

4.11 PUBLIC SERVICES AND UTILITIES

This section characterizes existing and proposed public services, utilities, and service systems in the project study area, and evaluates changes that may result from the development and implementation of the proposed desalination project. Public services include services that address community needs and are usually provided by local or regional government, although the government may privatize these services. Public services include fire and emergency response, police protection; schools; libraries; and solid waste recycling, hauling, and disposal. In addition, hospitals, which serve community need, may be publicly or privately operated, and are included in the discussion of public services. Utilities may also be privately or publicly owned and operated and include wastewater collection, transport, treatment, and discharge; storm water collection, transport, possibly treatment, and discharge; water treatment and supply; and power (gas and electricity).

The key project features including the plant site, intake structure, and outfall would be located within the City of San Rafael. The northern two-thirds of the proposed pipeline for the project would also be located in San Rafael. Other in-system improvements associated with the project, including pumping stations and tank site locations, would be located in San Rafael, Larkspur, Corte Madera, and the Town of Tiburon. Alternative pipeline routes and tank sites would also be present in the City of Mill Valley.

Public comments received during the scoping period concerned new facilities that would need to be constructed to produce the power to run the plant and the impacts from those new facilities.

4.11.1 Environmental Setting

4.11.1.1 Law Enforcement

Each city within the project study area provides law enforcement for areas within its jurisdiction. The San Rafael Police Department (SRPD) provides police protection service and traffic enforcement throughout the City of San Rafael. The SRPD operates from the central station at City Hall. The City is divided into seven beat patrol areas and 59 reporting zones. East San Rafael is located in Beat 3, the Canal patrol area, which consists of six reporting zones and covers a 2.5-square-mile area. The SRPD tries to have two officers patrolling a beat either through assignment or coverage by an adjacent beat. According to the San Rafael General Plan 2020, the SRPD has an officer-to-resident service-standard ratio of 1.4 officers per 1,000 residents. The SRPD maintains an average local response time of three to seven minutes, depending on the nature of the request.

Since 1980, the Twin Cities Police Department has provided consolidated law enforcement services under a Joint Powers Agreement to the cities of Larkspur and Corte Madera. The Twin Cities Police Department is divided into Field Operations and Support Services Divisions. The department has an annual budget of \$7.2 million with 42 employees (31 sworn). The department provides police services and public safety dispatching to the communities of Corte Madera and Larkspur with approximately 22,000 residents in an 8-square-mile suburban area. The police department maintains a minimum staffing level of one sergeant and three to five beat officers. Average response times in the study area vary from three to 15 minutes.

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Both southern county tank site alternatives, A and B, are located in the Ridgecrest area within approximately 500 feet from each other in the Marin County open space. The Ridgecrest Tank B site property is in the jurisdiction of Marin County open space but within the City of Corte Madera area of influence. The Town of Tiburon currently owns the Ridgecrest property for the proposed Tank A site. However, the property is located within the jurisdiction of the Marin County Open Space District, between the cities of Mill Valley and Tiburon. According to the Tiburon Police Department, law enforcement services in this area would be provided by the Marin County Sheriff's Office. Similarly, the sheriff's office would have primary responsibility to provide police services to the alternative tank sites of Chapman and Horse Hill, which are also located within the jurisdiction of the Marin County Open Space District. The County sheriff's office also provides assistance to cities countywide.

The alternative pipeline route passes through the cities of Corte Madera and Mill Valley. The Twin Cities Police Department and the Mill Valley Police Department would provide law enforcement at the respective locations.

4.11.1.2 Fire Protection and Emergency Medical Services

The San Rafael Fire Department (SRFD) would provide first-response fire protection and paramedic services in the vicinity of the plant, intake and outfall sites. The SRFD would also provide fire protection and emergency medical services along the northern portion of the pipeline route and at the Jacoby Street Pumping Station and San Quentin Ridge tank site. The SRFD has six fire stations: (1) 1039 C Street, (2) 210 Third Street, (3) 46 Castro Street, (4) 955 Point San Pedro Road, (5) 650 Del Ganado, and (6) 3530 Civic Center Drive. Current staffing of the SRFD is approximately 90 firefighters. The station at Castro Street would provide first response for fire calls at the plant site or intake and outfall structures.

