-term infrastructure needs and priorities of the community are met as part of an economic approach to economic vitality and sustainability.

PF4.1. Increase recycling and composting as part of a coordinated waste reduction and management program.

PF4.A. Develop and adopt a Waste Management Master Plan to enhance existing waste management services and systems. Assess the system's capacity to serve current and future residents, recommend improvements and identify funding mechanisms and implementation partners. The plan should include landfill space plans and a food waste composting program that incorporates approaches for on-site food waste composting for residences and businesses. Update the plan regularly to address changing needs and priorities.

PF4.B. Install recycling receptacles downtown and in all public parks and major streets. Ensure that the design and appearance of the receptacles fosters high quality community design, aesthetics and character.

CC3.1. Enhance recycling, composting and source reduction services for residential and commercial uses to support Napa County's countywide waste reduction goal to achieve overall waste diversion of 75 percent to 90 percent by 2020.

CC3.A. Establish programs and create incentives to achieve a 75 to 90 percent citywide construction and demolition debris waste diversion level by 2020.

CC3.B. Establish programs and create incentives to achieve a 75 percent organic (food and green) waste diversion level by 2020.

CC3.C. Establish citywide collection services for segregated food waste from commercial sources.

CC3.D. Encourage home composting of organic waste.

CC3.E. Create and support other programs, such as the Napa County Green Business Program and the green restaurant program, that help achieve the 75 to 90 percent overall waste diversion goal.

CC3.F. Adopt environmentally-preferable purchasing measures and explore joint-purchasing agreements with partner agencies and businesses.

CC6.I. Install renewable energy systems at City facilities

CC6.H. Establish a comprehensive, user-friendly recycling program that involves all City departments and facilities. Recover 70 to 85 percent of all waste generated in City operations.

Impact Analysis

Adoption and implementation of the General Plan Update would result in the following impacts with respect to utilities and services.

Impact SERVICE-1. Potential development that could be allowed under the General Plan Update could require new or expanded water resources and facilities.

Development projects allowed by the General Plan Update could likely include water lines and possibly other water facilities (pumping stations, etc.). In addition, the General Plan Update includes an implementing action (PF1.C) mandating continued service of existing water mains and replacement of obsolete, undersized water mains. The potential environmental impacts of development allowed by the General Plan Update are analyzed in this chapter of the Revised DEIR. Installation of new or expanded water facilities (e.g., water mains) as part of this development would not result in specific environmental impacts beyond those identified in this chapter that can be analyzed at the program level of detail provided in this EIR. Routine maintenance would not be subject to environmental review, but replacement of water mains would be subject to environmental review at the time that specific public or private projects are proposed.

Under the General Plan Update without water conservation measures, metered water demand is projected to increase from approximately 1,874 acre-feet per year to approximately 2,116 acre-feet per year by 2035, an increase of approximately 242 acre-feet per year. With the addition of “unaccounted-for water,” this increase in metered water demand would require a water supply of approximately 2,350 acre-feet per year by 2035, as shown in Table 4.R-5.

The General Plan Update contains policies and implementing actions ensuring that new development will be “water neutral” and will therefore not create any net increase in water use. Policies are also included to ensure water service is available to new development (Policies ES1.3, PF1.1, PF1.3,

The General Plan Update contains policies and implementing actions ensuring that new development will be “water neutral” and will therefore not create any net increase in water use. Policies are also included to ensure water service is available to new development (Policies ES1.3, PF1.1, PF1.3, and PF1.4, and Implementing Action PF1.E). Implementing Action PF1.A calls for development of a water conservation plan. The General Plan Update also contains provisions for promoting water conservation and water use restrictions (Policies PF1.2, CD1.4, OS3.3, CC4.3, and HE5.2, and Implementing Actions ES3.B, CD1.B, OS3.D, OS3.E, CC4.H, CC4.I, HE5.H, and HE5.J).

Impact SERVICE-1 would be less-than-significant.

Impact SERVICE-2. Potential development that could be allowed under the General Plan Update could require new or expanded wastewater collection, treatment and/or disposal service.

Development projects allowed by the General Plan Update could likely include sewer lines and possibly other wastewater facilities (on-site wastewater treatment, etc.). In addition, the General Plan Update includes policies and implementing actions calling for:

- Extension of City sewer service to areas that currently depend on septic systems prior to approval of future growth in these areas (Policy PF2.2 and Implementing Action PF2.A). (These areas may include various locations within the Urban Limit Line, such as Main Street between Crinella Drive and Pratt Avenue, El Bonita Avenue, Mills Lane, the Vidovich property, Arrowhead Drive, Dean York Lane, and Palmer Drive.)
- Sewer system improvements (upgrades, expansions) to reduce the number and scale of implementation constraints on the recycled water program (Policy PF2.3 and Implementing Action PF2.B).
- Maintenance of sewer pipes (Policy PF2.4).

The potential environmental impacts of development allowed by the General Plan Update are analyzed in this chapter of this EIR. Installation of new or expanded wastewater facilities (e.g., sewer lines and expansion of the City’s wastewater treatment plant) as part of this development would not result in specific environmental impacts beyond those identified in this chapter that can be analyzed at the program level of detail provided in this EIR. Routine maintenance would not be subject to environmental review, but sewer system upgrades and any sewer extensions to areas currently using septic systems would be subject to environmental review at the time that specific projects are proposed. The currently planned expansion of the wastewater treatment

plant is proceeding separately from and during the planning period of the General Plan Update. This impact would therefore be less-than-significant.

Impact SERVICE-3. Potential development that could be allowed under the General Plan Update could require new or expanded water resources and facilities.

Development allowed by the General Plan Update would increase the amount of solid waste generated by future residential, commercial, industrial and other land uses, but this increase would not exceed the capacity of the Clover Flat Landfill or require construction of new landfill facilities. This amount of solid waste would not create any capacity problems at the Clover Flat Landfill (Abreu, 2015). The impact on landfill capacity would therefore be less-than-significant.

Impact SERVICE-4. Potential development that could be allowed under the General Plan Update could create inconsistencies with state or federal solid waste statutes or regulations.

The General Plan Update would not create any inconsistencies with federal, state, or local statutes or regulations related to solid waste. The General Plan Update contains numerous policies and implementing actions promoting recycling, composting, and other methods of managing and reducing waste, including development of a Waste Management Master Plan (Policies PF4.1, CC3.1, and CC6.1, and Implementing Actions PF4.A, PF4.B, CC3.A, CC3.B, CC3.C, CC3.D, CC3.E, CC3.F, and CC6.H). These provisions would help ensure that the city meets AB 939, *Climate Change Scoping Plan*, and related Napa County waste reduction targets. The impact in relation to solid waste statutes and regulations would therefore be less than significant.

References – Utilities and Service Systems

- Abreu, Christy, Upper Valley Disposal Service. 2010. E-mail communication. May 5.
- California Air Resources Board. 2008. *Climate Change Scoping Plan*. December. Available at http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf
- City of St. Helena. 2007. *Infrastructure, Community Services and Facilities General Plan Update Working Paper*. November.
- City of St. Helena. 2010. *St. Helena General Plan Update 2030, Chapter Four, Public Facilities and Services*, Public Draft. February.

City of St. Helena. 2015. *City of St. Helena WWTRP Treatment Facilities Evaluation Update, Appendix B – WWTRP Historical Wastewater Flows 2005-2014* March.

City of St. Helena Water & Sewer Subcommittee. 2010. *Baseline Report of the Water & Sewer Subcommittee of the General Plan Update Steering Committee*. June 24.

Colgan Consulting Corporation 2013. *Development Impact Fee Study Report, Revised Final Draft*. October 3.

Napa County Transportation & Planning Agency. 2009. *Napa Countywide Community Climate Action Plan Framework*. Community Review Draft. December. Available at http://www.nctpa.net/docs/Draft_Napa%20Countywide%20Climate%20Action%20Framework%20121609%20c.pdf

Regional Water Quality Control Board (RWQCB), San Francisco Bay Region. 2010. "Tentative Order, NPDES Permit No. CA0038016 for City of St. Helena Wastewater Treatment and Reclamation Plant, Napa County." July 1.

West Yost Associates. 2010a. "Technical Memorandum No. 4, City of St. Helena Wastewater Flow Projections and Infrastructure." Memorandum from Jim Connell, West Yost Associates, to John Ferons, City of St. Helena. Draft. June 8.

West Yost Associates. 2010b. *City of St. Helena Water Supply Plan*. Final. October.

West Yost Associates. 2010c. Email from J. Connell to A. Skewes-Cox. July 19.

West Yost Associates 2012. "2010 Water Supply Plan – Impacts of Recent Water Supply Changes". Technical Memorandum from Jim Connell, West Yost Associates, to John Ferons, City of St. Helena. April 5.

CHAPTER 5

Alternatives to the Project

5.1 Introduction

An EIR must evaluate a range of reasonable alternatives to the project that could feasibly attain most of the basic project objectives.

The State CEQA Guidelines (Section 15126.6) require that an EIR describe and evaluate the comparative merits of a range of reasonable alternatives to the project, or to the location of the project, that could feasibly attain most of the basic objectives of the project. The CEQA Guidelines further require that the discussion focus on alternatives capable of avoiding or substantially lessening any of the significant effects of the project, including the “No Project” Alternative.

The CEQA Guidelines generally define “feasible” to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors. In addition, the following may be taken into consideration when assessing the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (CEQA Guidelines Section 15126.6(f)(1)).

The requirement that an EIR evaluate alternatives to the proposed project, or alternatives that address the location of the proposed project, is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained while reducing the magnitude of, or avoiding, the environmental impacts of the proposed project. The description or evaluation of alternatives does not need to be exhaustive, and an EIR need not consider alternatives for which the effects cannot be reasonably determined and for which implementation is remote or speculative. An EIR need not describe or evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project.

CEQA requires that an environmentally superior alternative be identified among the alternatives. In general, the environmentally superior alternative is defined as that alternative with the least adverse impacts on

the project area and its surrounding environment. When the “No Project” Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)).

Two alternatives are evaluated in this chapter of the Draft Program EIR:

- Alternative 1: No Project (retain 1993 General Plan)
- Alternative 2: No Low/Medium Residential Land Use Designation: The April 2016 General Plan is approved as proposed, with the exception that the majority of the Medium Density Residential Land Use Designation is not replaced by the new Low/Medium Density Land Use Designation.

CEQA requires that an environmentally superior alternative be selected among the alternatives.

The purpose of this chapter is to describe and evaluate the alternatives to the proposed General Plan Update. Alternatives are developed to reduce or eliminate the significant or potentially significant adverse environmental effects that would result from implementation of the proposed General Plan Update as identified in Chapter 4.

5.2 Factors in the Selection of Alternatives

The CEQA Guidelines recommend that an EIR briefly describe the rationale for selecting the alternatives to be discussed, identify any alternatives that were considered by the lead agency but were rejected as infeasible, and briefly explain the reasons underlying the lead agency’s determination (CEQA Guidelines Section 15126.6(c)). The following factors were considered in identifying the reasonable range of alternatives to the project for this EIR:

- The extent to which the alternative would accomplish most of the basic goals and objectives of the project;
- The extent to which the alternative would avoid or lessen the identified significant and unavoidable environmental effects of the project;
- The feasibility of the alternative, taking into account site suitability, availability of infrastructure, general plan consistency, and consistency with other applicable plans and regulatory limitations;
- The extent to which an alternative contributes to a “reasonable range” of alternatives necessary to permit a reasoned choice; and
- The requirement of the CEQA Guidelines to consider a “No Project” Alternative and to identify an “environmentally superior” alternative

in addition to the No Project Alternative (CEQA Guidelines Section 15126.6(e)).

Plan Objectives

As previously presented in Chapter 3, *Project Description*, the basic objectives of the St. Helena General Plan Update include the following:

- Identify an overall vision for the city, based on extensive community input;
- Establish a basis for judging whether specific development proposals and public projects are consistent with the vision identified in the General Plan;
- Guide City departments, other public agencies, and private developers in the design of projects that will enhance the character of the community, preserve and enhance critical environmental resources, and minimize natural and man-made hazards;
- Provide the basis for updating, establishing, and setting priorities for detailed plans and implementing programs, such as the city's Zoning Ordinance, specific and area plans, and the Capital Improvement Program;
- Provide estimates for projected population and employment growth to the year 2035;
- Protect the agricultural character of the city by focusing new development in the developed portions of the city;
- Reduce traffic congestion by providing alternative transportation choices, enhancing regional public transit connections, and achieving an appropriate jobs/housing balance to reduce commuter trips;
- Set forth environmental protection goals and implementing policies to guide future development in the community;
- Promote revenue-generating land uses in the City to the extent they conform to St. Helena's small-town character and would not result in significant adverse impacts;
- Promote healthy growth for the city at a rate that would not surpass infrastructure capabilities and available resources; and
- Increase the supply of affordable workforce housing to maintain St. Helena's quality of life and long-term economic sustainability.

5.3 Alternatives Selected for Consideration

With consideration given to the above factors for selection, the lead agency, the City of St. Helena, identified the following reasonable range of project alternatives to be addressed in this EIR:

- No Project Alternative
- No Low/Medium Density Land Use Designation Alternative

The City also considered an additional alternative but rejected it as infeasible and not appropriate. This alternative is discussed in Section 5.6 following.

5.4 Description and Analysis of Alternatives

Throughout this section, a description of each alternative is followed by a discussion of its impacts and how they would differ from those of the proposed General Plan Update. As permitted by CEQA, the significant effects of the alternatives are discussed in less detail than are the effects of the project (CEQA Guidelines, Section 15126.6(d)). However, the analysis is conducted at a sufficient level of detail to provide decision-makers adequate information to fully evaluate the alternatives and to approve any of the alternatives without further environmental review.

The impacts associated with the General Plan Update and each alternative are for year 2035 conditions.

Alternative 1 – No Project Alternative

Consideration of a No Project Alternative is required under CEQA.

Consideration of a No Project Alternative is required under CEQA. This alternative is analyzed consistent with the requirements of CEQA Guidelines Section 15126.6(e)(3)(A), which specifically states that when the project under evaluation is the revision of an existing land use or regulatory plan, the No Project Alternative will be the continuation of the existing plan.

Under this alternative, the proposed St. Helena General Plan Update would not be adopted and the existing (1993) General Plan would remain in effect.. Under the No Project Alternative, the city would operate under the existing General Plan, using it to guide the city's future development. Under this alternative, the proposed changes to the existing General Plan would not occur. The existing 1993 land use classifications would remain in effect.

Projected future residential development by the year 2035 would remain the same under the existing 1993 General Plan and under the proposed April 2016 General Plan update. This is due to the fact that the policies and numerical limits that regulate the rate of residential growth, specifically the Growth Management Provisions, are the same under the 1993 and April 2016 versions of the General Plan. In terms of commercial development, the April 2016 General Plan is eliminating the current numerical “caps” on growth for restaurant and hotel development that are contained in the 1993 General Plan. Despite this change, the projected future growth of these types of commercial uses is expected to be similar under the April 2016 General Plan, as historically the City has consistently approved increases in the “cap” for restaurant and hotel uses to accommodate new projects proposed under the current 1993 General Plan.

However, significant differences between the current 1993 General Plan and the proposed April 2016 General Plan are expected in a non time constrained future “build out” scenario. This difference is due primarily to the creation of the new Low/Medium Density land use designation under the proposed April 2016 General Plan that replaces the majority of the Medium Density land use designation. As a result of this change the maximum residential buildout

potential of the April 2016 General Plan is between 1,000 to 2,000 residential units lower than the current 1993 General Plan. This wide range is due to the inherent uncertainty in relation to the number of property owners in the Medium Density Land Use Designation that may decide in the future to add onto or redevelop their property to take advantage of the

difference in the current density of their property (typically 4 to 6 units/acre as compared to the maximum density allowed in the Medium Density Designation of 16 units/acre.

This alternative would comply with many of the identified project objectives but would not meet the following two objectives identified for the proposed General Plan Update:

- Promote healthy growth for the city at an amount and rate that would not surpass infrastructure capabilities and available resources; and
- Reduce congestion by providing alternative transportation choices, enhancing regional connections, and achieving a better jobs/housing balance to reduce commuter trips.

The proposed April 2016 General Plan Update includes a number of policies aimed at the above objectives, while the existing 1993 General Plan, particularly in relation to water conservation, does not. In addition, the existing General Plan does not include Mixed-Use designations to promote compliance with the above objectives by reducing dependency on the private automobile and increasing a mixture of land uses within the core of the City. The existing General Plan would also not comply with the objective to promote growth in balance with infrastructure capabilities, as it would not implement water neutrality to the extent envisioned in the April 2016 General Plan, and in the long term could include more residential development, which could affect water and wastewater demand as compared with the April 2016 General Plan Update.

Impacts

Land Use and Planning

The proposed General Plan Update would result in less-than-significant impacts associated with potential conflicts with relevant land use planning documents within and adjacent to the City of St. Helena.

