

## 4.13 TRAFFIC, CIRCULATION, AND PARKING

This section of the EIR describes the existing transportation system in the proposed project area, and identifies potential impacts of construction and operation of the proposed project on the local and regional circulation system. This section includes the following components:

- The existing transportation setting, including motorized vehicle travel, bicycle and pedestrian travel, transit services, and parking supply
- Transportation policies of local jurisdictions
- Potential impacts of the proposed project on vehicle, pedestrian and bicycle facilities, transit services, parking, and airport operations
- Proposed mitigation measures to reduce impacts.

### 4.13.1 Environmental Setting

#### 4.13.1.1 Motorized Roadway System

The proposed project could potentially affect many roadways and highways in central-southern Marin County. The roadway network that could potentially be affected by the proposed project primarily includes the streets and highways in which pipelines would be installed and/or crossed. Three of these roadways and highways provide regional access to the project area. Most are local roadways, which provide access to local residential and commercial business areas.

#### Regional Roadways

Three regional roadways serve the proposed project area: I-580, US 101, and Sir Francis Drake Boulevard.

- **I-580** has a terminus within the project area. The western terminus of this freeway is at US 101 in San Rafael. I-580 runs east-west between San Rafael and the Central Valley. This freeway provides access to locations east of Marin County by way of the Richmond–San Rafael Bridge. The segment of I-580 that is within the project area extends from US 101 in the west to the Richmond–San Rafael Bridge in the east. I-580 is the closest regional roadway to Marin Rod & Gun Club (the proposed intake structure site) and the proposed desalination plant site at Pelican Way in San Rafael.
- **US 101** runs in a north-south direction throughout the State of California. US 101 traverses Marin County from Novato in the north to Sausalito in the south. Most of the proposed pipeline segments from the in-system improvements run parallel to US 101.
- **Sir Francis Drake Boulevard** is an east-west roadway that runs from San Quentin in the east to Point Reyes in the west. The eastern terminus of this roadway is at I-580. Sir Francis Drake Boulevard serves as a main route to and from many communities west of US 101 in Marin County, including Greenbrae, Kentfield, Ross, San Anselmo, Fairfax, and the communities in West Marin. The segment of this roadway between US 101 and I-580 is known as East Sir Francis Drake Boulevard. This roadway segment functions as a connecting route between US 101 and I-580 for westbound vehicles on I-580 heading south on US 101

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or northbound vehicles on US 101 heading east on I-580. This segment of Sir Francis Drake Boulevard is within the project area.

### **Local Roadways**

Proposed project pipeline routes that are along local roadways are listed below along with a brief description of the adjacent land use types.

- Pelican Way – Commercial.
- East Francisco Boulevard – Commercial.
- Anderson Drive – Commercial.
- Jacoby Street – Commercial.
- Victoria Way – Commercial and residential.
- Redwood Highway – Commercial. This is a major arterial roadway.
- San Clemente Drive – Commercial and residential. This is a major arterial roadway.
- Paradise Drive – Commercial and residential. This is a major arterial roadway.
- Madera Del Presidio Drive – Residential.
- Creekside Drive – Residential.
- Central Court – Residential.
- Central Drive – Residential.
- Tiburon Boulevard – Commercial. This is a major arterial roadway.
- Irwin Street – Commercial.
- Tamalpais Avenue – Commercial and residential.
- Fifth Avenue – Commercial and residential. This is a major arterial roadway.
- Stevens Street – Commercial and residential.
- Pacheco Street – Commercial and residential.
- Lincoln Avenue – Commercial and residential. This is a major arterial roadway.
- Los Ranchitos Road – Commercial and residential. This is a major arterial roadway.
- North San Pedro Road – Commercial and residential. This is a major arterial roadway.
- Merrydale Road – Commercial and residential.
- Civic Center Drive – Commercial and residential. This is a major arterial roadway.

