
5.13 - Public Services and Facilities

5.13.1 - Introduction

Public services and facilities are a critical component of the North Fork Village-1 (NFV-1) Specific Plan to ensure the safety and health of future residents of the project. The Specific Plan contains policies to require that new development projects provide adequate public services and facilities to serve the projects as they are developed. New projects shall not be approved by the County where existing facilities are inadequate unless the applicant can demonstrate that all necessary public facilities will be installed or are adequately financed and maintained through fees or other means.

It should be noted here that the County of Madera has adopted developer impact fees applicable to all development within the County. Said fees are applicable to various public use facilities described in this section, such as police substations and fire stations, as well as libraries, and government centers. Such fees are required to offset future capital expenditures required to serve new development.

This EIR section provides baseline information on, and evaluates the impacts to, public services and facilities, including fire and police protection, and schools, as well as impacts to utilities, including domestic water supply, wastewater, solid waste, electricity, and natural gas. Information in this section is based on the following documents, including, NFV-1 Specific Plan (September 2006), Rio Mesa Area Plan and EIR (1995), River Ranch Estates EIR (2003), Water Supply Assessment (2006), agency comments to the Notice of Preparation (NOP), and correspondence from utility companies and public service departments.

Rio Mesa Area Plan and EIR

The Rio Mesa Area Plan (RMAP) was adopted in 1995 by the Madera County Board of Supervisors as part of the overall Madera County General Plan. The RMAP calls for three separate villages, or sub-areas, to be created as centers of development and commercial activity. The Infrastructure Master Plan (IMP) focuses on the infrastructure needs of the NFV-1 sub-area as a sub-section of NFV-1 (one of the three villages as proposed in the RMAP). The County has accepted a concept under which each landowner (or consortium of landowners) is allowed to develop their respective parcels independently, as long as the overall infrastructure needs of the community are met. In order to plan effectively, the landowners within the RMAP have proposed and the County has accepted the concept of infrastructure construction by sub-area. This concept requires appropriate sub-areas be identified and designed through an overall IMP which encompasses each village (or subset thereof) within the RMAP. In addition, larger landowners must include in their respective IMPs smaller adjoining parcels owned by others which will require utility services provided by the larger sub-area service provider.

The project area is currently undeveloped rangeland, no other existing development is nearby, and there are currently no public facilities in the project area, so it has very limited access to public services and facilities and the associated demand for public services is currently limited. Therefore, all development proposed in the NFV-1 Specific Plan Area will result in impacts on public services

and facilities. The RMAP and the NFV-1 Specific Plan contain policies and implementation measures that will mitigate these anticipated impacts. Accordingly, the IMP included in the NFV-1 Specific Plan contains engineering drawings that illustrate the location of all needed infrastructure improvements. Improvements in the NFV-1 Plan Area will be phased. The first phase will include a wastewater treatment plant and water system with a 0.5 million gallon water storage tank. The facilities will be sized and phased according to need, and permits for additional development will not be issued until the County is shown that capacity is adequate.

The goal of the overall IMP is to demonstrate that adequate planning and engineering procedures were followed and that the resulting documents are sufficient for master planning of the NFV-1 Specific Plan. In addition, the IMP has also taken into consideration all of those required elements of the RMAP that dictate how development is to occur within each sub-area of Rio Mesa.

5.13.2 - Police/Law Enforcement Service

Existing Conditions

The Madera County Sheriff-Coroner Department currently provides minimal law enforcement protection to the RMAP site from the Madera County Headquarters located at 14143 Road 28. Furthermore, police and law enforcement services would be initially provided from the Madera County Headquarters. The Madera County Sheriff-Coroner Department has assigned the project area to the Valley Division. This area is designated as Beat 2, which includes most lands in Southeast Madera County. Beat 2 is essentially a rural agricultural beat with some residential pockets. The Department generally fields one deputy into Beat 2 during each shift; however, there are periods when Beat 2 is merged with nearby beats and all of the merged areas are served by a single deputy Sheriff. Therefore, the response times can vary greatly. The nearest Sheriff's station is located at 35141 Bonadelle Avenue in the Bonadelle Ranchos area approximately 13 miles from the project site.

The Department participates in Mutual Aid Agreements with Law Enforcement agencies in the region as required by law. However, the Department has no specific mutual aid agreement for coordinated services in the proposed project area. The project study area is also served by the California Highway Patrol.

Thresholds of Significance

Appendix G of the CEQA Guidelines indicates that the proposed project would result in a significant impact on police and law enforcement services if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police and law enforcement services.

Project Impacts

The project site will be serviced by the Valley Division of the Madera County Sheriff-Coroner Department (Department). The project site is located within Beat 2, which is a rural agricultural area. Conversion from lower intensity uses to higher intensities will increase the calls for police and law enforcement services. Since residential areas generate more calls for police service than agricultural areas, police service calls will increase due to the population increase caused by the proposed project. The service calls expected to be created will be typical to suburban areas and are likely to include vandalism, theft, and domestic disputes. Response times are not specifically tracked by the Department; however, the proposed project is located on the fringe of Beat 2 and calls for service will require longer vehicle trips and take more time to respond.

The Department currently has a sworn force of 82 law enforcement officers (LEOs) serving the County, with 44 sworn officers serving the Valley Division operation area. The total Department employment is 112 persons and officer vacancies have created a shortage of manpower and increased response times to calls for service. The Department does not currently meet the 1.7-2.2 LEOs per thousand residents (population) suggested by Federal Bureau of Investigation (FBI) manning standards for rural counties. The proposed project has the potential to exacerbate the deficiency by adding significantly more residents to the fringe of the Department's existing service area. Accordingly, the proposed project will increase the population in the project area by approximately 8,898 (average household size of 3.0 persons), thus creating the need for additional police officers and corresponding support facilities.

According to Department staff, at full build-out the proposed NFV-1 project would require an additional staffing of 2 to 3 LEOs for each 2,700 potential residents. It is anticipated that build-out would take in excess of 25 years and the increase in the number of Sheriff's Officers would occur at various stages in the development of the project's phases as well as in the consideration of other projects in the general area of Madera County. The cost of providing capital equipment for these new officers would be a direct expense to the Department. This is considered a potentially significant impact.

The entire area of Southeast Madera County can be expected to grow over time increasing the demand for additional law enforcement at some officer to population ratio. The following addresses the capital outlay for equipment including training costs, vehicles, housing, radios, safety equipment, and other gear beyond annual personnel costs.

It should be clearly recognized that while this development may contribute to the needs for additional law enforcement, such services will continue to spread out over the "beat area." The RMAP EIR contains mitigation measure which calls for a Community Services District (CSD) to ensure adequate law enforcement personnel and equipment in phase with RMAP development (Mitigation Measure 4.15.2.4). A special assessment for law enforcement could be collected for increased law enforcement services above the level of service provided to all other areas of the County. Such

assessments would have to be reviewed annually and since they are property based assessments, subject to the provisions of Government Code 66000 et seq. (Proposition 218), which may require property owner elections to increase assessments. Currently, no action has been taken by any Rio Mesa property owner or Madera County to initiate proceedings to create a CSD. Madera LAFCo has the authority to approve the creation of a CSD and its breadth of authority. The NFV-1 project applicant has indicated that he will petition Madera LAFCo to form a Community Services District. While the CSD cannot provide law enforcement, they can contract with the County for a higher level of service that ordinarily provided to the rural areas.

Infrastructure (including police and law enforcement services, facilities, officers, staff, etc.) shall be funded through a variety of mechanisms. All fair share contributions shall be made through development agreements with the County of Madera. Accordingly, the NFV-1 Specific Plan states that additional services will be provided from existing stations with additional security services being provided by a community wide security company. Outsourcing of security services shall be paid through facilities district financing. Fair share costs for law enforcement shall be paid through countywide taxes while additional services beyond the scope of the County of Madera may be provided through special tax assessments deemed necessary by residents living within the Specific Plan to provide effective police and law enforcement services. In addition, the Specific Plan states that additional private security services may be provided by a community-wide security company (administered by a CSD) financed by a special tax assessment on residents living within the specific plan area.