The No Project Alternative has the potential to create significant land use impacts given the high maximum density of sixteen (16) units/acre currently allowed within the Medium Density residential land use designation. The Medium Density designation currently contains the majority of the City's existing single-family housing stock, which has a typical density of 4 to 5 units/acre. However, the upper density range of sixteen (16) units per acre currently allowed in the Medium Density land use designation under the 1993 General Plan is a density typically found in multiple family apartment and condominium development. This fact, combined with the high cost of land in St Helena, results in economic

pressures to demolish existing single family homes in order to develop multiple residential units in existing established single family neighborhoods. In addition, continuance of the existing General Plan with a more extensive density range could lead to pressure for greater development than would be allowed under the General Plan Update land use classification structure.

The proposed April 216 General Plan update avoids this type of impact by introducing a new land use designation of Low/Medium Density Residential with a density range of 3.1 to 7 units/acre, which is a much better fit with the existing single family neighborhoods.

Agricultural and Forestry Resources

The existing General Plan has the potential to create significant impacts related to the removal of important farmland. The current General Plan update contains a number of guiding and implementing policies that mitigate the impact of future development on farmland and forestry resources; however, existing policies are older and are not as extensive as contained in the 2016 General Plan Update. Therefore, the General Plan Update would provide greter protection for these resources.

Transportation and Circulation

The No Project Alternative would result in significant impacts on local and regional roadway operations, more so than under the April 2016 General Plan. The No Project Alternative does not include policies outlined in the General Plan Update that focus on reducing single occupancy vehicle trips, increasing multi-modal transportation, and providing infill/mixed use development; thus, continued implementation of the current General Plan would likely result in more traffic congestion compared to the proposed General Plan Update.

Another difference between the General Plan Update and the No Project Alternative, is that the No Project Alternative assumes the completion of all the road extensions as identified in the Circulation Element, some of which would very likely have significant traffic impacts on existing residential neighborhoods within the City. In contrast, the proposed General Plan Update limits as a default condition the proposed road extensions to bike/pedestrian/emergency vehicle use only. The General Plan update further requires that any such road extensions can only be used for vehicular (auto, truck, etc.) traffic if additional analysis demonstrates that the extension will meets specific criteria, including avoiding significant traffic impacts on existing residential neighborhoods.

Like the proposed General Plan Update, the existing General Plan would increase the number of vehicle miles traveled (VMT) per service population, but even more significantly due to the lack of emphasis on alternate modes of transportation. It is likely that Significant and Unavoidable impacts would result with respect to increased vehicle traffic and impacts to emergency vehicle access would also result under the existing General Plan as is expected to occur under the General Plan Update.

Air Quality

Like the proposed General Plan Update, air quality impacts of the existing General Plan would be less than significant. Air quality impacts associated with traffic from the existing General Plan would be higher under the No Project alternative as a result of a greater buildout population in the community, and, given the fact that the proposed April 2016 General Plan contains policies and implementation measures to reduce reliance on motorized vehicles that are lacking in the No Project Alternative. It is likely that buildout of the current General Plan would also result in a Significant and Unavoidable impact in terms of consistency with the adopted regional Clean Air Plan.

Noise

Impacts of the existing 1993 General Plan would be similar to those of the proposed April 2016 General Plan Update. Both the existing General Plan as well as the proposed 2016 General Plan Update contain policies to minimize significant noise impacts on residences and other sensitive noise receptors located near existing and proposed noise generators.

Aesthetics

The aesthetic impacts of the existing 1993 General Plan would be greater than the proposed April 2016 General Plan Update, given the commitment in the April 2016 General Plan to prepare Design Guidelines for Residential, Commercial, and Industrial uses. This action would ensure that future buildings, landscaping, signs and other improvements would better fit into the existing small town feeling of St. Helena.

Biological Resources

Impacts to biological resources would be approximately the same under the proposed General Plan Update and the existing 1993 General Plan. Both documents contain goals and implementing policies to protect special-sensitive plant and wildlife resources, wetlands and other waters, riparian habitats and wildlife corridors.

Cultural and Historic Resources

Like the General Plan Update, the existing General Plan has the potential for disturbance to prehistoric archaeological sites that may contain human remains that have religious significance to local Native American representatives. However, policies and Implementating Actions are included in both documents that would reduce such impacts to a less-than-significant level.

Energy

The 1993 General Plan EIR did not evaluate energy impacts, and no significant impacts related to energy have been identified for the proposed General Plan Update. Unlike the existing General Plan, the proposed April 2016 General Plan Update includes policies and implementing actions for green building and sustainability for reducing energy demands within the city; for example, the less reliance on road extensions and the introduction of mixed-use sites within the core of the city would reduce reliance on the private automobile. For this reason, the existing 1993 General Plan would result in greater energy impacts than the proposed April 2016 General Plan Update.

Greenhouse Gases

Like the proposed April 2016 General Plan Update, the existing 1993 General Plan would be expected to result in less than significant greenhouse gas emissions. However, the existing General Plan does not include the Mixed-Use land use designations or other implementation policies to reduce energy use and associated greenhouse gas emissions, and relies more heavily on road extensions to address traffic impacts. Therefore, the existing General Plan would have greater impacts with respect to greenhouse gas emissions.

Geology and Soils

Similar to the existing 1993 General Plan, the 2016 General Plan Update would allow additional residential, commercial and light industrial development that could expose people or structures to substantial risk related to geologic or seismic hazards. However, Both documents contain goals and implementing actions to ensure that such impacts, including but not limited to seismically-induced ground shaking, landsliding, effects of liquefaction and other geological impacts to a less-than-significant level.

Hazards and Hazardous Materials

The existing General Plan could result in development on former agricultural, commercial, or industrial properties and potential exposure to

contaminants from historic hazardous materials use and release. Hazardous materials used or disposed by new development under the existing General Plan could also affect groundwater or surface water, as described for the General Plan Update. However, new Policies and Implementation Measures are included in the updated April 2016 General Plan that would address any such impacts to a less-than-significant level.

Hydrology and Water Quality

New development allowed under the existing 1993 General Plan could violate water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality.

The inclusion of new policies in the April 2016 General Plan that reflect the latest Federal and State clean water requirements, which would address any impacts related to project run off.

Due to the Flood Control improvements implemented since the 1993 General Plan was prepared, the geographic size of the 100 year flood plain has been reduced significantly. The updated April 2016 General Plan reflects this change.

Mineral Resources

Like the April 2016 General Plan Update, the existing 1993 General Plan would not result in significant impacts on mineral resources.

Population and Housing

The existing 1993 General Plan could result in significant impacts associated with the inducement of population growth or displacement of existing housing/residents given the development pressure created by the disparity between the typical existing density in the City's Medium Density Land Use Designation (4 to 6 units/acre) and the maximum density of 16 units acre allowed under the current 1993 General Plan. As a result, the No Project Alternative could potentially result in more residential growth than the proposed General Plan Update at buildout. Therefore, the No Project Alternative would result in greater impacts with respect to this topic than the proposed General Plan update.

Public Services: Police and Fire

Projected growth to the year 2035 is similar for the 1993 and April 2016 General Plans, therefore the demand for public services such as Public Safety and Fire would be similar under both the current and proposed General Plan documents at the 2035 Horizon Year. However, the 2016

General Plan contains police and fire staffing standards that are lacking in the 1993 General Plan, with the result that the staffing levels for Fire and Police have the potential to be greater under the April 2016 General Plan as compared to the 1993 Plan.

Recreation

Given similar projected residential growth by the year 2035, the 1993 and April 2016 General Plan would have similar impacts relating to the need for and demand on park facilities. At buildout, the existing 1993 General Plan would likely have a lower ratio of parkland per population than the April 2016 General Plan given the higher goal for the acquisition and development of parks set forth in the April 2016 General Plan.

Utilities and Service Systems

The proposed April 2016 General Plan Update would not increase the demand for water and wastewater service given the various Goals, Policies, and Implementation Measures that establish a program for no “net increase” in water usage, and therefore will not place increased demands on treatment facilities. In addition, policies that support water conservation would result in a community wide reduction in water usage over the term of the new General Plan, as would implementation measures put in place to address the current drought. With the current 1993 General Plan the impact on water and wastewater systems would be significant due to the lack of underlying General Plan Policies and Implementation Measures that require new development to be water neutral,

Alternative 2 – No Low/Medium Land Use Designation Alternative

Under this alternative, the April 2016 General Plan would be the same with the exception that the Low/Medium Land Use Designation would not be included in the General Plan Update. All other provisions of the April 2016 General Plan would remain the same.

This alternative assumes that all proposed policies of the General Plan Update would apply and would continue to serve as mitigation for potential impacts. Proposed roadway extensions would be the same as under the proposed General Plan Update.

Compliance with Project Objectives

This alternative would meet almost all of the identified project objectives. It would not meet the following objective identified for the proposed project:

- Preserve the integrity and character of existing residential neighborhoods.

The disparity between the typical density of existing single family residential neighborhoods in the City (4 to 6 units/acre) as compared to the amount of density allowed under the Medium Density Land Use Designation (up to 16 units/acre) would create an economic incentive to significantly increase the density within existing single family areas, thereby negatively impacting them.

Impacts

Land Use and Planning

Land use impacts of this alternative would be similar to those of the proposed April 2016 General Plan Update, with the exception of the disparity in density between the existing single family development in areas designated Medium Density Residential and the maximum density allowed by that designation. Alternative 2 would result in greater Land Use and Planning impacts than the proposed General Plan Update

Agricultural and Forestry Resources

Impacts between the proposed April 2016 General Plan and the “No Low/Medium Density Designation Alternative” would be the same since proposed residential land use categories would not effect agricultural or forestry resources.

Transportation and Circulation

More residential development could be expected under the “No Low/Medium Density Designation Alternative” both by the 2035 Horizon Year and beyond due to development pressure created by the disparity between the density of existing development in the Medium Density Land Use Designation (typically 4 to 6 units/acre) and the significantly higher density allowed by the Medium Density Land Use Designation (up to 16 units/acre). This would likely occur despite the City’s Growth Management limit of a maximum of 9 units/year, as affordable housing units would be exempt from such limitations

Air Quality

With the possibility of greater residential development resulting from this Alternative than would be allowed under the General Plan Update, the higher total traffic would tend to result in greater air emissions. Under both Alternative 1 and the proposed General Plan Update, air impacts would likely be Significant and Unavoidable.

Noise

As with Air Quality, the possibility of additional residential development resulting from this Alternative, would result in incrementally greater total traffic, thereby increasing vehicular related noise.

Aesthetics

The aesthetic impacts of this Alternative would be similar to those of the proposed April 2016 General Plan Update.

Biological Resources

Like the proposed General Plan Update, this alternative could result in the loss of or modifications to wetlands and other waters and sensitive biological resources (e.g., sensitive natural communities and special-status species), requiring agency authorizations and appropriate mitigation.

Cultural and Historic Resources

Like the proposed General Plan Update, the No Low/Medium Designation Alternative has the potential create substantial adverse changes in the significance of historical resources, but any such impacts would be reduced to less than significant due adherence to policies included within the updated General Plan to protect these resources.

Like the proposed General Plan Update, this alternative has the potential for disturbance to prehistoric archaeological sites that may contain human remains that have religious significance to local Native American representatives. However, adherence to goals and implementing actions contained in the General Plan Update would reduce potential impacts to a less-than-significant level.

Energy

Energy use would be slightly less under the proposed April 2016 General Plan because of fewer residential units within the city. Neither this alternative nor the proposed General Plan Update are expected to have significant impacts related to energy, however.

Greenhouse Gases

Like the proposed April 2016 General Plan Update, greenhouse gas emissions associated with the “No Low/Medium Density Alternative” would be less than significant.

Geology and Soils

The impact would be slightly increased under the “No Low/Medium Density Alternative” because additional residential units would likely be built under this alternative. Adherence to General Plan Update goals and implementing actions would reduce potential geologic impacts to a less-than-significant level.

Hazards and Hazardous Materials

Like the proposed April 2016 General Plan Update, this alternative could result in development on former agricultural, commercial, or industrial properties and potential exposure to contaminants from historic hazardous materials use. Adherence to goals and implementing actions in the General Plan Update would reduce impacts associated with hazards and hazardous material to a less-than-significant level.

Hydrology and Water Quality

As with the April 2016 General Plan Update, operation of new development allowed under this alternative could violate water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality. The impact would be increased slightly under the “No Low/Medium Density Alternative” because additional residential units could be built within the city.

As with the General Plan Update, construction and operation of development allowed under this alternative could increase runoff that would result in flooding on-site or off-site, or exceed the capacity of the storm sewer systems. The impact would be slightly increased under the “No Low/Medium Density Alternative” because additional residential units would be built within the city.

Mineral Resources

No significant impacts on mineral resources would occur either under the proposed General Plan Update or the “No Low/Medium Density Alternative.”

Population and Housing

Land use impacts of this Alternative would be similar to those of the proposed April 2016 General Plan Update, with the exception of the disparity in density between the existing single family development in areas designated Medium Density Residential and the maximum density allowed by that designation, which could result in additional residential development. Therefore, the effect of this Alternative would be greater than under the General Plan Update.

Public Services

As with the proposed April 2016 General Plan Update, development allowed under this alternative could interfere with emergency response or evacuation, particularly due to traffic increases on SR 29.

Recreation

Compared to the General Plan Update, this alternative could have slightly more impact on parks and recreational facilities because additional residential units may be built. The City's existing parkland inventory does not meet applicable standards based on population. However, payment of development impact fees to the City as required for residential development would partially offset this impact.

Utilities and Service Systems

Demand for water would be increased slightly with this alternative as compared to the proposed General Plan Update. As for the proposed April 2016 General Plan Update, water conservation efforts would be implemented by the City to ensure this impact would be less-than-significant.

5.5 Environmentally Superior Alternative

Based upon the evaluation described in this section, the Proposed April 2016 General Plan Update would be the environmentally superior alternative as compared to the “No Project 1993 General Plan” and the “No Low/Medium Density Alternative,” given its reduced residential development potential and lower associated environmental impacts. The two Alternatives would not eliminate the significant and unavoidable impacts of the proposed April 2016 General Plan Update. The “No Project” and the “No Low/Medium Density Alternative would not meet some of the key objectives and goals of the project, as discussed in this section of the document.

In conclusion, the proposed April 2016 General Plan Update for the reasons just discussed in detail in this section of the report as compared to the other two alternatives is considered the environmentally superior alternative.

5.6 Alternatives Considered but Rejected

CEQA Guidelines Section 15126.6(c) requires an EIR to identify and briefly discuss any alternatives that were considered by the lead agency but were rejected as infeasible. In identifying alternatives, primary consideration was given to alternatives that would reduce significant impacts while still meeting project objectives. Alternatives that would have the same or greater impacts than the proposed project, or that would not meet most of the project objectives, were rejected from further consideration.

An off-site alternative was rejected because this would be infeasible for a general plan for a specific city. Further, this alternative would not meet the basic project objectives identified in Chapter 3, Project Description. For these reasons, an off-site alternative is considered infeasible pursuant to CEQA Guidelines 15126.6(c).

References

Bay Area Economics. 2009. *St. Helena General Plan Update Housing Element Goals, Policies, and Five-Year Action Plan (Final)*. September.

ESA. 1993. City of St. Helena General Plan Update Environmental Impact Report. March.

ABAG Projections 2013

CHAPTER 6

Growth-Inducing and Cumulative Effects

6.1 Growth-Inducing Effects

Growth-inducing effects can occur when a project fosters economic or population growth, or construction of additional housing, either directly or indirectly in the surrounding environment. The removal of obstacles to growth can also result in growth inducement. Some of the following are examples of projects that can entail growth-inducing effects:

- Extension of water/wastewater lines across undeveloped lands;
- Significant commercial development in an area with limited housing;
- Significant residential development in an area with limited commercial uses;
- Removal of lands from existing Williamson Act contracts;
- Expansion of Urban Limit Lines or Urban Reserve Areas into undeveloped lands; and
- Expansion of major facilities that serve development such as water and wastewater treatment facilities.

Growth-inducing effects can occur when a project fosters economic or population growth or construction of additional housing.

Development that would be fostered by the proposed St. Helena General Plan Update would occur within the existing developed portion of the City of St. Helena or immediately adjacent to existing development. Thus, no major water or wastewater line extensions across undeveloped lands would be required.

The proposed General Plan Update would generally balance residential and commercial growth within the city, and existing facilities would also serve to meet the needs of future residents. Thus, significant growth inducement would not result from projected residential or employment-generating land uses.

New development would not require the removal of lands from Williamson Act contracts, which could have the indirect impact of inducing new development on acreage no longer carrying reduced tax benefits associated with such contracts. While some lands slated for new development are in agricultural use (e.g.,

vineyards), only an estimated 0.83 acres are designated for agricultural use and are outside the Urban Limit Line of the city. This .83 acres is immediately adjacent to existing development.