#### ***4.13.1.2 Bicycle and Pedestrian System***

Many of the local roads in the proposed project area have bicycle lanes or permit bicycle riding on the street and also have sidewalks for pedestrian use. A bicycle and pedestrian path is within the proposed project area. This path runs parallel on the south side of East Sir Francis Drake

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Boulevard. East of where East Sir Francis Drake Boulevard crosses US 101, this path turns and runs southward across Corte Madera Creek. South of Corte Madera Creek, the path runs west, crosses under US 101, and continues to its terminus in Ross.

### **4.13.1.3 Transit System**

Public transportation service within the proposed project area includes bus and ferry transit service. Bus service is offered in the project area by Golden Gate Transit. Golden Gate Transit serves intra-county trips and travel between Marin County and Sonoma, San Francisco, and Contra Costa counties. Many service routes and terminals exist within the proposed project area. Some of the busier and well-traveled Golden Gate Transit bus routes occur within the project area. A large Golden Gate Transit hub, the San Rafael Transit Center, located on the corner of 3<sup>rd</sup> and Hetherton Streets, is located in the project area. Ferry service is provided from Larkspur Landing. Larkspur Landing is located on East Sir Francis Drake Boulevard, east of US 101. Larkspur Landing provides ferry service to San Francisco. The proposed project area traverses several abandoned railroad ROWs. There are plans to begin railroad service along some segments of these railroad ROWs (SMART 2004).

### **4.13.1.4 Parking**

The parking lot at the Marin Rod & Gun Club is the only potentially affected parking lot in the proposed project area because it would likely be used by construction workers during the reconstruction of the pier. Public parking is available along many of the local streets throughout the proposed project area.

### **4.13.1.5 Travel Characteristics and Congestion**

As stated above, there are three regional roadways in the project area. Sir Francis Drake Boulevard and I-580 provide access to the east and the west both within and outside of the proposed project area. US 101 provides access to the north and south. Many of the towns within this area of Marin County are located along US 101 and Sir Francis Drake Boulevard. The roadway network in the proposed project area has streets that filter into arterial roadways that lead to US 101. There are approximately 12 on/off-ramp complexes between US 101, I-580 and local roads. The traffic characteristics in the area follows the typical patterns of all populated areas in the region, with peak hours of congestion and vehicle use in the weekday mornings and evenings (“rush hour”) that correspond with the standard business day.

The Congestion Management Agency for Marin County has designated several roadway or highway segments within the proposed project area as focal points for traffic congestion within the county. These roadway segments are I-580 from US 101 to the Contra Costa County line (in the center middle the Richmond–San Rafael Bridge), US 101 from the San Francisco County line to the Sonoma County line, Second Street in San Rafael from Marquard Avenue to US 101, and Sir Francis Drake Boulevard from US 101 to I-580.

## **4.13.2 Impacts and Mitigation Measures**

The proposed project is inherently more likely to affect transportation facilities during construction than during operations because there would typically be only a minimal amount of

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surface activity along transportation facilities required to operate and maintain the proposed project after construction is complete.

### 4.13.2.1 *Standards of Significance*

The following standards of significance are based on Appendix G of the CEQA Guidelines. For the purposes of this EIR, an impact to transportation/traffic would be considered significant if the proposed project would:

- Cause an increase in the traffic that may be substantial in relation to the existing roadway capacity of the street system as indicated by a substantial increase in the number of vehicle trips;
- Exceed a level of service standard established by the Marin County 2005 Congestion Management Plan Update for designated roads or highways;
- Substantially increase hazards due to a design feature or incompatible uses;
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with applicable adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

### 4.13.2.2 *Impacts and Mitigation Measures*

**Impact 4.13-1:** Implementation of the proposed project would not cause an increase in the traffic that may be substantial in relation to the existing roadway capacity of the street system as indicated by a substantial increase in the number of vehicle trips.

