

## 4.11 UTILITIES AND SERVICE SYSTEMS

This section of the Environmental Impact Report (EIR) addresses the proposed project’s potential impacts on certain utilities and services including water, wastewater, stormwater, and solid waste. The analysis in this section has been prepared in accordance with §15064.5 of the State CEQA Guidelines, which considers the potential impacts on water, wastewater, stormwater, and solid waste disposal resource. This section describes the demand and availability of these resources within the project study area, and the applicable regulations that govern those resources. The following analysis of the potential environmental impacts related to utilities and service systems is derived from the following sources and agencies.

- City of Nevada City General Plan;
- City of Nevada City Zoning Ordinance;
- Nevada Irrigation District;
- City of Nevada City Wastewater; and
- Correspondence with service providers and agencies.

### 4.11.1 ENVIRONMENTAL SETTING

The climate of the Nevada City (City) and the SOI Plan update area generally is dry and mild but with hot summers and relatively wet winters. In the higher elevations around the City, snow levels are usually above 5,000 ft. The proposed SOI Plan update area is in the eastern portion of the service area and encircles the City. In this area, the City’s jurisdictional boundaries include approximately 1,470 incorporated acres (2018, Nevada County GIS data) and the current SOI (exclusive of the incorporated area) includes approximately 2,702 acres. Within its boundaries, the City provides a full portfolio of municipal services, including treated water, public sewer, and solid waste. These services, providers, and characteristics of their resources are provided in additional detail below.

#### Water

The City and SOI Plan update area receive water from treated surface water and groundwater. Public water supply to areas within the City is provided by City sources and Nevada Irrigation District (NID). Much of the SOI Plan update area is within the NID service area boundary. In these areas NID provides treated water service to some developed properties. Properties not served by NID and without access to public water service use private wells. NID’s service area and boundaries overlap with City boundaries with only the original City area of one square mile being outside NID’s boundaries. The City has service agreements with NID that allows service to be provided depending on proximity and eligibility of existing infrastructure (Nevada City, 2017). While NID serves most properties within the SOI Plan update area, there are several properties that are already served by City water. There are also some areas in the SOI Plan update area that are adjacent to existing City water line facilities. The NID Service Area Boundaries within the Consensus Alternative area and nearby unincorporated County in proximity to Nevada City are designated served by the Elizabeth George (E. George) water system. According to the NID 2015 Urban Water

Management Plan, the E. George water system serves the City and some locations in the SOI Plan update area. The E. George water treatment facility located off Banner Lava Cap Road serves 6,007 connections and has capacity for approximately 18 million gallons per day.

### ***City Water***

The Nevada City water system serves a population of approximately 3,010 people and has approximately 1,252 service connections. The City has its own water supply (via Little Deer Creek), but this supply is supplemented by NID each year as needed under the service agreement. According to the NID Urban Water Management Plan (UWMP), in 2015 approximately 400-acre feet (ac-ft/yr) of water was sold, transferred, or exchanged to Nevada City. The City water supply is derived from surface water in Little Deer Creek watershed, and by the Nevada Irrigation District's (NID) DS Canal. A surface water source assessment was completed for the Little Deer Creek watershed in February 2012. Prior to being dispersed to customers, City water is treated at the City's water treatment plant which has capacity for 2 million gallons per day (mgd) and currently treats a maximum daily demand of 1.5 mgd (Nevada City, 2017). The surface water is considered vulnerable to climatic effects of precipitation within the Little Deer Creek Watershed. City water rights are pre-1914 and are considered a 'statement of water diversion' which is a claim without a specific amount. The City diverts water from Little Deer Creek to the City's storage reservoir 54 ac. Ft. capacity. Little Deer Creek typically meets the needs for the City's water supply 9 months of the year. In the summer months, when there is insufficient surface water available from Little Deer Creek, the City purchases raw water from NID. The City has purchased water from various water companies since the mid 19th century including South Yuba Canal Co., Excelsior Ditch Co., Snow Mountain, Cascade and PG&E Company. These companies were subsequently dissolved or absorbed during the formation of NID in 1920's.

### ***Nevada Irrigation District***

NID was organized in 1921 under the California Irrigation District Act of 1897 as a nonprofit water agency and operated under Division 11 of the State Water Code. NID is on the western slope of the Sierra Nevada Mountain Range and encompasses 287,000 acres, mainly in Nevada and Placer Counties. NID's mountain watersheds cover 70,000 acres and include the upper portions of the Middle Yuba River above Milton Diversion, Canyon Creek above Bowman Reservoir, and Deer Creek. NID stores water in ten reservoirs that have a storage capacity of approximately 280,380 acre-feet and operates seven water treatment plants (WTPs) that supply approximately three billion gallons, or approximately 9,000 acre-feet, of treated drinking water per year.

NID has water rights to the vast majority of its water supply, with approximately three percent coming from outside sources. These include water contract purchases from PG&E and recycled water obtained from municipal wastewater treatment plants: Auburn, and Placer County at Joeger Road (NID, 2015).