Cumulative Impacts

Cumulative development within the County of Madera and the RMAP area (including the NFV-1 project area) would ultimately affect law enforcement protection services and will require a substantial increase in police and law enforcement services as the area is developed. Additional police personnel and equipment would be provided for by development impact fees, countywide tax revenues generated by future projects, in conjunction with a Community Services District financed by a special tax assessment on residents living within the specific plan area. As full build-out occurs, additional law enforcement services will become available in the geographical area providing for faster response times and improved service. The RMAP in conjunction with other past, present and reasonably foreseeable future projects may result in a potentially significant cumulative impact related to law enforcement. Implementation of mitigation measures that will provide additional equipment and support added personnel would reduce the impact to levels considered less than significant.

As the area is built-out, new governmental facilities will be required to provide this service, the construction of which could create significant environmental impacts. However, these new facilities will be integrated into the new developments and would be subject to additional environmental review. Therefore, cumulative environmental effects related to police services will be mitigated to less than significant.

Mitigation Measures

The applicant, developer, and/or successors-in-interest shall be responsible for the following law enforcement mitigation measures:

- PSF-LE-1** Madera County shall establish a law enforcement impact fee for the RMAP area (or countywide) sufficient to provide resources to expand police and law enforcement services to the adopted standards. The developer shall be responsible for paying such impact fee at the time prescribed by the County in the impact fee structure.
- PSF-LE-2** The developer shall be responsible for petitioning LAFCo to expand the responsibility and authority of the administered Community Services District to provide for enhanced law enforcement services (i.e., private security services). The developer shall provide evidence that a funding mechanism approved by Madera County will provide a continuous source of revenue to finance private security services.

Level of Significance After Mitigation

Impacts to police and law enforcement services would be reduced to less than significant levels after implementation of the required mitigation measures.

5.13.3 - Fire Services

Existing Conditions

The unincorporated areas of Madera County are served by the Madera County Fire Department for structural fire protection. This includes the Local Responsibility Area (LRA), as well as structural fire protection within the State-owned lands defined as the State Responsibility Area (SRA). The County contracts with California Department of Forestry and Fire Protection (CDFFP) to provide staffing for the County Fire Department. The CDFFP also staffs forest fire stations in the SRA during declared fire season. The NFV-1 project site is within the SRA, as the project site lies east of the Madera Canal.

In the early stages of RMAP development, homes may be placed as “islands” of urbanization (homes surrounded by wildland). If a structure fire occurs during a declared fire season, CDFFP would respond in addition to the Madera County Fire Department. Madera County Fire Department (MCFD) currently provides limited fire protection to the RMAP area and the proposed project site. According to the RMAP EIR, the MCFD provides limited fire protection services to the RMAP area from Station No. 9 located at 41016 Avenue 11 (8 to 9 miles away from the project), and Station No. 19 located at 35141 Bonadelle Avenue (10 to 11 miles away). Additional fire protection service is provided by the CDFFP, as the MCFD works on a contractual basis with the CDFFP. The nearest fire station is located approximately 1 mile south of the project site in the town of Friant, Fresno County, and is operated by the CDFFP.

The RMAP EIR indicates that Station No. 9 is equipped with two Class-A engines and is staffed entirely by volunteer fire fighters as it has no paid staff. Station No. 9 has up to ten volunteers available for service; however, these volunteers are not always available for service at the same time. Station No. 19 is equipped with one Class-A engine, one water tender unit and one foam unit, and has paid staffing of one full-time firefighter and 22; the volunteers are also not always available for service at the same time. The Fire Department has faced past problems of no volunteers being available for emergency responses. Because of the volunteer status of the fire stations, it is difficult to forecast exact response times to the proposed NFV-1 project location.

The RMAP calls for fire stations to maintain a response time of 7 to 15 minutes and that fire stations should be located in or adjacent to Community or Village Cores, or other locations with good accessibility. The Madera County General Plan, on the other hand, calls for a response time of 10 minutes and an Insurance Service Organization (ISO) rating of 4 in urban areas. The ISO rating is based on a scale of one to ten, one indicating the highest level of protection and ten indicating no protection.

Thresholds of Significance

Appendix G of the CEQA Guidelines indicates that the proposed project would result in a significant impact on fire protection services if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

Project Impacts

The existing CDFFP fire station one mile south of the project site in the town of Friant, Fresno County, is not adequate to provide service to the proposed project and therefore other services will be required. Response times to the RMAP and the project site from Stations No. 9 and No. 19 are currently unavailable; however, estimated response times are in excess of 15 minutes. The RMAP EIR indicates that this level of service is considered inadequate for the urban development proposed by the project and therefore is considered a potentially significant impact. Furthermore, the fire Department generally has an ISO rating (or protection rating) of Rural 8 for the RMAP area, which encompasses the project site.

Development of the NFV-1 Specific Plan area would add 2,966 dwelling units thus creating the need for additional fire protection services and corresponding support facilities. Accordingly, construction of the proposed project would result in an increased demand for fire protection services beyond the current reasonable response time (10 minutes for urban areas) from existing fire stations, and it is expected that fire protection services provide for an ISO rating of 4 required by the Madera County General Plan. The proposed project has the potential to exacerbate the deficiencies by adding significantly more residents to the fringe of the Department's existing service area as existing Fire

Department facilities, staffing, and equipment would not be adequate to provide a sufficient level of fire protection services to the proposed project site. This is considered a potentially significant impact.

The IMP indicates that the proposed project's water distribution system and accompanying fire hydrants are to be constructed to a standard that meets the MCFD requirements for flow and pressure. The proposed NFV-1 project provides for a Fire Station in the South Mesa Neighborhood that will be consistent with RMAP and Madera County General Plan policies. There will have to be consideration by the MCFD whether this location is acceptable or another location should be selected, acquired, and constructed by the County.

As with law enforcement enhancements required by the RMAP, the Madera County General Plan establishes standards for urban fire protection. The General Plan requires the County to encourage an ISO rating of 4 and a response time of 10 minutes in urban areas. Additionally, the General Plan requires new development to develop or fund fire protection facilities that meet these criteria. The cost of providing equipment, housing, and gear represent capital costs to the County that can be reimbursed through currently adopted fire impact fees. The County has not established an assessment structure that enhances fire protection services in urban areas and continues to pay for such services out of the General Fund. With the appropriate authority, a Community Services District can provide for a higher level of fire Protection services and collect fees for such purposes.

The RMAP EIR mitigation measures calls for a Community Services District (CSD) to assure adequate law enforcement personnel and equipment in phase with RMAP development (Mitigation Measure 4.15.2.4). A special assessment for fire protection could be collected for increased fire protection services above the level of service provided to all other areas of the County. Such assessments would have to be reviewed annually and since they are property based assessments, subject to the provisions of Government Code 66000 et seq. (proposition 218), which may require property owner elections to increase assessments. As previously stated, no action has been taken by any Rio Mesa property owner or Madera County to initiate proceedings to create a CSD. Madera LAFCo has the authority to approve the creation of a CSD and its breadth of authority. The developer has indicated that they will petition Madera LAFCo to form a Community Services District. Unlike law enforcement powers, a CSD can provide fire services or they can contract with the County for a higher level of service that ordinarily provided to the rural areas.

The requirement to have a Fire Station in place in the South Mesa Neighborhood at the time the first dwelling unit is occupied would require substantial initial investment by the property owner that could be reimbursed from fire impact fees over time as the project develops. Funding for enhanced fire protection above that allocated from the County General Fund resources for operational costs (increased number of firefighters and faculty overhead) would have to be born by the CSD.

Infrastructure (including fire protection services, faculties, firefighters, staffing, etc.) shall be funded through a variety of mechanisms. All fair share contributions shall be made through development

agreements with the County of Madera. Accordingly, the NFV-1 Specific Plan states that fire protection shall be provided by the local service provider and fair share costs for fire protection and emergency services shall be paid through county-wide taxes while additional services beyond the scope of the County of Madera may be provided through special tax assessments deemed necessary by residents living within the Specific Plan to provide safe and effective fire protection. Where the County of Madera elects not to provide fire protection services, fire services shall be provided by a local Community Service District.