The SRFD also operates three paramedic units. The nearest medical facilities are Kaiser Hospital in Terra Linda and Marin General Hospital in Greenbrae. The C Street station would provide first response for emergency medical calls. Response time to calls for service is approximately one to four minutes.

The Larkspur Fire Department, ~~which~~ would respond to fires or emergencies in the project study area, including the Larkspur Landing Pumping Station, that are within its 3.1-square-mile jurisdiction, ~~-. The department~~ has a professional staff of 18 (one fire chief, one deputy fire chief/fire marshal, six captains, and 10 firefighters/engineers). About 20 volunteer firefighters augment the professional staff, primarily on non-emergency tasks. The department has two fire stations, Fire Station #15 in downtown Larkspur and Fire Station #16 in Greenbrae, which would provide fire response and paramedic services. Mutual Aid Agreements are in force between the Larkspur Fire Department and fire departments in other Marin County jurisdictions.

For fire emergencies along the pipeline route crossing the Town of Corte Madera, including the ~~alternative tank site~~ Ridgecrest BA tank site, the Corte Madera Fire Department would provide fire and paramedic services. The Fire Department services an area of 4 square miles with two fire stations, Station #13 at 5600 Paradise Drive and Station #14 at 342 Tamalpais Drive.

Augmenting the aforementioned services, the Marin County Fire Department (MCFD) provides structural fire protection throughout the county. The County Fire Department has 1,250-gallon-per-minute pumpers, enhanced water supply systems, and ongoing training to minimize damage

from structural fires. If an area is known to have a deficient water supply, water tenders are dispatched to the emergency scene. Mutual aid agreements are in place between MCFD and several cities and areas to provide maximum resources throughout the county. In addition to its headquarters in Woodacre, MCFD has five stations located in Marin City, Point Reyes, Hicks Valley, Tomales, and Throckmorton.

The MCFD operates its own dispatch through its Emergency Command Center. The Emergency Command Center also coordinates emergency response with neighboring agencies such as the California State Parks and United States Park Service. The Marin County Fire Chief is the California Office of Emergency Services Area Coordinator. Dispatch coordinates all Office of Emergency Services mutual aid requests for both in- and out-of-state requests for assistance. All of the Emergency Command Center officers are trained to the state and national level for resource management and deployment.

The portion of the alternative pipeline route that crosses through Mill Valley would be served primarily by the Mill Valley Fire Department, which has joined other fire agencies in southern Marin to form the Southern Marin Emergency Medical Paramedic System, with the paramedic rescue unit stationed at the Mill Valley Public Safety Building (Station 7). The city's two stations are staffed with seven fire fighters on duty and 24 line personnel.

4.11.1.3 Airports

The San Rafael Airport and three small heliports in San Rafael, Sausalito, and Point Reyes collectively service the entire project study area. Marin Ranch and San Rafael are two heliports that are located within a 1-mile radius of the project area. The San Rafael Heliport is approved to provide limited (up to 12 flights a day) transportation service to San Francisco International Airport.

4.11.1.4 Schools

Both public and private schools serve the eastern portion of Marin County that the project area transverses. In San Rafael, 11 public schools and 10 private schools serve more than 5,400 students. As one of the largest cities in the county, three school districts provide educational services in the area: Dixie Elementary School District (north San Rafael), San Rafael Elementary School District (Santa Venetia and San Rafael south of Puerto Suello), and San Rafael High School District (9–12 grades, citywide). The public schools nearest to the plant site and intake / outfall sites are the Bahia Vista Elementary School on Bahia Way, Davidson Middle School on Woodland Avenue, and San Rafael High School on Mission Avenue.

Students in Larkspur and Corte Madera attend elementary (Neil Cummins Elementary) and middle school (Hall Middle School), which are part of the Larkspur School District. Redwood High School of the Tamalpais Union High School District serves these communities. There are also four private schools in Corte Madera and two private schools in Larkspur.

The Mill Valley public school district is composed of five elementary schools and one middle school with a total enrollment of 2,250 students. In addition, there are four private schools in the City of Mill Valley.

Two institutions of higher education in the county include the College of Marin (a community college) and Dominican University, which have an estimated enrollment of 1,600 students.

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4.11.1.5 Libraries

The San Rafael Public Library is a heavily used public library serving the City of San Rafael. The library offers books as well as other services such as youth services, adult programs (talks, lectures, book clubs, and special events) and book sales. Planning is currently under way for additional library facilities to meet current and projected demand, including expansion of the Pickleweed Park Community Center and additional library branches. Each of the other cities in the project study area also has its own public library.

4.11.1.6 Water Supply

The project study area falls entirely within MMWD's service area; thus, MMWD provides water to the entire project area for domestic, commercial, and firefighting use. MMWD facilities include seven reservoirs, four water treatment plants, and various storage tanks, pumps, and distribution mains. Water sources include rainfall, ~~and some~~ water from the Russian River, and recycled water. Existing facilities in the vicinity of the plant site include a water main at Kerner Boulevard and an 8-inch diameter lateral main at Morphew Street.

MMWD currently serves a population of 190,800. By 2020, it is anticipated that its service area would include a population of 205,763 (MMWD 2006). Growth and historical periods of drought in the county are among the reasons for MMWD's search for reliable long-term water supply options. To maximize existing water supply, MMWD has several aggressive water conservation programs in place. MMWD also has a water shortage contingency plan, included in the *Urban Water Management Plan 2005* (MMWD 2006, updated 2007), which includes a dry year water use reduction program and mandatory rationing. Water rationing, both voluntary and mandatory, is instituted based on the reservoir water levels at the end of the rainy season. Voluntary rationing is triggered when there is total reservoir storage of less than 50,000 acre-feet on April 1. Mandatory rationing is triggered when there is total reservoir storage of less than 40,000 acre-feet on April 1.

The San Rafael General Plan 2020 includes a policy, CON-20 Water Conservation, which would help reduce water use by supporting the extension of recycled water infrastructure and by providing water-conserving landscaping and water-recycling methods information to residents and businesses. MMWD is also continuing its efforts to increase water conservation through its Integrated Water Resources Management Program. In addition, MMWD is continuing to explore additional opportunities to partner on water recycling with the Las Gallinas Valley Sanitary District. Nevertheless, additional growth in MMWD's service area cannot be met without further increasing water supply.

4.11.1.7 Wastewater

Responsibility for collecting, treating, and discharging wastewater in the study area rests primarily with the CMSA (which serves San Rafael south of Puerto Suello Hill, Corte Madera, Larkspur, and Greenbrae in the study area). In addition to operating and maintaining a regional facility on Anderson Drive in San Rafael, CMSA provides maintenance services to sewerage pumping stations in the City of Belvedere and Corte Madera (Sanitary District No. 2) and allows for the disposal of hauled wastes. However, current policies confine eligibility at the CMSA disposal facilities to those originating within the CMSA service area (San Rafael / Ross Valley)

and, for some wastes, those originating in areas of Marin County west of the service area. The outfall has a capacity to handle 125 MGD, and averages 8 MGD during dry weather flow. The daily average flow rate ranges from 2 to 15 MGD. During wet weather, the CMSA outfall can experience a flow rate as high as 115 MGD.

Other wastewater treatment plants in the study area include Sanitary District No. 5 of Marin County, which serves Tiburon, ~~and~~ the Sewerage Agency of Southern Marin, which serves Mill Valley, and the Las Gallinas Valley Sanitary District, which serves northern San Rafael.

Operations of the pump stations are monitored 24 hours a day by a computerized Supervisory Control and Data Acquisition System. When operators at the wastewater treatment plant receive an alarm on the system, they immediately call the duty standby mechanic to respond to the alarm.

4.11.1.8 Storm Water Drainage

The Public Works Department of each city and town through which the project passes provides storm drainage and flood control in the project study area. In addition, the Marin County Stormwater Pollution Prevention Program was formed in 1993 to prevent stormwater pollution, protect and enhance water quality in creeks and wetlands, preserve beneficial uses of local waterways, and comply with state and federal regulations. The program is a joint project of the County of Marin and each of the county's 11 cities and towns. While each municipality pursues its own local stormwater pollution prevention activities, it also contributes to the countywide program. Each municipality has adopted a stormwater ordinance to clarify its authority to control what is discharged to the municipally owned storm drainage system. In particular, the ordinance effectively prohibits the discharge of non-stormwater discharges to the storm drains and requires that the discharge of pollutants in stormwater be minimized by implementing BMPs.

4.11.1.9 Solid Waste

The Marin Sanitary Service is responsible for solid waste disposal in central Marin County. The Marin Sanitary Service operates the Resource Recovery and Recycling Plant and a transfer station where waste from commercial collectors is taken and then hauled by transfer truck to Redwood Landfill, a Class III (general solid waste) facility.

The Redwood Landfill located in northern Marin County is the principal landfill for residential and commercial wastes generated in the vicinity of the key project features in San Rafael and Larkspur. The projected landfill closure year is 2032. Permitted capacity is 19.1 million cubic yards. As of 2006, remaining capacity was about 12.2 million cubic yards.

Other solid waste facilities that would service parts of the project area include the Marin (County) Hazardous and Solid Waste JPA and the Mill Valley Refuse Service, Inc. (serving Mill Valley, Corte Madera, Tiburon, Alto, and Strawberry).

4.11.1.10 Electricity and Natural Gas

It is expected that PG&E, an investor-owned utility regulated in part by the California Public Utilities Commission, would provide the electricity and natural gas required for operation of the proposed desalination plant. Currently, the transmission to the plant site is via a 12kV

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distribution feeder (San Rafael circuit 1103) that provides service to a termination point at San Quentin. The feeder is rated for a maximum current flow of 600 amps and is expected to experience a peak summer load of 503 amps with the existing service. A parallel feeder (San Rafael circuit 1102) is rated for a maximum current flow of 541 amps and is expected to experience a peak summer load of 460 amps (Regacho, pers. comm., 2003).

4.11.2 Impacts and Mitigation Measures

4.11.2.1 *Standards of Significance*

The following standards of significance are based on Appendix G of the CEQA Guidelines. For the purposes of this EIR, impacts to public services and utilities are considered significant if implementation of the proposed desalination project 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 any of the public services;
- Exceed the San Francisco Bay RWQCB's wastewater treatment requirements;
- Require or result in the construction or expansion of water or wastewater treatment facilities, which would cause significant environmental effects;
- Require or result in the construction or expansion of storm water drainage facilities, which could cause significant environmental effects;
- Result in the need for new or expanded water supply entitlements;
- Exceed available wastewater treatment capacity;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;
- Fail to comply with applicable federal, state, and local statutes and regulations related to solid waste;
- Require or result in the construction or expansion of electrical, natural gas, chilled water, or steam facilities, which would cause significant environmental impacts; or
- Require or result in the construction or expansion of telecommunication facilities, which would cause significant environmental impacts.

4.11.2.2 *Analytical Method*

This analysis evaluates the potential for adverse physical impacts to occur as a result of the provision of new or altered public service facilities under the proposed desalination project, including facilities or facility expansions needed to accommodate increases in demand for services and service personnel, or to enable service providers to maintain level of service standards. Increased demand for public services that would result from implementation of the desalination project is determined by comparing projected population growth with existing

service ratios, response times, capacities, and/or other performance objectives identified for each service to determine whether there would be unmet need. An unmet need for services could indicate that new facilities would be needed or that additional staff would be needed, which could result in a need for expanded facilities.

The potential for implementation of the desalination project, in conjunction with regional growth, to generate a cumulative demand for new or expanded public services facilities that could result in significant adverse environmental effects is discussed in Section 7.4. Mitigation measures are provided to reduce the project's contribution to significant adverse environmental impacts, to the extent feasible.

4.11.2.3 Impacts and Mitigation Measures

The proposed facility would be staffed by up to six operators, two maintenance workers, and a supervisor. The maximum number of staff at the facility at any one time during normal operations would be four. The total workforce is estimated at nine.

Impact 4.11-1: Implementation of the proposed desalination project would not result in significant environmental impacts associated with the provision of new or altered facilities for law enforcement services in order to maintain each department's applicable service objective.

Significance: Less than significant

Mitigation: No mitigation required

Discussion:

The increase in workforce from the proposed project would not adversely affect the service ratios of the police services provided in the project study area. Associated in-system improvements and other project features would not require police protection services.

Indirect effects on law enforcement and other public services associated with potential growth in the project area are addressed in Section 7.3.

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Impact 4.11-2: Implementation of the proposed desalination project would not result in significant environmental impacts associated with the provision of new or altered fire department facilities to maintain each department's response standard.

Significance: Less than significant

Mitigation: No mitigation required

Discussion:

As discussed in Section 4.11.1.2, the SRFD would have the primary responsibility for fire and paramedic services covering the majority of the project area and key project features. Other fire departments that may be called upon to provide services in the project area include the Larkspur Fire Department, the Corte Madera Fire Department, the MCFD, and the Mill Valley Fire Department for areas in each of their jurisdictions. With the implementation of the proposed

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project, the infrastructure that would need to be protected would increase; however, the fire departments would continue to provide services to their respective areas. No additional services would be required to serve the proposed project.

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Impact 4.11-3: Implementation of the proposed desalination project would require increased discharges through Central Marin Sanitation Agency's wastewater effluent outfall, which would not result in significant environmental impacts.

Significance: Less than significant

Mitigation: No mitigation required

Discussion:

The desalination project would generate wastewater streams in the form of concentrate water that would be disposed of via mixing and co-release with treated wastewater effluent from the CMSA wastewater treatment plant. Reclaimed filter backwash water would be combined with raw intake water and fed into the pretreatment process. Hence, no wastewater from backwashing would be generated that actually leaves the plant site. Spent cleaning compounds would be disposed via discharge to sewer. The specific cleaning employed would depend on the type of membrane fouling that occurs. The RO industry has developed a wide range of cleaning and membrane storage chemicals that are environmentally acceptable. The major categories of cleaning chemicals are caustic bases, acids, chelating agents, enzymes, detergents, surfactants, biocides, disinfectants and oxidants.

The dewatering system would take influent solids at a concentration between 2 and 3 percent and produce a cake having approximately 25 percent solids by weight. Expected chemical characteristics of this dewatering liquid would be the same as raw water, with the addition of chemicals for coagulation and flocculation. This liquid would be disposed via mixing with the brine and discharged to CMSA's outfall.

Sanitary wastewaters from toilets, showers, and a small kitchen at the desalination plant would be disposed into the local sewer system. From there they would be combined with other sanitary wastes collected from nearby areas and pumped to the CMSA treatment plant.

The existing CMSA facility has an NPDES permit issued by the San Francisco Bay RWQCB to discharge treated effluent into San Francisco Bay. The effluent that would result from mixing desalination plant wastewater and CMSA wastewater would be within the CMSA NPDES permit limits. The CMSA has a maximum discharge capacity of 125 MGD. As described in Section 3.4.2.5, the proposed plant could add to the existing discharge by a maximum of 5.4 MGD for a 5 MGD plant, 10.7 MGD for a 10 MGD plant, and 14.9 MGD for a 15 MGD plant. Currently, during wet weather, the CMSA outfall can experience a flow rate as high as 115 MGD. This is partially due to water infiltration through cracks in the pipes. During these periods, the CMSA outfall would not be able to accommodate the additional RO plant discharge, and the RO plant would either be shut down or operate at a minimum capacity. It should be noted that during normal and/or above-average rainfall years, even if it was necessary to expand the 5 MGD plant to 15 MGD capacity, the desalination plant, if constructed to a 15 MGD capacity, would

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operate at 2 MGD during the winter months. It is only during dry and drought years that the desalination plant would operate at 12 to 15 MGD during the winter.

The potential impact on discharge water quality parameters is analyzed in detail in Section 4.7. No additional wastewater treatment or conveyance facilities would be required because of the project.

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Impact 4.11-4: Implementation of the proposed project would require the expansion of storm drainage conveyance, which would not result in significant environmental impacts. MMWD would ensure that facilities for adequate storm water drainage are included in the project design.

Significance: Less than significant

Mitigation: No mitigation required

Discussion:

Currently, the project site is unpaved and storm water infiltrates the soil or flows off the site. MMWD would include a storm water drainage system that would be tied into the storm sewer main that runs underneath Pelican Way. This system, including culverts, drain inlets, curbs, and ditches, would be designed to meet City of San Rafael and County of Marin standards.

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Impact 4.11-5: Implementation of the proposed project would increase the volume of municipal solid waste that would require disposal, but would not require an expansion of any area landfills.

Significance: Less than significant

Mitigation: No mitigation required

Discussion:

During project construction, excess soil and vegetative debris would be generated from excavations and site preparations at the plant site and intake site. Additionally, construction debris would result along the project area where pipelines, pump stations, or tank structures would be located. All solid waste generated along Reach 1 and Reach 3 would be transported to the Redwood Landfill in northern Marin County. The Mill Valley Refuse Service, Inc. would serve most in-system improvements along Reach 2.

During long-term operation of the desalination facility, the only solid waste generated in association with project operations would be at the plant site. As described in Section 3.4.6.2, waste generated would include approximately 3 to 27 tons of dried clarifier sludge per day, depending on season and product water capacity (see Table 3-4); marine residues from periodic cleaning of the intake pipe; spent cartridge filters; and operational and office waste. This waste would be transported to and disposed of at the Redwood Landfill facility. All wastes would be disposed in accordance with prevailing regulations, and recycling would be practiced, wherever appropriate. ~~Redwood Landfill has an estimated remaining capacity of 12.2 million cubic yards with an estimated landfill closure date of January 2032.~~ Redwood Landfill is in the process of

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renewing its Solid Waste Facilities Permit, which would extend the period of time that the landfill could operate. According to the Redwood Landfill Solid Waste Facilities Permit Revision Final Supplemental Environmental Impact Report (County of Marin 2005), if the project (meaning the permit revision) is not approved, the landfill could reach capacity as early as 2024. If the project is approved, the landfill could reach capacity by 2037.

If Redwood Landfill reaches capacity during the life of the desalination plant, the solid waste from the desalination plant would be disposed of at some other yet-to-be determined location, as would all of the solid waste in Marin County. Although no new proposed landfill disposal sites have been identified, the 1995 Siting Element for Marin County and its cities provides siting criteria and an evaluation process when the County considers expanding an existing facility or developing a new facility. This process, which identifies acceptable disposal sites, is also initiated in the event that less than 15 years of landfill capacity exists for the County. Based on the type and quantity of waste anticipated, no additional landfill facilities would be required, and no significant impact would result from the proposed project.

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Impact 4.11-6: Implementation of the proposed desalination project would require the expansion of the electrical system, which would not result in significant adverse environmental impacts.

Significance: Less than significant

Mitigation: No mitigation required

Discussion:

PG&E has a 12 kV primary voltage distribution line that follows East Francisco Boulevard in San Rafael. PG&E would provide transmission voltage to the desalination plant site on Pelican Way by replacing the last 15 poles along East Francisco Boulevard, over a distance of approximately 3,800 linear feet, with steel poles. The transmission line poles would be replaced, at the same location as existing poles, with taller poles. The existing conductors (wires) would be replaced, and a new set of conductors would be strung above the replaced existing conductors. The new conductors would transmit power directly to the desalination plant site. Taller poles would be needed to ensure adequate distance on the poles between the replaced existing conductors and the new conductors, so that arcing between the conductors does not occur. MMWD would need to construct a substation at the Pelican Way desalination plant site to reduce PG&E's 115 kV to the plant's operating voltage. Replacing the transmission line poles would create less-than-significant impacts on air quality, noise, and traffic. Although the poles would be taller than the existing poles, this portion of the project area contains commercial/light industrial uses, and taller transmission line poles would not significantly alter the visual character of the area.

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