CHAPTER 13

TRANSPORTATION

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This section evaluates the projected traffic operations and circulation impacts associated with the proposed upgrade and expansion of the PWRP facilities.

ENVIRONMENTAL SETTING

Existing Roadway System

The City of Palmdale is about 60 miles north of the City of Los Angeles via SR-14. SR-14 runs north into Kern County and south to the San Fernando Valley, providing the Palmdale community with regional and inter-regional connectivity via an interchange with the Golden State Freeway (I-5). The I-5 runs north into central and northern California, as well as south into Orange and San Diego Counties. Figure 13-1 shows the regional highways in the vicinity of the PWRP.

SR-14 is a north/south freeway which provides regional access for the entire Antelope Valley to the rest of the County. Further south, SR-14 becomes an east/west route providing access to the Santa Clarita Valley. It has four travel lanes south of Avenue P-8 and six travel lanes north of Avenue P-8. The traffic volumes on the Antelope Valley Freeway range between 76,000 and 83,000 average daily trips.[1]

Several arterials in the City of Palmdale serve regional, as well as local, needs. Palmdale Boulevard connects Palmdale with Victorville to the east in San Bernardino County. Elizabeth Lake Road, which is the westerly extension of Palmdale Boulevard, connects with Avenue D, which in turn connects to I-5 near the Ventura County border. Pearblossom Highway (SR-138) branches near the San Bernardino County border into Palmdale Road, which connects to I-15 near Victorville, and SR-138, which connects to I-15 near San Bernardino. Sierra Highway links Palmdale with the City of Mojave to the north in Kern County and with the I-5/SR-14 interchange to the south near Sylmar.

Many of the roads in the vicinity of the project area are paved, unsignalized, two-lane County roads and private roads. However, in the undeveloped portions of the Initial Study Area many County roads remain unpaved or incomplete.

The undeveloped portions of the Initial Study Area is sparsely populated and traffic is generally light. However, Avenue P in the vicinity of 40th Street experiences moderate levels of traffic because it provides access from points east to USAF Plant 42 and Palmdale. Traffic on these rural straight roads can move at high speeds. Few intersections are equipped with turning lanes.

Major arterial roads have three lanes of through traffic in each direction and a median for left-turning traffic, or two lanes in each direction, a left-turn median, and curb lane parking. Some of the major arterials within Palmdale are discontinuous.

The primary treatment facilities are located near the intersection of 30th Street East and Avenue P-8. Off site oxidation lagoon facilities are located at the intersection of 40th Street East and Avenue P. The City of Palmdale projects there will be significant increases in traffic on County roads in the area as the population increases.

Existing Levels of Service

A few arterial segments are currently operating near or below an acceptable Level of Service (LOS). Table 13-1 lists the arterial segments that are congested. Traffic flows are typically described in terms of their LOS. LOS is defined by a volume-to-capacity ratio (v/c) ranging from A (v/c ratio 0.0 – 0.6) to F (v/c ratio over 1.0). Levels A through C are generally considered good operating conditions with only minor delays. LOS D is fair operating conditions with drivers occasionally having to wait through more than one signal at the intersection. The City of

[1] *Caltrans, Traffic Counts, 2003.*

Table 13-1
Congested Arterial Segments

ARTERIALS	DESCRIPTION	LEVELS OF SERVICE
Palmdale Boulevard, between the Antelope Valley Freeway and 30th Street East	Significant levels of congestion for motorists. This section has four lanes and a paved median island with an 84-foot cross-section.	LOS E
Pearblossom Highway, between Barrel Springs and 30th Street East	This segment is currently striped for two through lanes and has yet to be upgraded to a full major arterial cross-section.	LOS F
The intersection of Pearblossom Highway and Avenue T	Operates at LOS D during the a.m. peak hour, and the intersection of Palmdale Blvd. and 30th Street East operates at LOS D during the p.m. peak hour.	LOS D
SR-138	This road is striped for a total of two through lanes and has yet to be converted to a major arterial cross-section.	LOS E
Sierra Highway, between Avenues M and P	Currently striped for four through lanes.	LOS E
Sierra Highway, between Pearblossom Highway and the Antelope Valley Freeway	This segment is striped for four through lanes.	LOS F

Source: City of Palmdale General Plan, Circulation Section, 1993.

Palmdale's current policy considers LOS D or better as good traffic flow.

Truck Routes

The Palmdale City Council has established truck routes within the city boundaries. The truck routes are designed to accommodate vehicles exceeding 10,000 pounds gross weight. City regulations prohibit their use on undesignated city streets, except when delivering or otherwise servicing facilities on such streets. Designated truck routes are shown in Figure 13-2.

REGULATORY BACKGROUND

County General Plan

The County General Plan Circulation Element includes a transportation element. The Circulation Element sets the direction for the development of a comprehensive, coordinated, and continuing transportation system for the County. The Circulation Element reflects broad input on transportation planning for the future. The goal for transportation planning is stated as follows:

> **Goal:** To achieve a transportation system that is consistent with the comprehensive objectives of the General Plan and the needs of the residents.[2]

City of Palmdale General Plan

The City of Palmdale General Plan includes a Circulation Element. The Circulation Element is designed to provide a blueprint for construction and maintenance of a transportation network. The element is consistent with state law and with other elements in the general plan. The road network is based upon development permitted by the Land Use Element. The public transit and trip reduction policies are in conformance with state, county, and regional programs. The element addresses the City of Palmdale's plans to upgrade and expand its pedestrian walkways, surface streets, arterial and regional bikeways, public transportation, rail service, and air service. The City of Palmdale General Plan contains numerous goals, objectives, and policies for circulation.