No expansion of the Urban Limit Line is proposed as part of the General Plan Update and all new development would occur within the existing city limits. The areas already designated in the 1993 General Plan as “Urban Reserve Areas” (see Chapter 3, Project Description, of this EIR) are all within the existing city limits but immediately adjacent to the Urban Limit Line.¹ These areas would continue to be designated for agricultural use and would only be considered for development after areas within the Urban Limit Line are developed and if additional acreage is needed for urban uses. No significant growth-inducing impacts would occur from the continued designation of these Urban Reserve Areas because of their acreage, the need for a General Plan Amendment for them to be developed, the projected timing and limitations on the use of these lands, and the fact that they are immediately adjacent to existing development and within the city limits. The City’s water and wastewater treatment systems are nearing capacity and no major water or wastewater expansions are proposed as part of the General Plan Update. Thus, no growth inducement would occur in relation to such expansions.

Significant irreversible changes can include land use changes, use of nonrenewable resources, and damage from environmental accidents.

6.2 Significant Irreversible Changes

CEQA Guidelines Section 15126.2(c) specifies that the EIR shall discuss the significant irreversible environmental changes associated with a project relevant to land use changes, nonrenewable resources, and environmental accidents.

6.2.1 Changes that Commit Future Generations to Similar Uses

By allowing specified land use development within the City of St. Helena, the proposed General Plan Update would alter some of the existing uses within the Urban Limit Line but would continue to protect agricultural areas outside of the Urban Limit Line (but within the city limits). It is reasonable to anticipate that future projects would not introduce land uses that could not be changed or “reversed” in the future. Thus, the project would not commit future generations to similar uses. However, it could be said that once areas in agricultural use within the city are converted to new development, the chances of that land reverting to agricultural use are slim. It is more likely that any changes would be in types of development or intensity of development.

¹ The City of St. Helena includes an Urban Limit Line that is within the city limits.

However, it should be noted that 48 percent of the land area within the city limits is protected by agricultural designations in the proposed General Plan Update, with 74 percent designated for open space type uses, including agricultural, open space, woodlands and water sheds, and similar uses. The Urban Limit Line, within which new development would occur, would continue to protect agricultural areas.

6.2.2 Use of Nonrenewable Resources

The General Plan Update would allow for development that would consume natural resources (gasoline, sand and gravel, asphalt, oil, wood products, etc.) during construction activities. During operation of new developments, energy would be consumed for lighting, heating/cooling, and transportation. Neither the construction nor operation of projects associated with implementation of the proposed General Plan Update would consume nonrenewable resources in amounts substantially different from or greater than typical urban development or similar land uses.

The General Plan Update contains numerous goals and policies mandating that that future development allowed pursuant to the General Plan Update incorporate sustainable features to minimize impacts on non-renewable resources. For example, see Land Use Element Policy LU1.1 requiring new development to mitigate impacts to infrastructure by using sustainable, best management practices in constructing new development and infrastructure and Climate Change Element Policy CC2.1 that encourages the City employ measures to reduce energy demand through conservation and efficiency.

6.2.3 Irreversible Damage from Environmental Accidents

The use, storage, handling, and transport of hazardous materials are strictly regulated by federal and state laws. Implementation of the proposed General Plan Update could result in unexpected accidents involving hazardous materials, but all developments would be required to comply fully with applicable regulations and would not be expected to result in significant impacts resulting from accidental release of hazardous materials during construction or operations.

6.3 Cumulative Impacts

“Cumulative impacts” are the incremental impacts of the General Plan Update when added to closely related past, present, and reasonably foreseeable future projects.

This section of the EIR addresses cumulative impacts associated with the incremental impact of the General Plan Update when added to closely related past, present, and reasonably foreseeable future projects.

As a Program EIR on a General Plan Update, this EIR addresses cumulative impacts of growth. For purposes of this cumulative analysis, a non time constricted horizon period for the General Plan Update, as described in this section, is utilized due to the fact that with the City’s Growth Management Program, it is infeasible that all land uses in the City under this General Plan Update would be fully built out by 2035.

Under the General Plan Update as analyzed in this cumulative analysis, full development of the thirteen “Change Areas” is assumed to occur, along with the development of all the Key Housing Opportunity Sites as identified in the City’s 2015 to 2023 Housing Element. This Full Buildout Scenario development would result in up to 890 new residential units and an estimated 2100 new residents in the city, and approximately 300,000 new square feet of additional commercial square footage.

Napa County was contacted to determine if proposed or pending projects were to be located in the vicinity of St. Helena but within the County’s borders outside the city limits. The only potential projects identified was the redevelopment of a closed outlet mall located to the north of St. Helena adjacent to State Route 29 that includes a complex of wineries and restaurants (J. McDowell, Napa County Planning, 2015). Another project is the proposed Enchanted Resorts project in the City of Calistoga. This project is about 8.5 miles north of St. Helena and would include 33 homes, 110 hotel units, and spa facilities such as pool and restaurant (City of Calistoga, 2010).

6.3.1 Land Use and Planning

The land use and planning-related impacts of the General Plan Update would be the same as those described in Section 4.A, Land Use and Planning, of this EIR. The General Plan Update project would not contribute to any cumulative land use impacts associated with nearby County projects or City of Calistoga projects.

6.3.2 Agricultural and Forestry Resources

The less-than-significant impacts of the General Plan Update Build-out would be the same as those in Section 4.B, Agricultural and Forestry Resources, of this EIR.

It is unlikely the General Plan Update could possibly lead to development of the “Urban Reserve Areas” that were also identified in the 1993 General Plan. Figure 3-5 in Chapter 3, Project Description, of this EIR illustrates the locations of the three Urban Reserve Areas identified in the General Plan Update. The General Plan Update states that “Urban Reserve Areas can be considered for urban development after urban sections within the Urban Limit Line are developed and if additional land is needed for urban uses” (City of St. Helena, 2015). The General Plan Update designates the Urban Reserve Areas as Agriculture. Development of the Urban Reserve Areas is unlikely during the time frame of this General Plan (2035) given the growth controls utilized by the City.

The Urban Reserve Areas shown in Figure 3-5 contain Prime Farmland or Farmland of Statewide Importance (“Farmland”), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program (see Figure 4.B-2). Development of the Urban Reserve Areas could therefore increase the number of acres of “Farmland” that would be converted to non-agricultural use (see Impact AGRICULTURE-1 in Section 4.B of this EIR). Existing and proposed policies would reduce this cumulative impact to less than significant.

Removal of agricultural land would not occur for the County Cairdean Estates project or the Enchanted Resorts project in Calistoga. Since there are no significant proposed or pending projects in the unincorporated area immediately surrounding St. Helena, the General Plan Update would not combine with other nearby projects elsewhere in the county to create cumulative impacts on agricultural or forestry resources. The project’s contribution to this cumulative impact would be mitigated by policies by the General Plan Update.

6.3.3 Transportation and Traffic

The less-than-significant impacts of the General Plan Update would be the same as or similar to those described in Section 4.C of this EIR. In addition to land use changes within St. Helena, the traffic analysis for the General Plan Update takes into account planned development patterns set forth in the Napa County General Plan and the Highway 29 Channelization project being implemented by Caltrans. The traffic analysis accounts for this additional development because it would generate traffic on regional roadways – particularly on SR 29 (Main Street), which extends through St. Helena. Cumulative conditions would include planned transportation improvements being developed by the Napa Valley Transportation Authority.

Buildout of the land uses and changes to the roadway network envisioned in the St. Helena General Plan Update would contribute cumulative traffic to

intersections and roadway segments that are expected to operate at unacceptable levels of service, including roadway segments on Main Street. As identified in the Transportation and Traffic section of this Revised DEIR (see Section 4.C), build-out of the General Plan Update is anticipated to result in significant and unavoidable impacts at the following intersections:

- Silverado Trail/Pope Street/Howell Mountain study intersection where PM peak hour intersection operations would remain at LOS F, peak hour delay would increase by more than five seconds, and the Caltrans peak hour signal warrant criterion would be met in the Year 2035.
- The Paseo Grande/College/Pope Street intersection would experience an increased delay over five seconds in the AM and PM peak periods.
- The Main Street and Pratt Avenue would experience significant delays in the AM and PM peak period greater than five seconds over existing conditions.
- Operations at the Pratt Avenue intersection with the Silverado Trail would degrade from LOS C to LOS D during the PM peak hour and would also experience a significant increase in delay greater than five seconds.

Full build-out of the proposed General Plan Update would increase the cumulative amount of traffic on Main Street in the northbound and southbound directions, though much of the growth in traffic on Main Street is due to regional travel patterns outside of the control of the city. Options for mitigating traffic impacts on Main Street are limited, because of the constrained right-of-way, the high cost of road improvements, and the lack of political will to create additional roadway capacity beyond existing road configurations.

Implementation of the policies and actions contained in the proposed General Plan Update would reduce impacts on Main Street and other roadways. Specific policies and actions that would reduce impacts are CR1.4, CR1.5, CR1.11, CR1.12, CR6.2, CR1.H, CR1.I, and CR 1.K.

Additional funding, if available (e.g., from a city or countywide transportation sales tax), could also be used to pay for improvements to Main Street that would manage congestion through the City of St Helena and along the Main Street corridor. Implementation of the proposed General Plan Update, together with regional improvements to the Main Street corridor when funding becomes available, would reduce congestion in the city, although the impact would not be reduced to a less-than-significant level. Therefore, transportation and traffic impacts are considered cumulatively considerable and **significant and unavoidable**. Future cumulative vehicular traffic would also exacerbate future emergency service access, which is identified as a significant and unavoidable impact in Section 4.C.

6.3.4 Air Quality

The San Francisco Bay Area is currently designated as a nonattainment area under federal and state air quality standards for ozone and PM_{2.5}. The region is also nonattainment for PM₁₀ under state ambient air quality standards. Past, present, and future development projects contribute to regional air quality impacts on a cumulative basis. Air pollution is largely a cumulative impact. Typically, and in the case of the proposed General Plan Update, there is no single project sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

However, as noted in Section 4.D, Air Quality, the proposed General Plan Update would significantly increase local trips which would exceed the number of such trips forecast in the regional Clean Air Plan. Since this impact could not be mitigated, inconsistency with the Clean Air Plan would be a **significant and unavoidable impact** which would be exacerbated in conjunction with all other local trips.

In developing thresholds of significance for air pollutants, the Bay Area Air Quality Management District (BAAQMD) considered the emission levels at which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions or effect on emissions would be cumulatively considerable, resulting in significant adverse air quality impacts on the region's existing air quality conditions. Thus, the evaluation in Section 4.D, Air Quality, of this EIR accounts for cumulative air emissions, and additional analysis of cumulative impacts is unnecessary. Similarly, the evaluation of community risk and hazards associated with traffic on Main Street accounts for cumulative traffic conditions. The predictions of community risk and hazards from air pollution and TACs are based on cumulative conditions, and no significant hazards were identified.

6.3.5 Noise

Under the General Plan Update, cumulative noise levels in areas of St. Helena that are planned for development may substantially increased over existing conditions. The General Plan Update could produce up to would produce an additional 632 housing units, 190,000 more square feet of commercial uses, and 875 more jobs. Additional housing, commercial land uses, and jobs would be expected to result in greater traffic volumes along roadways serving those particular sites. Additional traffic on regional roadways such as SR 29 would also contribute traffic noise.

Noise increases within the community would largely be a function of the existing and future traffic volumes along the roadways. The greatest increases in traffic noise would be expected in developing areas where existing traffic volumes are relatively low. Conversely, traffic noise increases resulting from cumulative development would be less along busy thoroughfares such as Main Street.

As identified under the General Plan Update, traffic noise increases could be expected on existing low-volume roadways that would be subject to additional traffic as a result of cumulative General Plan Update development. With adherence to various goals and implementing actions contained in the General Plan Update, future cumulative noise impacts in the community would be less-than-significant.

Due to the distance of the other cumulative projects in Calistoga and the County (Cairdean Village) from the City of St. Helena, cumulative noise impacts of the project in association with these projects would not be significant. Cumulative noise impacts associated with traffic passing through St. Helena have been evaluated based on the traffic data used in the analysis that accounted for cumulative projects.

6.3.6 Aesthetics

Under the General Plan Update, aesthetic impacts would be approximately the same as those identified in Section 4.F, Aesthetics. Proposed General Plan Update policies, implementing actions and the City's design review process would be adequate to mitigate cumulative aesthetic impacts. The same recommended mitigation measures would apply to the cumulative aesthetic impacts and no additional significant impacts would occur. Due to the distance of the other cumulative projects in Calistoga and the County (Cairdean Estate project and the resort project in Calistoga) from the City of St. Helena, cumulative aesthetic impacts of the project in association with these projects would not be significant.

6.3.7 Biological Resources

The overall cumulative effect of development is dependent on the degree to which significant vegetation and wildlife resources are protected or site-specific impacts are mitigated as part of individual developments. This includes preservation of areas of sensitive natural communities such as valley oak woodland, riparian woodland, and native grasslands, protection of essential habitat for special-status plant and animal species, and avoidance of wetlands. Further environmental review of specific development proposals in St. Helena as required by the General Plan Update will generally serve to ensure that important biological and wetland resources

are identified, protected, and properly managed, and should serve to prevent any significant adverse development-related impacts.

Cumulative impacts to nesting raptors and other special status species created by the project in conjunction with County and City of Calistoga projects could be significant but would be mitigated, for the project, by General Plan Update policies. The same would apply to cumulative impacts related to loss of wetlands and other waters.

Cumulative development contributes to an incremental reduction in the amount and connectivity of existing natural communities and wildlife habitat. However, most of the anticipated development associated with implementation of the General Plan Update would occur in locations that are already urbanized or have been extensively altered by past agricultural uses, and therefore have only limited wildlife habitat values. Potential impacts on wetlands and other sensitive biological resources would be addressed through avoidance and adequate mitigation, and any future tree loss would be at least partially addressed through replacement plantings. Conformance with policies and implementation actions in the General Plan Update would serve to address any significant impacts on biological resources, and the project's contribution to potential cumulative impacts would be considered less than significant.

6.3.8 Cultural Resources

The proposed General Plan Update has the potential to contribute to cumulative impacts on cultural resources. These impacts are described in Section 4.H, Cultural Resources, of this EIR. This Section identifies the potential presence of significant archeological, paleontological, Native American and other cultural resources near the Napa River, Sulphur Creek and other bodies of water in northern Napa County. The Downtown portion of St. Helena and nearby historic neighborhood contain a significant number of historic dwellings.

Each discretionary development proposal received by the City undergoes environmental review pursuant to CEQA. If there is a potential for significant impacts on cultural resources, the City would require an investigation to determine the nature and extent of the resources and identify appropriate mitigation measures. Development projects therefore are not expected to result in significant impacts on cultural resources, provided that appropriate evaluations are conducted on a case-by-case basis to determine whether the resources are "historical resources" or "unique archaeological resources," and appropriate mitigation measures, including but not limited to preservation in place, capping, or data recovery, are implemented prior to development. Thus, implementation of the General

Plan Update and the mitigation measures identified in Section 4.H of this EIR, along with project-specific mitigation measures and application of appropriate sections of the St. Helena Municipal Code, would be expected to reduce potential cultural resources impacts to less-than-significant levels.

The project is not expected to contribute to cumulative cultural resource impacts in association with County or City of Calistoga projects or to require additional mitigation measures beyond what has been recommended for the project.

6.3.9 Energy

Energy use within the city would increase with the General Plan Update and with development of the city's Urban Reserve areas. The amount of new development would slightly increase over the life of the General Plan Update from current conditions as noted in Chapter 3, Project Description. However, cumulative energy impacts would not be significant with adherence to the proposed policies and implementing actions incorporated into the General Plan Update. The project would contribute to overall cumulative increases in energy use in association with County and City of Calistoga projects. In addition, the County has initiated the "Community Climate Action Framework" with the ultimate goal of reducing energy use and associated greenhouse gas emissions within the entire County.

6.3.10 Greenhouse Gas Emissions

GHG emissions contribute to global climate change on a cumulative basis. No single land use project or plan could generate enough GHG emissions to noticeably (or measurably) change the global average temperature. The combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts. The BAAQMD CEQA Air Quality Thresholds of Significance state that land use sector projects that comply with the GHG thresholds would not be "cumulatively considerable" because they would be helping to solve the cumulative problem as a part of the AB 32 process.

Cumulative GHG impacts created by County and City of Calistoga projects would add to any cumulative GHG increases created by the project. The County has initiated the "Community Climate Action Framework" with the ultimate goal of reducing energy use and associated greenhouse gas emissions within the entire County. This effort would ensure that cumulative GHG impacts are less than significant.

6.3.11 Geology and Soils

Potential cumulative impacts related to geology, soils, and seismicity do not extend far beyond a General Plan's boundaries, since geological impacts are confined to discrete spatial locations and do not generally combine to create an extensive cumulative impact condition. The exception to this would occur where a large geologic feature (e.g., fault zone, massive landslide) might affect an extensive area, or where the development effects from the project could affect the geology of an off-site location. These circumstances would not occur as a result of implementation of the St. Helena General Plan Update. The cumulative increases in population and development that would result from implementation of the Full Buildout Scenario would increase the number of residents and employees exposed to the region's known seismic hazards; however, conformance with the California Building Code would preserve building integrity during a seismic event, and other regulatory measures would reduce geohazards impacts to a less-than-significant level. As a result, cumulative impacts would be minimized and would be less than significant.