Based on NIDs adopted Urban Water Management Plan (UWMP), NID anticipates that it will have approximately 477,000 acre-feet of water available in normal years and approximately 359,000 acre-feet available in dry years for its wholesale, retail, and raw water deliveries. NID estimates that approximately 200,711 acre-feet available in dry years for its wholesale, retail, and raw water deliveries. *Table 4.10-1:*

*NID Available Water Supplies* summarizes NID’s normal year, single dry year, and multiple dry year supply reliability forecast. As shown Multiple Dry Years 2, 3, and 4 would have supply of approximately 231,325 AFY, 251,258 AFY, and 200,711 AFY, respectively.

**Table 4.11-1: NID Available Water Supplies**

Supply	Average/Normal	Single Dry	Multiple Dry Water Years			
	Year	Year	Year 1	Year 2	Year 3	Year 4
	AFY	AFY	AFY	AFY	AFY	AFY
Watershed Runoff	221,500	77,378	223,069	89,763	120,041	77,378
Reservoir – Carryover Storage	129,400	107,330	140,310	137,195	117,500	107,330
PG&E Contract	8,000	16,003	2,882	4,367	13,744	16,003
<b>Total</b>	<b>358,900</b>	<b>200,711</b>	<b>366,261</b>	<b>231,325</b>	<b>251,258</b>	<b>200,711</b>

### ***Gallons Per Capita Per Day***

Gallons Per Capita Per Day (GPCD) is the calculation of average daily water use per person per day. This is total water use within a service area including commercial, industrial, and irrigation uses, minus allowable exclusions, divided by population and measured in gallons. This is different from the R-GPCD used in drought reporting to the State Water Resources Control Board. RGPCD is residential water use in a service area divided by population. The residential water use includes single-family and multi-family residential water uses.

To calculate GPCD over time, NID used both a five year and ten-year period to determine water use. The 10-year baseline period per capita water used for the 2015 UWMP is 246 GPCD. This volume is slightly less than the 2010 UWMP analysis which used a baseline average per capita use of 254 GPCD. The updated 5-year base period for the 2015 UWMP per capita use is 227 GPCD, which is less than the 2010 5-year base per capita use of 245 GPCD. NID accounts for the historical GPCD decrease for the District since the 2010 UWMP analysis because the baseline population has somewhat increased (NID, 2015).

When considering residential customers only, average daily water use declines. Approximately 61% of water consumption in the NID service area is from residential uses. Of this volume, approximately 40-50% is used outdoors for things such as gardening and landscaping. During August 2017, one of the more water use intensive months, the average number of daily gallons used per residential customer was 72.70 (SCPR, 2017).

### ***Groundwater***

Several key properties help determine whether the subsurface environment will provide a significant, usable groundwater resource. Most of California’s groundwater occurs in material deposited by streams, called alluvium. Water infiltrates deep into the layers of sand and gravel, and silts and clays and coalesce into thin lenses and beds that contain water and are termed aquifers. California’s groundwater basins usually include one or a series of alluvial aquifers with intermingled aquitards. Although alluvial aquifers are most common in California, other groundwater development occurs in fractured crystalline rocks, fractured volcanic, and limestones. This is the case in Nevada County where the majority of groundwater in the western portion of the County occurs in fractures of the hard rocks between 200 and 215 feet below

ground. There is little groundwater found to occur in the alluvium and colluvium of the area. The ground water in the Sierra Nevada foothills that is found is sourced from these reservoirs in fractured rock and that are recharged slowly over time and generally well confined.

### **Surface Water**

The NID 2018 Annual Water Quality Report states that NID treated and distributed 3.1 billion gallons of surface water in 2017. The water originates from 70,000 acres of mountain watersheds for which NID holds water rights. This means that NID does not have to purchase water from other agencies. The five watersheds from which the water is derived are in the Sierra Nevada mountains and fed by snowpack. The watersheds include the Middle and South Yuba River watersheds, Bear River watershed, North Fork American River watershed, and the Deer Creek watershed. Water is initially collected in seven reservoirs in the mountain division before flowing downstream via the Bowman-Spaulding Canal, through Fuller Lake, to PG&E's Lake Spaulding. Water is then transported to NID's water treatment plants via a canal system operated by NID and the Pacific Gas and Electric Company. NID uses over 400 miles of canals and another 300 miles of pipeline to transport water to customers. (NID, 2018). NID Reservoirs, are within the Mountain Division or the Foothill Division, and are shown in *Table 4.10-2 NID Reservoirs*, below.

**Table 4.11-2: NID Reservoirs**

Mountain Division		Foothill Division	
Reservoir	Storage (Acre-Feet)	Reservoir	Storage (Acre-Feet)
Jackson Meadows	69,205 AF	Rollins	65,988 AF
Bowman	68,510 AF	Scotts Flat	48,547 AF
French Lake	13,940 AF	Combie	5,555 AF
Faucherie	3,980 AF		
Sawmill	3,030 AF		
Jackson Lake	1,330 AF		
Milton	295 AF		
<b>Subtotal:</b>	160,290 AF	<b>Subtotal:</b>	120,090 AF
<b>Total:</b>	<b>280,380 AF</b>		

### **Wastewater**

#### **City**

The wastewater system serves almost everyone in the City, although there are a few scattered lots that still utilize septic tanks. Service is sometimes provided outside the City boundary, provided certain conditions are met. Wastewater services currently provided include collection, treatment and disposal of treated effluent and repairs and maintenance of wastewater facilities and associated infrastructure. The City does not currently provide sewer service for any industrial facilities. Although the City has industrial zoning, the enterprises located there do not create industrial waste due to the type of operations (Nevada City, 2015 – Wastewater MSR).