**Significance:** Less than significant

**Mitigation:** No mitigation required

#### **Discussion:**

Construction and operation of the proposed project would increase the number of vehicle trips at the proposed desalination plant and along the streets where the proposed in-system improvements would occur. This increase in vehicle trips would be due to construction workers accessing and leaving the work sites, employees traveling to and from the proposed desalination plant under operational conditions, work crews accessing and leaving proposed in-system improvement sites for maintenance, construction-related vehicles accessing and leaving the proposed desalination plant site and proposed in-system improvement work sites, and truck traffic accessing and leaving the proposed desalination plant under operational conditions. All construction-related increases in vehicle trips would be temporary. Increases in vehicle trips due to operational conditions at the proposed desalination plant would be permanent. Increases in vehicle trips due to maintenance of the in-system improvements would be permanent but intermittent.

It is anticipated that construction of the proposed desalination plant and appurtenant facilities (reconstructed pier, intake structure, and pipelines to and from the intake structure and outfall)

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would take approximately 24 months. During this time period, an average of 35 construction workers would be working on the construction of the desalination plant and its associated facilities. At peak construction, 70 workers would be accessing these sites. Construction crews would carpool together to the proposed desalination plant site. It is anticipated that construction workers would be meeting at their place of employment each morning and would commute to the construction sites in company and/or private work trucks and pickup trucks. Under a worst-case scenario, it is assumed that on average construction crews would arrive and leave the work site with two crewmembers per vehicle. Therefore, the construction of the desalination plant would, at peak, add on average 35 commuter vehicles to the site access routes.

In addition to the vehicle trips from workers accessing the proposed desalination plant site, Marin Rod & Gun Club, and pipeline routes, an estimated average of three to four truck trips per day would be generated to dispose of excavated materials from these sites. The materials would be hauled via I-580 and US 101 to Redwood Landfill near Novato. During the first two to three months of construction, there would be an estimated maximum average of five truck trips per day for delivery of materials. Following this time period, there would be an estimated average of one truck trip per day for material delivery during the rest of the construction period.

Construction workers and trucks would likely use US 101 and I-580 to access the proposed desalination plant site. Traffic would exit these highways at Bellam Avenue to the west or the San Quentin off-ramp to the east, and travel along East Francisco Boulevard to Pelican Way to the proposed desalination plant site. To access the Marin Rod & Gun Club pier, these vehicles would take the same exits and access the club from East Francisco Boulevard. Given the general commercial business land uses along these routes, the temporary increase in vehicle trips from construction crews and trucks accessing these sites would result in minimal increases in traffic.

During the peak month of the estimated 3-year period of construction of the proposed in-system improvements, approximately 50 construction workers would be required, resulting in an estimated increase in vehicle trips by 25 vehicles. This would occur during ~~the first phase of construction of the 5 MGD plant~~, and then during any subsequent phases of construction if plant expansion is necessary. Most construction sites would be accessed first by US 101, then via the most direct route to the work site along local streets. Within the project area, the minimum peak-hour traffic volume for US 101 is 9,500 vehicles (Caltrans 2004). An increase by ~~27-25~~ vehicles would result in a 0.3 percent increase over the current peak-hour traffic volume on this freeway. Construction crews would be located at different points along the linear pipeline reaches or at the proposed tanks and pump stations sites. **Table 4.13-1** shows the streets and their associated pipeline reach where the in-system improvements would occur. During the peak month of construction for the in-system improvements, the vehicle trips from the construction crews accessing an individual work site via local roads would be less than ~~27-25~~ vehicles. This would be a minimal and temporary increase in vehicle trips on residential streets and streets with commercial businesses and would not result in a substantial increase in traffic.