Due to the distance of the other cumulative projects in Calistoga and the County from the City of St. Helena, cumulative geological and soil impacts of the project in association with these projects would not be significant.

6.3.12 Hazards and Hazardous Materials

The hazardous materials and other public health and safety issues identified for the General Plan Update are generally site-specific and have been described in Section 4.L, Hazards and Hazardous Materials, of this Revised DEIR. Due to the distance of the other cumulative projects in northern Napa County (Calistoga and the unincorporated portion of Napa County) from the City of St. Helena, cumulative hazardous materials impacts of the General Plan Update in association with these projects would not be significant.

6.3.13 Hydrology and Water Quality

Impacts to hydrology and water quality of the General Plan Update would be as described in Section 4.M, Hydrology and Water Quality, of this EIR. The increased runoff from the Enchanted Resorts project in Calistoga and the Cairdean Estates project north of St. Helena would be largely within the watershed of the Napa River and could contribute to flood levels within the Napa River downstream of St. Helena. Each of these projects would require mitigation to reduce offsite runoff during peak storm events (i.e., onsite detention basins, etc.). For projects within the jurisdiction of the City, future development would be subject to General Plan Update policies and

implementing actions would reduce the project's contribution to this cumulative impact to a less-than-significant level.

6.3.14 Mineral Resources

Cumulative impacts related to mineral resources would not be significant and are addressed in Section 4.N, Mineral Resources, of this Revised DEIR. County of Napa and City of Calistoga projects are not expected to result in cumulative impacts to mineral resources given their land use designations.

6.3.15 Population and Housing

Cumulative impacts of the General Plan Update with respect to this topic are described in Section 4.O, Population and Housing, of this Revised DEIR.

The General Plan Update would induce population growth in the area by allowing for residential development that would add an estimated 632 residents and 260 new housing units in the city by 2030. This impact is considered less than significant for the reasons described in Section 4.O.

Development under the General Plan Update could result in the displacement of existing residents or housing units. This impact is considered less than significant, however, for the reasons described in Section 4.O.

County of Napa and City of Calistoga projects would not result in any displacement of residents. Limited cumulative growth inducement would occur in this portion of Napa County by the combined impact of the City's General Plan Update in conjunction with nearby County and City of Calistoga project, since non-City projects are not residential in nature. The City's contribution to this cumulative impact would be offset by proposed General Plan Update policies and the fact that all new growth for the project would occur within the existing city limits.

6.3.16 Public Services

Need for New or Expanded Fire Protection and Police Facilities

Increases in resident and employee population under the General Plan Update would increase demands for fire protection and police services but are not currently expected to create a need for new or expanded facilities for the reasons discussed in Section 4.P, Public Services, of this Revised DEIR. County and City of Calistoga projects would be outside of the service area of the City of St. Helena. Absent a major emergency event requiring mutual aid by the City

of St. Helena, adjacent areas would not require City police or fire services and would not contribute to a cumulative impact.

Need for New or Expanded School Facilities

St. Helena Unified School District schools currently have capacity to serve additional students and are experiencing declining enrollment. General Plan Update provisions and school impact fees, as described in Section 4.P, would mitigate any impacts on school facilities. County and City of Calistoga projects would be outside of the service area of the City of St. Helena and the St. Helena Unified School District and would not contribute to a cumulative impact.

Need for New or Expanded Library Facilities

The increase in resident and employee population associated with the General Plan Update buildout would increase demands for library services and could create a need for new or expanded library facilities, but the General Plan Update provisions in Section 4.P would mitigate impacts on library facilities (Kreiden, 2015). County and City of Calistoga projects would be outside of the service area of the City of St. Helena.

Exposure to Wildland Fire Hazards

Wildland fire hazards under the General Plan Update would be the same as described in Section 4.P would be less than significant. County and City of Calistoga projects would be outside of the service area of the City of St. Helena.

Emergency Response

Development in accordance with the General Plan Update could interfere with emergency response or evacuation, particularly due to traffic increases on Main Street. The potentially significant and unavoidable impact is described in Section 4.P. The additional development allowed under the General Plan Update would result in additional increases in traffic congestion, particularly along Main Street. See discussion under Subsection 6.3.3, Transportation and Traffic, above. County and City of Calistoga projects would be outside of the service area of the City of St. Helena but traffic associated with these projects and others outside of St. Helena could add to traffic using Main Street and could exacerbate this impact on a cumulative level.

6.3.17 Recreation

The less-than-significant recreation-related impacts of the General Plan Update would be the same as those described in Section 4.Q, Recreation, of this Revised DEIR.

County and City of Calistoga projects would be outside of the service area of the City of St. Helena and thus would not contribute to cumulative recreational impacts on a City-wide scale. These cumulative projects could contribute to increased demands on regional recreational facilities in conjunction with City growth. The project's contribution to this cumulative impact would be expected to be less than significant, given the availability of regional park facilities.

6.3.18 Utilities and Service Systems

Impacts of New or Expanded Water Facilities

The impact of the General Plan Update would be similar to that described in Section 4.R, Utilities and Service Systems, of this Revised DEIR, and would be less than significant. County and City of Calistoga projects would be outside of the service area of the City of St. Helena. Water and wastewater demands are addressed below.

Impacts of New or Expanded Wastewater Facilities

The impact of the General Plan Update would be similar to that described in Section 4.R, and would be less than significant. County and City of Calistoga projects described earlier would be outside of the service area of the City of St. Helena and would not contribute to the City's wastewater collection, treatment or disposal systems on a cumulative basis.

Impact on Landfill Capacity

The General Plan Update is expected to generate approximately 1,081 tons per year, or 4.2 tons per day, of solid waste. This amount of solid waste would not create any capacity problems at the Clover Flat Landfill (Abreu, 2015). The impact on landfill capacity would therefore be less than significant. County and City of Calistoga projects would be outside of the service area of the City of St. Helena, but could contribute to region-wide demands for landfill capacity. The General Plan Update's contribution to this cumulative impact would be mitigated by General Plan Update policies aimed to reduce overall waste generation within the City of St. Helena.

Compliance with Solid Waste Statutes and Regulations

The cumulative impact of the General Plan Update would be similar to that described in Section 4.R, and would be less than significant.

Water Supplies

The potentially significant cumulative impact of the General Plan Update would be similar to that described in Section 4.R of this Revised DEIR.

Under the General Plan Update anticipated build-out of land uses would require an estimated 1,790 acre-feet of water per year (see Table 4 R-3). Estimated water supply would range from 2,150 acre-feet under a “wet” season to an estimated 1,571 acre-feet during a critical dry year. With adherence to General Plan Update goals and implementing actions requiring moderate to severe water cut-backs and other measures that have been implemented by the City during the recent drought to reduce overall water use, impacts to water supply on a project level has been deemed less-than-significant.

On a cumulative basis, there could be impacts beyond City boundaries with delivery of City of Napa water to St. Helena to supplement groundwater and other supplies in terms of impacts to other watersheds where City of Napa water originates; however, it is likely that full CEQA review has been completed on such water transfers to ensure that full environmental review has been completed.

Future cumulative water use by County of Napa and City of Calistoga development projects would be outside of the water service area of the City of St. Helena. Water needed by these other projects would not contribute to a cumulative impact to the City of St. Helena’s water system.

Therefore cumulative impacts relative to a long-term water supply for the City of St. Helena is anticipated to be less-than-significant.

Exceedance of Wastewater Treatment Capacity and Requirements

The potentially significant impact of the General Plan Update is described in Section 4.R.

Based on the current status of the City’s Wastewater Treatment Plant, the City is in the process of ensuring that treated effluent from the Plant comply with current water discharge requirements imposed by the San Francisco Bay Regional Water Quality Control Board. Since compliance with this standard

cannot be guaranteed, cumulative exceedances of wastewater treatment capacity would be **significant and unavoidable**.

County and City of Calistoga projects would be outside of the service area of the City of St. Helena.

6.4 Significant and Unavoidable Environmental Impacts

In accordance with CEQA Section 21083, and with CEQA Guidelines Sections 15064 and 15065, an EIR must also identify impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the implementation of the proposed project, or by other mitigation measures that could be implemented, as described in Section 4, Environmental Setting, Impacts and Mitigation Measures.

Implementation of the proposed General Plan Update would result in the following significant and unavoidable impacts:

- **Impact AQ-1.** Proposed approval and construction of land uses allowed under the General Plan Update would not be consistent with the regional Clean Air Plan.
- **Impact NOI-2.** Potential generation of construction noise.
- **Impact TRANS-1.** Increased motor vehicle traffic would result in unacceptable level of service (LOS) at a number of local intersections by the year 2035.
- **Impact TRANS-2:** Emergency access within St. Helena may be impacted by traffic congestion on Main Street and other local roads
- Cumulative exceedances of wastewater treatment capacity.

References

Abreu, Christy, Upper Valley Disposal Service. 2015. E-mail communication..

Baker, Jennifer, Library Director, City of St. Helena. 2010. E-mail communication. May 5.

City of Calistoga, 2010. Request for Proposals for Enchanted Resorts Development Application Environmental Review, April 23.

City of St. Helena. 2010. St. Helena General Plan Update 2030, Chapter Two, Land Use and Growth Management, Public Draft. February.

Desmond, Greg, City of St. Helena. 2010. E-mail communication. May 5.

West Yost Associates. 2010a. "Technical Memorandum No. 4, City of St. Helena Wastewater Flow Projections and Infrastructure." Memorandum from Jim Connell, West Yost Associates, to John Ferons, City of St. Helena. Draft. June 8.

West Yost Associates. 2010b. *City of St. Helena Water Supply Plan*. Draft. June.

CHAPTER 7

Report Preparers

EIR Preparers

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EIR Consultants

Victor Carniglia, City Consultant

Jerry Haag, City Consultant

Subconsultants

Illingworth & Rodkin: Air Quality; Greenhouse Gas Emissions; Noise

WRA: Biological Resources

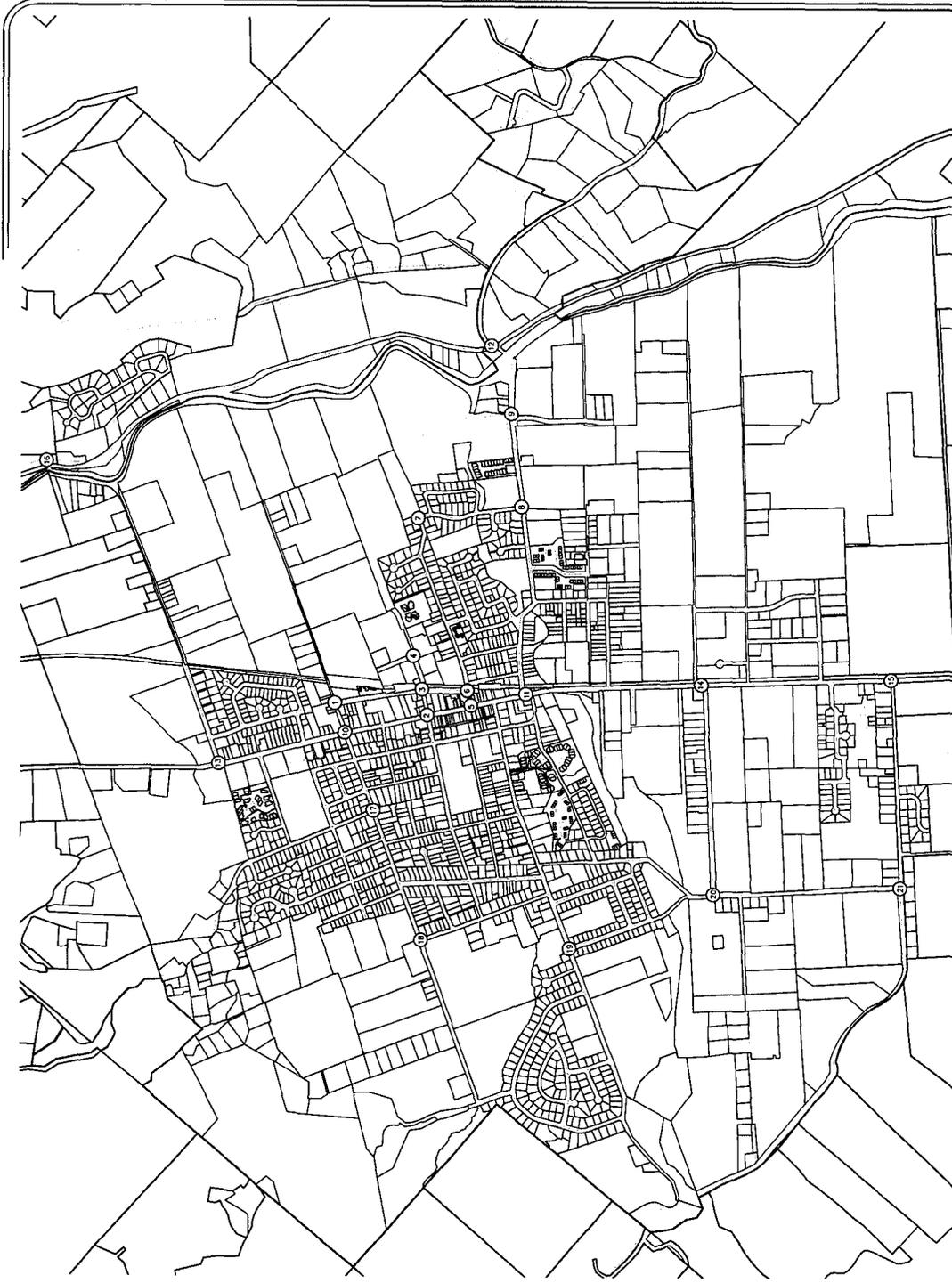
Omni Means LTD: Transportation and Traffic

