

4.17 UTILITIES AND SERVICE SYSTEMS

This section describes the existing utilities and service systems of the Specific Plan Area and evaluates the potential impacts associated with the proposed Specific Plan, both at the individual and cumulative levels. The analysis in this section is based in part on the City's General Plan, the Infrastructure Master Plan¹ prepared by Precision Civil Engineering, Inc., included in Appendix C of this Environmental Impact Report (EIR), and the Water Supply Assessment² prepared by MKN Associates, Inc., included in Appendix I of this EIR.

4.17.1 Environmental Setting

4.17.1.1 Water Supply

Potable water is currently provided to the existing residential units and agriculture-related land uses within the Specific Plan Area by private groundwater wells and water deliveries from the Madera Irrigation District (MID).

The City of Madera provides potable water to existing development within the City through the use of 18 active groundwater wells. The active groundwater wells pump water from the Madera Subbasin, which is located within the San Joaquin River Hydrologic (groundwater basin). The City's active wells all pump from the regional groundwater basin directly into the City's distribution system to meet the City's demands. The City has a total pumping capacity of 20,931 gallons per minute (gpm), and the City's distribution system is comprised of 187 miles of pipeline and one one-million-gallon elevated storage tank. The distribution mains are typically 16-inches and smaller. The quality of the water pumped currently meets all California Code of Regulations primary and secondary drinking water standards.

The City's 2015 Urban Water Management Plan identified that in 2011 the City pumped 11,396-acre feet per year (AFY) from the Madera Subbasin, and that the amount of groundwater pumping decreased to 9,314 AFY in 2015. In 2019, the Madera Subbasin Joint Groundwater Sustainability Plan (GSP)³ stated that groundwater pumping decreased to 8,275 AFY.

4.17.1.2 Wastewater

Wastewater Collection System. There are no existing wastewater collection pipelines located within the Specific Plan Area. The City's Sanitary Sewer System Master Plan identifies five sewer basins, trunk lines, and gravity sewer mains located throughout the City that collect wastewater generated within the City and convey it to the wastewater treatment plant (WWTP) located southwest of the City (and described below).

The City's Sanitary Sewer System Master Plan identifies a future trunk line (Road 23 Trunk) within the Specific Plan Area. The Road 23 Trunk is planned to be located within the right-of-way (ROW) of

¹ Precision Engineering. 2020. Specific Plan Infrastructure Master Plan. January 16.

² MKN & Associates. 2021. Village D Specific Plan Project SB 610 Water Supply Assessment. February.

³ Davids Engineering, Inc., et. al. 2020. Madera Subbasin Sustainable Groundwater Management Act, *Joint Groundwater Sustainability Plan*. Available online at: www.maderacountywater.com/wp-content/uploads/2020/02/Madera_GSP_2020_FinalReport.pdf (accessed April 28, 2020).

Road 23 and would range in size from 15 inches to 30 inches. In addition, a lift station is planned to be located near the intersection of Road 23 and Avenue 16.

Wastewater Treatment and Disposal. Wastewater generated within the Specific Plan Area is currently treated by private septic systems.

Wastewater generated in the city of Madera is conveyed to the existing WWTP located at Road 21 ½ and Avenue 13.

The WWTP is a 10.1 million gallons per day (MGD) primary and secondary treatment facility. The Madera WWTP has a design capacity of 10.1 MGD and can accommodate a design peak dry weather flow of up to 15.1 MGD. The plant is currently operating at an average flow of 5.7 MGD. The original treatment plant and disposal facilities were constructed in 1972. The plant was expanded in 1990 with the addition of a third primary clarifier and then upgraded in 2007 with the installation of three oxidation ditches and four secondary clarifiers, which replaced the original trickling filters. The influent mechanical screens at the headworks were replaced in 2011.

The WWTP operates under Waste Discharge Requirements (WDRs) Order No. 95-046 of the California Regional Water Quality Control Board (RWQCB), Central Valley Region, which was adopted in 1989. The treated effluent from the existing WWTP is discharged to existing evaporation/percolation ponds.

4.17.1.3 Stormwater

Stormwater drainage in the City is typically directed to street curbs and gutters where it is conveyed to inlets and the City's storm drain pipeline and retention basin system. There are no existing stormwater collection facilities within the Specific Plan Area.

4.17.1.4 Solid Waste

Solid Waste Collection and Disposal. Mid Valley Disposal provides solid waste removal services for the City of Madera. Mid Valley Disposal operates a curbside solid waste, a green waste collection program, and a mandatory blue-can recycling program for Madera. In unincorporated Madera County, residential collection in the Specific Plan Area is provided by Red Rock Environmental Group.

Landfill Facilities. There is currently one active, permitted landfill that services available to the City of Madera. The Fairmead Solid Waste Disposal Site (Solid Waste Information System [SWIS] Number: 20-AA-0002) is a Class III landfill located at 21739 Avenue 22 At Road 19 south of the City of Chowchilla. The Fairmead Solid Waste Disposal site is owned by the County of Madera and operated by Madera County Public Works Division. It is located on approximately 120 acres with a total permitted disposal area of 77 acres surrounded by agricultural, open space, residential, and rural land uses. This landfill accepts wood waste, dead animals, agricultural, construction/demolition, green materials, industrial, tires, asbestos, and mixed municipal wastes with a maximum of 1,100 tons accepted per day. The estimated permitted capacity of the landfill is 9.4 million cubic yards, with approximately 5,552,894 cubic yards of capacity remaining. As of 2020, the estimated closure date of the landfill is 2028.

4.17.1.5 Energy, Natural Gas, and Telecommunications

Electric Power. Madera receives its electricity from Pacific Gas and Electric Company (PG&E). PG&E provides electrical service to business and residents throughout the City and the Specific Plan Area via underground and above-ground service lines. PG&E owns and maintains all service and transmission lines and electrical substations throughout City.

Natural Gas. PG&E is the natural gas service provider for the City and the Specific Plan Area. PG&E owns and maintain several natural gas transmission lines in the City that feed local distribution lines that connect to individual service lines.