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**Table 4.13-1  
Activities to Occur on Roadways**

<b>Roadway</b>	<b>Activities to Occur</b>
East Francisco Boulevard	The beginning of Reach 1 of the in-system improvements would occur in and along this road.
Anderson Drive <sup>1</sup>	Reach 1 and Reach 3 of the in-system improvements would occur in and along this road. The Jacoby Street Pumping Station would be installed near to the corner of Jacoby Street and this road.
Jacoby Street <sup>1</sup>	Reach 1 of the in-system improvements would occur in and along this road. The Jacoby Street Pumping Station would be installed near to the corner of Anderson Drive and this road.
Victoria Way	Reach 1 of the in-system improvements would occur in and along this road.
Redwood Highway <sup>1</sup>	Long segments of Reach 2 and Reach 3 of the in-system improvements would occur in and along this road.
San Clemente Drive	Reach 2 of the in-system improvements would occur in and along this road.
Paradise Drive	A short segment of Reach 2 of the in-system improvements would occur in and along this road.
Madera Del Presidio Drive	Reach 2 of the in-system improvements would occur in and along this road.
Creekside Drive	Reach 2 of the in-system improvements would occur in and along this road.
Central Court	Reach 2 of the in-system improvements would occur in and along this road.
Central Drive	Reach 2 of the in-system improvements would occur in and along this road.
Tiburon Boulevard	The termination point of Reach 2 of the in-system improvements would occur at this road.
Irwin Street <sup>1</sup>	Reach 3 of the in-system improvements would occur in and along this road.
Tamalpais Avenue <sup>1</sup>	Reach 3 of the in-system improvements would occur in and along this road.
Fifth Avenue <sup>1</sup>	A short segment of Reach 3 of the in-system improvements would occur in and along this road.
Stevens Street <sup>1</sup>	A short segment of Reach 3 of the in-system improvements would occur in and along this road.
Pacheco Street <sup>1</sup>	A short segment of Reach 3 of the in-system improvements would occur in and along this road.
Lincoln Avenue <sup>1</sup>	A long segment of Reach 3 of the in-system improvements would occur in and along this road.
Los Ranchitos Road <sup>1</sup>	Reach 3 of the in-system improvements would occur in and along this road.
North San Pedro Road <sup>1</sup>	A short segment of Reach 3 of the in-system improvements would occur in and along this road.
Merrydale Road <sup>1</sup>	Reach 3 of the in-system improvements would occur in and along this road.
Civic Center Drive <sup>1</sup>	Reach 3 of the in-system improvements would occur in and along this road.

<sup>1</sup> The construction of Reach 3 and the Jacoby Street Pumping Station would only occur if it is necessary to expand the desalination plant is expanded beyond the initial 5 MGD capacity.

The disposal of excavated material would generate about three to four truck trips per day for pipeline construction, about six to seven truck trips per day from the Ridgecrest A tank site, and about six to seven truck trips from the San Quentin Ridge tanks site. All trucks would use local streets that provide the most direct access to US 101. Once on US 101, these trucks would transport the excavated materials to the Redwood Landfill near Novato. Given that the construction of the tanks and pipelines would occur simultaneously, the in-system improvements would add up to 18 trucks per day to the traffic on US 101. These truck trips would be

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distributed throughout the workday, adding fewer than three trucks per hour to the highway. This would be a minimal increase to vehicle trips and would not substantially affect traffic to either local streets or US 101. Therefore, during construction of the in-system improvements, the temporary increase in vehicle trips would be minimal and the impact due to the increase in traffic would not be significant.

Operation of the proposed desalination plant would require four employees, generating an equal number of vehicles on the access routes. As shown in Table 3-4, at 5 MGD capacity, the disposal of sludge and other wastes generated from the facility operations would result in an average of one truck trip every six days during summer months and two truck trips every three days during winter months. At 10 MGD capacity, waste disposal would result in one truck trip every three days during summer months and two truck trips every three days during winter months. At 15 MGD capacity, waste disposal would result in one truck trip every two days during summer months and three truck trips every two days during winter months. All truck trips would be to the Redwood Landfill in Novato. These permanent increases in vehicle trips to the local and regional roadway network would result in minimal increases in traffic. Therefore, under operational conditions, the permanent increase in vehicle trips would be minimal and the impact due to the increase in traffic would be less than significant.

Once the in-system improvements are constructed, small work crews would occasionally need to access the sites for routine maintenance. This temporary increase in vehicle trips to any one site would be minimal and would result in a negligible increase in traffic.

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**Impact 4.13-2:** The proposed project would not cause a level of service standard established by the Marin County 2003 Congestion Management Plan for designated roads or highways to be exceeded.

**Significance:** Less than significant

**Mitigation:** No mitigation required

**Discussion:**

Second Street in San Rafael, East Sir Francis Drake Boulevard, I-580, and US 101 are the roadways that are designated in the Marin County 2003 Congestion Management Plan that would be affected by the proposed project. Pipelines of the in-system improvements would cross all of these roadways. I-580 and US 101 would be crossed under overpasses. Construction would not occur on East Sir Francis Drake Boulevard. The pipeline would be installed across this roadway by a pipe-jacking method. Construction would not occur within any of these roadways designated in the Congestion Management Plan. Therefore, the proposed project would not directly lead to congestion along these roadways.

A section of pipeline in Reach 3 would cross Second Street in San Rafael at Tamalpais Avenue. This pipeline would be installed through an open trench. Portions of this intersection would be unavailable to traffic circulation, but access across this intersection would be permitted at all times. To comply with the City of San Rafael's roadways construction policies, construction of this pipeline across Second Street would occur at night, when the effects of construction on congestion would be minimal. MMWD would coordinate

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with the City of San Rafael to comply with their appropriate rules and policies for minimizing the temporary effects of construction on congested roads.

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**Impact 4.13-3:** Implementation of the proposed project would not substantially increase hazards due to design features or incompatible uses.

**Significance:** Less than significant

**Mitigation:** No mitigation required

**Discussion:**

The proposed project would not result in increased hazards due to design features or during construction activities. MMWD would obtain encroachment permits from each of the local jurisdictions where the work is to be performed. The encroachment permits would contain conditions that must be followed during pipeline construction in the public ROW. These conditions are designed and implemented to protect public safety during construction. Conditions could include temporary speed limit restrictions, use of flaggers, warning signs, lights, barricades, cones, etc. Further, MMWD would maintain the work site(s), including traffic control, in a safe condition at all times—, ~~e~~Even outside the normal work hours. Traffic safety control measures would be implemented in accordance with the *Work Area Traffic Control Handbook* (American Public Works Association ~~1996~~2006).

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**Impact 4.13-4:** Implementation of the proposed project would result in reduced emergency access on some local roadways during construction.

**Significance:** Less than significant

**Mitigation:** No mitigation required

**Discussion:**

Construction activities on roadways that would be affected by the proposed project could result in delays for emergency vehicles that need to access those areas. The loss of lanes and the resulting increase in congestion could lengthen the response time required for emergency vehicles passing through the construction zone. Access to all areas adjacent to the roadways where work would occur would not be inhibited, and emergency access would always be available to access these areas throughout construction. In addition, MMWD would coordinate in advance of construction with emergency service providers to avoid restricting movements of emergency vehicles. Police departments, fire departments, ambulance services, and paramedic services would be notified in advance by MMWD of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness.

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**Impact 4.13-5:** Implementation of the proposed project would not result in inadequate parking capacity.

**Significance:** Less than significant

**Mitigation:** No mitigation required

**Discussion:**

The proposed project would not result in the permanent loss or reduction of available parking. For all construction activities, temporary parking would be needed for workers' vehicles. For construction of the proposed desalination plant facilities, parking spaces would need to be available for a maximum of 35 vehicles and nine trucks. There are two parking lots at the Marin Rod & Gun Club where the pier would be reconstructed and the intake structure would be constructed. These two parking lots, which contain over 75 parking spaces, would provide adequate parking capacity for all vehicles driven to the site by construction crews and for trucks delivering or carrying away materials. For all pipelines outside of the pier that would be installed for the desalination plant facilities, construction crews would park their vehicles along the roads, adjacent to, or near the work sites. For these activities, construction crews would be relatively small in comparison to the number of workers that would work at the proposed desalination plant site or at the pier and intake structure facility. The roads where this work would occur are surrounded by commercial and business land uses where street-side parking would be adequately available and would not be substantially utilized by the general public. Adequate roadside parking would be available along this stretch of the project area to accommodate work crew vehicles. At the proposed desalination plant site, workers would park at the site. This site is approximately 10 acres in size and can accommodate the parking needs of all vehicles belonging to construction crews and trucks hauling materials.

The crews that would construct the tanks and pumping stations of the in-system improvements would park at the individual sites. These vehicles would not use existing parking lots or on-street parking. Workers that would perform maintenance at these facilities would also park at the individual sites and would not occupy existing available parking with their vehicles. Construction crews that would be installing the pipelines associated with the in-system improvements would park their vehicles along roadways near to or adjacent to their worksites. The vehicles would occupy available parking that may otherwise be used by the general public. These construction crews would be relatively small, and work would only occur at a specific segment for a maximum of three to four days. Therefore, this impact to parking capacity would be temporary and minimal.

Under operational conditions, the proposed desalination plant facility would contain a parking lot that would be large enough to accommodate all desalination plant employees and trucks. For maintenance workers that would service the intake structure facility, adequate parking would be available on the reconstructed Marin Rod & Gun Club pier. Maintenance workers would occasionally need to service the pump stations and tanks. Parking would be available at these sites for the maintenance workers' vehicles.

Therefore, construction and operation of the desalination plant and in-system improvements would not result in inadequate parking capacity.

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**Impact 4.13-6:** Implementation of the proposed project would conflict with applicable adopted policies, plans, or programs supporting alternative transportation.

**Significance:** Potentially significant

**Mitigation 4.13-6:** MMWD would coordinate at least 30 days in advance with public transit agencies to avoid disruption to transit operations. Public agencies that operate bus routes on the roadways potentially affected by the proposed construction activities would be informed in advance of the pipeline project and the potential impacts at bus stop locations. Alternative pickup/drop-off locations will be determined and marked appropriately.

**Residual Significance:** Less than significant

### **Discussion:**

Access to bus stops, sidewalks, and bicycle lanes may be temporarily disrupted during pipeline construction activities. MMWD would ensure that the proposed project would not conflict with applicable policies, plans, or programs supporting alternative transportation by coordinating with local jurisdictions and public transit agencies and by complying with their appropriate guidelines and rules. Access along all roads would remain throughout construction activities; bus routes would not need to be detoured or temporarily re-routed; and work at any single segment of pipeline would occur, at maximum, for three to four days.

Pedestrian and bicycle routes that cross a pipeline alignment and routes that would be parallel to an alignment would be temporarily affected during construction activities. These temporary disruptions, such as closing a sidewalk adjacent to a trench where a pipeline segment would be installed, would occur to reduce hazards to the general public and not compromise public safety. MMWD would provide alternative pedestrian and bicycle access routes to avoid obstruction to pedestrian and bicycle circulation. Where existing pedestrian and bicycle circulation routes would be obstructed by pipeline construction, alternative access routes would be developed and marked appropriately, in conjunction with local agencies. A trench would be excavated and a pipeline installed adjacent to the pedestrian and bicycle path that is parallel to East Sir Francis Drake Boulevard and that crosses Corte Madera Creek. Construction work would occur far enough away from this bicycle path for the path to remain accessible and safely usable by pedestrians and cyclists.

Buses would continue to operate as streets would not be completely blocked and access would be maintained; however, there would be traffic delays and some bus stops would be rendered temporarily inaccessible for a period up to three to four days if they are located immediately adjacent to a pipeline route. This would result in a potentially significant impact because it would conflict with appropriate transit policies and programs. Effects to bus traffic could be reduced to a level that is less than significant through implementation of Mitigation 4.13-6.

Access to the ferry terminal at Larkspur Landing would not be affected by the proposed project. Operations of the ferries from this location would not be affected by the proposed project.

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