APPENDIX A

Transportation Background Information

General Plan Study Intersections

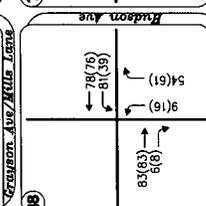
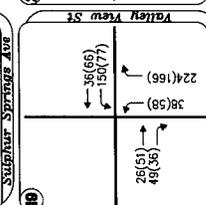
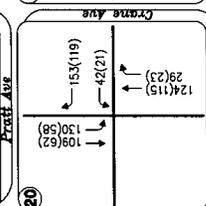
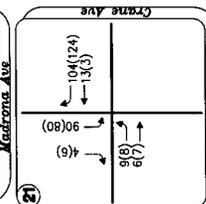
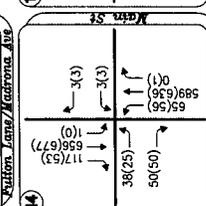
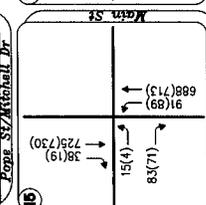
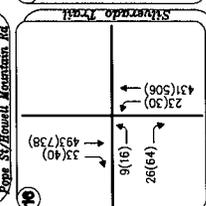
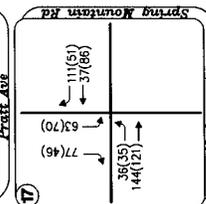
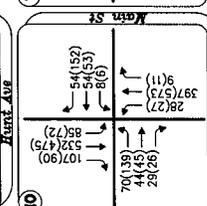
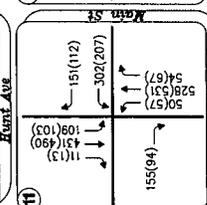
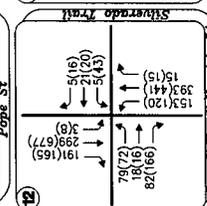
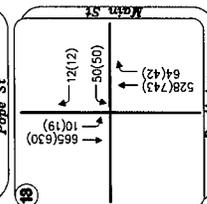
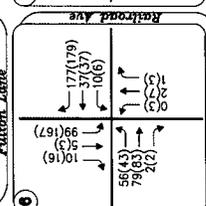
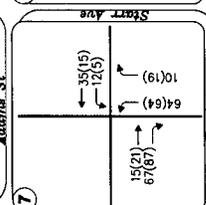
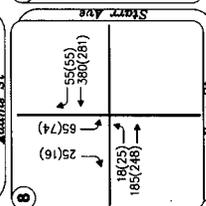
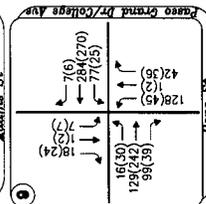
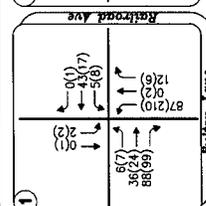
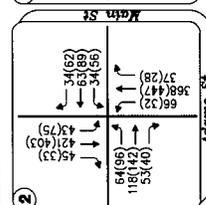
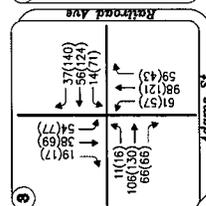
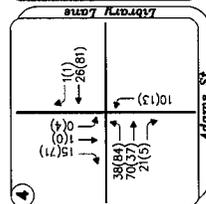
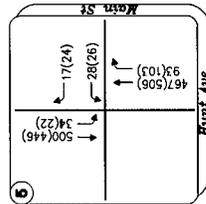
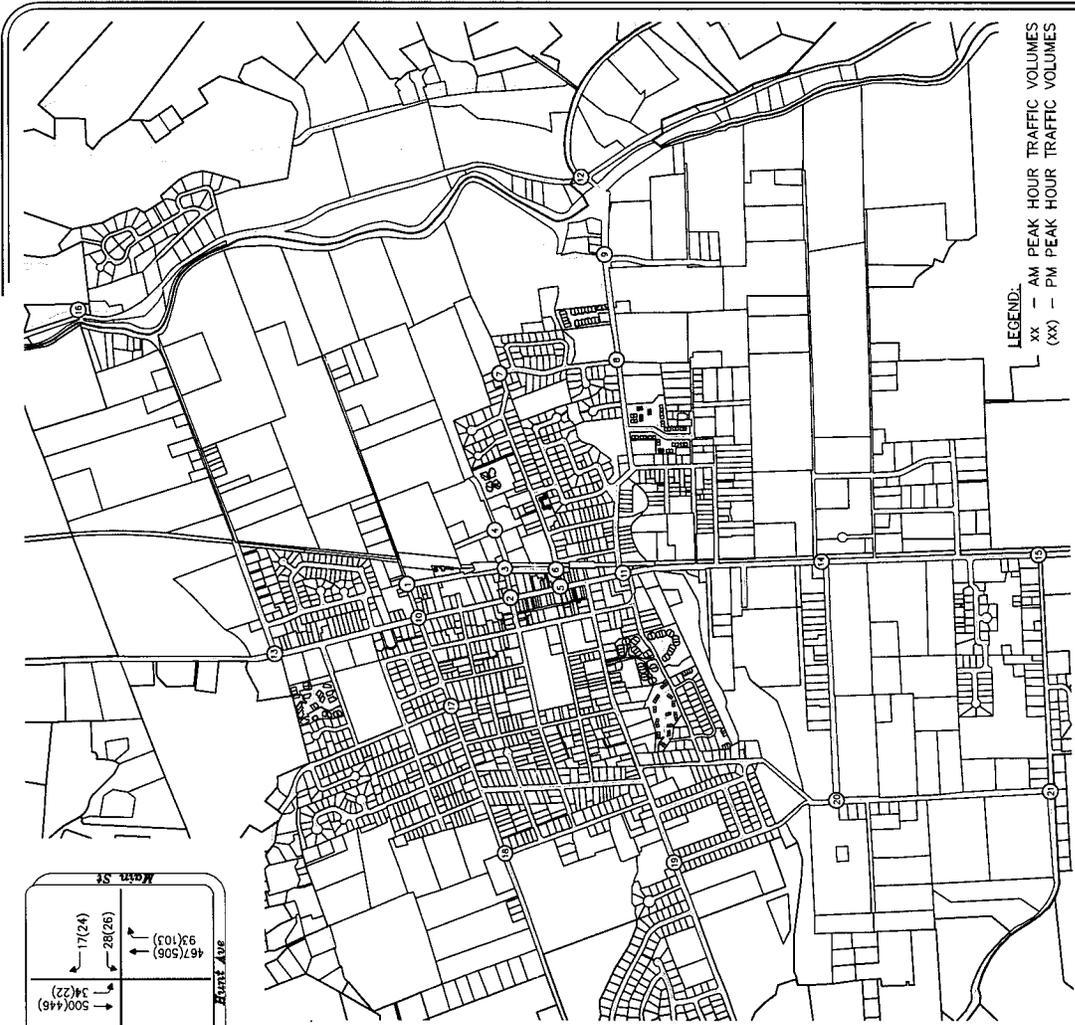
- 1 - Fulton Lane & Railroad Ave
- 2 - Main St & Adams St
- 3 - Adams St & Railroad Ave
- 4 - Adams St & Library Ln
- 5 - Main St & Hunt Ave
- 6 - Hunt Ave & Railroad Ave
- 7 - Hunt Ave & Starr Ave
- 8 - Starr Ave & Pope St
- 9 - Paseo Grand/College & Pope St
- 10 - Main St & Fulton Ln
- 11 - Main St & Pope St/Mitchell Dr
- 12 - Pope St/Howell Mountain Rd & Silverado Trail
- 13 - Main St & Pratt Ave
- 14 - Main St & Grayson Ave/Mills Ln
- 15 - Main St & Sulphur Springs Ave
- 16 - Pratt Ave & Silverado Trail
- 17 - Madrona Ave & Spring Mountain Rd
- 18 - Madrona Ave & Hudson Ave
- 19 - Valley View St & Spring St
- 20 - Grayson Ave & Crane Ave
- 21 - Sulphur Springs Ave & Crane Ave



St Helena General Plan Update

General Plan Study Intersections





St Helena General Plan Update

Existing Peak Hour Traffic Volumes

Turning Movement Count

DATE	TIME	INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
7/29/15	800	1	105	10	10	20	10	10	10	15	45	100	15	50	10
7/29/15	800	2	75	50	620	50	50	745	55	70	130	60	60	75	45
7/29/15	800	3	70	65	105	65	65	45	30	20	120	75	20	80	55
7/29/15	800	4	20	10	10	10	10	10	25	45	90	30	10	65	15
7/29/15	800	5	730	40	730	110	40	845	20	65	95	10	50	25	25
7/29/15	800	6	10	105	10	10	105	15	20	65	25	75	20	55	185
7/29/15	800	7	70	85	10	20	85	10	55	30	260	45	20	45	70
7/29/15	800	8	135	15	10	50	15	10	25	25	150	130	160	315	15
7/29/15	800	9	40	100	645	15	100	845	115	80	55	45	15	65	65
7/29/15	800	10	60	780	780	100	145	765	25	25	165	165	375	190	190
7/29/15	800	11	210	10	400	25	10	305	210	95	25	115	15	30	15
7/29/15	800	12	75	20	785	70	20	980	125	45	10	60	60	10	20
7/29/15	800	13	855	60	855	20	60	1015	45	25	150	90	10	45	120
7/29/15	800	14	100	75	955	20	75	510	45	20	35	35	90	85	15
7/29/15	800	15	30	30	440	60	75	115	90	50	150	15	160	45	160
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APPENDIX B

List of Cultural Resources

**TABLE C-1
RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS**

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
--	P-28-000009	Archaeological Site	Prehistoric	--	midden site with human burial
--	P-28-000151	Archaeological Site	Prehistoric	2S2	lithic scatter
--	P-28-000301	Archaeological Site	Prehistoric	--	lithic scatter, midden
--	P-28-000313	Archaeological Site	Prehistoric	--	lithic scatter
--	P-28-000951	Archaeological Site	Prehistoric	--	lithic scatter
--	P-28-001267	Archaeological Site	Prehistoric	--	lithic scatter
--	P-28-001349	Archaeological Site	Historic	--	stone foundation, possible building pad, and structural debris
--	P-28-001402	Archaeological Site	Prehistoric	--	lithic scatter
--	CA-NAP-129	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-133	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-134	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-158	Archaeological Site	Prehistoric	--	lithic scatter
--	CA-NAP-352	Archaeological Site	Prehistoric	--	lithic scatter
--	CA-NAP-356	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-376	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-403	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-404	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-406	Archaeological Site	Prehistoric	--	lithic scatter
--	CA-NAP-408	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-507	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-578	Archaeological Site	Prehistoric	--	lithic scatter
--	CA-NAP-684H	Archaeological Site	Historic	--	concrete and brick structure; possible remnants of water wheel
--	CA-NAP-843	Archaeological Site	Prehistoric	--	lithic scatter
--	C-1300	Archaeological Site	Prehistoric	--	reported to NWIC by resident; bifaces and a grinding stone observed
1104 Adams Street	--	Commercial Building	1906	1D	native fieldstone commercial building

**TABLE C-1 (Continued)
RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS**

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
1225 Adams Street	--	Commercial Building	1920	1D	utilitarian commercial building
1310 Adams Street	4574-0074-0000	Church	1867	3S	United Methodist Church
1325 Adams Street	4574-0075-0000	School	1932	3S	Spanish Colonial Revival elementary school
1611 Adams Street	4574-0076-0000	Residence	1907	3S	Craftsman bungalow
Alexander Court	4574-0046-0000	Neighborhood	1907	3S	Residential street; Bungalow, Craftsman, and Colonial style houses
1207 Alexander Court	4574-0045-0000	Residence	1907	3S	Craftsman bungalow
Allison Avenue	4574-0032-0000	Barn	1885	3S	former olive press-house
910 Allison Avenue	--	Residence	1902	--	rural vernacular residence
1269 Allyn Avenue	4574-0077-0000	Residence	1886	3S	Italianate style
1279 Allyn Avenue	4574-0078-0000	Residence	1890	3S	Stick style
1317 Allyn Avenue	4574-0079-0000	Residence	1883	3S	Italianate style
Charter Oak Avenue	4574-0040-0000	Winery	1881	3S	Sciaroni Winery stone sherry house
Charter Oak Avenue	4574-0041-0000	Winery	1881	3S	Sciaroni Winery fermenting building
957 Charter Oak Avenue	4574-0033-0000	Residence	1875	7N	Gothic Revival style
967 Charter Oak Avenue	4574-0034-0000	Residence	1880	3S	Italianate style
1043 Charter Oak Avenue	4574-0035-0000	Residence	1905	7N	Queen Anne, Colonial Revival residence; "Dr. Connor House"
1132 Church Street	--	Residence	1890	--	vernacular residence
1216 Church Street	4574-0047-0000	Warehouse	1878	1S	bonded brandy warehouse
2070 Dean York Lane	4574-0103-0000	Residence	1880	7N	frame-house cottage
415 Dowdell Lane	4574-0104-0000	Residence	1890	3S	Stick style
1133 Edwards Street	4574-0036-0000	Residence	1870	7N	Gothic Revival style
1217 Edwards Street	4574-0037-0000	Residence	1875	7N	Greek Revival style
825 Fulton Lane	--	Residence	1864	--	vernacular residence
Highway 29	P-28-001299	Bridge	1910	6Y	masonry arch bridge (#21-16) over Sulphur Creek
Highway 29	P-28-001316	Bridge	1902	6Y	masonry arch bridge (#21-17) over York Creek

**TABLE C-1 (Continued)
RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS**

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
Highway 29	P-28-001332	Culvert	1911	--	concrete culvert
Hudson Avenue	4574-0081-0000	Winery	1890	7N	Esmeralda Winery cellar building
1401 Hudson Avenue	4574-0080-0000	Residence	1883	3S	Colonial Revival style
921 Hunt Avenue	4574-0038-0000	Residence	1870	3S	Saltbox style cottage
940 Hunt Avenue	--	Residence	1936	--	Craftsman style
957 Hunt Avenue	4574-0039-0000	Residence	1890	3S	Second Empire style; "D.O. Hunt House"
1407 Kearney Street	4574-0082-0000	Residence	1906	3S	Craftsman style
1459 Kearney Street	4574-0083-0000	Residence	1899	3S	Queen Anne, Colonial Revival style
1489 Kearney Street	--	Residence	1900	--	vernacular residence
1451, 1451-1/2 Library Lane	--	Residence/Winery	1908, 1912	--	"Jackse Winery"; vernacular winery and associated residence
1902 Madrona Avenue	4574-0105-0000	Residence/Winery	1885	6Y/2S2	Italianate residence (6Y); native stone wine cellar (2S2)
Main Street	4574-0048-0000	Lighting	1915	3S	Main Street Electrolaires
Main Street	4574-0049-0000	Park	1890	3S	Lyman Park; site of former meeting hall and public high school
Main Street	--	Commercial District	1870-1947	1S	St. Helena Historic Commercial District; 35 contributing buildings
195 Main Street	--	Motel	1940	--	Streamline Moderne style
397 Main Street	4574-0106-0000	Residence	1859	3S	Italianate style
437 Main Street	4574-0107-0000	School	1912	1S	Richardsonian Romanesque style high school
738 Main Street	4574-0042-0000	Residence	1875	3S	Gothic Revival style
933 Main Street	--	Commercial Building	1949	--	"Gott's Roadside Tray"; Streamline Moderne/Googie building
1000 Main Street	--	Winery	1933	--	"Merrivale Winery"; concrete clad, utilitarian winery
1028 Main Street	--	Residence	1907	--	vernacular residence
1057 Main Street	4574-0050-0000	Commercial Building	1886	3S	Site of John C. Money's St. Helena Planing Mill
1200 Main Street	4574-0051-0000	Commercial Building	1903	1D	"Dutch Colonial" style
1201 Main Street	4574-0052-0000	Commercial Building	1890	1D	Native stone; brick false-front
1205 Main Street	--	Commercial Building	1899	1D	Native stone; brick false-front
1210 Main Street	--	Commercial Building	1955	6X	cinder block building

**TABLE C-1 (Continued)
RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS**

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
1214 Main Street	--	Commercial Building	1875	6X	remodeled
1219 Main Street	--	Commercial Building	1875	1D	wood-frame, stone building
1222 Main Street	--	Commercial Building	1875	6X	remodeled
1223 Main Street	--	Commercial Building	1875	6X	remodeled
1225 Main Street	--	Commercial Building	1875	1D	brick false-front
1228 Main Street	--	Commercial Building	1875	6X	remodeled
1230 Main Street	--	Commercial Building	1875	6X	Remodeled
1231 Main Street	4574-0053-0000	Commercial Building	1875	1D	"Davis Building"
1234 Main Street	--	Commercial Building	1908	6X	Remodeled
1235 Main Street	--	Commercial Building	1880	1D/2S2	Italianate style
1269 Main Street	--	Commercial Building	1911	1D/2S2	concrete-block; native stone
1302 Main Street	4574-0054-0000	Commercial Building	1891	1D	"Hunt Building"; native stone
1305 Main Street	4574-0055-0000	Commercial Building	1881	1D	Wood building; former "Windsor Hotel"
1310 Main Street	--	Commercial Building	1875	1D	remodeled
1312 Main Street	--	Commercial Building	1920	1D	remodeled
1313 Main Street	--	Commercial Building	1875	1D	remodeled
1316 Main Street	--	Commercial Building	1920	1D	vertical-board sided building
1320 Main Street	--	Commercial Building	1915	1D	stucco-finished
1321 Main Street	--	Commercial Building	1920	6X	remodeled
1325 Main Street	--	Commercial Building	1925	6X	remodeled
1327 Main Street	4574-0056-0000	Commercial Building	1892	1D	"Richie Block"; Queen Anne style
1328 Main Street	4574-0057-0000	Commercial Building	1900	1D	"St. Helena Star Building"; Romanesque Revival style
1332 Main Street	--	Commercial Building	1925	1D	remodeled
1339 Main Street	--	Commercial Building	1875	1D	remodeled
1343 Main Street	--	Commercial Building	1875	6X	remodeled
1346 Main Street	--	Commercial Building	1875	1D	single-story

**TABLE C-1 (Continued)
RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS**

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
1347 Main Street	4574-0058-0000	Commercial Building	1890	1D	"Owen Wade Building"; brick façade
1350 Main Street	--	Commercial Building	1885	1D	Italianate style
1351 Main Street	4574-0059-0000	Commercial Building	1890	1D	"Bank of St. Helena Building"; native fieldstone
1352 Main Street	4574-0060-0000	Commercial/Meeting Hall	1885	3S	I.O.O.F building; brick façade
1355 Main Street	--	Commercial Building	1940	1D	remodeled
1367 Main Street	--	Commercial Building	1888	1D	brick façade
1370 Main Street	--	Commercial Building	1925	6X	remodeled
1371 Main Street	--	Commercial Building	1884	1D	native stone
1379 Main Street	--	Commercial Building	1885	1D	Italianate style
1380 Main Street	--	Commercial Building	1937	1D	Streamline Moderne style, prefabricated gas station
1381 Main Street	4574-0061-0000	Commercial Building	1889	3S	"Kettlewell Building"; brick façade
1414 Main Street	4574-0063-0000	Residence	1870	7N	Victorian Gothic cottage
1461 Main Street	P-28-000790	Government Building	1941	--	United States Post Office
1508 Main Street	4574-0062-0000	Residence	1915	3S	Craftsman style
1817 Main Street	4574-0064-0000	Residence	1890	3S	vernacular residence
1817 Main Street	4574-0065-0000	Tankhouse	1890	3S	vernacular
1855 Main Street	--	Residence	1910	--	Georgian Revival style
1915 Main Street	4574-0066-0000	Residence	1907	3S	Colonial Revival style
2000 Main Street	P-28-001440	Winery	1878-1935	1S/1CL	Beringer Winery Historic District
2000 Main Street	P-28-000954	Stone Fence	1876	3D	Beringer Brothers winery Stone fence/retaining wall
2000 Main Street	P-28-000959	Trees	1885	1D	Beringer Brothers winery elm tree canopy
2000 Main Street	--	Road	--	3D	Beringer Winery circulation routes
2000 Main Street	P-28-001441	Residence	1883	1D/1S	Frederick Beringer mansion
2000 Main Street	P-28-001442	Residence	1860s	1D	"Sisters' House" Beringer Winery residence
2000 Main Street	P-28-001443	Commercial Building	1935	1D	"Export Building"; Beringer Winery office