Cumulative Impacts

Cumulative development within the County of Madera and the RMAP area (including the NFV-1 project area) would ultimately affect fire protection services and will result in the need for expansion of fire service capability as the area is developed. Additional fire personnel and equipment for the proposed project would be provided for by development impact fees, countywide tax revenues generated by future projects, in conjunction with a Community Services District financed by a special tax assessment on residents living within the specific plan area. The fire protection facilities provided in the Specific Plan would actually improve response times and levels of service to adjacent areas and is considered a less than significant impact. However, the RMAP in conjunction with other past, present and reasonably foreseeable future projects may result in a significant cumulative impact on the need to expand fire protection services. Implementation of mitigation measures for the project to meet the County General Plan policies for providing fire services will reduce the impact to levels consider less than significant.

New fire stations will be required, the construction of which could create significant environmental impacts. However, these new stations will be integrated into the new developments and would be subject to additional environmental review. Therefore, mitigating the project impact will also mitigate the cumulative impact.

Mitigation Measures

The applicant, developer, and/or successors-in-interest shall be responsible for the following fire services mitigation measures:

- PSF-FS-1** The applicant shall offer for dedication to the Madera County Fire Department an improved Fire Station and minimum equipment located in the South Mesa Neighborhood as defined by the NFV IMP such that it provides fire and emergency medical services within response time requirements of state law as stated in the Specific Plan, and pay Fire Impact Fees as established by Madera County. The developer shall be reimbursed from Fire Impact Fees collected from the area of fire protection benefit.
- PSF-FS-2** The applicant shall provide a funding mechanism through the Community Services District that will generate sufficient funds (collected from the area of fire protection and emergency response benefit) to provide emergency response of 10 minutes or

less to the project site pursuant to the Madera County General Plan. Such funding shall be proportionate to the benefit received by the project site if such funding provides additional personnel at an existing Fire Station.

Level of Significance After Mitigation

Impacts to fire services would be reduced to less than significant levels after implementation of the required mitigation measures.

5.13.4 - Schools

Existing Conditions

The entire Specific Plan project area is located within the Chawanakee Unified School District (CUSD), which provides K-12 instruction to area residents. The CUSD operates four schools, which children from the proposed project would attend, including North Fork School, Spring Valley School, Mountain Oaks High School, and Chawanakee Academy. North Fork School serves grades K-8 from a campus located at 33087 Road 228 in the unincorporated community of North Fork. Spring Valley School serves grades K-8 from a campus located at 46655 Road 200 in the unincorporated community of O'Neals approximately 8 miles north of the project site. Mountain Oaks High School serves a limited number of students in grades 9-12 and is located on the Spring Valley School campus. Chawanakee Academy is a K-12 public school that is part of the CUSD. The school offers many non-traditional methods of instruction to students residing in Madera County, as well as students in adjacent counties. Chawanakee Academy is located in the mountains between North Fork and Yosemite Lakes Park.

The CUSD is in the process of developing its first comprehensive high school encompassing 318.5 acres and located near the northeast corner of State Highway 41 and Road 200. A master plan has been prepared for the high school that would accommodate 1,200 students in grades 9-12. According to CUSD staff, the high school is anticipated to be completed within the next two years.

The CUSD is currently characterized as a rural school district that is defined as being overcrowded based on its current enrollment and capacities. The southern portion of the CUSD contains denser development that will result in a more urbanized character, and will require the development of more schools sites to serve those areas. It is unclear as to where the students from the proposed project will be enrolled due to the already overcrowded conditions in the CUSD.

SB 50 mandates that complete mitigation of school related impacts are covered by lawful payment of required school impact fees. Necessary mitigation fees have been established and discussed through the General Plan and will be based on square foot measurements.

Thresholds of Significance

Appendix G of the CEQA Guidelines indicates that the proposed project would result in a significant impact on school services if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for schools.

Project Impacts

The proposed project has the potential to exacerbate the deficient levels of service for schools within the CUSD by adding significantly more residents to the fringe of the CUSD's existing service area. Accordingly, development of the NFV-1 Specific Plan area would add 2,966 dwelling units and increase the population in the project area by approximately 8,899 residents thus creating the need for additional school services and corresponding support facilities. Based on student generation rates provided by the CUSD for single-family residences, Table 5.13-1 provides the estimated student generation for the proposed project.

Table 5.13-1: Student Generation Forecast

Residential Use	Number of Dwelling Units	Grades	Generation Rates	Total Students
Single-family	2,966	K-6	0.425	1,261
		7-8	0.139	412
		9-12	0.214	635
Total:		K-12	0.778	2,308
Source: Chawanakee Unified School District, December 2006.				

The generation of approximately 2,308 students (K-12) will result from the proposed project; 1,261 elementary students (K-6), 412 middle school students (7-8), and 635 high school students (9-12) would add to the existing and anticipated overcrowding conditions at schools that would serve the project site. Implementation of the proposed project will significantly impact the Chawanakee Unified School District and necessitate the construction of additional school facilities to serve the project's student population. Furthermore, the CUSD would require additional classroom space, classroom furniture, and teachers to serve the proposed project.

Representatives of the Chawanakee Unified School District, Madera County, and the development community have engaged in discussion to address this potential impact and identified a potential school site within the NFV-1 Specific Plan area. Accordingly, a grammar school site shall be provided and constructed as part of the NFV-1 Specific Plan built-out. A 14.8-acre site located in the South Mesa Neighborhood has been selected and approved by school district representatives as well as a representative from the State of California Architects Office. The location selected has been chosen according to accessibility, both in terms of central location and in terms of safety. With close proximity to high-density housing in South Creek Neighborhood and South Mesa Neighborhood, consideration shall be given to pedestrian corridors in ensuring that children are given safe passage to and from the school site.

According to the RMAP EIR, a mitigation measure requires that “residential rezone, general plan amendment, tentative parcel/final map requests shall not be approved unless accompanied by a finding that school facilities to accommodate projected students consistent with service level standards will be available in a timely manner to serve the project or that the project includes phasing conditions to ensure coordination of residential construction and school construction consistent with policy (Mitigation Measure 4.15.5.6).

Under state mandate, developer impact fees will meet full mitigation standards required by CEQA regardless of the enrollment capacity conditions of the affected schools. In addition, school impact fees will be required to cover the costs of adding capacity at other existing or new schools operated by the CUSD.

Cumulative Impacts

The RMAP and NFV-1 Specific Plan in conjunction with other past, planned, and reasonably foreseeable future projects will result in an increased student population and substantially contribute to significant cumulative impacts on public school facilities within the Chawanakee Joint Unified School District, Madera Unified School District, Golden State Unified School District, and Sierra Joint Unified School District. Implementation of the Madera County General Plan policies requiring developers to meet school needs as part of development entitlements through the payment of school impact fees and the dedication of school sites serving the development would reduce the impact to less than significant.

Mitigation Measures

The applicant, developer and/or successors-in-interest shall be responsible for the following mitigation measures for schools:

- PSF-S-1** Prior to the approval of the first Tentative Tract Map in the NFV-1 Specific Plan area, the developer shall dedicate a school site located in the South Mesa Neighborhood approved by the Chawanakee Unified School District and the State Architect.

- PSF-S-2** Prior to the issuance of building permits, the project applicant shall pay developer (school) impact fees to the Chawanakee Unified School District in accordance with Section 65995 of the Government Code for the proposed residences.

- PSF-S-3** The project applicant shall provide Madera County with certification from the Chawanakee Unified School District that school mitigation has been accepted by the District prior to the approval of the Final Tract Map pursuant to the District’s request.

Level of Significance After Mitigation

The assessment of development fees to provide a fair-share contribution for expansion of school facilities in compliance with State of California laws and regulations will assure adequate school funding. *Impacts to public schools will be less than significant after mitigation.*

5.13.5 - Solid Waste Service

Existing Conditions

Madera County does not currently require mandatory solid waste collection in the rural areas to the County. Currently residents subscribe to private waste hauling service or self-haul their waste to a solid waste transfer station or to the landfill. The County requires that urban scale developments subscribe to mandatory collection as a condition of approval of Tentative Subdivision Maps. The RMAP contains a policy that requires mandatory collection. Solid waste collection is mandatory in the two incorporated cities in the County. The County entered into a solid waste flow control agreement with the cities of Madera and Chowchilla.

Two private solid waste franchise haulers currently serve the County: EMADCO Disposal Service and Madera Disposal Services, Inc. EMADCO serves eastern Madera County and Madera Disposal Services, Inc. serves the valley area, including the NFV-1 project site. The County's solid waste disposal needs are provided for at the County-owned Fairmead Sanitary Landfill (only facility in the County) and the North Fork Transfer Station. The transfer station is located on Road 274 near the Town of North Fork. The North Fork transfer station allows residents to bring garbage in by self-haul.

The Fairmead Landfill is a permitted facility operated under contract by Madera Disposal Services, Inc., and consists of approximately 160 acres located just west of Highway 99 at the intersection of Avenue 22 and Road 19-1/2. The landfill consists of the old portion of the landfill (46 acres), the new expansion area (100+ acres) and the Mammoth Material Recovery Facility (MRF). The MRF was constructed in 2001 to comply with Assembly Bill 939, which mandates a 50 percent reduction in solid waste disposal by 2000. This facility is a separation facility where recyclable material is separated and removed from the waste stream. Waste from the North Fork transfer station and Oakhurst transfer station (owned and operated by EMADCO Disposal Service) is also transferred to the MRF, sorted, with recovered material held for sale and the balance placed in the landfill. The facility recovers about 20 percent of the waste stream. A permanent Household Hazardous Waste Collection facility is also being planned. In addition, a 10-acre compost facility is planned to operate 7 days a week. The compost facility is allotted 100 TPD (tons per day).

Thresholds of Significance

Appendix G of the CEQA Guidelines indicates that the proposed project would result in a significant impact on solid waste services if it would:

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

Project Impacts

According to the California Integrated Waste Management Board, disposal rates amount to 0.41 tons per year per capita. The proposed project will increase the population in the project area by approximately 8,899 (average household of 3.0 residents). The 8,899 persons residing at the proposed project site would generate approximately 3,649 tons of waste annually. This increase is not considered significant in the short term.

Madera County has established franchises for the collection of solid waste and recycling efforts. The proposed project is located in the valley and would be provided service by Madera Disposal Services, Inc. and the project site will be served by the Fairmead Landfill, which contains sufficient permitted capacity to accommodate the project's residential solid waste disposal needs. Madera Disposal Services, Inc. in concert with the County will have to implement an urban level solid waste and recycling program similar to the two incorporated cities. Madera County may require mandatory collection in rural areas of the County as a condition of Tentative Subdivision Maps. The NFV IMP requires mandatory recycling and solid waste collection and complies with federal, state, and local statutes and regulations related to solid waste.

Cumulative Impacts

As the build-out of the proposed RMAP and other developments within Madera County proceed, these developments will contribute to the reduced life span of the County-owned Fairmead Landfill. Additional landfill area will be necessary at an uncertain future time due to the anticipated overall growth of the County of Madera. As the County landfill reaches its capacity, the County will be responsible for acquisition of additional landfill area or possibly privatization at additional landfill locations. The County has adopted a Source Reduction and Recycling Element to its General Plan that includes programs to reduce the amount of solid waste being deposited in the landfill. Implementation of the recycling components of the General Plan for new and existing development would reduce the impact to less than significant.

The potential future development within the service area could require new and expanded landfill facilities, the construction of which could create significant environmental impacts. However, these new landfill facilities and expanding landfills would be subject to additional environmental review. Therefore, mitigating the project impact will also mitigate the cumulative impact.

Mitigation Measures

Recycling programs for solid waste services are in place and well regulated, and no further mitigation is required.

Level of Significance After Mitigation

No significant impacts to solid waste facilities have been identified.

5.13.6 - Water Supply and Delivery

The County of Madera's NFV-1 Specific Plan contains plans for the development of more than 500 dwelling units. Therefore, this project qualifies as a Project under California Senate Bill 610 (SB 610) and a Water Supply Assessment (WSA) was prepared for the proposed project and is contained in Appendix F, Hydrology/Water Quality, of this Draft EIR.

Existing Conditions

Presently, there is no public water system to serve the NFV-1 project site; hence, there is no Urban Water Management Plan available. Accordingly, the WSA for the project included a discussion with regard to whether the total projected water supplies available during normal, single dry, and multiple dry years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to any existing and planned future uses, including agricultural and manufacturing uses.

Groundwater Basin

The NFV-1 project lies within the Sierra Nevada foothills outside the eastern boundary of the Madera Sub-basin of the San Joaquin Valley Groundwater Basin within the San Joaquin River Hydrologic Region. Even though the project site does not lie within the sub-basin, groundwater in the foothills likely provides a subsurface source to the groundwater within the sub-basin. Refer to the WSA (Appendix H) for a detailed discussion of the nature of the sub-basin the project site borders.

Water Supplies

This section provides a detailed discussion of the existing and planned water supplies available to the NFV-1 project. As previously stated, there is no water purveyor for the area at this time. The proposed project anticipates receiving water from local groundwater sources and from recycled water sources (Table 5.13-2). Each of the water sources are briefly described in the sub-sections below. A more detailed discussion of the water sources is contained in the WSA.

Table 5.13-2: Annual Amount of Water Supply under Right or Contract for NFV-1

Supply	Amount, afa	Right	Contract	Ever Used
Groundwater ^a	2,215	X	—	No
Recycled Water	767	X	—	No
Notes: ^a Groundwater amount based on sustainable yield with interference. afa = acre-feet annually Source: Water Supply Assessment, 2007.				

Local Groundwater Supplies and Well Characteristics

The NFV-1 will rely solely on groundwater to meet its domestic use demands. There are eleven existing wells on the project site to meet these demands at full project buildout. Notably, groundwater has not previously been utilized within the proposed project site. Since the basin is not adjudicated and has not been deemed in overdraft by DWR, there are no existing restrictions on pumping.

Accordingly, the proposed NFV-1 development contains eleven wells in two clusters: one on the southern part of the property and one on the northern edge. These two clusters currently contain seven wells and four wells, respectively, and are referred to herein as the Southern and Northern Well Fields (refer to Exhibit 5.8-1). All wells were constructed to State of California Department of Health Services (DHS) specifications and pump tested per state and county standards. Well capacity data were obtained from aquifer tests (eleven in 1989-1991, one in 2004, and two in 2006) conducted on the NFV-1 (refer to the WSA for data).

Water System Design

The development of the NFV-1 Specific Plan area will require the installation of a community water system. According to the IMP for NFV-1 Specific Plan prepared by Ennis Consulting, the property will have 11 wells serving approximately 19 pressure zones, the majority of which will be pumped zones. The system has been designed as a dual system with an intertie between the north and south portions of the property. Due to the depth to groundwater at drawdown for each other wells and the need to store water for fire and emergency purposes, a step-up system has been proposed (refer to the WSA for water system design specifics).

Capital Outlay Program

The WSA contains a detailed discussion of a Capital Improvement Plan (CIP) for the construction of the NFV-1 Specific Plan Water System. According to the CIP, approximately \$14 million (2006 dollars) in capital water facilities will be required for complete build-out of a community water system.

As expansion occurs, new developments will pay their fair share contributions for the expansion of the community water system. In addition, ratepayers will provide capital for ongoing operations and maintenance of the system.

Reclaimed Water Supplies

The sewer system will be a combination of gravity, force main, and pressure system. A sewer treatment plant has been sited on a 12-acre parcel adjacent to Cottonwood Creek along the west property line. This facility will be designed to accommodate an ultimate flow of 0.70 million gallons per day (MGD) with wastewater treated to a tertiary level. The developer plans to install a package plant for treatment that can be readily expanded, if necessary. Reclaimed water will be used for landscaping requirements on school grounds, local parks, and irrigated use areas. In addition, common landscaping on all Mixed Use, Commercial/Office, Medium Density Residential, and High Density Residential lands will also use reclaimed water.

The projected population of 8,899¹ people will generate nearly 0.68 MGD of sewage per day, which is about 767 acre-feet annually. Due to the overall size of the project and the time of concentration of the tributary area, including lift stations, a detention tank shall be installed at the wastewater treatment facility. This tank shall be sized to accommodate 12 hours of sewage flow (roughly 325,000 gallons) and will be used to buffer flows into the treatment plant. Redundant storage shall be produced in the tank design as a dual chamber system, capable of isolation under warranted conditions.

Per discussions with the Regional Water Quality Control Board, clay lining of reclaimed water ponds may be required while nitrogen uptake will occur in irrigated use areas and common public space landscaping. All wastewater treatment and disposal processes will be subject to review and approval by the Regional Water Quality Control Board.

Availability of Supply

The rate of generation for reclaimed water is directly linked to interior household use. Water usage was estimated to be 85 gallons per capita per day (gpcd) and includes a value of 70 gpcd for internal use plus 15 gpcd for miscellaneous uses and system losses. These miscellaneous uses include exterior (non-landscaping) uses such as water used to wash cars, rinse driveways, etc. Water used for these purposes will enter storm water drains and not the sewer system, so it is not included in the calculations to determine the availability of reclaimed water. To determine the rate of generation for reclaimed water, a value of 70 gallons per capita per day was used.

Per capita sewer generation by land use type was obtained from the RMAP and is shown below in Table 5.13-3. The total number of units for each land use category was determined from the IMP for the proposed development. Low Density Residential (LDR), Very Low Density Residential (VLDR), and Rural Reserve (RR) land uses were estimated to average about 3.20 persons per dwelling unit, with an average sewage generation rate of 224 gallons per day per dwelling unit. Medium Density Residential land uses were estimated to average about 2.90 persons per dwelling unit, with an average consumption rate of 203 gallons per day per dwelling unit. High Density Residential (HDR) land uses were estimated to average about 2.75 persons per dwelling unit, with an average sewage generation rate of 193 gallons per day per dwelling unit. Land based water demands were calculated

¹ According to projected population figures in the NFV-1 Specific Plan.

for Commercial/Office land uses. This type of land use was estimated to generate 1000 gallons of sewage per acre.

Table 5.13-3: Sewer Generation by Land Use Type

Land Use Type	Sewer Generation	
	Capita per Dwelling Unit (gpcd) ^a	Sewer Use per Day (gallons)
RR	3.20	224
VLDR	3.20	224
LDR	3.20	224
MDR	2.90	203
HDR	2.75	193
Commercial/Office	—	1000/acre
Notes: ^a gpcd = gallons per capita per day. Potable interior school water use was factored in with commercial consumption rates. Source: Water Supply Assessment, 2007.		

Total sewage generation by land use type was calculated for the proposed project and is shown below in Table 5.13-4. Rural Residential (RR) land uses are estimated to generate 63 acre-feet annually (afa) of sewage. Very Low Density Residential (VLDR) land uses are estimated to generate 72 afa of sewage, Low Density Residential (LDR) are estimated to generate 115 afa of sewage, and Medium Density Residential (MDR) land uses are estimated to generate 448 afa of sewage. Commercial and office (C/O) land uses are estimated to generate 69 afa of sewage, producing a combined project sewage generation rate of 767 afa. This sewage water will be reclaimed and used for common area landscaping as well as landscaping requirements for school grounds, local parks, and irrigated use areas. In addition, common area landscaping on all Mixed Use (MU), C/O, MDR, and HDR lands will use reclaimed water.

Table 5.13-4: Generation of Reclaimed Water by Land Use Type

Land Use Type	Lot Size (ft ²)	Interior Water Use (gpcd) ^a	Capita/DU ^b (persons)	Sewage Generation/Day/DU (gallons)	Number of DUs	Total Sewage per Day (gallons)	Total Usage (afa) ^c
RR	20,000	70	3.20	224	249	55,776	63
VLDR	16,000	70	3.20	224	155	34,720	39
VLDR	14,000	70	3.20	224	130	29,120	33
LDR	12,000	70	3.20	224	194	43,456	49
LDR	10,000	70	3.20	224	264	59,136	66
MDR	6,000	70	2.90	203	1377	279,531	313
MDR	5,000	70	2.90	203	147	29,841	33
MDR	3,500	70	2.90	203	450	91,350	102

Table 5.13-4 (Cont.): Generation of Reclaimed Water by Land Use Type

Land Use Type	Lot Size (ft ²)	Interior Water Use (gpcd) ^a	Capita/DU ^b (persons)	Sewage Generation/Day/DU (gallons)	Number of DUs	Total Sewage per Day (gallons)	Total Usage (afa) ^c
Commercial/Office	—	—	—	1000 gal/acre	61.7 acres	61,714	69
Total	—	—	—	—	2,966	684,644	767

Notes:
^a gpcd = gallons per capita per day.
^b du = dwelling unit.
^c afa = acre-feet annually.
 Potable interior school water use was factored in with commercial consumption rates.
 Source: Water Supply Assessment, 2007.

Thresholds of Significance

Appendix G of the CEQA Guidelines indicates that a project would result in a significant impact on domestic water services and facilities if it would:

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

Project Impacts

Project Demand

Per capita based water demands for each of the various residential land uses within the proposed project site are shown in Table 5.13-5. Water usage was estimated to be 85 gallons per capita per day (gpcd). This value is substantiated by numerous studies and sewer master plans and includes a value of 70 gpcd for internal use plus 15 gpcd for miscellaneous uses and system losses. The number of persons per dwelling unit and per capita consumption rates were obtained from the RMAP and are shown below in Table 5.13-5.

Table 5.13-5: Water Usage by Land Use Type

Land Use Type	Interior Water Use (gpcd) ^a	Capita per Dwelling Unit (persons)	Water Use per Day Per Dwelling Unit (gallons)
RR	85	3.20	272
VLDR	85	3.20	272
LDR	85	3.20	272
MDR ^b	85	2.90	247

Table 5.13-5 (Cont.): Water Usage by Land Use Type

Land Use Type	Interior Water Use (gpcd) ^a	Capita per Dwelling Unit (persons)	Water Use per Day Per Dwelling Unit (gallons)
Commercial/Office	—	—	1600/acre
Notes: ^a gpcd = gallons per capita per day. ^b Mixed Use and High Density Residential lands are lumped into Medium Density Residential for water consumption calculations. Source: Water Supply Assessment, 2007.			

Interior water demand by land use type is shown in Table 5.13-6. The total number of units for each land use category was determined from the IMP for the proposed development. Low Density Residential (LDR), Very Low Density Residential (VLDR), and Rural Reserve (RR) land uses were estimated to average about 3.20 persons per dwelling unit, with an average consumption rate of 272 gallons per day per dwelling unit. There are 458 proposed LDR units each using 272 gallons per day; this produces a water demand for that land use of 140 afa. There are 285 proposed VLDR units each using 272 gallons per day; this produces a water demand for that land use of approximately 87 afa. There are 249 proposed Rural Residential units each using 272 gallons per day; this produces a water demand for that land use of 76 afa.

Medium Density Residential land uses were estimated to average about 2.90 persons per dwelling unit, with an average consumption rate of 247 gallons per day per dwelling unit. To be conservative, Mixed Use and High Density Residential lands were lumped into the Medium Density Residential category for water consumption calculations. There are 1,974 MDR and HDR proposed units each using 247 gallons per day; this produces a water demand of 546 afa. Land based water demands were calculated for Commercial/Office land uses. This type of land use was estimated to use 1600 gallons per acre. Commercial land uses on the project site account for 61.7 acres, producing a water demand of 111 afa. Total interior water usage for the proposed project is approximately 958 acre-feet annually.

Table 5.13-6: Interior Water Demand by Land Use Type

Land Use Type	Lot Size (ft ²)	Interior Water Use (gpcd) ^a	Capita/DU ^b (persons)	Water Use/Day/DU (gallons)	Number of DUs	Total Usage per Day (gallons)	Total Usage (afa) ^c
RR	20,000	85	3.20	272	249	67,728	76
VLDR	16,000	85	3.20	272	155	42,160	47
VLDR	14,000	85	3.20	272	130	35,360	40
LDR	12,000	85	3.20	272	194	52,768	59
LDR	10,000	85	3.20	272	264	71,808	80
MDR	6,000	85	2.90	247	1377	339,431	380

Table 5.13-6 (Cont.): Interior Water Demand by Land Use Type

Land Use Type	Lot Size (ft ²)	Interior Water Use (gpcd) ^a	Capita/DU ^b (persons)	Water Use/Day/DU (gallons)	Number of DUs	Total Usage per Day (gallons)	Total Usage (afa) ^c
MDR	5,000	85	2.90	247	147	36,236	41
MDR/HDR	3,500	85	2.90	247	450	110,925	124
Commercial/ Office	—	—	—	1600 gal/acre	61.7 acres	98,742	111
Total	—	—	—	—	2,966	855,158	958

Notes:
^a gpcd = gallons per capita per day.
^b du = dwelling unit.
^c afa = acre-feet annually.
Source: Water Supply Assessment, 2007.

Exterior water demands were calculated using *A Guide to Estimating Irrigation Water Needs of Landscape Planting in California* (Department of Water Resources 2000). Hard, non-irrigated surfaces compose between 61 percent and 82 percent of the total lot area for dwelling units in the proposed development. The remaining 18 percent to 39 percent of the total lot area is divided in half between lawns and other plantings, both of which are calculated as irrigated. Total exterior water use for each land use category is shown below in Table 5.13-7. Total exterior water usage for the proposed project is approximately 397 acre-feet annually.

Table 5.13-7: Exterior Water Demand by Land Use Type

Land Use Type	Lot Size (ft ²)	Total Irrigation per Unit per Year (gallons)	Number of DUs	Total Landscape per Year (gallons)	Total Landscape (afa)
RR	20,000	191,317	249	47,637,995	146
VLDR	16,000	144,714	155	22,430,721	69
VLDR	14,000	132,450	130	17,218,553	53
LDR	12,000	100,564	194	19,509,454	60
LDR	10,000	85,847	264	22,663,736	69
MDR	6,000	31,886 ^a	1377	43,907,309 ^a	135 ^a
MDR	5,000	26,000 ^a	147	3,821,930 ^a	12 ^a
MDR/HDR	3,500	15,453 ^a	450	6,953,646 ^a	21 ^a
Commercial/ Office	—	—	—	9,732,344 ^a	30 ^a
Total	—	—	2,966	129,460,459	397

Notes:
DU = dwelling unit afa = acre-feet annually.
^a Landscaping on all Mixed Use, Commercial/Office, Medium Density Residential, and High Density Residential will use reclaimed water (non-potable) and are included in the reclaimed water estimate.
Source: Water Supply Assessment, 2007.

Total water demands for the proposed project are shown below in Table 5.13-8. The values represent the combined demand of interior and exterior water usage. Total water demand for the proposed project is anticipated to be 1,355 afa.

Table 5.13-8: Water Demand by Land Use Type

Land Use Type	Lot Size (ft ²)	Total Interior Water Demand (afa)	Total Exterior Water Demand (afa)	Total Water Demand (afa)
RR	20,000	76	146	222
VLDR	16,000	47	69	116
VLDR	14,000	40	53	93
LDR	12,000	59	60	119
LDR	10,000	80	69	149
MDR	6,000	380	135 ^a	380
MDR	5,000	41	12 ^a	41
MDR/HDR	3,500	124	21 ^a	124
Commercial/Office	—	111	30 ^a	111
Total	—	958	397	1,355

Notes: afa = acre-feet annually.
^a Landscaping on all Mixed Use, Commercial/Office, Medium Density Residential, and High Density Residential will use reclaimed water (non-potable) and are included in the reclaimed water estimate.
 Source: Water Supply Assessment, 2007.

To supply this water, the applicant proposes a community well network comprising a series of existing well clusters at the southern and northernmost parts of the property. A logic control system will cycle the pump for each well according to a sequence based primarily on storage-tank levels and time of day.

Supply and Demand Comparison

A comparison of water supply and demand for an average water year, single dry water year, and multiple dry water years is presented from 2010 to 2030 in five-year increments.

Normal Year Water Assessment

Table 5.13-9 provides a summary of the average water year reliability for NFV-1.

Table 5.13-9: Normal Water Year Assessment

	Supply and Demand, Acre-Feet Annually				
	2010	2015	2020	2025	2030
Supply	2,215	2,215	2,215	2,215	2,215
Demand	0	678	1,355	1,355	1,355
Difference	2,215	1,537	860	860	860

Source: Water Supply Assessment, 2007.

Single and Multiple Dry Year Water Assessment

Table 5.13-10 provides a summary of the single dry and multiple dry water year reliability for NFV-1. The project's pump test data (refer to WSA for a summary of pump test data) gathered during the third, fourth, and fifth years of a six-year drought should result in conservatively estimated sustainable well yields. Design of the project's water supply system is based on these conservative values. Therefore, single and multiple dry year comparisons do not use reduced supply values.

In addition, strict conservation measures have been written into the community's Conditions, Covenants, and Restrictions (CC&Rs), particularly for exterior residential water use. Hard surfaces (i.e., houses, garages, pools, driveways, and patios) make up 61 to 82 percent of the total lot area for all residential lots in the NFV-1. Therefore, only 18 to 39 percent of the total lot area is available for landscaping and may potentially require irrigation. Furthermore, the amount of irrigation applied to residential lots in the NFV-1 is monitored and enforced through a dual water meter system, which separates interior household uses from exterior landscaping uses.

Table 5.13-10: Single and Multiple Dry Water Year Assessment

	Supply and Demand, Acre-Feet Annually				
	Normal	Single Dry	Multiple - 1	Multiple - 2	Multiple - 3
Supply	2,215	2,215	2,215	2,215	2,215
Demand	1,355	1,355	1,355	1,355	1,355
Difference	860	860	860	860	860
Source: Water Supply Assessment, 2007.					

Supply and Demand Comparison for Proposed Project

Water supplies for NFV-1 include groundwater and reclaimed water. Groundwater could provide up to 2,215 afa; however, because the groundwater basin is not yet adjudicated and there are no groundwater pumping restrictions, NFV-1 could potentially increase its groundwater pumping to meet increasing demands, if necessary, by drilling additional wells.

Water demands for the proposed Specific Plan are 1,355 afa at project build-out. Combined, existing wells have been determined to have sustainable yields, accounting for well interference, of 2,215 afa. This is more than enough water to supply the proposed project.

Based on information contained in the water balance report by Ennis Consulting and the Hydrogeological Analysis produced by Melvin C. Simons Associates (Appendix F), there will be sufficient water available to supply the proposed project in normal, single dry, and multiple dry years. The NFV-1 will have sufficient supply to meet the increasing demand through 2030, assuming the availability of groundwater remains the same.

Conclusions

For the ultimate design of 2,966 dwelling units, total water consumption at project build-out will be 1,355 acre-feet annually. Given safe water consumption practices administered by a Community Services District (CSD) or a Public Utility District (PUD) focused on enforcing irrigation consumption through a dual water meter system, existing well capacity will prove sufficient. It is important to recognize that the NFV-1 Project will differ from typical developments within the Central Valley as water use will be regulated and enforced with strict conservation practices written into the community Conditions, Covenants, and Restrictions (CC&Rs).

In addition to safe water practices, Friant Development Corporation, through the future CSD or PUD, will file annual reports with the State of California Department of Health Services (DHS) that demonstrate continuous well performance and water quality results for wells in operation, ensuring to the satisfaction of the DHS that safe and reliable water sources are continuously supplied to the development. Monthly well production values will be provided to the DHS, in addition to monitoring requirements for compliance with drinking water standards. All reasonable measures have been and will be taken to ensure that safe and reliable water is available to the property.

Based on the following information, water supplies appear to be sufficient to meet the projected demands of the proposed project into the year 2030 under normal, single dry, and multiple dry years assuming the availability of groundwater remains the same:

- Proven wells at this point have the combined ability to produce at least 1,373 gallons per minute, or 2,215 acre-feet annually, on a sustained yield basis, accounting for interference. Comparing total combined sustained yield with the water demand for the ultimate project of 1,355 acre-feet annually indicates that production capability more than matches demand.
- Reclaimed water will be of increasing importance in the future to help meet growing demands. The proposed project will generate 767 acre-feet annually of reclaimed water that will be used on landscaping requirements for school grounds, local parks, and irrigated use areas. In addition, reclaimed water will be used for common landscaping on all Mixed Use, Commercial/Office, Medium Density Residential, and High Density Residential land uses.
- According to Ennis Consulting, given the fact that the previously conducted well test data were generated during an unprecedented drought, and that no development using groundwater has occurred around the project vicinity, it is anticipated that the existing groundwater aquifer will prove adequate for the next 20 years.
- According to the Hydrogeologic Analysis by Melvin C. Simons Associates (Appendix F), the water resources available to serve the proposed project are sufficient. The NFV-1 will have an adequate water supply to meet the increasing demand for the project at complete buildout, assuming the availability of groundwater remains the same.

Therefore, sufficient water supplies are available, new facilities will be financed and constructed by the developer and impacts are less than significant.

Cumulative Impacts

The proposed project in conjunction with other past, present and reasonably foreseeable future projects will result in the expansion of public water systems serving an urban population. The proposed project intends to establish either a Community Services District or join the Sierra Foothill Public Utility District to provide for the treatment and distribution of domestic water. The provision of public water systems is consistent with the RMAP and the County General Plan. The cumulative impact related to water service has been considered in these policy documents as a means of avoiding cumulative service delivery impacts. The cumulative impact on water service is considered less than significant.

The proposed development project will result in the use of additional water resources. The potential demand for water will rise as additional developments are constructed and occupied. However, these increases are within the projections contained in the water supply assessment. Cumulative impacts will be less than significant with the implementation of mitigation measures to ensure that water use is minimized.

Mitigation Measures

The applicant, developer, and/or successors-in-interest shall be responsible for the following water supply mitigation measures:

PSF-WS-1 A Community Services District (CSD) or Public Utilities District (PUD) shall be formed to assure adequate water service in phase with NFV-1 Specific Plan development. In order to provide interim water service facilities until the CSD can be approved by a majority of registered voters a Community Facilities District (CFD) may be formed by the election of landowners with a condition of approval that the property owners will agree to annex to the CSD.

PSF-WS-2 The NFV-1 project will file monthly well production reports with the California Department of Health Services (DHS) which will ensure to the satisfaction of DHS delivery of safe and reliable drinking water to the NFV-1 Specific Plan area (see Appendix F, Hydrology and Water Quality). In addition, annual drinking water reports and consumer confidence reports will be filed per state mandate.

PSF-WS-3 All development within the NFV-1 Specific Plan shall include at a minimum, the following water saving features:

- Low flow toilets, shower heads, and faucets
- Dual meters to separately monitor indoor and outdoor usage
- Minimum hardscaping requirements on single-family residential

- PSF-WS-4** The community service district or other water purveyor formed to serve the project shall implement a water rate structure that discourages wasteful use and encourages conservation.
- PSF-WS-5** Recycled water from the tertiary treatment plant shall be used to the extent feasible to irrigate common landscaped areas or other areas as approved by the County and the State.

Level of Significance After Mitigation

No significant impacts to water supply and delivery services with the implementation of mitigation measures.

5.13.7 - Wastewater Service

Existing Conditions

The project site is mostly undeveloped rangeland and is not near any existing wastewater treatment systems. Residences near the plan area are serviced by individual septic systems.

The RMAP and EIR envisioned the utilization of package sewage treatment facilities for individual projects and recognized the growth inducing cumulative effects of introducing sewage treatment facilities to the area.

Thresholds of Significance

Appendix G of the CEQA Guidelines indicates that a project would result in a significant impact on wastewater services and facilities if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- 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.

Project Impacts

Wastewater Treatment Requirement

As part of the EIR process for the NFV-1 Specific Plan, a complete Report of Waste Discharge (ROWD) was prepared for the San Joaquin Regional Water Quality Control Board (RWQCB). Accordingly, the proposed project would not exceed wastewater treatment requirements of the applicable RWQCB and therefore impacts are less than significant.

Wastewater Treatment Facilities

The NFV-1 Specific Plan states that wastewater effluent is estimated at 683,489 gallons per day and that the proposed project will provide its own treatment of wastewaters. According to the Infrastructure Master Plan (Ennis Consulting, 2007), a 700,000 gallon Membrane Bio-Reactor (MBR) treatment plant has been proposed and approved for construction by the San Joaquin RWQCB to provide tertiary treatment of the wastewater. Due to the undulating terrain of the project, the sewer/wastewater system shall consist of a combination of gravity, force main and pressure sewer systems. The treatment plant has been sited on an 11.7-acre parcel adjacent to Cottonwood Creek in South Mesa Neighborhood. This facility shall be designed to accommodate the flow of effluent produced by the proposed project with an ultimate flow capacity of 0.70 million gallons per day (MGD) with wastewater treated to a tertiary level. This tertiary wastewater (or reclaimed water) shall be used for application to common space landscaped areas throughout the Specific Plan.

Approximately 256 acres of land shall be designated as Open Space - Use Area to utilize the amount of tertiary water created at project build-out of the proposed development. Additional landscaped acreage for tertiary water is also available in commercial, mixed use, multi-family zoned areas, school grounds, and local parks.

The proposed project would require or result in the construction of a new tertiary wastewater treatment facility, the construction of which may cause significant effects on the environment. However, such improvements will be subject to a supplemental CEQA environmental documentation review prior to construction. The treatment facilities will be constructed and operated in compliance with applicable regulations that will prevent significant impacts from occurring.

All new developments within the Specific Plan shall be constructed with the latest water saving devices including low flow toilets, showerheads, and faucets. Additionally, septic systems shall be employed in two minor locations as referenced in the ROWD prepared by Boyle Engineering Corporation. Additional sewer treatment and disposal information can be found in the ROWD by contacting the County of Madera Resource Management Agency.

Cumulative Impacts

The proposed project in conjunction with other past, present and reasonably foreseeable future projects will result in the expansion of public wastewater treatment and collection systems serving an urban population. The NFV-1 Specific Plan proposes to implement a water reclamation system to provide for irrigation of open space and recreation lands. The proposed project intends to establish a Community Services District or join an existing Public Utility District to provide for water services, sewage treatment, and delivery of reclaimed water. The provision of public wastewater treatment and collection systems is consistent with the RMAP and the Madera County General Plan. The cumulative impact related to wastewater service has been considered in these policy documents as a means of avoiding cumulative service delivery impacts. The cumulative impact on water service is considered less than significant

As future development occurs within the area, additional demand for treatment will occur. The related developments in the RMAP will provide waste treatment for their projects that comply with applicable regulations. The construction of new facilities to support those development projects will be subject to environmental review. The proposed facilities included in the project address capacity requirements for the entire NFV-1 Specific Plan area and therefore addresses the significant cumulative wastewater demand.

Mitigation Measures

- PSF-WW-1** Prior to the issuance of building permits for lots proposing individual on-site sewage treatment, the project applicant shall provide the County with a recommended on-site sewage system design with soil engineering reports or studies demonstrating that the system design is adequate to prevent all water quality and health impacts.
- PSF-WW-2** Prior to issuance of building permits, the project shall join an existing Public Utility District or establish a Community Services District to provide for the treatment and distribution of domestic and reclaimed water.
- PSF-WW-3** Prior to issuance of certificates of occupancy for any wastewater generating use, the wastewater treatment facility and delivery system will be constructed and operational to the satisfaction of the County of Madera.

Level of Significance After Mitigation

The mitigation measures provided will assure that needed facilities are properly permitted and regulated prior to construction. *Impacts related to wastewater would be less than significant.*

5.13.8 - Stormwater and Drainage Service

Existing Conditions

The Madera County Engineering Department is responsible for controlling storm runoff in the Madera urban area. In most urban areas, storm runoff is collected and transported to percolating basins where it is recharged to the groundwater, as a groundwater management practice.

The NFV-1 site is located in a rural area and is situated within the unincorporated portion of southern Madera County. The project site consists mostly of undeveloped rangeland and does not contain an existing organized stormwater drainage facility. The natural drainage of the project site is generally to the southeast, toward Millerton Lake, Cottonwood Creek and the San Joaquin River. There are two natural drainage features within the project boundaries; the southern portion of the Specific Plan Area drains to Cottonwood Creek, while the northern portion drains to Millerton Lake. The drainage area of Cottonwood Creek is approximately 40 square miles. The entire southern part of the study area drains into Cottonwood creek as does the northwestern edge of the northern part of the site. A review of ten years' worth of runoff data (1995-2004) from the Cottonwood Creek recorder station (U.S. Bureau of Reclamation) located in the southeastern part of the property indicates annual runoff ranging from 0 (calendar year 2003) to 14,766 acre-feet in 1995. Mean annual runoff during this ten-

year period was 5,579 acre-feet. Runoff for January 2005 alone was 1,642 acre-feet. The remainder of the northern part of the study area (less than one square mile in area) drains to Millerton Lake via an ungauged ephemeral stream.

Thresholds of Significance

Appendix G of the CEQA Guidelines indicates that a project would result in a significant impact on wastewater services and facilities if it would:

- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Project Impacts

Project implementation will result in an increase in impervious surfaces due to site coverage from buildings, roadways, and other related improvements. As the amount of impervious surfaces increases, so does the amount of stormwater runoff. This is a potentially significant impact.

To compensate for the increased stormwater runoff, the proposed project will incorporate the use of stormwater conveyance facilities to be engineered and constructed prior to the completion of residential and commercial development. In general, project design incorporates a drainage system consisting of natural unlined channels, improved unlined channels, lined channels and closed conduits, pipe and box culverts, and retention and detention basins in appropriate locations to channel stormwater safely through developed areas. It is a policy of the Rio Mesa Area Plan (RMAP) to develop a comprehensive storm drain system adequately sized and designed to accommodate storm flows from all present and future development within the plan area. Accordingly, a storm water drainage master plan has been prepared that illustrates the size and scope of storm drainage channels and retention and detention basins. This Master Storm Drainage Plan (Exhibit 3-13) is more described within the NFV-1 Infrastructure Master Plan (IMP).

Within the NFV-1 Specific Plan Area, drainage zones have been designated and are based upon the natural terrain and drainage paths of the existing Specific Plan Area. Storm runoff within the property generally drains into two watersheds; the southern portion of the Specific Plan Area drains into Cottonwood Creek while the northern portion drains into Millerton Lake. In all instances, on-site detention basins will be constructed to detain, clean, and release storm flows that fall on the property. All basins will be designed with some element of retention in order to increase groundwater recharge as specified in the RMAP. In addition, stormwater basin design shall include an outfall structure or other suitable method for basin relief for any rainfall event greater than design capacity. The majority of detention facilities will be constructed in existing drainage channels while minimizing impacts to defined waters of the U.S. In every instance, engineering mechanisms will be constructed to minimize the impact of on-site storm flows to the natural drainage condition. Such mechanisms and Best Management Practices (BMPs) to help assure the quality of runoff are discussed in greater detail within Section 5.8, Hydrology and Water Quality, of this EIR.

The RMAP EIR mitigation measures call for a Community Services District (CSD) to assure adequate stormwater drainage in phase with RMAP development (Mitigation Measures 4.9.4.1-3). The RMAP requires that a CSD or some other responsible entity be established to operate and maintain the drainage system. Madera LAFCo has the authority to approve the creation of a CSD and its breadth of authority.

Implementation of the proposed project would require or result in the construction of new stormwater drainage facilities, the construction of which may cause significant effects on the environment. However, such improvements will be subject to a supplemental CEQA environmental documentation review prior to construction. The facilities will be constructed and operated in compliance with applicable regulations and recommended design alternatives for accommodating storm drainage that will prevent significant impacts from occurring. Therefore, impacts are considered less than significant and no mitigation measures are required.

Cumulative Impacts

The proposed project in conjunction with other past, present and reasonably foreseeable future projects will result in the expansion of stormwater and drainage collection systems serving an urban population. The NFV IMP proposes to implement new stormwater facilities to provide for stormwater collection and conveyance service. The proposed project intends to establish a Community Services District to operate and maintain the stormwater facilities. The provision of public stormwater facilities and drainage collection systems is consistent with the RMAP and the Madera County General Plan. The cumulative impact related to stormwater collection and conveyance service has been considered in these policy documents as a means of avoiding cumulative impacts. The cumulative impact on stormwater collection and conveyance service is considered less than significant.

As future development occurs within the area, additional demand for stormwater systems and drainage conveyance will occur. The related developments in the RMAP will provide stormwater collection and conveyance service for their projects that comply with applicable regulations. The construction of new facilities to support those development projects will be subject to environmental review. The proposed facilities included in the project address capacity requirements for the entire NFV-1 Specific Plan area and therefore addresses the significant cumulative wastewater demand.

Mitigation Measures

PSF-SD-1 Prior to issuance of building permits, the project shall join an existing Public Utility District or establish a Community Services District to operate and maintain stormwater facilities. In order to provide funding and management of interim surface water drainage facilities until the Community Services District or other water district can be approved by a majority of registered voters, a Community Facilities District (CFD) may be formed for the construction and installation of the surface and

stormwater drainage systems, by the election of landowners, with a condition of approval that the property owners will agree to annex to the CSD.

Level of Significance After Mitigation

No significant impacts to stormwater and drainage service with the implementation of mitigation measures.

5.13.9 - Electricity

Existing Conditions

The project is located within the PG&E service area. Electrical power is generated from a combination of oil, natural gas, hydroelectric, nuclear, and renewable sources such as wind and solar energy. Because the project site is primarily rangeland and agricultural uses, daily electrical demand is mainly for water pumping at the 11 wells located in the plan area.

Thresholds of Significance

A project is considered to have a significant impact on electrical services if existing or future planned facilities and supplies are not adequate to serve proposed land uses or existing electrical service is notably disrupted.

Project Impacts

The proposed project would convert the project site to residential and commercial uses that would result in an increased demand for electricity. Annual electrical demand from build-out of the proposed project is determined by multiplying the number of dwelling units by the average electrical demand factors. For residential units, the electrical demand factor is 5,526.50 KWH/DU/YR.² Development of the proposed project at full build-out of 2,966 dwelling units (du) would result in an increase in demand for electrical service of approximately 16.4 million kilowatt hours-per-year.

According to the NFV-1 Specific Plan, the developer has initiated contact with PG&E for electric services to the development. Electrical service shall be provided by PG&E from nearby power lines which shall be under-grounded during the build-out process. In addition to standard utility services, incorporation of energy conservation features in the design of all new construction shall be implemented as required by state law. PG&E would provide service to the proposed project, and coordination between the applicant/developer and PG&E would avoid any notable service disruptions during extension and upgrading of services and facilities. This typical coordination would also ensure that the nature, design, and timing of electrical system improvements are adequate to serve the project. Construction of major new electrical transmission facilities will require subsequent environmental review under CEQA and environmental impacts shall be assessed at that time.

² Source: Table A9-11-A, South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

Cumulative Impacts

The proposed project in addition to related development in the Rio Mesa area will increase demands for electrical generating and transmission facilities. As a public utility, PG&E is required to provide electrical service to accommodate demand resulting from new development. However, cumulative impacts on electricity service associated with the RMAP in conjunction with other past, present and reasonably foreseeable future projects are considered a cumulatively significant impact at a growth inducing level.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts on electricity service would be less than significant.

5.13.10 - Natural Gas

Existing Conditions

The natural gas provider in the plan area is PG&E. Currently, the nearest gas line ends at Valley Children's Hospital approximately 10 miles southwest of the site, and the project site has no current demand for natural gas.

Thresholds of Significance

A project is considered to have a significant impact on natural gas service if existing or future planned facilities and supplies are not adequate to serve proposed land uses or existing natural gas service is notably disrupted.

Project Impacts

The proposed project would convert undeveloped land with residential and commercial uses that would result in an increased demand for natural gas. An estimate of the projected natural gas demand for buildout of the proposed project is calculated by multiplying the number of dwelling units by the natural gas demand factor of 219.1 CF/day/du (City of Ontario General Plan 1992), the proposed project development of 2,966 dwelling units (du) would result in an increase of natural gas consumption of 237.2 million cubic feet per year.

According to the NFV-1 Specific Plan, the developer has initiated contact with Pacific Gas and Electric for gas services to the development. A design deposit has been made by the developer and PG&E is under contract to study project alignments and commence with engineering design and right-of-way acquisition for extension of a gas line from Valley Children's Hospital to the NFV-1 Specific Plan Boundary. In addition to standard utility services, incorporation of energy conservation features in the design of all new construction shall be implemented as required by state law.

PG&E would provide service to the proposed project, and coordination between the applicant/developer and PG&E would avoid any notable service disruptions during extension and

upgrading of services and facilities. This typical coordination would also ensure that the nature, design, and timing of natural gas system improvements are adequate to serve the project. Construction of major new gas transmission facilities will require subsequent environmental review under CEQA and environmental impacts shall be assessed at that time.

Cumulative Impacts

The proposed project in addition to related development in the Rio Mesa area will increase demands for natural gas collection and transmission facilities. As a public utility, PG&E is required to provide natural gas collection and transmission facilities to accommodate demand resulting from new development. However, cumulative impacts on natural gas service associated with the RMAP in conjunction with other past, present and reasonably foreseeable future projects are considered a cumulatively significant impact at a growth inducing level.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts on natural gas services would be less than significant.