The Nevada City Wastewater Treatment Plant WWTP is located at 650 Jordan Street just southwest of downtown, along Deer Creek. This location encompasses 5.54 acres in size and is at an elevation of 2,496 feet above sea level. The plant went through a multi-million-dollar upgrade which was completed in 2007. The treatment plant uses a tertiary activated sludge system and after treatment the plant discharged the water to Deer Creek (NID, 2015). The system presently serves approximately 1,380 connections (460 for businesses and institutions, 920 for residences) (Nevada City, 2015 – Wastewater MSR). The City's Wastewater Treatment Plant has capacity for 0.69 million gallons per day (mgd). According to the City, the current average dry weather flow is approximately 0.39 mgd, or approximately 56.5% of capacity. This leaves a remaining capacity of approximately 0.3 mgd (Nevada City, 2017).

### ***Nevada County***

The County does not comprehensively provide wastewater collection and treatment to all areas of the County. Much of Nevada County, including areas within the SOI Plan update area, is served by on-site sewage disposal/septic systems. With the exception of the Eden Ranch neighborhood, the County does not provide wastewater collection and treatment to properties within the vicinity of Nevada City.

Eden Ranch is a residential neighborhood which receives wastewater service from the County Sanitation District. This existing developed area is located adjacent to the southern right-of-way of SR-49 and is access via Eden Ranch Road off of Old Downieville Highway. The Eden Ranch System is a Septic Tank Effluent Gravity (STEG) gravity collection system where individual house septic tanks flow to a community pump station and is discharged to the leach field. Compliance with Sanitation Code is checked during building permit design review and the district provides inspection of the sewer lateral and septic tank during construction. There are no known capacity restrictions in the collection system (Nevada County, 2012).

### **Solid Waste**

Solid waste disposal service is provided to the City using Waste Management. Waste Management provides both residential and business services and collects trash, recycling, and green waste. Refuse collected by Waste Management and self-hauled refuse are collected at the McCourtney Road Transfer Station and Recycling Center located at 14741 Wolf Mountain Road in Grass Valley.

Nevada County does not have an active solid waste landfill; all solid waste refuse is hauled to out-of-County landfills under the contract with Waste Management of Nevada County. Solid waste, including green waste, generated in the County is taken to the McCourtney Road Transfer Station & Recycling Center in Grass Valley. Green waste, also referred to as organic waste, is hauled off to out-of-County landfills by Waste Management of Nevada County. Effective January 1, 2019 any business that generates four or more cubic yards of solid waste per week must recycle its organic waste. (CalRecycle, 2019).

### **Electricity and Natural Gas**

Electric and natural gas facilities are provided in Nevada County (County) by Pacific Gas & Electric Company (PG&E). There are 5 PG&E substations within the County. Four of these substations have

distribution voltages of 12kV and one substation has a distribution voltage of 21kV. Three of the substations are served via 60kV transmission lines and two substations are served via 115kV transmission lines. The transmission lines are networked and generation for these transmission lines comes from generators located throughout the state. The transmission lines are operated by California Independent System Operators, CALISO. In 2017, according to the California Energy Commission (CEC), total energy usage for Nevada County was 750.441659 Million of kWh (GWh) (CEC, 2017), which was an increase of approximately percent from 2016 when total energy consumption was 661.054476 (CEC, 2016).

## 4.11.2 REGULATORY SETTING

### Federal

#### ***Federal Safe Drinking Water Act***

The Safe Drinking Water Act, the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times since it came into law. The Act authorizes the U.S. Environmental Protection Agency (EPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations (NPDWR), to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Water Resources Control Board conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

### State Regulations

#### ***California Porter-Cologne Water Quality Control Act***

Under the Porter-Cologne Water Quality Control Act, which was passed in California in 1969 and amended in 2013, the State Water Resources Control Board (SWRCB) has authority over State water rights and water quality policy. This Act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions. RWQCBs regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. The City is overseen by the Central Valley RWQCB.

#### ***California Urban Water Management Planning Act***

Through the Urban Water Management Planning Act of 1983, the California Water Code requires all urban water suppliers within California to prepare and adopt an Urban Water Management Plan (UWMP) and update it every five years. This requirement applies to all suppliers providing water to more than 3,000 customers or supplying more than 3,000 acre-feet<sup>1</sup> of water annually. The Act is intended to support conservation and efficient use of urban water supplies. The Act requires that total project water use be compared to water supply sources over the next 20 years in five-year increments, that planning occur for single and multiple dry water years, and that plans include a water recycling analysis that incorporates a

description of the wastewater collection and treatment system within the agency's service area along with current and potential recycled water uses.

### ***Sustainable Groundwater Management Act (2014)***

The Sustainable Groundwater Management Act of 2014 (SGMA) consists of three legislative bills, Senate Bill (SB) 1168 (Pavley), AB 1739 (Dickinson), and SB 1319 (Pavley). The legislation provides a framework for long-term sustainable groundwater management across California. Under the roadmap laid out by the legislation, local and regional authorities in medium and high priority groundwater basins will form Groundwater Sustainability Agencies that oversee the preparation and implementation of a local Groundwater Sustainability Plan. Local stakeholders have until 2017 to organize themselves in Groundwater Sustainability Agencies. Groundwater Sustainability Plans will have to be in place and implementation will begin sometime between 2020 and 2022. Groundwater Sustainability Agencies will have until 2040 to achieve groundwater sustainability.

### ***California Senate Bills 610 and 221***

SB 610 and SB 221 amended State law to (1) ensure better coordination between local water supply and land use decisions and (2) confirm that there is an adequate water supply for new development. Both statutes require City and County decision-makers to receive detailed information regarding water availability prior to approval of large development projects. SB 610 requires the preparation of a Water Supply Assessment (WSA) for certain types of projects subject to the California Environmental Quality Act (CEQA). Projects that would be required to prepare a WSA include but are not limited to residential development of more than 500 dwelling units and shopping center or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor area.

### ***Water Conservation in Landscaping Act of 2006 (AB 1881)***

The Water Conservation in Landscaping Act of 2006 (AB 1881) required the State Department of Water Resources to update the State Model Water Efficient Landscape Ordinance (WELO) by 2009. The State's model ordinance was issued on October 8, 2009. Under AB 1881, Cities and Counties are required to adopt a State updated model landscape water conservation ordinance by January 31, 2010, or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance (MO). In accordance with AB 1881.

### ***2015 Update of the State Model Water Efficient Landscape Ordinance (per Governor's Executive Order B-29-15)***

To improve water savings in the landscaping sector, the California Department of Water Resources (DWR), 2015) updated the Model Ordinance (in accordance with Executive Order B-29-15. The Model Ordinance promotes efficient landscapes in new developments and retrofitted landscapes. The Executive Order calls for revising the Model Ordinance to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf. New development projects that include landscape areas of 500 square feet or more are subject to the Ordinance. This applies to

residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review.

### ***CALGreen Building Code***

The CalGreen Building Code requires residential and non-residential water efficiency and conservation measures for new buildings and structures. Local agencies had until December 1, 2015 to adopt the ordinance or adopt their own ordinance, which must meet or exceed effectiveness. Section 15.04.015 - California Codes Adopted of Title 15 – Buildings and Construction of the City Municipal Code, notes numerous California codes related to building standards that were adopted by the City. This includes the 2016 edition of the California Building Standards Code, known as the California Code of Regulations, Title 24, Part 11 (California Green Building Standards Code), the whole thereof with State amendments.

### ***California Integrated Waste Management Act***

California's Integrated Waste Management Act of 1989, AB 939 (Sher), subsequently amended by SB 1016 (Wiggins), set a requirement for cities and counties throughout the State to divert 50 percent of all solid waste from landfills by January 1, 2000 through source reduction, recycling, and composting. To help achieve this, the Act required that each city and county prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of on-going landfill capacity.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on two factors: a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. The California Integrated Waste Management Board was replaced by the California Department of Resources Recycling and Recovery (CalRecycle) in 2010. CalRecycle sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate. In 2014, the statewide residential per capita disposal rate was 4.5 pounds per resident per day, and the statewide employee per capita disposal rate was 10.6 pounds per employee per day.

## **Nevada City General Plan**

The purpose of the Nevada City General Plan (NCGP) is to be a long-term comprehensive guide to address all aspects of future growth, development, and conservation within the City. As part of the NCGP there are certain elements that provide guidance for further planning efforts such as zoning amendments and environmental review. Among the elements is guidance for providing public services and infrastructure to facilitate and ensure logical growth within the City and into the SOI.

### ***Public Service/Fiscal***

#### *Objectives*

- Encourage a rate of growth which does not exceed the City's ability to provide necessary public services or the ability of the local economy to support such growth.

### Policies

- Encourage commercial and employment-generating uses which provide tax revenues and employment to help support planned residential growth, including auxiliary public facilities and services.
- Develop a program of growth phasing, wherein only those lands where public facilities and services are available at a given time will be able to develop at urban densities and standards at that time.
- Initiate planning for incremental expansion of the city sewer and water systems. Specifically, verify the existing excess capacity, alternative means to increase capacity, and comparative costs to those alternatives.
- Enact measures requiring new development to contribute to costs of necessary improvements, by such means as mitigation fees, or sewer impact fees proportional to the quantity of new space.
- Identify areas with capacity constraints, and place appropriate policy restrictions on those areas. For example, limit growth in the area served by Boulder Street, because of traffic constraints.

## **Nevada City Municipal Code**

The Nevada City Municipal Code (NCMC) provides the requirements and regulations related to development and overall operations within the City. The NCMC also provides specific guidance related to some of the elements related to hydrology and water quality. More specifically, Title 13 of the Nevada City Municipal Code (NCMC) discusses public services including the water system, the sewer system, underground utility districts, and floodplain management.