Telecommunications. Several providers provide telecommunication services to the City. AT&T is the largest provider of cellular and fixed telephone services.

4.17.1.6 Regulatory Context

Water Supply

Sustainable Groundwater Management Act. California legislature passed the Sustainable Groundwater Management Act (SGMA) in September 2014 to establish new measures for groundwater management and regulation statewide by providing sustainable local control of groundwater resources. Under SGMA, local agencies must establish governance of their subbasin by forming Groundwater Sustainable Agencies (GSAs) that have been given the authority to develop, adopt, and implement a Groundwater Sustainability Plan (GSP) for the subbasin. GSAs must define and monitor groundwater conditions in the subbasin and set and achieve sustainable groundwater management within 20 years of adopting the GSP.⁴

City of Madera General Plan. The City of Madera General Plan is the City's primary policy planning document. The General Plan establishes a number of goals and policies that identify the importance of managing natural resources and infrastructure, such as stormwater. Table 4.17.A lists the General Plan policies related to potable water.

Wastewater

City of Madera General Plan. The City of Madera General Plan is the City's primary policy planning document. The General Plan includes goals and policies that address physical systems, such as the City's water supply, so that they can be managed to ensure sustainability. Table 4.17.B lists the General Plan policies related to wastewater.

⁴ Davids Engineering, Inc., et. al. 2020. Madera Subbasin Sustainable Groundwater Management Act, *Joint Groundwater Sustainability Plan*. Available online at: www.maderacountywater.com/wp-content/uploads/2020/02/Madera_GSP_2020_FinalReport.pdf (accessed April 28, 2020).

Table 4.17.A: General Plan Policies Related to Wastewater

Policy/Action Item Number	Policy/Action Item
Circulation and Infrastructure Element	
Policy CI-44	Public facilities should be phased in a logical manner which avoids “leapfrog” development and encourages the orderly development of roadways, water and sewer, and other public facilities. The City shall not provide public financing or assistance for projects that do not comply with City master plans.
Policy CI-47	All major development projects shall identify the size and cost of all infrastructure and public facilities and identify how the installation and long-term maintenance of infrastructure will be financed consistent with the policies in this General Plan.
Policy CI-51	Except when prohibited by state law, the City shall require that sufficient capacity in all public services and facilities will be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.
Policy CI-53	<p>Water supply and delivery systems shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City’s satisfaction.</p> <p>Action Item CI-53.1 The following shall be required for all development projects, excluding subdivisions:</p> <ul style="list-style-type: none"> • An assured water supply and delivery system shall be available at the time of project approval. If a choice of alternative methods of supply and/or delivery is selected, each shall be capable individually of providing water to the project. • All required water infrastructure for the project shall be in place at the time of project approval, or shall be assured through the use of bonds or other sureties to the City’s satisfaction. Water infrastructure may be phased to coincide with the phased development of large-scale projects. <p>Action Item CI-53.2 The following shall be required for all subdivisions to the extent permitted by state law:</p> <ul style="list-style-type: none"> • Proposed water supply and delivery systems shall be identified at the time of tentative map approval to the satisfaction of the City. Alternative methods of supply and/or delivery may be proposed, provided that each is capable individually of providing water to the project. • Prior to the approval of a final map by the City, sufficient capacity shall be available to accommodate the subdivision plus existing development, and other approved projects in the same service area, and other projects which have received commitments for water service. • Offsite and onsite water infrastructure sufficient to provide adequate water to the subdivision shall be in place prior to the approval of a final map or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act. • Offsite and onsite water distribution systems required to serve the subdivision shall be in place and contain water at sufficient quantity and pressure prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City.
Policy CI-56	The City shall require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.

Source: City of Madera General Plan (October 2009).

Table 4.17.B: General Plan Policies Related to Wastewater

Policy/Action Item Number	Policy/Action Item
Circulation and Infrastructure Element	
Policy CI-44	Public facilities should be phased in a logical manner which avoids “leapfrog” development and encourages the orderly development of roadways, water and sewer, and other public facilities. The City shall not provide public financing or assistance for projects that do not comply with City master plans.
Policy CI-47	All major development projects shall identify the size and cost of all infrastructure and public facilities and identify how the installation and long-term maintenance of infrastructure will be financed consistent with the policies in this General Plan.
Policy CI-51	Except when prohibited by state law, the City shall require that sufficient capacity in all public services and facilities will be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.
Policy CI-58	<p>Sewage conveyance and treatment capacity shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City’s satisfaction.</p> <p>Action Item CI-55.1 The following shall be required for all development projects, excluding subdivisions:</p> <ul style="list-style-type: none"> • Sewer/wastewater treatment capacity shall be available at the time of project approval. • All required sewer/wastewater infrastructure for the project shall be in place at the time of project approval, or shall be assured through the use of bonds or other sureties to the City’s satisfaction. <p>Action Item CI-55.2 Require the following for all subdivisions to the extent permitted by state law:</p> <ul style="list-style-type: none"> • Sewage/wastewater treatment capacity shall be available at the time of tentative map approval. • Sewer service to the subdivision shall be demonstrated prior to the approval of the Final Map by the City. Sufficient capacity shall be available to accommodate the subdivision plus existing development, and other approved projects using the same conveyance lines, and projects which have received sewage treatment capacity commitment. • Onsite and offsite sewage conveyance systems required to serve the subdivision shall be in place prior to the approval of the Final Map, or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act. • Sewage conveyance systems inside the subdivision shall be in place and connected to the sewage disposal system prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City.
Policy CI-59	Development along corridors identified as locations of future sewerage conveyance facilities shall incorporate appropriate easements as a condition of approval.

Source: City of Madera General Plan (October 2009).

Stormwater

City of Madera General Plan. The City of Madera General Plan is the City’s primary policy planning document. The General Plan establishes a number of goals and policies that identify the importance of managing natural resources and infrastructure, such as stormwater. Table 4.17.C lists the General Plan policies related to stormwater.

Table 4.17.C: General Plan Policies Related to Stormwater

Policy/Action Item Number	Policy/Action Item
Conservation Element	
Policy CON-3	<p>The City supports natural groundwater recharge and new groundwater recharge opportunities through means such as:</p> <ul style="list-style-type: none"> • Developing a comprehensive groundwater recharge program to be applied in conjunction with new development. • Increasing the area on developed sites into which rainwater can percolate. • Providing areas where rainwater and other water can collect and percolate into the ground. • Providing for groundwater recharge in storm drainage facilities. <p>The use of reclaimed water to recharge the groundwater table.</p>
Policy CON-8	<p>The City encourages Low Impact Development practices in all residential, commercial, office, and mixed-use discretionary projects and land division projects to reduce, treat, infiltrate, and manage runoff flows caused by storms, urban runoff, and impervious surfaces. Low impact development practices may include:</p> <ul style="list-style-type: none"> • Use of small scale stormwater controls such as bioretention, grass swales and channels, vegetated rooftops, rain barrels and cisterns. • Reduction of impervious surfaces through site design and use of pervious paving materials. • Retention of natural features such as trees and ponds on site. • The use of drought tolerant plant materials and/or water-conserving irrigation systems.
Policy CON-12	<p>The City shall seek to minimize toxic runoff from such sources as homes, golf courses, and roadways. Examples of potential programs include:</p> <ul style="list-style-type: none"> • The use of “bioswales” and similar features (such as infiltration trenches, filter trips, and vegetated buffers) to trap contaminants; • Installation of grease/oil separators to keep these contaminants out of storm runoff; • Regular street sweeping programs to prevent the buildup of oil, grease, and other contaminants and keep them from being swept into creeks and rivers; • Minimizing pesticide use and promoting the use of natural pest controls; • Encouraging the installation of “gray water” systems; • The development of new storm drain runoff retention ponds for sediment and pollutant removal based on the updated storm water master plan.
Policy CON-14	<p>The relocation of natural stream courses is discouraged. Where flood protection is a necessity, the City supports leaving existing natural stream courses and adjoining land in a natural state and creating new storm drainage capacity in parallel above- or below-ground facilities.</p>

Source: City of Madera General Plan (October 2009).

Solid Waste

Assembly Bill (AB) 939. The California Integrated Waste Management Act, referred to as AB 939, required all California cities, counties, and approved regional solid waste management agencies to be responsible for enacting plans and implementing programs to divert 25 percent of their solid waste by 1995 and 50 percent by year 2000. Later legislation mandates the 50 percent diversion requirement be achieved every year. The City of Madera’s achieved a diversion rate of 50 percent (based on the most recent data available from 2007).⁵

⁵ Madera, City of. 20019. City of Madera General Plan EIR.

City of Madera Municipal Code. Section 5-3.30 requires that construction and demolition debris generated under a City issued building, renovation, or demolition permit and eight cubic yards or more of material by volume shall have necessary mixed and/or source separated C&D recycling bin(s) or roll-off boxes for the removal and recycling of all construction and demolition debris from the project site.

City of Madera General Plan. The City of Madera General Plan is the City's primary policy planning document. The General Plan established a number of goals and policies that identify management of infrastructure and service systems, include solid waste, to ensure long-term viability. Table 4.17.D lists the General Plan policies related to solid waste.

Table 4.17.D: General Plan Policies Related to Solid Waste

Policy/Action Item Number	Policy/Action Item
Circulation and Infrastructure Element	
Policy CI-51	Except when prohibited by state law, the City shall require that sufficient capacity in all public services and facilities will be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.
Policy CI-62	The City will promote solid waste source reduction, reuse, recycling, composting and environmentally safe transformation of waste. The City will seek to comply with the requirements of AB 939 with regard to meeting state-mandated targets for reductions in the amount of solid waste generated in Madera. Action Item CI-62.1 The City shall provide information to businesses and residents on available options to implement waste reduction targets. Other actions may include: <ul style="list-style-type: none"> • Actively promoting a comprehensive, consistent, and effective recycled materials procurement effort among other governmental agencies and local businesses. • Encouraging all companies that do business in Madera to recycle and reuse construction scraps, demolition materials, concrete, industrial waste, and green waste.

Source: City of Madera General Plan (October 2009).

Energy, Natural Gas, and Telecommunications

City of Madera General Plan. The City of Madera General Plan is the City's primary policy planning document. The General Plan established policies to direct implementation of infrastructure to meet future demand for services. Table 4.17.E lists the General Plan policies related energy, natural gas, and telecommunications.

4.17.2 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to utilities and service systems that could result from implementation of the proposed Specific Plan. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed Specific Plan and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

Table 4.17.E: General Plan Policies Related to Energy, Natural Gas, and Telecommunications

Policy/Action Item Number	Policy/Action Item
Circulation and Infrastructure Element	
Policy CI-51	Except when prohibited by state law, the City shall require that sufficient capacity in all public services and facilities will be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.
Conservation Element	
Policy CON-40	All public and private development—including homes, commercial, and industrial—should be designed to be energy-efficient. Action Item CON-40.3 City buildings and facilities will be operated in the most energy efficient manner without endangering public health and safety and without reducing public safety or service levels.

Source: City of Madera General Plan (October 2009).

4.17.2.1 Significance Criteria

The thresholds for impacts related to utilities and service systems used in this analysis are consistent with Appendix G of the State CEQA Guidelines. Development of the proposed Specific Plan would result in a significant impact related to utilities and service systems if it would:

- Threshold 4.17.1** **Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;**
- Threshold 4.17.2** **Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;**
- Threshold 4.17.3** **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;**
- Threshold 4.17.4** **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; or**
- Threshold 4.17.5** **Not comply with federal, State, and local management and reduction statutes and regulations related to solid waste.**

4.17.2.2 Project Impacts

The following discussion describes the potential impacts related to utilities and service systems that could result from implementation of the proposed Specific Plan.

Threshold 4.17.1 **Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

Water Facilities. Water demand generated by implementation of the proposed Specific Plan is discussed in detail under the discussion of Threshold 4.17.2. As discussed below, the proposed Specific Plan's estimated annual average indoor water demand at full buildout is approximately 2,254 acre-foot per year (AFY). In order to convey water to and throughout the Specific Plan Area, a Conceptual Water Master Plan is included as part of the proposed Specific Plan and is shown as Figure 3-9 of the Project Description. The Conceptual Water Master Plan shows the major water facilities to be constructed as part of the proposed Specific Plan. The Conceptual Water Master Plan, distribution system, and pipe sizes, were developed based upon the proposed Land Use Plan (refer to Figure 3-6 and Tables 3.A through 3.D of the Project Description) and the City's Water System Master Plan (WSMP). Adjustments to the proposed land uses would require modifications to the WSMP based on approval of subsequent development entitlements that finalize residential densities, neighborhood commercial, recreational and office use. Per the proposed Specific Plan's Infrastructure Master Plan, all in-tract water facilities are intended to be designed at the time of each subdivision approval and shall be adequate to meet these pressure and fire flow requirements throughout each individual development. As shown in the Water Master Plan for the proposed Specific Plan, the proposed Specific Plan would include construction and operation of eight wells to provide potable water to the Specific Plan Area. In addition, the proposed Specific Plan would include a series of 12-inch, 18-inch, and 24-inch water distribution mains throughout the Specific Plan Area.

Construction of the proposed water facilities would be subject to the mitigation measures for construction- and operational-period impacts. Construction of water facilities related to implementation of the proposed Specific Plan would be required to comply with mitigation measures identified in this Draft EIR, including AIR-2.1, AIR-2.2, AIR-3.1, BIO-1.1, BIO-1.2, BIO-1.3, BIO-3, CUL-1, CUL-2.1, CUL-2.2, CUL-3, GEO-6.1, GHG-1.1, HAZ-1, NOI-1.1, NOI-2.1, Regulatory Compliance Measure HYD-1 and Standard Condition of Approval GEO-1.

Mitigation Measure UTL-1.1 Prior to the issuance of each grading permit for projects within the Specific Plan Area, the City shall ensure that the Infrastructure Master Plan for the Specific Plan is implemented and that General Plan policies requiring capacity analyses of service systems are completed.

Level of Significance With Mitigation: Significant and unavoidable. Although mitigation measures identified throughout this EIR would address and reduce construction impacts related to water facilities, potential impacts related to air quality and noise as a result of such construction cannot be reduced to a less-than-significant level.

Wastewater Facilities. The City's 2014 Sanitary Sewer System Master Plan (SSSMP) identified the need for an additional sewer trunk line located within Road 23 (referred to as the Road 23 Trunk) to

connect the Specific Plan Area, and areas to the north of the Specific Plan Area to the City's existing Waste Water Treatment Plant (WWTP). The existing Westberry Trunkline has capacity to accommodate 214 residential units within the Specific Plan Area.

The Wastewater System Master Plan, shown on Figure 3-10 in the Project Description, shows the wastewater master planned sewer mains and preliminary elevations for proposed Specific Plan. The Road 23 Trunk would be a 30-inch pipeline that would connect to a 48-inch pipeline running parallel to an existing 48-inch pipeline that connects to the existing WWTP. The 30-inch pipeline would be approximately 15,900 linear feet and the parallel 48-inch pipeline would be approximately 8,000 linear feet. A lift station would be required to be installed west of the intersection of Avenue 16 and Road 23. As shown on Figure 3-10, a second lift station would also be required within the Specific Plan Area just north of the Fresno River crossing on Road 23.

The wastewater generated within the Specific Plan Area would be conveyed to the existing WWTP located on Road 21 ½ and Avenue 13. Wastewater would be collected in a system of sewer mains using primarily gravity flow. The collection system would generally follow topographical features or roads and require one or more lift stations. In addition, a separate distribution system would be constructed for delivery of treated effluent from the WWTP for irrigation of landscaped areas.

The Madera WWTP would be expanded to treat effluent to meet tertiary levels, consistent with Title 22 requirements for landscaping and irrigation uses. Funding for this upgrade as well as the distribution system would deliver treated effluent would be provided through a Community Facilities District (CFD).

Incremental development of wastewater collection facilities and infrastructure shall be designed in accordance with the Infrastructure Master Plan as needed for each phase of the proposed Specific Plan. Wastewater collection pipes shall be constructed in conformance with the wastewater system master plan.

Construction of new pipelines and expansion of the existing WWTP could result in potential environmental impacts related to air quality, biological resources, cultural resources, and noise. Because specific information related to the alignment of wastewater pipelines and construction plans for the WWTP have not yet been prepared and would be subject to phasing of implementation of the proposed Specific Plan, future analysis would be required at the time those plans are developed. Mitigation Measure LU-2.1 requires that the proposed Specific Plan complete a Public Facilities Financing Plan (PFFP) prior to adoption. Implementation of Mitigation Measure UTL-1.2 would address on-site construction impacts, however, without specific information currently available related to the size and locations of the facilities, a significant impact would occur. Construction of wastewater facilities related to implementation of the proposed Specific Plan would be required to comply mitigation measures identified in this Draft EIR, including AIR-2.1, AIR-2.2, AIR-3.1, BIO-1.1, BIO-1.2, BIO-1.3, BIO-3, CUL-1, CUL-2.1, CUL-2.2, CUL-3, GEO-6.1, GHG-1.1, HAZ-1, NOI-1.1, NOI-2.1, Regulatory Compliance Measure HYD-1, and Standard Condition of Approval GEO-1. However, implementation of the proposed Specific Plan would still result in construction-period air quality and noise impacts that would be considered significant and adverse. In addition, impacts associated with any off-site wastewater treatment facilities shall be evaluated at the time those projects are proposed, as required in Mitigation Measure UTL-1.2.a.

Mitigation Measure UTL-1.2 Prior to the issuance of each grading permit for projects within the Specific Plan Area, and consistent with policies of the General Plan, the City shall review the City’s wastewater facility capacity and shall prepare environmental review, consistent with the California Environmental Quality Act, and analysis for any future off-site wastewater facility expansions and improvements required to support development of the Specific Plan. The CEQA analysis shall be completed prior to approval of each development project.

Level of Significance With Mitigation: Significant and unavoidable. Although mitigation measures identified throughout this EIR would address construction impacts related to wastewater facilities, potential impacts related to air quality and noise as a result of such construction cannot be reduced to a less-than-significant level.

Stormwater Drainage Facilities. The proposed storm water collection system would be comprised of roadway curb and gutter, inlets, pipelines, and retention basins, and grading would be consistent with City standards. In addition, the proposed Specific Plan includes two on-site stormwater runoff retentions to hold stormwater.

Per the City of Madera Storm Drainage Master Plan (SDMP) all future conveyance facilities shall be designed to convey a design storm with a ten percent probability of occurrence, which is also known as a ten (10) year return interval. Retention basins would be designed to meet stormwater runoff retention of a 100-year storm event for 10 days (referred to as a 100-year, 10-day stormwater runoff designs). Streets are to convey the difference in peak runoff volume generated between the 100-year 24-hour design storm and the 10-year 24-hour design storm. Rainfall precipitation intensity for the design storm event shall be based upon data and graphs found in the National Oceanic and Atmospheric Administration (NOAA), per the SDMP.

Construction of stormwater facilities would occur concurrently with development of the proposed Specific Plan and would be constructed to convey stormwater flows as the proposed Specific Plan is implemented. Construction of stormwater drainage facilities would comply with Mitigation Measures AIR-2.1, AIR-2.2, AIR-3.1, BIO-1.1, BIO-1.2, BIO-1.3, BIO-3, CUL-1, CUL-2.1, CUL-2.2, CUL-3, GEO-6.1, GHG-1.1, HAZ-1, NOI-1.1, NOI-2.1, Regulatory Compliance Measure HYD-1, and Standard Condition of Approval GEO-1. However, implementation of the proposed Specific Plan would still result in construction-period air quality and noise impacts that would be considered significant and adverse.

Level of Significance With Mitigation: Significant and unavoidable. Although mitigation measures identified throughout this EIR would address construction impacts related to stormwater drainage facilities, potential impacts related to air quality and noise as a result of such construction cannot be reduced to a less-than-significant level.

Electric, Natural Gas, and Telecommunications facilities. PG&E would provide natural gas and electric to the Specific Plan area. PG&E would install gas mains to the Specific Plan area as necessary. All new electric lines and all existing lines within the Specific Plan area shall be installed according to City of Madera requirements.

Proposed on-site communication facilities would be installed underground within a duct and structure system to be installed by the developer during implementation of the proposed Specific Plan. Subject to the Public Facilities Financing Plan (PFFP), which is required by General Plan Policy LU-14 and Mitigation Measure LS-2.1 of this EIR for adoption of the proposed Specific Plan, maintenance of the installed system would be the responsibility of the City and/or Special District fiber optic entity. Development of the proposed Specific Plan requires the installation of all fiber optic infrastructure necessary to service the project as a standalone development.

Construction of electric, natural gas, and telecommunications facilities would occur concurrently with development of the proposed Specific Plan and would be constructed to provide connections to development as the proposed Specific Plan is implemented. Construction of electric, natural gas, and telecommunications facilities would comply with Mitigation Measures AIR-2.1, AIR-2.2, AIR-3.1, BIO-1.1, BIO-1.2, BIO-1.3, BIO-3, CUL-1, CUL-2.1, CUL-2.2, CUL-3, GEO-6.1, GHG-1.1, HAZ-1, NOI-1.1, NOI-2.1, and Regulatory Compliance Measure HYD-1, and Standard Condition of Approval GEO-1. However, implementation of the proposed Specific Plan would still result in construction-period air quality and noise impacts that would be considered significant and adverse.

Level of Significance With Mitigation: Significant and unavoidable. Although mitigation measures identified throughout this EIR would address construction impacts related to electric, natural gas, and telecommunications facilities, potential impacts related to air quality and noise as a result of such construction cannot be reduced to a less-than-significant level.

Threshold 4.17.2 Would the project have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

A Water Supply Assessment (included in Appendix I of this EIR) was prepared for the proposed Specific Plan to determine if existing water supply entitlements, water rights, or water service contracts would be sufficient to meet future water supply demand of the proposed Specific Plan.

The proposed Specific Plan would result in a maximum of 10,783 residential units and, for the purpose of providing a conservative analysis, buildout of the proposed Specific Plan is estimated to occur through the year 2035.

The proposed Specific Plan's estimated annual average indoor water demand at full buildout is approximately 2,254 AFY, as shown in Table 4.17.F. As discussed in the Water Supply Assessment (WSA), the water use coefficient values for the various land use categories are based on water demands in the Infrastructure Master Plan (IMP) and are representative of indoor water usage only. The proposed Specific Plan, as identified in the Infrastructure Master Plan (included as Appendix C of this EIR), intends to use reclaimed water to meet outdoor irrigation demands and would not utilize the City's groundwater wells to supply irrigation demands.

Table 4.17.F: Project Water Demands at Full Buildout

Land Use Type	Land Use District	Units	Annual Water Demand (AFY)	Annual Water Demand (gpm)	Maximum Day Demand (gpm) ¹
Village Country Estates	V-CE	54 DU	10.3	6.4	12.7
Village Low Density	V-LDR	4,784 DU	857.4	531.6	1,063.1
Village Medium Density	V-MDR	3,579 DU	641.4	397.7	795.3
Village High Density	V-HDR	2,366	355.1	220.2	440.3
Village Mixed Use	V-MU	120 acres	94.1	58.3	116.7
Village Business Park	V-BP	1,293,454 sf	115.9	71.9	143.7
Elementary School Sites	V-ES	3,656 students	32.8	12.3	40.6
Unaccounted for Water ²	-	-	147.5	91.4	182.9
Total Water Demand	-	-	2,254.5	1,397.7	2,795.4

Source: Water Supply Assessment, MKN & Associates (February 2021).

¹ Assumes the 2014 WMP maximum day to average day demand factor of 2.0

² Assumes 7% of total system water demand

AFY = annual feet per year

DU = dwelling units

gpm = gallons per minute

sf = square feet

Table 4.17.G shows the estimated indoor water demand during the planned buildout of the Specific Plan in 5-year increments through 2040. Buildout of the Specific Plan will be dictated by market conditions. For the purposes of this EIR assessment, buildout demands were allocated based on the three neighborhoods of the proposed Specific Plan (Southeast, Northwest, and Southwest) and tentative tract maps outlined in the Infrastructure Master Plan, and each neighborhood would be constructed over five-year periods. Occupancy of the Southeast Neighborhood is assumed to occur at the end of 2025 and is projected to be completed in 2030.

Table 4.17.G: Project Water Demands Through 2040¹

Year	Estimated Water Demand (AF)
2020	0
2025	0
2030	776.6
2035	1,562.8
2040 ²	2,254.4

¹ Buildout demands were allocated based on three sections of development outlined in the Infrastructure Master Plan. The Southeast Neighborhood is estimated to be completed in 2030; the Northwest Neighborhood is estimated to be completed in 2035.

² Water demands for the completed Southwest Neighborhood are captured in year 2040 until construction-phasing information becomes available.

AF = acre-feet

The proposed Specific Plan intends to use reclaimed wastewater for outdoor irrigation. Based on the Infrastructure Master Plan, approximately 1.9 MGD, or 2,128 AFY, of the daily treated wastewater effluent would be available for reclaimed uses. About 1.84 MGD, or 2,065 AFY, is needed to satisfy irrigation demands at average day. Maximum day- and peak-hour demands would be met by utilizing storage structures such as on- and off-site tanks or reservoirs, consistent with the

Infrastructure Master Plan. Therefore, reclaimed wastewater can be used to meet the entire irrigation demand of the proposed Specific Plan.

SB 610 requires that all existing and projected water demand for the next 20 years be considered when analyzing the sufficiency of the water supply to meet existing and future demand, not just Project demand. SB 610 also requires the water supplier to analyze and compare water supplies in water short years (dry years) with current and projected water demand. However, as previously discussed in Section 4.17.1.1, the City relies solely on groundwater to meet demands within the City, and as determined by the WSA, the groundwater supply (availability) has been determined to be sufficient to meet the demand of the City for at least the next 20 years in all water year types, including normal, single dry years and multiple dry years.

Table 4.17.H compares the projected water demand City and the water demand of the proposed Specific Plan through 2040. Table 4.17.H also shows the percentage of the City’s total projected increase in water demand represented by the water demand of the proposed Specific Plan in 5-year increments. The Project water demand represents approximately 4.1 to 9.6 percent of the City’s total projected water demands, depending on the year.

Table 4.17.H: Comparison of the Water Demand and Project Water Demand

	2015 ¹	2020	2025	2030	2035	2040 ³
Total City water demand (AF)	9,314	10,100 ⁴	17,400	19,200	21,100	23,400
Project related water demand served by City (AF) ²	0	0	0	776.6	1,562.8	2,254.5
Project demand as percentage of total City demand (%)	0	0	0	4.1	7.4	9.6

¹ 2015 water usage is the actual production measured by the City as recorded in the 2015 Madera UMWP.

² Buildout demands were allocated based on projections outlined in the Infrastructure Master Plan. Buildout is projected to be completed in year 2030. Occupancy of the Southeast section is assumed to occur at the end of 2025.

³ Water demands for the completed Southwest section are captured in year 2040 until construction phasing information becomes available.

⁴ Groundwater pumping estimate provided by City.

AF = acre feet

Typically, municipal water systems are designed such that the minimum water supply capacity (pumping capacity) is capable of meeting the maximum day demand (MDD) with the primary supply offline. MDD is calculated by applying a peaking factor to the average day demand (ADD). ADD is defined as the average of the total water used throughout the year. The City of Madera applies a peaking factor of 2.0 to its ADD to determine its MDD. Peak instantaneous demand is usually met through the use of additional wells and/or storage tanks. The City’s WMP utilizes these criteria in analyzing the City’s water system and in determining pipeline sizes and storage tank requirements.

The current pumping capacity for the City’s active wells is 20,931 gpm. Based on data provided in the 2014 City of Madera WMP, the largest ADD between 2005 and 2010 occurred in 2007 and was

approximately 8,710 gpm. Based on the peaking factor criteria stated in the 2014 WMP, the 2007 MDD is approximately 17,420 gpm. The estimated total MDD of the completed Specific Plan Project is about 2,795 gpm, as shown in Table 4.17.F. Table 4.17.I presents the estimated MDD of the proposed Specific Plan and the existing and projected MDD for the City’s water system. The City’s firm capacity is based on future improvements recommended in the 2014 WMP. The 2014 WMP includes the proposed Specific Plan demand in its analysis. The Project MDD is included in the projections for the system MDD.

Table 4.17.I: Maximum Day Demands and System Capacity (Gallons Per Minute)

	2015	2020	2025	2030	2035	2040 ³
Project MDD to be Served by City	0	0	0	1,252.7	2,520.8	3,636.5
City MDD	11,549	19,467	21,575	23,806	26,162	29,014
City MDD Plus Project MDD ¹	11,549	19,467	21,575	25,058.7	28,682.8	32,650.5
City System Firm Capacity ²	25,140	20,931 ⁴	54,583	57,708	75,278	80,833

¹ System MDD assumes a peaking factor of 2.0 as stated in the 2014 WMP.

² Based on existing and proposed infrastructure improvements identified within all planning villages listed in the 2014 City of Madera WMP recommended capital improvement program. (except for 2020)

³ Water demands for the completed Southwest Neighborhood are captured in year 2040 until construction phasing information becomes available.

⁴ Based on the City of Madera Imminent Development Supply Analysis 2020 found in Appendix E of the WSA

The 2020 Groundwater Sustainability Plan concluded that the groundwater basin is capable of supplying the water required to meet the City’s water demands through 2040. However, the City’s existing water distribution system is not capable of supplying the water required to meet the demand of both the City and the proposed Specific Plan through 2040. However, the master planned waster system infrastructure identified in Infrastructure Master Plan for the proposed Specific Plan does provide the City with the ability to meet the demands of the City and proposed Specific Plan through 2040 assuming the following:

- The City will be supplying water to the Project area.
- The City will continue to utilize groundwater as their sole source of water.
- The City will continue to construct required groundwater facilities as outlined in current and future Water Master Plans.
- The City will replace or deepen wells as necessary and provide wellhead treatment on wells that develop water quality problems.
- The Specific Plan will utilize reclaimed water to meet irrigation demands and lower groundwater pumping.

As stated in the WSA, the Madera Subbasin is in a state of overdraft and measures and programs as identified in the WSA and the referenced documents must be implemented in order to ensure the long-term viability of the groundwater resources in the Madera subbasin. It is anticipated that the

City of Madera GSA and joint GSAs in the Madera Subbasin will continue work together in order to meet the requirements and goals of reaching sustainable groundwater supply by 2040 as laid out in the GSP. Implementation of Mitigation Measure UTL-2 would ensure that sufficient water supplies are available to serve development occurring under the proposed Specific Plan, and would reduce the potential impact to a less-than-significant level.

Mitigation Measure UTL-2 Prior to the issuance of each grading permit for projects within the Specific Plan Area, the City shall review water supplies available at the time and ensure that the required groundwater facilities, including replacing and increasing depth of groundwater wells, and the use of reclaimed water as identified in the City's Water Master Plan are adequate to serve the project.

Level of Significance With Mitigation: Less than significant.

Threshold 4.17.3 **Would the 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?**

The IMP provides sewer generations calculated based on water demands, with the assumption that all indoor water generated within the Specific Plan Area is collected by the wastewater collection system. The estimated sewer generation rate for single family residential land uses is 160 gpd per DU. For high-density residential units only, a lower per DU rate of 134 gallons per day has been used. For VCE a higher rate of 170 gpd per DU was used. The planned Elementary Schools are expected to have approximately 3,656 students that would generate wastewater at a rate of 8 gpd per student, which would produce about 29,248 gpd. The inflow and infiltration (I&I) is the storm water flow entering the waste water system through manholes, and joints in the sewer collection system. The I&I is estimated to be approximately 7% of total flows, which is generally acceptable for new wastewater collection systems. Table 4.17.J provides a summary of the sewer generation rates used for the proposed land uses in the Specific Plan and sewer system master planning. As shown, the Average Daily Flow is approximately 2.0 MGD.

As discussed above in section 4.17.1.2, the WWTP has a design capacity of 10.1 MGD and can accommodate a design peak dry weather flow of up to 15.1 MGD. The plant is currently operating at an average flow of 5.1 MGD, and has experienced maximum daily flows of approximately 8.20 MGD during wet weather seasons and 6.4 MGD during dry weather seasons.⁶ With the Average Daily Flow (ADF) of approximately 2.0 MGD, the WWTP has capacity to treat wastewater generated by buildout of the proposed Specific Plan.

Level of Significance Without Mitigation: Less than significant. No mitigation is required.

⁶ Madera, City of. 2014. City of Madera Sanitary Sewer System Master Plan. September.

Table 4.17.J: Sewer Generation Rates

Land Use Type	Land Use District	Units	gpd per unit	gpd
Very Low Residential	VLD	54 Dwelling Units (DU)	170 gpd per dwelling unit	9,180
Low Density Residential	LDR	4,784 DU	160 gpd per dwelling unit	765,467
Medium Density Residential	MDR	3,579 DU	160 gpd per dwelling unit	572,706
High Density	HDR	2,366	134 gpd per dwelling unit	317,027
Village Mixed Use	VMU	120 Acres	700 gpd per acre	84,049
Industrial	I	1,293,454 Square Feet	0.08 gpd per square foot	103,476
Elementary School Sites	P&SP	3,656 Students	8 gpd per student	29,249
Inflow and Infiltration ¹	-	-	-	131,681
Total				2,012,835

Source: Specific Plan Infrastructure Master Plan, Precision Civil Engineering (January 16, 2020).

¹ Assumes 7% of the total sewer flows is Inflow and Infiltration.

DU = dwelling unit

gpd = gallons per minute

Threshold 4.17.4 Would the project 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?

To determine the amount of solid waste that could be generated through implementation of the proposed Specific Plan, the analysis uses information provided by CalRecycle, as shown in Table 4.17.K.

Table 4.17.K: Estimated Waste Generation of Proposed Specific Plan

Land Use	Buildout of proposed Specific Plan (2049)	Solid Waste Generation Rate ¹	Estimated Solid Waste Generated at Buildout of Proposed Specific Plan	
			lbs/day	Tons/day
Single-Family Residential	8,417 units	10 lbs/unit/day	84,170	42.1
Multi-Family Residential	2,366 units	7 lbs/unit/day	16,562	8.2
Mixed Use	1,830,587 sq ft	6 lbs/1,000 sq ft/day	10,983.5	5.5
Industrial	2,58,659 sq ft	6 lbs/1,000 sq ft/day	1,551.9	0.8
Education	3,656 students	0.5 lbs/student/day	1,828	0.9
Total			115,095.4	57.5

Source: LSA (2020).

¹ Source: CalRecycle, Waste Characterization, Residential Sector Generation Rates: Estimated Solid Waste Generation Rates, 2020

sq ft = square feet

units = dwelling units

lbs = pounds

New residential, mixed use, industrial and educational land uses in the Specific Plan Area would increase the amount of solid waste generated by residents, businesses, and students. The increase in growth and development as a result of the implementation of the proposed Specific Plan would

result in an increase of solid waste to landfills, and would contribute to an increased demand for solid waste services throughout the Specific Plan Area.

As shown on Table 4.17.K, above, implementation of the proposed Specific Plan would result in the generation of approximately 57.5 tons of solid waste per day. Based on the estimated closure date of the Fairmead Landfill in 2028, before buildout of the proposed Specific Plan in 2049, there is a potential for additional landfill capacity needed to accommodate the proposed Specific Plan. Pending on the timing, type and quantity of development within the Specific Plan, the increase of solid waste generated by the development could potential accelerate the projected closure timeline of the Fairmead Landfill. Therefore, development under the Proposed Specific Plan could result in a significant impact on landfill capacity.

With the remaining capacity and lifespan at the Fairmead Landfill, the increase in solid waste generated by development under the proposed Specific Plan would exceed capacity of the landfills if the estimated waste streams above occur in the future. However, AB 939 mandates the reduction of solid waste disposal in landfills, and the City is currently achieving a 50 percent diversion rate (based on the most recent data available from 2007). In addition, the City of Clovis Landfill (SWIS Number: 10-AA-0004) is also a Class III facility with 7.740,000 cubic yards of capacity remaining and an estimated closure date of April 2047. The anticipated 57.5 tons of solid waste generated per day assumes a worst-case scenario and does not factor in the diversion rate. General Plan Policy CI-62 states that the City will seek to comply with the requirements of AB 939 with regard to meeting state-mandated targets for reductions in the amount of solid waste generated in the City and the Specific Plan Area, and would provide residents and business with information regarding options to implement waste reduction targets. In addition, General Plan Policy CI-51 requires the City to require that sufficient capacity in all public services levels to avoid capacity shortages. With continued improvements in diversion rates and existing sufficient capacity at the current landfill (Fairmead Landfill) and continued sufficient capacity at an alternative landfill (Clovis Landfill) as confirmed by the CalRecycle,⁷ solid waste impacts resulting from the proposed Specific Plan would be considered less than significant.

Level of Significance Without Mitigation: Less than significant. No mitigation is required.

Threshold 4.17.5 Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Construction and operation of the proposed Specific Plan would generate solid waste that would be disposed of in accordance with applicable federal, State, and local regulations pertaining to municipal waste. Throughout the buildout of the proposed Specific Plan, solid waste would continue to be handled, transported, and disposed of according to all applicable federal, State, and local regulation pertaining to municipal waste disposal.

As shown in Table 4.17.K, the anticipated long-term generation of solid waste from continued implementation of the proposed Specific Plan could result in the generation of approximately 57.5

⁷ CalRecycle. Solid Waste Information System. Fairmead Solid Waste Disposal Site (20-AA-0002). Website: <https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/1701> (accessed on July 20, 2020).

tons per day within the Specific Plan Area. The City's General Plan requires the City to promote recycling and waste reduction, and the City's Municipal Code requires that 65 percent of construction and demolition debris to be recycled or reused. As a result, implementation of the proposed Specific Plan would comply with existing statutes and regulations related to solid waste, and a less than significant impact would occur.

Level of Significance Without Mitigation: Less than significant. No mitigation is required.

4.17.2.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it – in combination with other projects – would contribute to a significant cumulative impact related to utilities and service systems. The cumulative impact analysis for utilities and service systems considers the larger-context of future development of the City of Madera as envisioned by the General Plan and relied upon the projections of the General Plan and General Plan EIR. Cumulative impacts related to utilities and service systems would be those impacts that result from incremental changes that combine with other development within the City of Madera.

Facility Construction. The proposed Specific Plan would require construction of new or expanded facilities related to potable water, wastewater, stormwater and electric, natural gas, and telecommunications facilities. Construction of these facilities would be subject to mitigation measures identified in this EIR. The proposed Specific Plan would require construction of these facilities to occur incrementally as development occurs. The City's General Plan EIR identified growth areas, including the Specific Plan Area, that would require expansion of existing facilities and construction of new facilities.

The General Plan identifies several policies, including Policies CI-47, CI-51, CI-53, CI-56, CI-58, CI-59, and CI-62, that require the City to assess capacity of utilities and service systems to ensure that sufficient capacity is available to maintain service levels. As discussed above, a PFFP will be approved with the proposed Specific Plan, as required by Mitigation Measure LU-2.1 of this EIR. The PFFP will establish the financing for improvements to the utilities and service systems that serve the Specific Plan Area. Improvements identified within the Specific Plan Area would be subject to mitigation measures identified in this Draft EIR, including Mitigation Measures AIR-2.1, AIR-2.2, AIR-3.1, BIO-1.1, BIO-1.2, BIO-1.3, BIO-3, CUL-1, CUL-2.1, CUL-2.2, CUL-3, GEO-6.1, GHG-1.1, HAZ-1, NOI-1.1, NOI-2.1, Regulatory Compliance Measure HYD-1 and Standard Condition of Approval GEO-1. In addition, as required by Mitigation Measure UTL-1.2 further analysis would be required for future off-site improvements for which no information is currently available. Therefore, because the potential impacts resulting from construction of new facilities cannot be reduced to less-than-significant levels, the proposed Specific Plan would combine with other development identified in the General Plan to result in a significant cumulative impact.

Level of Significance With Mitigation: Significant and unavoidable. Although mitigation measures identified throughout this Draft EIR would address construction impacts related to water facilities, potential impacts related to air quality and noise as a result of such construction cannot be reduced to a less-than-significant level and would combine with other development to result in cumulative construction impacts that cannot be reduced to a less than cumulatively-significant level.

Water Supply. The 2020 Groundwater Sustainability Plan concluded that the groundwater basin is capable of supplying the water required to meet the City’s water demands through 2040. With implementation of the recommendations identified in the Infrastructure Master Plan as required by Mitigation Measure UTL-2, the City would be able to provide water to the Specific Plan Area, as well as to the City. However, as stated in the WSA, the Madera Subbasin is in a state of overdraft and measures and programs identified in the WSA and the referenced documents must be implemented in order to ensure the long-term viability of the groundwater resources in the Madera subbasin. It is anticipated that the City of Madera GSA and joint GSAs in the Madera Subbasin will work together in order to meet the requirements and goals of reaching sustainable groundwater supply by 2040 as laid out in the GSP. According to the WSA, the proposed Specific Plan in combination with buildout of the General Plan would have sufficient water supplies, and as a result, a less-than-significant cumulative impact would occur.