TABLE C-1 (Continued)
RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
2000 Main Street	P-28-001444	Winery and Cellar	1877	1D	Beringer Winery and wine cellar
2000 Main Street	P-28-001445	Commercial Building	1935	1D	Beringer Winery distillery
2000 Main Street	P-28-001446	Residence	ca. 1912	1D	Jacob Beringer, Jr. Craftsman bungalow
2555 Main Street	P-28-000953	Winery	1889	1S/1CL	"Greystone Cellars"; Richardsonian Romanesque style winery building
2555 Main Street	4574-0113-0000	Stone Arch	1889	1S	Native fieldstone archway for Greystone Cellars
2800 Main Street	4574-0115-0000	Winery	1874	1S/7L	Charles Krug Winery
2800 Main Street	--	Outbuilding	1881	2S3	Charles Krug Winery Carriage House
681 McCorkle Avenue	--	Residence	1907	--	vernacular residence
835 McCorkle Avenue	4574-0043-0000	Residence	1885	3S	Queen Anne style
458 Mills Lane	--	Residence	1900	--	vernacular residence
1255 Oak Avenue	4574-0084-0000	Church	1889	1S	Church of St. Helena
1310 Oak Avenue	--	Commercial Building	1905	1D	native stone façade
1313 Oak Avenue	4574-0089-0000	Meeting Hall	1900	3S	"Native Sons Hall"; Italian Villa style
1326 Oak Avenue	--	Residence	1899	--	vernacular residence
1360 Oak Avenue	4574-0085-0000	Library	1907	1S	Carnegie Library
1445 Oak Avenue	4574-0086-0000	Residence	1895	3S	Stick style
1454-1466 Oak Avenue	--	Residence	c. 1930	--	Tudor Revival style residences
1467 Oak Avenue	4574-0087-0000	Residence	1882	3S	Stick style; M.F.K Fisher residence
1551 Oak Avenue	4574-0088-0000	Residence	1907	7N	Queen Anne, Bungalow style
Pope Street	P-28-001300	Bridge	1894	2S2/7L	masonry arch bridge (#21C-109) over Napa River
Pope Street	P-28-001302	Bridge	1908	6Y	masonry arch bridge (#21C-110) over Sulphur Creek
924 Pope Street	4574-0044-0000	Winery	1885	3S	Jacob Meily Winery fermenting building
330 Pratt Avenue	--	Barn	1882	--	vernacular barn
376 Pratt Avenue	--	Residence	1882	--	vernacular residence
514 Pratt Avenue	--	Residence/Winery	1885, 1930	--	stone and wood-frame winery building; vernacular residence

**TABLE C-1 (Continued)
RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS**

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
855 Pratt Avenue	--	Residence	1890	--	vernacular farmhouse
Railroad Avenue	4574-0071-0000	Warehouse	1895	7N	"Boy Scout Hall"; wood, false-front warehouse
Railroad Avenue	4574-0072-0000	Railroad Depot	1895	1S	Southern Pacific Railroad Depot
1321 Railroad Avenue	--	Commercial Building	1875	1D	stucco-finished, L-shaped commercial building
1345 Railroad Avenue	4574-0067-0000	Commercial Building	1884	1D/1S	"Taylor, Duckworth & Co. Foundry"; Commercial warehouse district
1417 Railroad Avenue	4574-0068-0000	Commercial Building	1906	7N	warehouse
1468 Railroad Avenue	4574-0069-0000	Commercial Building	1877	1S	Victorian, Italianate style sherry house and saloon
1478 Railroad Avenue	4574-0070-0000	Commercial Building	1880	7N	vernacular saloon
1550 Railroad Avenue	--	Residence	1910, 1939	--	vernacular and Mission Revival style
1572 Railroad Avenue	P-28-000770	Government Buildings	1939	2S2/4CM / 6Y	CDF Ranger Unit Headquarters with Craftsmen bungalow ranger residence (2S2) and ranger unit headquarters (6Y)
Silverado Trail	4574-0014-0000	Cellar	1894	7N	"Stone Bridge Saloon" site
1605 Spring Mountain Road	4574-0099-0000	Residence	1900	3S	Queen Anne style
1637 Spring Mountain Road	4574-0100-0000	Residence	1907	3S	Craftsman style
1651 Spring Mountain Road	4574-0101-0000	Residence	1905	3S	Shingle, Queen Anne, Colonial Revival styles
1709 Spring Mountain Road	4574-0102-0000	Residence	1920	7N	Bungalow cottage
Spring Street	4574-0116-0000	Cemetery	1856	7N	St. Helena Public Cemetery
1228 Spring Street	4574-0073-0000	Commercial Building	1875	1D/1S	"William Tell Hotel"; false-front
1245 Spring Street	4574-0117-0000	Residence	1927	7N	Bungalow cottage
1313 Spring Street	4574-0089-0000	Meeting Hall	1900	3S	Italian Villa style
1314 Spring Street	4574-0090-0000	Church	1883	7N	Grace Episcopal Church
1343 Spring Street	4574-0091-0000	Church/Residence	1875	7N	Italianate style First Baptist Church; former Joseph Chiles house
1420 Spring Street	4574-0092-0000	Church	1875	3S	First Presbyterian Church
1526 Spring Street	4574-0093-0000	Residence	1875	7N	frame-house cottage
1531 Spring Street	4574-0094-0000	Residence	1885	7N	frame-house cottage
1542 Spring Street	4574-0095-0000	Residence	1875	3S	Greek Revival style

**TABLE C-1 (Continued)
RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS**

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
1551 Spring Street	P-28-001516	Residence	ca. 1880	--	Italianate style house and two barns
1635 Spring Street	--	Winery	1876	--	"Lewelling Winery"; vernacular winery building
1735 Spring Street	4574-0096-0000	Residence	1885	7N	wood-frame farmhouse
1817 Spring Street	4574-0097-0000	Residence/Winery	1890	7N	Schweinitzer House & Winery; frame-house and winery building
1933 Spring Street	--	Residence	1910	--	Bungalow residence
1944 Spring Street	4574-0098-0000	Residence	1867	7N	Gothic Revival Methodist Church Parsonage
1331 Stockton Street	--	Residence	1912	--	Folk Victorian residence
2252 Sulphur Springs Avenue	--	Residence	1865	--	vernacular residence
2610 Sulphur Springs Avenue	--	Residence	1879	--	"Edgehill Vineyard Barracks"; vernacular style

^a As assigned by the California Office of Historic Preservation.

^b California Office of Historic Preservation (OHP) National Register Status (NRS) Code: **1D** Contributor to a district or multiple resource property listed in National Register by the Keeper of the National Register. Listed in the California Register; **1S** Individual property listed in National Register by the Keeper. Listed in the California Register; **2S** Individual property determined eligible for National Register by the Keeper. Listed in the California Register; **2S2** Individual property determined eligible for National Register by a consensus through Section 106 process. Listed in the California Register; **2S3** Individual property determined eligible for National Register by Part I Tax Certification. Listed in the California Register; **3S** Appears eligible for National Register as an individual property through survey evaluation; **4CM** Master List – State Owned Properties – PRC §5024; **6X** Determined ineligible for the National Register by SHRC or Keeper; **6Y** Determined ineligible for National Register by consensus through Section 106 process – Not evaluated for California Register or local listing; **7J** Received by OHP for evaluation or action but not yet evaluated; **7L** State Historical Landmarks 1-769 and Point of Historical Interest designated prior to January 1998 – Needs to be reevaluated using current standards; **7N** Needs to be reevaluated (formerly National Register Status Code 4); **7W** Submitted to OHP for action – withdrawn.

From: "Kurt Kelder" <kurt@kelderengineering.com>
Subject: **RE: Nu Forest Annexation**
Date: March 15, 2016 7:22:23 PM PDT
To: "'Jerry Haag"' <jphaag@pacbell.net>, "'Sharmaine Ege"' <Shar@nuforestproducts.com>
Cc: "'Vanessa Apodaca"' <apodaca@coastlandcivil.com>

Hi Jerry,

Typically, for sewer use, I use the County standard for commercial employees. This equate to 15 gpd per employee.

Vanessa: if you're OK with this number, I am willing to put it on paper and stamp/sign it.

At 80 employees, this equates to 1,200 gpd. If we want to add a factor of safety of say 25%; we could estimate the sewer use at 1,500 gpd.

Water use would be somewhat similar. We would have a bit more for landscape irrigation, etc.

What do you think?

Thanks.

Kurt

Kurt Kelder, PE
Kelder Engineering, Inc.
132 S. Cloverdale Blvd.
Cloverdale, CA 95425
Phone: (707) 894-0862
e-mail: kurt@kelderengineering.com

-----Original Message-----

From: Jerry Haag [mailto:jphaag@pacbell.net]
Sent: Tuesday, March 15, 2016 3:18 PM
To: Sharmaine Ege <Shar@nuforestproducts.com>; Kurt Kelder <kurt@kelderengineering.com>
Cc: Vanessa Apodaca <apodaca@coastlandcivil.com>
Subject: Nu Forest Annexation

IN the interest of moving this project along, is there a way to estimate future water and sewer use of the Nu Forest facility at full buildout? Maybe this could be based on City of Healdsburg records?

Also, Sharmaine--does Nu Forest have any information of the type of dust collection equipment to be installed? Is there a manufacturer or make/model

number chosen? Or will existing dust handling equipment at the Healdsburg yard just be moved up to Cloverdale? If George or others knows the technical specs of this, our air quality person on the CEQA team would like to know.

thanks

This email has been checked for viruses by Avast antivirus software.
<https://www.avast.com/antivirus>

**TABLE B-1
RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS**

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
--	P-28-000009	Archaeological Site	Prehistoric	--	midden site with human burial
--	P-28-000151	Archaeological Site	Prehistoric	2S2	lithic scatter
--	P-28-000301	Archaeological Site	Prehistoric	--	lithic scatter, midden
--	P-28-000313	Archaeological Site	Prehistoric	--	lithic scatter
--	P-28-000951	Archaeological Site	Prehistoric	--	lithic scatter
--	P-28-001267	Archaeological Site	Prehistoric	--	lithic scatter
--	P-28-001349	Archaeological Site	Historic	--	stone foundation, possible building pad, and structural debris
--	P-28-001402	Archaeological Site	Prehistoric	--	lithic scatter
--	CA-NAP-129	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-133	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-134	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-158	Archaeological Site	Prehistoric	--	lithic scatter
--	CA-NAP-352	Archaeological Site	Prehistoric	--	lithic scatter
--	CA-NAP-356	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-376	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-403	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-404	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-406	Archaeological Site	Prehistoric	--	lithic scatter
--	CA-NAP-408	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-507	Archaeological Site	Prehistoric	--	midden site
--	CA-NAP-578	Archaeological Site	Prehistoric	--	lithic scatter
--	CA-NAP-684H	Archaeological Site	Historic	--	concrete and brick structure; possible remnants of water wheel
--	CA-NAP-843	Archaeological Site	Prehistoric	--	lithic scatter
--	C-1300	Archaeological Site	Prehistoric	--	reported to NWIC by resident; bifaces and a grinding stone observed
1104 Adams Street	--	Commercial Building	1906	1D	native fieldstone commercial building

RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
1225 Adams Street	--	Commercial Building	1920	1D	utilitarian commercial building
1310 Adams Street	4574-0074-0000	Church	1867	3S	United Methodist Church
1325 Adams Street	4574-0075-0000	School	1932	3S	Spanish Colonial Revival elementary school
1611 Adams Street	4574-0076-0000	Residence	1907	3S	Craftsman bungalow
Alexander Court	4574-0046-0000	Neighborhood	1907	3S	Residential street; Bungalow, Craftsman, and Colonial style houses
1207 Alexander Court	4574-0045-0000	Residence	1907	3S	Craftsman bungalow
Allison Avenue	4574-0032-0000	Barn	1885	3S	former olive press-house
910 Allison Avenue	--	Residence	1902	--	rural vernacular residence
1269 Allyn Avenue	4574-0077-0000	Residence	1886	3S	Italianate style
1279 Allyn Avenue	4574-0078-0000	Residence	1890	3S	Stick style
1317 Allyn Avenue	4574-0079-0000	Residence	1883	3S	Italianate style
Charter Oak Avenue	4574-0040-0000	Winery	1881	3S	Sciaroni Winery stone sherry house
Charter Oak Avenue	4574-0041-0000	Winery	1881	3S	Sciaroni Winery fermenting building
957 Charter Oak Avenue	4574-0033-0000	Residence	1875	7N	Gothic Revival style
967 Charter Oak Avenue	4574-0034-0000	Residence	1880	3S	Italianate style
1043 Charter Oak Avenue	4574-0035-0000	Residence	1905	7N	Queen Anne, Colonial Revival residence; "Dr. Connor House"
1132 Church Street	--	Residence	1890	--	vernacular residence
1216 Church Street	4574-0047-0000	Warehouse	1878	1S	bonded brandy warehouse
2070 Dean York Lane	4574-0103-0000	Residence	1880	7N	frame-house cottage
415 Dowdell Lane	4574-0104-0000	Residence	1890	3S	Stick style
1133 Edwards Street	4574-0036-0000	Residence	1870	7N	Gothic Revival style
1217 Edwards Street	4574-0037-0000	Residence	1875	7N	Greek Revival style
825 Fulton Lane	--	Residence	1864	--	vernacular residence
Highway 29	P-28-001299	Bridge	1910	6Y	masonry arch bridge (#21-16) over Sulphur Creek
Highway 29	P-28-001316	Bridge	1902	6Y	masonry arch bridge (#21-17) over York Creek

RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
Highway 29	P-28-001332	Culvert	1911	--	concrete culvert
Hudson Avenue	4574-0081-0000	Winery	1890	7N	Esmeralda Winery cellar building
1401 Hudson Avenue	4574-0080-0000	Residence	1883	3S	Colonial Revival style
921 Hunt Avenue	4574-0038-0000	Residence	1870	3S	Saltbox style cottage
940 Hunt Avenue	--	Residence	1936	--	Craftsman style
957 Hunt Avenue	4574-0039-0000	Residence	1890	3S	Second Empire style; "D.O. Hunt House"
1407 Kearney Street	4574-0082-0000	Residence	1906	3S	Craftsman style
1459 Kearney Street	4574-0083-0000	Residence	1899	3S	Queen Anne, Colonial Revival style
1489 Kearney Street	--	Residence	1900	--	vernacular residence
1451, 1451-1/2 Library Lane	--	Residence/Winery	1908, 1912	--	"Jackse Winery"; vernacular winery and associated residence
1902 Madrona Avenue	4574-0105-0000	Residence/Winery	1885	6Y/2S2	Italianate residence (6Y); native stone wine cellar (2S2)
Main Street	4574-0048-0000	Lighting	1915	3S	Main Street Electrolaires
Main Street	4574-0049-0000	Park	1890	3S	Lyman Park; site of former meeting hall and public high school
Main Street	--	Commercial District	1870-1947	1S	St. Helena Historic Commercial District; 35 contributing buildings
195 Main Street	--	Motel	1940	--	Streamline Moderne style
397 Main Street	4574-0106-0000	Residence	1859	3S	Italianate style
437 Main Street	4574-0107-0000	School	1912	1S	Richardsonian Romanesque style high school
738 Main Street	4574-0042-0000	Residence	1875	3S	Gothic Revival style
933 Main Street	--	Commercial Building	1949	--	"Gott's Roadside Tray"; Streamline Moderne/Googie building
1000 Main Street	--	Winery	1933	--	"Merryvale Winery"; concrete clad, utilitarian winery
1028 Main Street	--	Residence	1907	--	vernacular residence
1057 Main Street	4574-0050-0000	Commercial Building	1886	3S	Site of John C. Money's St. Helena Planing Mill
1200 Main Street	4574-0051-0000	Commercial Building	1903	1D	"Dutch Colonial" style
1201 Main Street	4574-0052-0000	Commercial Building	1890	1D	Native stone; brick false-front
1205 Main Street	--	Commercial Building	1899	1D	Native stone; brick false-front
1210 Main Street	--	Commercial Building	1955	6X	cinder block building

RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
1214 Main Street	--	Commercial Building	1875	6X	remodeled
1219 Main Street	--	Commercial Building	1875	1D	wood-frame, stone building
1222 Main Street	--	Commercial Building	1875	6X	remodeled
1223 Main Street	--	Commercial Building	1875	6X	remodeled
1225 Main Street	--	Commercial Building	1875	1D	brick false-front
1228 Main Street	--	Commercial Building	1875	6X	remodeled
1230 Main Street	--	Commercial Building	1875	6X	Remodeled
1231 Main Street	4574-0053-0000	Commercial Building	1875	1D	"Davis Building"
1234 Main Street	--	Commercial Building	1908	6X	Remodeled
1235 Main Street	--	Commercial Building	1880	1D/2S2	Italianate style
1269 Main Street	--	Commercial Building	1911	1D/2S2	concrete-block; native stone
1302 Main Street	4574-0054-0000	Commercial Building	1891	1D	"Hunt Building"; native stone
1305 Main Street	4574-0055-0000	Commercial Building	1881	1D	Wood building; former "Windsor Hotel"
1310 Main Street	--	Commercial Building	1875	1D	remodeled
1312 Main Street	--	Commercial Building	1920	1D	remodeled
1313 Main Street	--	Commercial Building	1875	1D	remodeled
1316 Main Street	--	Commercial Building	1920	1D	vertical-board sided building
1320 Main Street	--	Commercial Building	1915	1D	stucco-finished
1321 Main Street	--	Commercial Building	1920	6X	remodeled
1325 Main Street	--	Commercial Building	1925	6X	remodeled
1327 Main Street	4574-0056-0000	Commercial Building	1892	1D	"Richie Block"; Queen Anne style
1328 Main Street	4574-0057-0000	Commercial Building	1900	1D	"St. Helena Star Building"; Romanesque Revival style
1332 Main Street	--	Commercial Building	1925	1D	remodeled
1339 Main Street	--	Commercial Building	1875	1D	remodeled
1343 Main Street	--	Commercial Building	1875	6X	remodeled
1346 Main Street	--	Commercial Building	1875	1D	single-story

RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS

Address	Resource Identification Number^a	Resource Type	Age	OHP NRS Code^b	Comments
1347 Main Street	4574-0058-0000	Commercial Building	1890	1D	"Owen Wade Building"; brick façade
1350 Main Street	--	Commercial Building	1885	1D	Italianate style
1351 Main Street	4574-0059-0000	Commercial Building	1890	1D	"Bank of St. Helena Building"; native fieldstone
1352 Main Street	4574-0060-0000	Commercial/Meeting Hall	1885	3S	I.O.O.F building; brick façade
1355 Main Street	--	Commercial Building	1940	1D	remodeled
1367 Main Street	--	Commercial Building	1888	1D	brick façade
1370 Main Street	--	Commercial Building	1925	6X	remodeled
1371 Main Street	--	Commercial Building	1884	1D	native stone
1379 Main Street	--	Commercial Building	1885	1D	Italianate style
1380 Main Street	--	Commercial Building	1937	1D	Streamline Moderne style, prefabricated gas station
1381 Main Street	4574-0061-0000	Commercial Building	1889	3S	"Kettlewell Building"; brick façade
1414 Main Street	4574-0063-0000	Residence	1870	7N	Victorian Gothic cottage
1461 Main Street	P-28-000790	Government Building	1941	--	United States Post Office
1508 Main Street	4574-0062-0000	Residence	1915	3S	Craftsman style
1817 Main Street	4574-0064-0000	Residence	1890	3S	vernacular residence
1817 Main Street	4574-0065-0000	Tankhouse	1890	3S	vernacular
1855 Main Street	--	Residence	1910	--	Georgian Revival style
1915 Main Street	4574-0066-0000	Residence	1907	3S	Colonial Revival style
2000 Main Street	P-28-001440	Winery	1878-1935	1S/1CL	Beringer Winery Historic District
2000 Main Street	P-28-000954	Stone Fence	1876	3D	Beringer Brothers winery Stone fence/retaining wall
2000 Main Street	P-28-000959	Trees	1885	1D	Beringer Brothers winery elm tree canopy
2000 Main Street	--	Road	--	3D	Beringer Winery circulation routes
2000 Main Street	P-28-001441	Residence	1883	1D/1S	Frederick Beringer mansion
2000 Main Street	P-28-001442	Residence	1860s	1D	"Sisters' House" Beringer Winery residence
2000 Main Street	P-28-001443	Commercial Building	1935	1D	"Export Building"; Beringer Winery office

RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
2000 Main Street	P-28-001444	Winery and Cellar	1877	1D	Beringer Winery and wine cellar
2000 Main Street	P-28-001445	Commercial Building	1935	1D	Beringer Winery distillery
2000 Main Street	P-28-001446	Residence	ca. 1912	1D	Jacob Beringer, Jr. Craftsman bungalow
2555 Main Street	P-28-000953	Winery	1889	1S/1CL	"Greystone Cellars"; Richardsonian Romanesque style winery building
2555 Main Street	4574-0113-0000	Stone Arch	1889	1S	Native fieldstone archway for Greystone Cellars
2800 Main Street	4574-0115-0000	Winery	1874	1S/7L	Charles Krug Winery
2800 Main Street	--	Outbuilding	1881	2S3	Charles Krug Winery Carriage House
681 McCorkle Avenue	--	Residence	1907	--	vernacular residence
835 McCorkle Avenue	4574-0043-0000	Residence	1885	3S	Queen Anne style
458 Mills Lane	--	Residence	1900	--	vernacular residence
1255 Oak Avenue	4574-0084-0000	Church	1889	1S	Church of St. Helena
1310 Oak Avenue	--	Commercial Building	1905	1D	native stone façade
1313 Oak Avenue	4574-0089-0000	Meeting Hall	1900	3S	"Native Sons Hall"; Italian Villa style
1326 Oak Avenue	--	Residence	1899	--	vernacular residence
1360 Oak Avenue	4574-0085-0000	Library	1907	1S	Carnegie Library
1445 Oak Avenue	4574-0086-0000	Residence	1895	3S	Stick style
1454-1466 Oak Avenue	--	Residence	c. 1930	--	Tudor Revival style residences
1467 Oak Avenue	4574-0087-0000	Residence	1882	3S	Stick style; M.F. Fisher residence
1551 Oak Avenue	4574-0088-0000	Residence	1907	7N	Queen Anne, Bungalow style
Pope Street	P-28-001300	Bridge	1894	2S2/7L	masonry arch bridge (#21C-109) over Napa River
Pope Street	P-28-001302	Bridge	1908	6Y	masonry arch bridge (#21C-110) over Sulphur Creek
924 Pope Street	4574-0044-0000	Winery	1885	3S	Jacob Meily Winery fermenting building
330 Pratt Avenue	--	Barn	1882	--	vernacular barn
376 Pratt Avenue	--	Residence	1882	--	vernacular residence
514 Pratt Avenue	--	Residence/Winery	1885, 1930	--	stone and wood-frame winery building; vernacular residence

RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
855 Pratt Avenue	--	Residence	1890	--	vernacular farmhouse
Railroad Avenue	4574-0071-0000	Warehouse	1895	7N	"Boy Scout Hall"; wood, false-front warehouse
Railroad Avenue	4574-0072-0000	Railroad Depot	1895	1S	Southern Pacific Railroad Depot
1321 Railroad Avenue	--	Commercial Building	1875	1D	stucco-finished, L-shaped commercial building
1345 Railroad Avenue	4574-0067-0000	Commercial Building	1884	1D/1S	"Taylor, Duckworth & Co. Foundry"; Commercial warehouse district
1417 Railroad Avenue	4574-0068-0000	Commercial Building	1906	7N	warehouse
1468 Railroad Avenue	4574-0069-0000	Commercial Building	1877	1S	Victorian, Italianate style sherry house and saloon
1478 Railroad Avenue	4574-0070-0000	Commercial Building	1880	7N	vernacular saloon
1550 Railroad Avenue	--	Residence	1910, 1939	--	vernacular and Mission Revival style
1572 Railroad Avenue	P-28-000770	Government Buildings	1939	2S2/4CM / 6Y	CDF Ranger Unit Headquarters with Craftsmen bungalow ranger residence (2S2) and ranger unit headquarters (6Y)
Silverado Trail	4574-0014-0000	Cellar	1894	7N	"Stone Bridge Saloon" site
1605 Spring Mountain Road	4574-0099-0000	Residence	1900	3S	Queen Anne style
1637 Spring Mountain Road	4574-0100-0000	Residence	1907	3S	Craftsman style
1651 Spring Mountain Road	4574-0101-0000	Residence	1905	3S	Shingle, Queen Anne, Colonial Revival styles
1709 Spring Mountain Road	4574-0102-0000	Residence	1920	7N	Bungalow cottage
Spring Street	4574-0116-0000	Cemetery	1856	7N	St. Helena Public Cemetery
1228 Spring Street	4574-0073-0000	Commercial Building	1875	1D/1S	"William Tell Hotel"; false-front
1245 Spring Street	4574-0117-0000	Residence	1927	7N	Bungalow cottage
1313 Spring Street	4574-0089-0000	Meeting Hall	1900	3S	Italian Villa style
1314 Spring Street	4574-0090-0000	Church	1883	7N	Grace Episcopal Church
1343 Spring Street	4574-0091-0000	Church/Residence	1875	7N	Italianate style First Baptist Church; former Joseph Chiles house
1420 Spring Street	4574-0092-0000	Church	1875	3S	First Presbyterian Church
1526 Spring Street	4574-0093-0000	Residence	1875	7N	frame-house cottage
1531 Spring Street	4574-0094-0000	Residence	1885	7N	frame-house cottage
1542 Spring Street	4574-0095-0000	Residence	1875	3S	Greek Revival style

RECORDED CULTURAL RESOURCES WITHIN CITY LIMITS

Address	Resource Identification Number ^a	Resource Type	Age	OHP NRS Code ^b	Comments
1551 Spring Street	P-28-001516	Residence	ca. 1880	--	Italianate style house and two barns
1635 Spring Street	--	Winery	1876	--	"Lewelling Winery"; vernacular winery building
1735 Spring Street	4574-0096-0000	Residence	1885	7N	wood-frame farmhouse
1817 Spring Street	4574-0097-0000	Residence/Winery	1890	7N	Schweitzer House & Winery; frame-house and winery building
1933 Spring Street	--	Residence	1910	--	Bungalow residence
1944 Spring Street	4574-0098-0000	Residence	1867	7N	Gothic Revival Methodist Church Parsonage
1331 Stockton Street	--	Residence	1912	--	Folk Victorian residence
2252 Sulphur Springs Avenue	--	Residence	1865	--	vernacular residence
2610 Sulphur Springs Avenue	--	Residence	1879	--	"Edgehill Vineyard Barracks"; vernacular style

^a As assigned by the California Office of Historic Preservation.

^b California Office of Historic Preservation (OHP) National Register Status (NRS) Code: **1D** Contributor to a district or multiple resource property listed in National Register by the Keeper of the National Register. Listed in the California Register; **1S** Individual property listed in National Register by the Keeper. Listed in the California Register; **2S** Individual property determined eligible for National Register by the Keeper. Listed in the California Register; **2S2** Individual property determined eligible for National Register by a consensus through Section 106 process. Listed in the California Register; **2S3** Individual property determined eligible for National Register by Part I Tax Certification. Listed in the California Register; **3S** Appears eligible for National Register as an individual property through survey evaluation; **4CM** Master List – State Owned Properties – PRC \$5024; **6X** Determined ineligible for the National Register by SHRC or Keeper; **6Y** Determined ineligible for National Register by consensus through Section 106 process – Not evaluated for California Register or local listing; **7J** Received by OHP for evaluation or action but not yet evaluated; **7L** State Historical Landmarks 1-769 and Point of Historical Interest designated prior to January 1998 – Needs to be reevaluated using current standards; **7N** Needs to be reevaluated (formerly National Register Status Code 4); **7W** Submitted to OHP for action – withdrawn.

From: "Kurt Kelder" <kurt@kelderengineering.com>
Subject: **RE: Nu Forest Annexation**
Date: March 15, 2016 7:22:23 PM PDT
To: "Jerry Haag" <jphaag@pacbell.net>, "Sharmaine Ege" <Shar@nuforestproducts.com>
Cc: "Vanessa Apodaca" <apodaca@coastlandcivil.com>

Hi Jerry,

Typically, for sewer use, I use the County standard for commercial employees. This equate to 15 gpd per employee.

Vanessa: if you're OK with this number, I am willing to put it on paper and stamp/sign it.

At 80 employees, this equates to 1,200 gpd. If we want to add a factor of safety of say 25%; we could estimate the sewer use at 1,500 gpd.

Water use would be somewhat similar. We would have a bit more for landscape irrigation, etc.

What do you think?

Thanks.

Kurt

Kurt Kelder, PE
Kelder Engineering, Inc.
132 S. Cloverdale Blvd.
Cloverdale, CA 95425
Phone: (707) 894-0862
e-mail: kurt@kelderengineering.com

-----Original Message-----

From: Jerry Haag [mailto:jphaag@pacbell.net]
Sent: Tuesday, March 15, 2016 3:18 PM
To: Sharmaine Ege <Shar@nuforestproducts.com>; Kurt Kelder <kurt@kelderengineering.com>
Cc: Vanessa Apodaca <apodaca@coastlandcivil.com>
Subject: Nu Forest Annexation

IN the interest of moving this project along, is there a way to estimate future water and sewer use of the Nu Forest facility at full buildout? Maybe this could be based on City of Healdsburg records?

Also, Sharmaine--does Nu Forest have any information of the type of dust collection equipment to be installed? Is there a manufacturer or make/model

number chosen? Or will existing dust handling equipment at the Healdsburg yard just be moved up to Cloverdale? If George or others knows the technical specs of this, our air quality person on the CEQA team would like to know.

thanks

This email has been checked for viruses by Avast antivirus software.
<https://www.avast.com/antivirus>

APPENDIX C

Greenhouse Gas Emissions Model Output

Page from 2005-2010 St Helena Inventory Community Emissions Inventory Results

Emissions by Scope

The emissions sources by scope and sector included in this inventory are listed in Table 4.

Table 4: Scopes and Sectors Included in St. Helena 2005 and 2010 Community Inventory

Sector	Scope 1	Scope 2	Scope 3
Residential	Natural Gas Other Fuel	Electricity	
Commercial / Industrial	Natural Gas Other Fuel & Point Source Emissions	Electricity	Electricity
Transportation (On-road & Off-road)	Gasoline & Diesel		
Waste			Future Emissions from Waste
Agriculture	Nitrogen Fertilizer Application Agricultural Off-road Equipment		

Total roll-up community emissions for St. Helena, consisting of Residential, Commercial/Industrial, Transportation, Waste, and Agricultural sectors were approximately 43,831 metric tons¹⁵ of CO₂e (MtCO₂e) in the year 2005 and increased to 44,008 MtCO₂e in the year 2010, which is a 177 MtCO₂e (0.4%) increase from 2005 to 2010 (Table 5). This roll-up does not include emissions categorized as information items. Because the sources that go into a roll-up number vary from community to community, this number should not be used for comparison purposes without a careful analysis of the basis of the number.

Table 5: 2005 and 2010 Community GHG Emissions by Sector and Scope

Sector	2005				2010				Absolute Change (MtCO ₂ e)	Percent Change
	Scope 1	Scope 2	Scope 3	Total	Scope 1	Scope 2	Scope 3	Total		
Commercial / Industrial	6,954	9,519	115	16,588	6,963	8,359	122	15,444	-1,144	-7%
Transportation (On/Off-road)	11,768	N/A	N/A	11,768	15,098	N/A	N/A	15,098	3,330	28%
Residential	7,076	4,093	N/A	11,169	7,269	3,677	N/A	10,946	-223	-2%
Waste	N/A	N/A	2,684	2,684	N/A	N/A	1,053	1,053	-1,631	-61%
Agriculture	1,622	N/A	N/A	1,622	1,468	N/A	N/A	1,468	-155	-10%
Total Emissions Progress	27,420	13,612	2,799	43,831	30,797	12,035	1,175	44,008	177	0.4%
Percentage of Total CO ₂ e	63%	31%	6%	100%	70%	27%	3%	100%	-	-

*Transportation emissions excludes agricultural off-road emissions. The same agricultural off-road emissions were categorized with N fertilizer emissions in the Agriculture sector

¹⁵ All emissions estimated using ICLLIT's CACP 2009 Software.