**Section 13.04.190 A.** This Section discusses water main extensions and submissions of the proposal must be made by the superintendent of public works for review and approval by the city council. Section 13.04.190 B provides that all such main extensions shall be of such size as will properly serve all of the properties shown on the map, as well as any additional properties within the city which may in the future be served by the further extension of such main.

**Section 13.08.050 A.** This section describes the process for sewer main extensions and installations and states that the proposal must be made to the superintendent of public works including service map for review and approval by the city council. Section 1308.050 B provides that all such sewer main extensions shall be of such size as will properly serve all of the properties shown on the map, as well as any additional properties within the city which may in the future be served by the further extension of such main.

**Section 13.08.110.** This section provides guidance on new construction design. This section requires all new sewer extensions and service connections to be properly designed and constructed and that they meet all design requirements of the city, as determined by review of the city manager with no new construction without city approval.

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### 4.11.3 STANDARDS OF SIGNIFICANCE

In accordance with State CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. Based on Appendix G of the State CEQA Guidelines, a project would have a significant impact on utilities and service systems, if it would:

- a) Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects.
- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
- c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant" impact or a "potentially significant" impact. Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a "significant and unavoidable" impact.

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### 4.11.4 PROJECT IMPACTS AND MITIGATION

Potential impacts on Utilities and Service Systems were evaluated by looking at the potential for the SOI Plan update area to result in changes to the provision of utility services and the capacity of existing service providers. This impacts discussion compares the baseline conditions to the anticipated service extensions after adoption of the Consensus Alternative and the potential for implementation of future proposed project activities. Direct and indirect impacts on utilities and service systems were assessed based on the types of lands that could be disturbed and construction activities that could occur indirectly, after adoption of the SOI Plan and future annexation of properties.

## Impacts Discussion Overview

The Impacts Discussion Overview describes the characteristics of the Consensus Alternative, development potential, assumptions for provision of utility services, and City and environmental review requirements related to the protection of environmental resources and the quality of those resources. This discussion is applicable to each impact, Impact 4.10-1 through 4.10-4, below, but is provided here to avoid repetitive discussion.

The Consensus Alternative would update the SOI Plan area, and future development projects under City jurisdiction would occur only after being annexed to the City. The majority of these undeveloped areas within the Consensus Alternative area are designated for estate residential, rural residential, or open space with minor areas designated for planned development, employment centers, public uses, or service commercial. The lands that would be annexed are anticipated to be built out over time and development in these areas is anticipated to be consistent with the existing designations and planning documents.

In addition, the six potential development areas identified by the City are discussed throughout this document. These sites do not yet have any development approval and the specific project footprints are unknown. Annexation and the anticipated timeline for built out would occur over an unknown period of time and is anticipated to be at similar densities as to what is shown in the project description and in accordance with existing City planning documents.

Within the Consensus Alternative boundaries there are four priority annexation areas. These areas in general are already developed, are in close proximity to, or are already being served by existing water or wastewater lines. These areas are in logical locations for extension of City municipal services and represent a logical progression of City boundaries. Given that most of these areas would not require the extension of services such as public sewer or water, disturbance would be low, and given the sites have existing uses, the pressure to increase development density is low. The majority of the remaining undeveloped areas within the Consensus Alternative area are designated for estate residential, rural residential, or open space with minor areas designated for planned development, employment centers, public uses, or service commercial. These areas would be developed as demand arises, but at this time, the City has no applications for annexation or development applications, and hence, analysis of potential development and associated impacts is not discussed in this EIR.

All future development within the Consensus Alternative area, including the six potential development areas identified by the City, would be subject to City design and review as part of City's project review process. All projects would be evaluated for consistency with the NCGP, Nevada City Municipal Code, and Nevada City Design Guidelines. The City also has authority to prezone all future annexations to Nevada City. For all annexations that include new development, the City would be able to specify conditions to ensure that future projects would incorporate all required elements of the listed development guidance documents related to the provision of utility services and protection of resources. The project by project City review also would include a City led CEQA analysis and as applicable, would require project-specific mitigation measures or binding conditions of approval to reduce impacts related to the provision of utilities and services and potential for indirect impacts.

***Impact UT-1: Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects?***

The Consensus Alternative would not require or result in the relocation or construction of any new water, wastewater, storm drainage, power, natural gas, or telecommunication service lines or facilities. The Consensus Alternative would adjust the SOI boundary which does not include any improvements, or implement any development proposals, new construction, or new entitlements to develop. Additionally, the Consensus Alternative would not change any existing land use designations in any area. The Consensus Alternative would not result in any direct impacts to utilities or services.

***Wastewater Treatment***

Within the Consensus Alternative area, a large percentage of properties use private on-site-wastewater-treatment systems (OWTS) such as septic tanks and leach fields. Throughout most of the Consensus Alternative area there is a lack of sewer infrastructure and it is not anticipated that the City would need to provide wastewater services to developed parcels within the SOI even upon annexation. Under the Consensus Alternative there would be no direct expansion or extension of any sewer lines or wastewater treatment plant, or any other associated facilities.

The Consensus Alternative includes Priority Annexation Areas #1, #2, #3, and #4, and it should be noted that the City already provides wastewater services outside its jurisdictional boundaries to properties located within Priority Annexation Areas #1 (a CalTrans facility), #2 (the County Juvenile Hall), and #3 (a residential neighborhood). Priority Annexation Area #4 consists of uses including a cemetery and rural residential parcels and vacant parcels that could be developed with residential units at similar densities. Indirectly, the Consensus Alternative would enable extension of sewer services to other properties near these sites in the context of future annexation applications, resulting in a minor increase in demand for service.

Regarding the six potential development areas, future development of these areas is not certain and there are no defined project boundaries or development footprints, proposals, plans, or applications. Therefore, the specific nature of these developments is unknown and future demand on wastewater treatment is unknown. If applications for these sites are received, the future development of these areas would be subject to the City's review and regulation when applications and plans are submitted.

As areas are annexed and if wastewater services are extended to these or other future annexation sites, the wastewater would be treated at the Nevada City WWTP. The WWTP has capacity for 0.69 million gallons per day (mgd) and has an average daily remaining capacity of approximately 0.3 mgd (Nevada City, 2017). The Waterboard estimates that a conservative estimate for wastewater generation from a conventional residential use is approximately 92.5 gallons per day (gpd). The City; however, uses the City of Grass Valley standard estimates of 191 gpd. Considering the remaining capacity of the WWTP, using the much more conservative Grass Valley generation rate a total of approximately 1,571 homes could be

provided service. It should be noted that the septic systems of other uses in the Consensus Alternative area could fail. As sewer service lines are extended, this could induce residents to request service as opposed to repairing or replacing leach fields. It is unknown and not possible to know the status of all the existing systems and the rate at which this may occur. Nonetheless, some additional demand on the WWTP may occur from such or similar conditions.

Growth within the City has been slow over the last two decades. Between census years 2000 to 2010, the City's population grew by 71 people, which equates to a 0.26 percent annual growth rate. As of January 1, 2014, the population in Nevada City was estimated by the California Department of Finance at 3,016 persons. This represents a decline of 1.7 percent since the 2010 U.S. Census (LAFCo, 2015). More recently, according to the California Department of Finance (CDOF), the 2018 population of Nevada County was 3,226, which was a decrease of six people from 2017 which was reported to have a population of 3,232 (CDOF, 2018). Although some additional growth has occurred in the last two years, the trend of the slow growth is not anticipated to change substantially. Based on the anticipated growth rate, the remaining capacity to treat approximately 1,570 residences, There is adequate capacity at the WWTP to treat potential annexation areas.

Finally, as discussed in the Impacts Discussion Overview, all annexation projects would be subject to a city lead CEQA review which would require projects to show all wastewater improvements and ensure adequate capacity exists. If expansion of the WWTP or other facilities would be needed, these improvements also would be subject to CEQA review. These facts and requirements for additional review would ensure these impacts are less than significant.

### ***Water Service***

Within the Consensus Alternative area, a large percentage of properties use water wells for domestic water needs. Throughout most of the Consensus Alternative area, some treated water service is provided by Nevada Irrigation District and it is not anticipated that the City would provide potable services to most of the SOI even upon annexation. Under the Consensus Alternative there would be no direct expansion or extension of any water lines or treatment plant, or any other associated facilities. The Consensus Alternative does include Priority Annexation Areas #1, #2, #3, and #4, however, most of the developed properties in these areas are already connected to NID's treated water system.

Regarding the six potential development areas, future development of these areas is not certain and there are no defined project boundaries or development footprints, plans, or applications. Therefore, the specific nature of these developments is unknown and future demand for water resources is unknown. If applications for these sites are received, the future development of these areas would be subject to the City's review and regulation when development applications and plans are submitted.

As areas are annexed if water services are extended to these or other future annexation sites, the water would likely be supplied by NID. While the City currently supplies some water to customers, the City relied on NID surplus water to fulfill all service demands. NIDs anticipates that it will have approximately 477,000 acre-feet of water available in normal years, approximately 359,000 acre-feet (AFY) available in dry years and approximately 231,325 AFY, 251,258 AFY, and 200,711 AFY, in multiple dry years 2, 3, and

4, respectively. Currently, NID produces approximately 9,000 AF of drinking water per year from their existing water supply and would have adequate water to serve the relatively small increase that could be indirectly created from the Consensus Alternative and other growth as discussed in wastewater impacts above.

All annexation projects would be subject to a city lead CEQA review which would require projects to show all wastewater improvements and ensure adequate capacity exists. If, through future planned environmental review, expansion of the NID facilities would be needed, these improvements also would be subject to CEQA review. These facts and requirements for additional review would ensure these impacts are less than significant.

### ***Stormwater***

The Consensus Alternative area encompasses a portion of unincorporated County land that is largely rural in nature with numerous undeveloped tracts of land. These locations are not characteristic of more densely developed areas where stormwater runoff becomes more focused due to the large number of impervious surfaces. Because the Consensus Alternative is largely undeveloped, and a robust stormwater drainage system has not been incorporated, a large volume of rainwater and stormwater is able to infiltrate. The majority of stormwater either infiltrates through the existing undeveloped areas or flows overland or as subsurface flow. Water that does fall on impervious surfaces such as roads and homes is typically conducted to by manmade roadside ditches or vegetated and natural drainages. The Consensus Alternative would not result in a direct expansion or extension of any stormwater infrastructure or any other associated drainage facilities.

The Consensus Alternative does include Priority Annexation Areas #1, #2, #3, and #4 but extension of services or expansion of uses of these sites would not be directly authorized by adoption of the Consensus Alternative. Priority Annexation Areas #1 and #2 consist of an existing Caltrans facility and a Juvenile Hall. Priority Annexation Areas #3, and #4 consist of a cemetery and rural residential parcels with a few parcels that could be developed with residential units at similar densities. Indirectly, the Consensus Alternative would enable extension of City managed stormwater drainage facilities to these sites if they are annexed. Densities are anticipated to remain similar and substantial expansion or demand for new facilities is not anticipated.

Regarding the six potential development areas, future development of these areas is not certain and there are no defined project boundaries or development footprints, plans, or applications. Therefore, the specific nature of these developments is unknown and future demand for stormwater facilities is unknown. However, as discussed in *Chapter 3.6 Hydrology and Water Quality*, these projects would be subject to NPDES permits due to their size being greater than one acre and SWPPP incorporating BMP's would be required. Additionally, due to their anticipated size, a formal stormwater drainage system would likely be required, and LID's would likely be incorporated.

As part of any future annexation process, these projects and all other projects would be subject to a City lead CEQA review. This would require projects to show all wastewater improvements and ensure adequate capacity exists. If, it is determined that expansion of stormwater drainage facilities would be

needed environmental review would be required and subject to CEQA. These facts and requirements for additional review would ensure these impacts are less than significant.

***Electricity, Natural Gas, and Telecommunications***

The area within the Consensus Alternative would continue to be served by PG&E for electric and natural gas services. Numerous small to large phone companies, such as AT&T, provide phone service to the unincorporated areas. Under the Consensus Alternative there would be no direct expansion or extension of any of these services or extension of lines.

The Consensus Alternative does include Priority Annexation Areas #1, #2, #3, and #4 but extension of services or expansion of uses to these sites would not be authorized by adoption of the Consensus Alternative. Priority Annexation Areas #1 and #2 consist of an existing Caltrans facility and the County Juvenile Hall. Priority Annexation Areas #3, and #4 consist of a cemetery and rural residential parcels with a few parcels that could be developed with residential units at similar densities. Indirectly, the Consensus Alternative would enable annexation of these existing County lands and indirectly enable extension of City services, as well as electricity, natural gas, and telecommunications. This also would occur in conjunction with annexation and approval of any of the six potential development areas. However, future development of these areas is not certain and there are no defined project boundaries or development footprints, plans, or applications. Therefore, the specific nature of these developments is unknown and future demand for these services is unknown.

Finally, the listed projects and all other project proposed for o annexation would be subject to a City lead CEQA review. As part of that review, an evaluation of availability of these services, and potential impacts associated with extension would be required. If needed, mitigation or a plan to reduce impacts would be developed. These facts and requirements for additional review would ensure these impacts are less than significant.

***Mitigation Measures:*** No Mitigation Measures are Required.

***Impact UT-2: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?***

Water supply is discussed in Impacts UT-1, above. No direct impacts to water supply would occur. Indirectly, inclusion in the Consensus Alternative could result in future annexation and need for water service by NID. NID would have adequate supplies to serve anticipated future demand in the Consensus Alternative area. Additionally, subsequent CEQA review would be required. This impact would be less than significant.

***Mitigation Measures:*** No Mitigation Measures are Required.

**Impact UT-3:** *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Wastewater treatment capacity is discussed in Impacts UT-1, above. No direct impacts associated with wastewater would occur. Indirectly, inclusion in the Consensus Alternative could result in future annexation and need for wastewater treatment service at the City WWTP. The WWTP would have adequate supplies to serve anticipated future demand in the Consensus Alternative area. Additionally, subsequent CEQA review would be required. This impact would be less than significant.

**Mitigation Measures:** No Mitigation Measures are Required.

**Impact UT-4:** *Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

The Consensus Alternative would be served by Waste Management which provides both residential and business services and collects trash, recycling, and green waste. As discussed above, under the Consensus Alternative there would be no direct development and there are no applications for projects or development entitlements. Thus, no direct impacts associated with solid waste generation would occur.

The Consensus Alternative does include Priority Annexation Areas #1, #2, #3, and #4 but extension of services or expansion of uses of these sites would not be authorized by adoption of the Consensus Alternative. Priority Annexation Areas #1 and #2 consist of an existing Caltrans facility and a Juvenile Hall. Priority Annexation Areas #3, and #4 consist of a cemetery and rural residential parcels with a few parcels that could be developed with residential units at similar densities. Indirectly, the Consensus Alternative would enable annexation of existing County lands and indirectly enable extension of City services. These areas; however, already contain development that would already be served by Waste Management or they would already self-haul waste to the McCourtney landfill. Waste generated by potential future development would be minimal.

Regarding the six potential development areas, if these areas are annexed and future development of these areas does occur, they would require new waste management services. Because it is not certain and there are no defined project boundaries or development footprints, plans, or applications, it is unknown what the demand would be. Therefore, the specific nature of these developments is unknown and future demand for these services is unknown.

Lastly, as part of the annexation and development review process, all future annexations would be subsequent CEQA review. This would include an evaluation of conformance with applicable waste reduction laws such as AB 939. This impact would be less than significant.

**Mitigation Measures:** No Mitigation Measures are Required.

**Impact UT-5: *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?***

The Consensus Alternative would not result in any direct conflicts with any federal, state, or local rule, regulation, or law related to solid waste. The Consensus Alternative does not include any development or entitlement for development. Indirectly, the Consensus Alternative could induce additional development or result in the annexation of previously developed areas. As part of the annexation and development review process, all future annexations would be subsequent CEQA review. This would include an evaluation of conformance with applicable waste reduction laws such as AB 939. This impact would be less than significant.

**Mitigation Measures:** No Mitigation Measures are Required.

## 4.11.5 CONCLUSION

As discussed above, the Consensus Alternative would not result in any direct impacts on utilities because approval of the project would not authorize any development or issue any development entitlements. Impacts in this regard would not occur.

All future proposed annexations would be subject to plan and design review by the City. This include site-specific CEQA analysis as required by City Municipal Code. All sites would be evaluated for their potential to result in impacts to the provision of utility services or the need for any off-site improvements that could result in impacts to the environment. Due to the rural nature of the Consensus Alternative area, not all potential annexation areas are served by existing water, wastewater, or substantial stormwater infrastructure. Most of these areas; however, are in proximity to electricity, natural gas, and telecommunications lines. If required, as part of the annexation process, all improvements planned any site within the Consensus Alternative area would be required to undergo the City development and review process and subsequent CEQA analysis. This would reduce impacts to less than significant.

## 4.11.6 CUMULATIVE IMPACTS

Adoption of the Consensus Alternative would not directly generate additional wastewater flows, require additional water or storm drainage facility, and would not directly require the extension of any electrical, natural gas, or telecommunication line, or the expansion of waste management services. Thus, the Consensus Alternative would not make a direct contribution to cumulatively impacts in this regard.

The cumulative context for water supplies and infrastructure needs is the service area of the NID which supplies public water to most of western Nevada County and supplies the City with surplus water. Other ground water sources in the unincorporated area of the County would come from groundwater wells. Existing development and future development that would indirectly be served or indirectly occur upon annexation could result in increased water demand from NID that could exceed supply and related infrastructure. Based on existing supply and demand, it is anticipated that NID would have adequate

supply to provide water to future annexation areas and other location in their service area to which they have existing lines. This impact would be less than significant and not cumulatively considerable.

The cumulative context for wastewater service and infrastructure needs is the City and areas that would be annexed from the Consensus Alternative areas and linked to existing wastewater lines. As discussed above, the City WWTP has remaining capacity of approximately 0.3 mgd. Based on existing and project growth rates of the City, including annexations, service capacity is anticipated to be adequate. This impact would be less than significant and not cumulatively considerable.

The cumulative context for stormwater service includes areas in unincorporated County lands and areas that would be annexed from the Consensus Alternative. A cumulative impact could result if the runoff from these areas is greater than the capacity of the existing stormwater system. As discussed above, the majority of the Consensus Alternative area is rural in nature and does not generate substantial and concentrated stormwater runoff due to the overall lack of impervious surfaces. The cumulative effects from these areas would be less than significant and not cumulatively considerable. Annexation of areas that would contribute to the storm water system in the more urbanized areas would be subject to the City design review process and would require a drainage plan included LIDs. This would help ensure that drainage patterns and the timing of runoff remains similar and does not overwhelm the storm drainage system. This impact would be less than significant and not cumulatively considerable.

The cumulative context for electricity, natural gas, and telecommunications infrastructure is the City and areas that would be annexed from the Consensus Alternative area and connected to existing service providers. As discussed above, PG&E provides electricity and natural gas and various other providers provide telecommunication services. Based on existing and project growth rates of the City, including annexations, service capacity is anticipated to be adequate. Additionally, any annexations would be subject to CEQA review. This impact would be less than significant and not cumulatively considerable.

The cumulative context for stormwater service includes areas in unincorporated County lands and areas that would be annexed from the Consensus Alternative. Solid waste would be collected and handled by Waste Management Systems, Inc. A cumulative impact could result if the runoff from these areas is greater than the capacity of the existing waste management system. The Consensus Alternative in combination with the other cumulative projects in the predominantly low-density areas is not anticipated to substantially increase the amount of solid waste such that it would require new or expanded solid waste disposal facilities or a use substantial portion the remaining capacity at either facility. Therefore, the combined effects of the proposed project and cumulatively considered projects on capacity of solid waste facilities would not be cumulatively considerable.

**Mitigation Measures:** No Mitigation Measures are Required.