[2] *County General Plan, Circulation Element, 1986.*

Congestion Management Plan

A Congestion Management Plan (CMP) was enacted by the state legislature in 1989 to improve traffic congestion in California's urbanized areas. Under the program, regional agencies are designated within each county to prepare and administer the CMP. In the County, the agency charged with administering the CMP is the County Transportation Commission. The County Transportation Commission adopted the County's CMP in November, 1992. The CMP includes the following roadways within the City of Palmdale:

- SR-14; and
- SR-138.

Policy C2.1.5 from the City of Palmdale General Plan reinforces the city's intent to maintain compliance with the CMP process.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Thresholds of Significance

According to CEQA Guidelines, a project would have a significant effect on the environment if it:

- Causes an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system.
- Causes circulation patterns associated with the project to create unsafe traffic operation.
- Causes potential traffic safety hazards to pedestrian and bicyclists.
- Generates a demand for parking that would not be accommodated by the proposed on site supply of parking spaces.

Impact 13-1: Construction activity would temporarily disrupt traffic near the project area.

Construction of treatment and storage facilities would result in temporary disruption of traffic resulting from truck movements to and from the project area during activities associated with project construction. Construction-related traffic would cause a temporary and intermittent lessening of the capacities of the access streets and haul routes because of the slower movements and turning radii of construction trucks compared to personal vehicles. Installation of pipelines within roadway right-of-ways could result in temporary lane closures and temporarily reduce roadway capacity.

Construction activities are anticipated to generate less than 50 trips per day on local and regional roadways. This accounts for approximately 40 worker commute trips and 10 delivery truck trips per day. Deliveries would include construction material and rolls of liner material to the storage reservoir sites. Concrete delivery trucks could generate an additional 20-30 trips per day during the short-term construction of treatment facility foundations. It is not anticipated that large amounts of soil will be excavated and removed from the construction sites. The storage reservoir berms will be constructed with on site materials.

Road blockage during times of peak traffic flow would have a greater potential to create conflicts than during non-peak hours due to increased commuter traffic on affected roadways. Along Avenue P and 50th Street East, commuter traffic can reach speeds in excess of 65 miles per hour (mph). The addition of comparatively slow-moving construction vehicles would increase traffic volumes and could potentially increase traffic hazards along these roads as trucks enter from construction sites into the fast-moving traffic. Mitigation measures would reduce the impact of construction vehicles on local roads to less than significant levels.

Construction of the expanded PWRP facilities would take place entirely within the existing treatment plant site; truck access would be available from 30th Street East. Because of the relatively low traffic

volumes on 30th Street East, no adverse impacts to traffic in the vicinity of the PWRP would occur.

Conversion of land to agricultural reuse is not expected to significantly impact traffic. The only construction activities to occur within transportation easements would be trenching activities for pipeline installations within County roads. These activities would require encroachment permits from the County Department of Transportation. The pipeline installation in County roads may require temporary lane closures, but due to the wide easements of the County roads in the area, road closures would not be expected.

Mitigation Measure

Mitigation Measure 13-1: The contractor shall prepare and implement a traffic control plan to minimize traffic impacts during project construction.

Significance After Mitigation

Less than significant.

Impact 13-2: Project operation may generate additional vehicle trips that would cause traffic delays.

The PWRP is currently staffed by an average of 15 employees, generating 30 trips to and from the site each day. This is anticipated to increase to 20 employees by the year 2025, generating 40 commute trips per day. Servicing and monitoring the facilities account for an estimated 20 daily trips on local roads. This would likely increase slightly to 25 or 30 daily trips. One or two deliveries currently occur each day. This is anticipated to increase slightly to three deliveries. Biosolids and grit are currently removed from the site by haul trucks to appropriate reuse or disposal facilities. A total of eight solids disposal trips per week (biosolids and grit and screenings) are estimated for the year 2025 based on the projected flow increases.

Table 13-2 displays the anticipated frequency of chemical deliveries, and biosolids removal trips for the projected flow rates.

The existing site entrance would be used by all vehicles entering and leaving the PWRP. It is anticipated that most trips to the PWRP storage reservoirs and agricultural areas would utilize Avenue P, 40th Street East, 50th Street East, 70th Street East, and 90th Street East and would not necessarily occur during peak hours. Due to the small number of additional trip and the flexibility of arrival times, the impact of the proposed project on existing and projected traffic volumes would not be anticipated to be significant.

Mitigation Measure

No mitigation measures are required.

Significance of Impact

Less than significant.

Table 13-2
Projected Truck Trips at 15.0 MGD and 22.4 MGD

TRUCK TRIP	NUMBER OF TRUCK TRIPS (ROUND TRIP)	
	15.0 MGD	22.4 MGD
Process Chemicals		
Alum	1 per month	2 per month
Ammonia Hydroxide	1 per month	2 per month
Anionic Polymer	5 per month	6 per month
Cationic Polymer	12 per month	16 per month
Ferric Chloride	6 per month	6 per month
Ferrous Chloride	6 per month	6 per month
Sodium Bisulfite	6 per month	6 per month
Sodium Hypochlorite (NaOCl)	8 per month	11 per month
Other Chemicals		
Propane	2 per year	2 per year
Diesel	2 per month	2 per month
Gasoline	2 per month	2 per month
Biosolids	3 per week	4 per week
Grit/Screening	1 per week	2 per week

Source: District No. 20.