St Helena GP Update
Data Used to Model Air Pollutant and GHG Emissions

Land Use Type	Existing 2010 (from 2008 study)		Existing (2015)		Development Allowed by Growth Management System (2035)		Total with General Plan
	2010	2008	2015	2035	2035	2035	2035
Single-Family Units	2118		1864	180			
Multi-Family Units	632		556	80			
Total Housing Units	2750		2420	260			2680
Population	6100		5900	632			6532
							11%
Office Space (square feet)				88,000			
Retail Space (square feet)				75,000			
Winery Uses (square feet)				27,000			
Hotels (rooms)				300			435600
Industrial							
Total	7,093,612		625,600				
Jobs	5810		5590	541			6131
Total Trips	39,570						10%
Rate of Growth			Jobs	10%	541	6131	increase total
			Population	11%	632	6532	
			Service Population	10%	1173	12663	
						0.092632	
From total of hourly traffic movements					24210		
AM			17876		26905		
PM			19315		51115		
Total			37191				
			Percent Change			37%	
			These probably include through trips				

St Helena CalEEMod Traffic Modeling for GP Update growth

	Trip Rate	Trip Length		5.4	7.3	9.5	7.3	9.5	7.3	Trip Type		Res		Res		Non Res		Non Res	
		12.4	4.3							0	0	100	0	H-W	H-S	H-O	C-C	C-W	C-NW
Apartment Units Low Rise	6.59	7.16	6.07	12.4	4.3	5.4	0	0	0	100	0	26.1	29.1	44.8	0	0	0	0	0
General Light Industry	6.97	1.32	0.68	0	0	0	7.3	9.5	7.3	100	0	0	0	0	0	28	59	13	13
General Office	11.01	2.37	0.98	0	0	0	7.3	9.5	7.3	100	0	0	0	0	0	48	33	19	19
Building Hotel	8.17	8.19	5.95	0	0	0	7.3	9.5	7.3	100	0	0	0	0	0	61.6	19.4	19	19
Single Family Housing	9.57	10.08	8.77	12.4	4.3	5.4	0	0	0	100	0	26.1	29.1	44.8	0	0	0	0	0
Strip Mall	44.32	42.04	20.43	0	0	0	7.3	9.5	7.3	100	0	0	0	0	0	64.4	16.6	19	19

Trips with Passby/Diverted 9,187
 VMT with Passby/Diverted 16352069
 CalEEMod VMT --> 18135941 10%
 23360620 30%
 Adjusted trips 8283.356
 % of Existing 21%
 Total 47853.36

Output from CalEEMod combined with City Inventory for energy and solid waste

CalEEMod Modeled Existing Emissions				
Category	2015	adjust	2020	2035
Area	412	412	412	412
Energy	40823	40823	30977	30977
Mobile	82845	32915	71599	28447
Waste	4136	4136	4136	4136
Water	3863	3863	3182	3182
Total	132079	82148	110307	67154
			105584	65278

Traffic Trips	
F&P Traffic Trips	39570
CalEEMod Trips	99,596
Adjustment	40%

Energy	
2010 =	445
2020 =	290
Adjustment	65%

CalEEMod modeled GP increase			
	2020	adjust	2035
	18.6527	19	18.6511
	2,281.67	2282	2,281.67
	6,235.52	5113	5,825.39
	222.8314	223	222.8314
	113.4904	113	113.4904
	8,872.16	7750	8,462.03
			7413

Existing Projected Emissions

Area	2015	2020	2035
Energy	26390	17197.98	17197.9775
Mobile	32915	28447	26570
Waste	1053	842.4	842.4
Water	3863	3863	3863
Total	64633	50762	48886

from inventory adjusted for year
 from inventory and reduced 20%

GP Total Emissions

	2020	2035
	431	431
	19480	19480
	33560	31347
	1065	1065
	3977	3977
	58512	56299
	-9%	-13%

St Helena General Plan Growth Napa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	80.00	Dwelling Unit	5.00	80,000.00	229
Single Family Housing	180.00	Dwelling Unit	58.44	324,000.00	515
General Office Building	88.00	1000sqft	2.02	88,000.00	0
Strip Mall	75.00	1000sqft	1.72	75,000.00	0
Hotel	300.00	Room	10.00	435,600.00	0
General Light Industry	27.70	1000sqft	0.64	27,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.6	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2035

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MW/hr)	290	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
--------------------------	-----	--------------------------	-------	--------------------------	-------

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - Use PG&E 2020 projected emission rate
- Land Use - Development Allowed by Growth Management System (2035)
- Construction Phase - No construction
- Off-road Equipment - No construction
- Vehicle Trips - Zero out passby and diverted trips to compute differences.

2.2 Overall Operational

Unmitigated Operational

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	5.8206	0.0443	3.7135	2.1200e-003	0.2720	0.2720	0.2720	0.2720	0.2720	0.2720	27.7420	12.2559	39.9979	0.0662	1.4300e-003	41.8300
Energy	0.1611	1.4434	1.0747	8.7900e-003	0.1113	0.1113	0.1113	0.1113	0.1113	0.1113	0.0000	2,660.6117	2,660.6117	0.1372	0.0513	2,679.3925
Mobile	2.9491	5.4398	29.3308	0.0987	6.7318	0.1227	6.8545	1.8035	0.1133	1.9168	0.0000	6,429.1468	6,429.1468	0.1754	0.0000	6,432.8295
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	124.2893	0.0000	124.2893	7.3453	0.0000	278.5404
Water						0.0000	0.0000	0.0000	0.0000	0.0000	16.5453	48.4074	64.9527	1.7042	0.0411	113.4904
Total	8.9309	6.9275	34.1190	0.1096	6.7318	0.5061	7.2378	1.8035	0.4966	2.3002	168.5767	9,150.4218	9,318.9984	9.4282	0.0939	9,546.0828

Mitigated Operational

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	5.8206	0.0443	3.7135	2.1200e-003		0.2720	0.2720		0.2720	0.2720	27.7420	12.2559	39.9979	0.0662	1.4300e-003	41.8300
Energy	0.1611	1.4434	1.0747	8.7900e-003		0.1113	0.1113		0.1113	0.1113	0.0000	2,660.6117	2,660.6117	0.1372	0.0513	2,679.3925
Mobile	2.9491	5.4398	29.3308	0.0987	6.7318	0.1227	6.8545	1.8035	0.1133	1.9168	0.0000	6,429.1468	6,429.1468	0.1754	0.0000	6,432.8295
Waste						0.0000	0.0000		0.0000	0.0000	124.2893	0.0000	124.2893	7.3453	0.0000	278.5404
Water						0.0000	0.0000		0.0000	0.0000	16.5453	48.4074	64.9527	1.7039	0.0411	113.4640
Total	8.9309	6.9275	34.1190	0.1096	6.7318	0.5061	7.2378	1.8035	0.4966	2.3002	166.5767	9,150.4218	9,318.9984	9.4279	0.0938	9,546.0564

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
Percent Reduction															

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/20/2017	5/22/2017	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Mitigated	2.9491	5.4398	29.3308	0.0987	6.7318	0.1227	6.8545	1.8035	0.1133	1.9168	0.0000	6,429,1468	6,429,1468	0.1754	0.0000	6,432.8295
Unmitigated	2.9491	5.4398	29.3308	0.0987	6.7318	0.1227	6.8545	1.8035	0.1133	1.9168	0.0000	6,429,1468	6,429,1468	0.1754	0.0000	6,432.8295

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Apartment Low Rise	527.20	572.80	485.60	1,217,409	1,217,409	1,217,409	1,217,409
General Light Industry	193.07	36.56	18.84	439,257	439,257	439,257	439,257
General Office Building	968.88	208.56	86.24	1,839,214	1,839,214	1,839,214	1,839,214
Hotel	2,451.00	2,457.00	1,785.00	4,739,298	4,739,298	4,739,298	4,739,298
Single Family Housing	1,722.60	1,814.40	1,578.60	3,956,316	3,956,316	3,956,316	3,956,316
Strip Mall	3,324.00	3,153.00	1,532.25	5,944,448	5,944,448	5,944,448	5,944,448
Total	9,186.75	8,242.32	5,486.53	18,135,941	18,135,941	18,135,941	18,135,941

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartment Low Rise	12.40	4.30	5.40	26.10	29.10	44.80	89	11	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	95	5	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	81	19	0
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	62	38	0

Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	89	11	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	60	40	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.478344	0.072752	0.168497	0.154136	0.057898	0.008272	0.017009	0.028716	0.002617	0.001151	0.007251	0.000600	0.002755

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Mitigated						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,066.2108	1,066.2108	0.1066	0.0221	1,075.2883
Electricity Unmitigated						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,066.2108	1,066.2108	0.1066	0.0221	1,075.2883
Natural Gas Mitigated	0.1611	1.4434	1.0747	8.7900e-003		0.1113	0.1113	0.1113	0.1113	0.1113	0.0000	1,594.4010	1,594.4010	0.0306	0.0292	1,604.1042
Natural Gas Unmitigated	0.1611	1.4434	1.0747	8.7900e-003		0.1113	0.1113	0.1113	0.1113	0.1113	0.0000	1,594.4010	1,594.4010	0.0306	0.0292	1,604.1042

5.2 Energy by Land Use - Natural Gas

Unmitigated

Land Use	Natural Gas Use kBTU/yr	tons/yr										MT/yr					
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
General Light Industry	759257	4.0900e-003	0.0372	0.0313	2.2000e-004		2.8300e-003	2.8300e-003			2.8300e-003	2.8300e-003	0.0000	40.5168	7.8000e-004	7.4000e-004	40.7634
General Office Building	1.51536e+006	8.1700e-003	0.0743	0.0624	4.5000e-004		5.6500e-003	5.6500e-003			5.6500e-003	5.6500e-003	0.0000	80.8654	1.5000e-003	1.4800e-003	81.3575
Hotel	2.02031e+007	0.1089	0.9904	0.8319	5.9400e-003		0.0753	0.0753			0.0753	0.0753	0.0000	1,078.1159	0.0207	0.0198	1,084.6771
Single Family Housing	6.35093e+006	0.0343	0.2926	0.1245	1.8700e-003		0.0237	0.0237			0.0237	0.0237	0.0000	338.9100	6.5000e-003	6.2100e-003	340.9725
Strip Mall	186750	1.0100e-003	9.1500e-003	7.6900e-003	5.0000e-005		7.0000e-004	7.0000e-004			7.0000e-004	7.0000e-004	0.0000	9.9657	1.9000e-004	1.8000e-004	10.0263
Apartments Low Rise	862518	4.6500e-003	0.0397	0.0169	2.5000e-004		3.2100e-003	3.2100e-003			3.2100e-003	3.2100e-003	0.0000	46.0272	8.8000e-004	8.4000e-004	46.3073
Total		0.1611	1.4434	1.0747	8.7800e-003		0.1113	0.1113			0.1113	0.1113	0.0000	1,594.4009	0.0306	0.0292	1,604.1042

Mitigated

Land Use	Natural Gas Use KBTU/yr	ROG	NOx	CO	SO2	tens/yr			MT/yr					CO2e		
						Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2		Total CO2	CH4
General Light Industry	759257	4.0900e-003	0.0372	0.0313	2.2000e-004	2.8300e-003	2.8300e-003	2.8300e-003	2.8300e-003	2.8300e-003	2.8300e-003	0.0000	40.5168	7.8000e-004	7.4000e-004	40.7634
General Office Building	1.51536e+006	8.1700e-003	0.0743	0.0624	4.5000e-004	5.6500e-003	5.6500e-003	5.6500e-003	5.6500e-003	5.6500e-003	5.6500e-003	0.0000	80.8654	1.5500e-003	1.4800e-003	81.3575
Hotel	2.02031e+007	0.1089	0.9904	0.8319	5.9400e-003	0.0753	0.0753	0.0753	0.0753	0.0753	0.0753	0.0000	1,078.1159	0.0207	0.0198	1,084.6771
Single Family Housing	6.35093e+006	0.0343	0.2926	0.1245	1.8700e-003	0.0237	0.0237	0.0237	0.0237	0.0237	0.0237	0.0000	338.9100	6.5000e-003	6.2100e-003	340.9725
Strip Mall	186750	1.0100e-003	9.1500e-003	7.6900e-003	5.0000e-005	7.0000e-004	7.0000e-004	7.0000e-004	7.0000e-004	7.0000e-004	7.0000e-004	0.0000	9.9657	1.9000e-004	1.8000e-004	10.0263
Apartments Low Rise	862518	4.6500e-003	0.0397	0.0169	2.5000e-004	3.2100e-003	3.2100e-003	3.2100e-003	3.2100e-003	3.2100e-003	3.2100e-003	0.0000	46.0272	8.8000e-004	8.4000e-004	46.3073
Total		0.1611	1.4434	1.0747	8.7800e-003	0.1113	0.1113	0.1113	0.1113	0.1113	0.1113	0.0000	1,594.4009	0.0306	0.0292	1,604.1042

5.3 Energy by Land Use - Electricity

Unmitigated

Land Use	Electricity Use kWh/yr	Total CO2 tons/yr	CH4 MT/yr	N2O MT/yr	CO2e
Apartments Low Rise	294537	38.7439	3.8700e-003	8.0000e-004	39.0738
General Light	250131	32.9027	3.2900e-003	6.8000e-004	33.1828
General Office Building	1,73448e+006	228.1566	0.0228	4.7200e-003	230.0991
Hotel	3.67646e+006	483.6087	0.0484	0.0100	487.7260
Single Family Housing	1,27313e+006	167.4697	0.0168	3.4600e-003	168.8955
Strip Mall	876750	115.3293	0.0115	2.3900e-003	116.3112
Total		1,066.2108	0.1066	0.0221	1,075.2883

Mitigated	5.8206	0.0443	3.7135	2.1200e-003	0.2720	0.2720	0.2720	0.2720	27.7420	12.2559	39.9979	0.0662	1.4300e-003	41.8300
Unmitigated	5.8206	0.0443	3.7135	2.1200e-003	0.2720	0.2720	0.2720	0.2720	27.7420	12.2559	39.9979	0.0662	1.4300e-003	41.8300

6.2 Area by SubCategory

Unmitigated

SubCategory	tons/yr													MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Biogenic CO2	NBiogenic CO2	Total CO2	CH4	N2O	CO2e		
Architectural Coating	0.6110				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
Consumer Products	4.0238				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
Hearth	1.1279	0.0221	1.7852	2.0100e-003	0.2613	0.2613	0.2613	0.2613	0.2613	0.2613	27.7420	9.0937	36.8356	0.0632	1.4300e-003	38.6043		
Landscaping	0.0579	0.0222	1.9282	1.0000e-004	0.0107	0.0107	0.0107	0.0107	0.0107	0.0107	0.0000	3.1623	3.1623	3.0200e-003	0.0000	3.2258		
Total	5.8206	0.0443	3.7135	2.1100e-003	0.2720	0.2720	0.2720	0.2720	0.2720	0.2720	27.7420	12.2559	39.9979	0.0662	1.4300e-003	41.8300		

7.2 Water by Land Use

Unmitigated

Land Use	Indoor/Outdoor Use	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
	Mgal	tons/yr	MT/yr	MT/yr	MT/yr
Apartments	5.21232 /	6.8765	0.1704	4.1200e-003	11.7309
Low Rise	3.28603				
General Light Industry	6.40562 /	6.5916	0.2092	5.0200e-003	12.5415
	0				
General Office Building	15.6406 /	20.5080	0.5112	0.0124	35.0735
	9.58616				
Hotel	7.61003 /	8.2202	0.2486	5.9800e-003	15.2922
	0.845559				
Single Family Housing	11.7277 /	15.4721	0.3833	9.2700e-003	26.3945
	7.39357				
Strip Mall	5.55544 /	7.2843	0.1816	4.3900e-003	12.4579
	3.40495				
Total		64.9527	1.7042	0.0411	113.4904

Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	tons/yr			MT/yr
Apartments Low Rise	5.21232 / 3.28603	6.8765	0.1703	4.1100e- 003	11.7283
General Light Industry	6.40562 / 0	6.5916	0.2092	5.0100e- 003	12.5382
General Office	15.6406 / 9.58616	20.5080	0.5111	0.0123	35.0656
Hotel	7.61003 / 0.845559	8.2202	0.2485	5.9700e- 003	15.2883
Single Family Housing	11.7277 / 7.39357	15.4721	0.3833	9.2500e- 003	26.3886
Strip Mall	5.55544 / 3.40495	7.2843	0.1815	4.3800e- 003	12.4551
Total		64.9527	1.7039	0.0411	113.4640

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

Total CO2	CH4	N2O	CO2e

	tons/yr	MT/yr	
Unmitigated	124.2893	7.3453	0.0000
Mitigated	124.2893	7.3453	0.0000

8.2 Waste by Land Use

Unmitigated

Land Use	Waste Disposed (tons)	Total CO2	CH4	N2O	CO2e
Apartments Low Rise	36.8	7.4701	0.4415	0.0000	16.7409
General Light Industry	34.35	6.9727	0.4121	0.0000	15.6264
General Office Building	81.84	16.6128	0.9818	0.0000	37.2303
Hotel	164.25	33.3413	1.9704	0.0000	74.7199
Single Family Housing	216.3	43.9070	2.5948	0.0000	96.3983
Strip Mall	78.75	15.9855	0.9447	0.0000	35.8246

Total		124.2894	7.3453	0.0000	278.5404
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Mitigated

Land Use	Waste Disposed	Total CO2	CH4	N2O	CO2e
tons	tons/yr	MT/yr	MT/yr	MT/yr	MT/yr
Apartments Low Rise	36.8	7.4701	0.4415	0.0000	16.7409
General Light Industry	34.35	6.9727	0.4121	0.0000	15.6264
General Office Building	81.84	16.6128	0.9818	0.0000	37.2303
Hotel	164.25	33.3413	1.9704	0.0000	74.7199
Single Family Housing	216.3	43.9070	2.5948	0.0000	98.3983
Strip Mall	78.75	15.9855	0.9447	0.0000	35.8246
Total		124.2894	7.3453	0.0000	278.5404

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation