

# EXECUTIVE SUMMARY

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## 1. INTRODUCTION

This Final Environmental Impact Report (FEIR) has been prepared by the California Public Utilities Commission (CPUC) in accordance with the California Environmental Quality Act (CEQA) to inform the public and to meet the needs of local, State, and Federal permitting agencies to consider the Carson to Norwalk Pipeline Project proposed by SFPP, L.P.<sup>1</sup> (referred to in this document as SFPP). The proposed project is described briefly below, and in detail in Section B of this EIR. This EIR does not make a recommendation regarding the approval or denial of the project; it is purely informational in content.

This EIR evaluates and presents the environmental impacts that are expected to result from construction and operation of SFPP's Proposed Project, and provides mitigation measures which, if adopted by the CPUC or other responsible agencies, could avoid or minimize the environmental impacts identified. This EIR also identifies alternatives to the Proposed Project and evaluates the environmental impacts associated with those alternatives, in accordance with CEQA requirements.

This CEQA document reflects comments made by agencies and the public during the scoping and Notice of Preparation period, as well as comments made on the Draft EIR. The Draft EIR was issued on February 2, 1998, followed by a public comment period that ended on March 25, 1998. During the comment period, the following public involvement activities were completed:

- The Notice of Availability of Draft EIR was sent to Los Angeles and San Bernardino County Clerks.
- The Notice of Availability of Draft EIR was mailed to approximately 14,700 property owners and residents along the proposed and alternative pipeline routes. This Notice included the dates and times of the Informational Workshop and Public Participation Hearing.
- Notice of the Workshop and Hearing was published in four local newspapers: The Long Beach Press Telegram and the South East Cities Tribune on February 27, 1998; The Wave Group on February 28, 1998; and La Opinion (Spanish language) on March 3, 1998.
- An Informational Workshop was held on March 5, 1998, to provide the public and affected agencies with the opportunity to ask questions or discuss their concerns with the CPUC and EIR consultants.
- A Public Participation Hearing was held on March 19, 1998, and a court reporter recorded oral comments.
- Written comments were accepted at the Workshop and Hearing, and by mail, fax, and electronic mail.

Copies of all written comments on the Draft EIR and a transcript of the Public Participation Hearing are included in Part H of this Final EIR. Responses to each comment are also included in that section.

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<sup>1</sup> After publication of the Draft EIR, Santa Fe Pacific Pipeline Partners, L.P. was purchased by Kinder Morgan Energy Partners, L.P. The new name of Santa Fe Pacific Pipeline Partners, L.P. is SFPP, L.P. (SFPP). Throughout this Final EIR, the Applicant will be referred to as "SFPP" or "the Applicant."

## 2. DESCRIPTION OF PROPOSED PROJECT AND ALTERNATIVES

### 2.1 PROPOSED PROJECT

SFPP, which is headquartered in the City of Orange, California, provides transportation and terminal services for refined petroleum products (gasoline, diesel and jet fuel) in six western states. SFPP is a public utility and a common carrier that operates approximately 3,400 miles of pipeline varying in size from 4 inches to 24 inches. As part of this system, SFPP currently transports approximately 350,000 barrels per day of petroleum products from the Los Angeles refineries to markets in southern California, Nevada, and Arizona.

SFPP proposes to build and operate a new 16-inch petroleum products pipeline extending from SFPP's existing Watson Station in Carson to the existing SFPP station at Norwalk, California (approximately 13 miles). The proposed pipeline will supplement the capacity of SFPP's existing two pipelines that currently connect these two stations. The new pipeline will transport unleaded gasoline, diesel fuel, and jet fuel. The throughput of the new line will average 190,000 barrels of petroleum products per day; the products shipped will consist of approximately 56% gasoline, 19% jet fuel and 25% diesel. The principal destination of these products is SFPP's Colton Terminal in Rialto, where the products are then distributed to markets in Nevada, Arizona, and the California Inland Empire.

As shown on Figure ES-1, the 13-mile pipeline would traverse portions of the Cities of Carson, Long Beach, Bellflower, Cerritos and Norwalk, as well as some Los Angeles County land. SFPP also plans to modify existing facilities located in Carson, Norwalk, Industry, and Rialto as a part of the proposed expansion project. The pipeline would cross three waterways along the proposed route: the Los Angeles and the San Gabriel rivers, and Compton Creek. Table ES-1 summarizes the components of the proposed project.

SFPP estimates that the proposed project will cost \$22 million to construct. This cost is broken into \$8 million for labor and \$14 million for supplies and equipment. Approximately 95 people would be employed for pipeline construction and 111 for station construction during the peak construction period. It is approximated that construction of the 13-mile pipeline would proceed between 200 and 500 feet per day, therefore taking between 137 days (at 500 feet per day) and 343 days (at 200 feet per day).

Placeholder Figure ES-1

8.5x11 map of proposed project & alts

**Table ES-1 Summary of Project Components**

<b>Component/Location</b>	<b>Description</b>
<b>Components of the Proposed Pipeline</b>	
Pipeline	<ul style="list-style-type: none"> <li>• 13 miles long</li> <li>• 16-inch diameter pipe</li> <li>• Pipe: API 5LX60, wall thickness 0.312"</li> </ul>
Throughput	<ul style="list-style-type: none"> <li>• 204,000 Barrels Per Day (BPD) maximum</li> <li>• 190,000 BPD average</li> </ul>
Products Shipped (approximate breakdown)	<ul style="list-style-type: none"> <li>• 56% -- Unleaded gasoline</li> <li>• 19% -- Jet fuel</li> <li>• 25% -- Diesel fuel</li> </ul>
Operating Parameters	<ul style="list-style-type: none"> <li>• 1,440 psi Maximum Allowable Operating Pressure (MAOP)</li> <li>• 72 °F Product temperature (ambient)</li> </ul>
Safety/Operating System	<ul style="list-style-type: none"> <li>• 8 automatic block valves (MOV's) (2 at each river crossing; 1 each at Carson &amp; Norwalk Stations)</li> <li>• 2 manual valves at Industry Station</li> <li>• Computerized pipeline monitoring system (SCADA System)</li> </ul>
<b>Station Modifications</b>	
Watson Station (in Carson)	<ul style="list-style-type: none"> <li>• 2 new electric pumps (2,000 hp each); upgrade existing surge pump to 900 hp</li> <li>• New metering equipment</li> <li>• 1 outgoing valve</li> <li>• Vapor recovery systems will be added to 3 existing tanks</li> <li>• 1 tank will be converted from diesel to multi-product use</li> <li>• New scraper-launching facility will be installed</li> <li>• All changes within the existing station boundaries.</li> </ul>
Norwalk Station	<ul style="list-style-type: none"> <li>• Construct new 16-inch pipeline; connect with existing 16-inch Military Line</li> <li>• 1 incoming valve at station boundary</li> </ul>
Industry Station	<ul style="list-style-type: none"> <li>• Re-route existing 16-inch pipeline from south to north side of RR tracks (approximately 300 feet of new pipe) to run through station</li> <li>• Install 2 new electric pumps (1,750 hp each) next to existing pump</li> </ul>
Colton Terminal (in Rialto)	<ul style="list-style-type: none"> <li>• Piping modifications to allow product from the existing pipelines to ship through to Phoenix-West line</li> </ul>

## 2.2 ALTERNATIVES

As a part of the alternatives evaluation process, 18 potential alternative routes or methods of shipping petroleum products were evaluated. Eleven alternatives were eliminated because they did not offer significant environmental advantages over the proposed project. Seven alternative route segments are fully analyzed in this EIR, as well as the No Project Alternative, and are described in Table ES-2.

These alternatives are considered in this document for full analysis so that they can be compared to the proposed project. Figure ES-1 shows where these alternatives are located.

Table ES-2 Proposed and Alternative Pipeline Segments

	Proposed Route Segment	Miles	Alternative Route Segments: Name & Description	Miles
A	Del Amo (E) - Rancho Way (N) - Laurel Park (N)	1.2	none	0
B	Laurel Park (N) - East across MTA tracks (@ Victoria) & Compton Creek to corner of Santa Fe & Victoria	0.8	<b>Santa Fe Alternative Segment</b> East from Laurel Park (at a point about 1500 feet north of its junction with Rancho Way); east (under Alameda Street, East Alameda, and railroad tracks) into Santa Fe Avenue. Northeast on Santa Fe across Compton Creek to corner of Victoria	0.6
C	Victoria & Santa Fe (E) - Gordon St. - White Ave. - bore under LA River - DeForest Ave (S) - South Street (E) to Cherry Avenue	2.7	none	0
D	South Street (E) from Cherry - Paramount (N) to Artesia	1.5	<b>Cherry Alternative Segment</b> Cherry (N) from South Street; Artesia (E) to Paramount Blvd.	1.5
			<b>Paramount Alternative Segment</b> Cherry/Garfield (N) from Artesia; Alondra Blvd. (E) to Lakewood Blvd.	2.5
E	Artesia (E) from Paramount to Studebaker (N) to 166th (E) to Norwalk Blvd. (N) to corner of Norwalk and Alondra	3.5	<b>Alondra Alternative Segment</b> Lakewood Blvd (N) from Artesia; Alondra (E) from Lakewood to corner of Alondra & Norwalk	4.0
			<b>Bellflower Rail Alternative Segment</b> Lakewood Blvd (N) from Artesia; railroad ROW (just south of Compton/Somerset) southeast to Artesia Blvd.	4.2
			<b>Artesia Alternative Segment</b> Artesia (E) from Studebaker - Norwalk Blvd. (N) to corner of Alondra & Norwalk	2.0
F	Norwalk Blvd (N) from Alondra to DFSP entrance; new pipe into DFSP station	0.6	<b>Shoemaker Alternative Segment</b> Alondra Blvd (E) from Norwalk - Shoemaker (N) to corner of Excelsior	1.5
		12.9		16.3

In addition to the route segments described above, the No Project Alternative is evaluated in each environmental issue area. The No Project Alternative addresses the impacts of the actions that would occur if the Proposed Project is not constructed. The demand for petroleum products in Arizona, Nevada, and the Inland Empire would still grow and the product would be supplied by other means. Existing pipelines would be used to a greater extent, and trucking of products from Los Angeles refineries to Las Vegas and to the Inland Empire would increase.

### 3. COMPARISON OF ALTERNATIVES

#### 3.1 INTRODUCTION

This section summarizes and compares the environmental advantages and disadvantages of the proposed project and the alternatives evaluated in detail in this EIR (see Figure ES-1). This comparison is based on the environmental impacts of the proposed route and each alternative, as identified in Sections C.2 through C.13. Based on comments submitted on the Draft EIR, the conclusions of this section have changed; these conclusions are presented in Sections 3.2 and 3.3 below.

Section 3.2 includes a summary of the impacts of each alternative in comparison to the proposed route. Section 3.3 presents the Environmentally Superior Alternative, including a map (Figure ES-2) of the environmentally superior pipeline route.

#### 3.2 COMPARISON OF ALTERNATIVES

This section presents a summary comparison of the impacts of the proposed project and alternatives. For the seven alternative route segments (Santa Fe, Cherry, Paramount, Alondra, Bellflower Rail, Artesia, and Shoemaker), as well as the No Project Alternative, summary tables show the differences in environmental impact for each issue area. Because the Alondra Alternative must be compared with both the Bellflower Rail Alternative (in the east) and the Artesia Alternative (in the west), as well as to the proposed project segments, summary tables for these route segments include the proposed project and two separate alternatives (see Sections 3.2.4 and 3.2.5). Table ES-3 summarizes the major characteristics of the proposed and alternative route segments.

Following is the methodology that was used to compare alternatives in this EIR:

- Step 1:** An alternatives screening process (described in Section B.7) was used to identify the seven alternative route segments that had the potential to eliminate significant impacts of the proposed pipeline route.
- Step 2:** The environmental impacts of the proposed and the alternative route segments are identified (Sections C.2 through C.13), including the potential impacts of pipeline construction and operation. These impacts are summarized in Table D.4-1 (see Section D, Comparison of Alternatives).
- Step 3:** The environmental impacts of each alternative segment are compared to the comparable segment of the proposed pipeline route. These comparisons are presented in Sections 3.2.1 through 3.2.7 below.
- Step 4:** Impacts in the 12 environmental issue areas were evaluated as to their relative importance so that the overall impacts of each alternative could be compared with the proposed project. Potential impacts in six environmental issue areas are considered to be most important in this analysis; these issue areas are system safety, land use, hydrology, socioeconomics, air quality, and transportation. Long-term effects (such as risk of an accident) are given more consideration than short-term effects (such as noise or air emissions during construction). Based on this evaluation, a conclusion is drawn as to the environmental superiority of each segment.

Table ES-3 Characteristics of Proposed Project and Alternative Segments

Issues of Concern	Santa Fe Alternative		Cherry Alternative		Paramount Alternative		Central Route Segments			Eastern Route Segments			Shoemaker Alternative	
	Proposed	Alternative	Proposed	Alternative	Proposed (a)	Alternative	Proposed (b)	Alondra Alternative (West)	Bellflower Rail Alternative	Proposed (c)	Alondra Alternative (East)	Artesia Alternative	Proposed (d)	Alternative
<b>Length of Segment (mi.)</b>	0.8	0.6	1.5	1.5	1.0	2.5	2.4	3.0	4.2	2.5	2.1	2.5	0.6	1.5
<b>Type/Location of Waterway Crossing</b>	Open cut crossing of Compton Creek 0.3 mi. N of Santa Fe Ave	Open cut crossing of Compton Creek at Santa Fe Ave	n/a	n/a	n/a	n/a	San Gabriel River on Artesia bridge	San Gabriel River on Alondra bridge	San Gabriel River bored at RR ROW	n/a	n/a	n/a	n/a	n/a
<b>Jurisdiction(s)</b>	LA County	LA County	Long Beach	Long Beach	Long Beach Bellflower	Long Beach Paramount Bellflower	Bellflower Cerritos	Bellflower	Bellflower Cerritos	Cerritos Norwalk	Bellflower Cerritos Norwalk	Cerritos Artesia	Norwalk	Norwalk
<b>Water Wells</b>	1	0	0	0	3	1	2	3	5	1	1	2	1	1
<b>Non-residential sensitive receptors</b>	0	1	1	2	3	2	8	6	9	7	5	4	1	3
<b>Total residential units*</b>	0**	0	130	160	500	150	300	270	170	250	300	50	110	90

\* Residential units are estimated based on a drive-by survey of the proposed and alternative routes.

\*\* Two mobile home parks are located near the proposed route segment (west of Laurel Park Road and north of Victoria Avenue)

It should be noted that only the portion of the proposed project route that would be replaced by each alternative segment is shown in the comparisons above. The proposed route segments compared:

- a Proposed route segment on Artesia Boulevard (between Paramount and Lakewood Boulevards) was compared to the Paramount Alternative.
- b Proposed route segment on Artesia Blvd (Lakewood Boulevard to the San Gabriel River) was compared to Central Route Segments (Bellflower Rail Alternative and Alondra Alternative, west half)
- c Proposed route segment on Artesia Blvd. (San Gabriel River to Studebaker Road), Studebaker Road (Artesia Blvd. to 166<sup>th</sup> Street), 166<sup>th</sup> Street (Studebaker to Norwalk Blvd.) and Norwalk Blvd. (166<sup>th</sup> to Alondra Blvd.) was compared to Eastern Route Segments (Artesia Alternative and Alondra Alternative, east half)
- d Proposed route segment on Norwalk Blvd. (from Alondra Blvd. to the Norwalk Station) was compared to the Shoemaker Alternative

### 3.2.1 Santa Fe Alternative Segment

The Santa Fe Alternative Segment was determined to be environmentally superior to the proposed route segment. This segment would replace the proposed route segment including the northern part of Laurel Park Road to the corner of Victoria Street and Santa Fe Avenue. Table ES-4 summarizes and compares the impacts of these two segments for each issue area.

**Table ES-4 Santa Fe Alternative Compared to Proposed Route**

Issue Areas	Proposed Route Segment	Santa Fe Alternative
<b>Major Issues</b>		
<b>Land Use &amp; Recreation; Noise<sup>1</sup></b>	■ Accidents or construction could impact two nearby mobile home parks; no non-residential sensitive receptors	⊕ No residences affected; one sensitive receptor
<b>System Safety</b>	■ Longer route increases probability of an accident during operation	⊕ Shorter route reduces probability of an accident during operation
<b>Hydrology &amp; Water Resources</b>	■ One water well could be affected by an accident	⊕ No water wells that could be affected by an accident
<b>Air Quality</b>	■ Longer route; more emissions from construction	⊕ Shorter route reduces air emissions from construction
<b>Socioeconomics</b>	Similar impacts (both segments would affect businesses)	
<b>Transportation &amp; Traffic</b>	■ Higher traffic volume on Laurel Park; more construction-related traffic impacts	⊕ Lower traffic volumes on Santa Fe Avenue than on Laurel Park Road
<b>Minor Issues</b>		
<b>Biological Res.</b>	Similar impacts (both routes cross Compton Creek)	
<b>Cultural Resources</b>	■ Could affect site LAN 389; closer to Dominguez Adobe	⊕ No cultural sites would be affected
<b>Environmental Contamination</b>	⊕ No contaminated sites	■ Three medium potential contaminated sites could be encountered in construction
<b>Geology &amp; Soils</b>	Similar impacts (both segments cross the Newport-Inglewood Fault where an earthquake could cause pipeline rupture)	
<b>Visual Resources</b>	Similar impacts (urban construction primarily within streets)	

Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- ⊕ Indicates that segment has fewer environmental impacts
- Indicates that the segment has more environmental impacts.

### 3.2.2 Cherry Alternative Segment

The Cherry Alternative Segment was determined to be environmentally superior to the proposed route segment along South Street and Paramount Boulevard. In the Draft EIR, the proposed route segment was determined to be environmentally superior to the Cherry Alternative Segment. Further analysis of these two segments based on additional information in the comments on the Draft EIR resulted in a revised conclusion. The revised comparison of the impacts of these two segments for each environmental issue area is presented in Table ES-5.

Table ES-5 Cherry Alternative Compared to Proposed Route

Issue Areas	Proposed Route Segment	Cherry Alternative
<b>Major Issues</b>		
<b>Land Use &amp; Recreation; Noise<sup>1</sup></b>	➕ Pipeline accidents and construction impacts could affect approximately 130 residential units and one non-residential sensitive receptor	➖ Pipeline accidents and construction impacts could affect approximately 160 residential units and two non-residential sensitive receptors
<b>System Safety</b>	Similar impacts (segments are the same length)	
<b>Hydrology &amp; Water Resources</b>	Similar impacts (no wells or waterway crossings)	
<b>Air Quality</b>	Similar impacts (segments are the same length)	
<b>Socioeconomics</b>	➖ Businesses on South Street would experience continued construction disruption	➕ No extended business disruptions
<b>Transp. &amp; Traffic</b>	➖ Ongoing cumulative traffic impacts from construction on South Street	➕ No cumulative traffic impacts
<b>Minor Issues</b>		
<b>Biological Res.</b>	Similar impacts (no biological resources concerns)	
<b>Cultural Res.</b>	Similar impacts (no cultural resources identified)	
<b>Environmental Contamination</b>	➖ Six high potential sites and twelve medium potential sites could affect construction safety	➕ Two high potential sites and six medium potential sites could affect construction safety
<b>Geology &amp; Soils</b>	➕ No liquefaction along proposed route segment	➖ Alternative segment would be installed in an area of moderate susceptibility to liquefaction, potentially causing pipeline rupture. (Note that connection with the Paramount Alternative would avoid this area liquefaction area)
<b>Visual Resources</b>	Similar impacts (urban construction primarily within streets)	

Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- ➕ Indicates that segment has fewer environmental impacts
- ➖ Indicates that the segment has more environmental impacts.

In addition to the information presented in the table, two facts are noted in support of the Cherry Alternative. First, because the Paramount Alternative was determined to be environmentally superior to the proposed route along Artesia Boulevard (as described in Section 3.2.3 below), in order to connect the proposed segment with the Paramount Alternative, one additional mile of pipeline would have to be constructed (as demonstrated in Draft EIR Figure D.2-2) if the Cherry Alternative were not used. Second, the Cherry Alternative Segment and the comparable portion of the proposed route are both within the City of Long Beach. On March 24, 1998, the Long Beach City Council adopted a resolution in support of the Cherry Alternative, citing the reasons described in this section.

### 3.2.3 Paramount Alternative

The Paramount Alternative was determined to be environmentally superior to the equivalent portion of the proposed pipeline route. The major factor in this determination is the significant difference between the numbers of residences along the two segments. The Paramount Alternative is primarily industrial and

commercial, whereas the proposed route segment is mixed land uses with a large number of multi-family buildings located along Artesia Boulevard. Table ES-6 describes the environmental impacts of the Paramount Alternative segment in comparison to the proposed route for each environmental issue area.

**Table ES-6 Paramount Alternative Compared to Proposed Route**

Issue Areas	Proposed Route Segment	Paramount Alternative
<b>Major Issues</b>		
<b>Land Use &amp; Recreation; Noise<sup>1</sup></b>	■ Pipeline accidents and construction impacts could affect approximately 500 residential units; three non-residential sensitive receptors	⊕ Pipeline accidents and construction impacts could affect approximately 150 residential units; residences generally at greater distance from ROW; two non-residential sensitive receptors
<b>System Safety</b>	⊕ Shorter route (reduced probability of an accident)	■ Longer route (increased probability of an accident)
<b>Hydrology &amp; Water Resources</b>	± Three water wells (Cities of Long Beach and Bellflower) could be affected by a pipeline accident	± One water well (supplying 50-60% of City of Paramount's water) could be affected by a pipeline accident
<b>Air Quality</b>	⊕ One mile of construction (fewer air emissions)	■ 2.5 miles of construction (more air emissions)
<b>Socioeconomics</b>	A similar number of businesses could be affected along proposed and alternative segments	
<b>Transportation &amp; Traffic</b>	± 20,500 - 25,000/day traffic volumes on Artesia Boulevard	± 19,200/day traffic volume along Alondra Boulevard; 29,000/day on Cherry/ Garfield
<b>Minor Issues</b>		
<b>Biological Res.</b>	Similar impacts (no biological resources concerns)	
<b>Cultural Res.</b>	Similar impacts (no cultural resources identified)	
<b>Environmental Contamination</b>	⊕ Five medium potential sites could affect construction safety	■ Eight medium potential sites could affect construction safety
<b>Geology &amp; Soils</b>	■ A substantial area of moderate liquefaction north of Artesia Boulevard could cause pipeline rupture in an earthquake	⊕ A small area of moderate liquefaction east of Cherry Ave. in Long Beach could cause pipeline rupture in an earthquake
<b>Visual Resources</b>	Similar impacts (urban construction primarily within streets)	

Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- ⊕ Indicates that segment has fewer environmental impacts
- Indicates that the segment has more environmental impacts.
- ± Trade-offs between impacts result in overall similar impacts.

### 3.2.4 Central Route Segments: Lakewood Boulevard to San Gabriel River

- ± The central portion of the proposed route offers two alternative segments in addition to the proposed route: the Alondra Alternative and the Bellflower Rail Alternative. The Bellflower Rail Alternative was determined to be environmentally superior in this segment: it would affect fewer residential units, offer safety benefits, and cause few traffic impacts. Table ES-7 shows the comparison of the impacts of these three routes between Lakewood Boulevard on the west and the San Gabriel River on the east. Note that Figure ES-1 shows all of these route segments.

Table ES-7 Central Route Segments: Lakewood Boulevard to San Gabriel River

Issue Areas	Proposed Route Segment (Artesia Blvd. between Lakewood Blvd. and San Gabriel River)	Alondra Alternative (Lakewood Blvd. and Alondra Blvd. to San Gabriel River)	Bellflower Rail Alternative
<b>Major Issues</b>			
<b>Land Use &amp; Recreation; Noise</b>	■ Pipeline accidents and construction impacts could affect approximately 300 residential units; 8 non-residential sensitive receptors	■ Pipeline accidents and construction impacts could affect approximately 270 residential units; 6 non-residential sensitive receptors	⊕ Pipeline accidents and construction impacts could affect approximately 170 residential units; 9 non-residential sensitive receptors
<b>System Safety</b>	■ Similar impacts (no difference in length; installation of pipeline in city streets results in risk of third-party accidents)		⊕ Longer route so greater probability of accident due to length, but lower risk of co-locational and third-party accidents
<b>Water Resources; Biological Resources</b>	■ San Gabriel River crossing hung from Artesia Blvd. bridge (accidental rupture would directly contaminate waterways); two water wells could be affected by a pipeline accident	■ San Gabriel River crossing hung from Alondra Blvd. bridge (accidental rupture would directly contaminate waterways); three water wells could be affected by a pipeline accident	⊕ San Gabriel River crossing would be bored (reduced risk of accident); five water wells could be affected by a pipeline accident
<b>Air Quality</b>	± 2.4 miles of construction in city streets	± 3.0 miles of construction in city streets	± 4.2 miles of construction (2.8 in rail ROW); construction would be faster in rail ROW
<b>Socioeconomics, Public Services</b>	■ Similar impacts (businesses would be affected by construction in city streets)		⊕ Few businesses would be exposed to construction impacts or accidents; access not affected by construction
<b>Transportation &amp; Traffic</b>	■ 2.4 miles of construction on Artesia Boulevard (20,000 vehicles/day)	■ 3.0 miles of construction on Lakewood and Alondra Blvds. (25,000 - 35,000 vehicles/day)	⊕ 2.8 miles of construction in rail ROW (5 street crossings); 1.6 miles in Lakewood Blvd.
<b>MINOR ISSUES</b>			
<b>Cultural Res.</b>	Similar impacts (no cultural resources affected)		
<b>Env. Contamination</b>	■ A maximum of six medium potential sites could affect construction safety	■ A maximum of two high potential sites and six medium potential sites could affect construction safety	⊕ Two medium potential sites could affect construction safety
<b>Geology &amp; Soils</b>	Similar impacts (eastern end of all segments has moderate/high liquefaction potential where an earthquake could cause pipeline rupture)		
<b>Visual Resources</b>	Similar impacts (all segments include mixed land uses; construction in streets or rail ROW)		

Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

⊕ Indicates that segment has fewer environmental impacts

■ Indicates that the segment has more environmental impacts.

± Indicates that there are trade-offs between impacts and no segment is clearly advantageous.

### 3.2.5 Eastern Route Segments: San Gabriel River to Norwalk Boulevard

Between the San Gabriel River and Norwalk Boulevard, three pipeline segments could be used: the proposed route, the Alondra Alternative, or the Artesia Alternative. The Artesia Alternative was determined to be the environmentally superior route segment because there are significantly fewer residences that could be exposed to the risk of a pipeline accident and to construction impacts. This factor is considered to outweigh the other issue areas in which impacts would be more severe than those along the proposed or Alondra segments. Also, this portion of the Alondra Alternative could be used only if the western portion of that alternative were found to be environmentally superior, and in the Central Route Segment (as described in Section 3.2.4), the Bellflower Rail Alternative is clearly environmentally superior. Therefore, use of the eastern portion of the Alondra Alternative is not feasible.

Table ES-8 summarizes the environmental impacts of the pipeline segments between the San Gabriel River (on the west) and Norwalk Boulevard (on the east).

**Table ES-8 Eastern Route Segments: San Gabriel River to Norwalk Station**

Issue Areas	Proposed Route Segment (Artesia Blvd., Studebaker Rd., 166 <sup>th</sup> Street)	Alondra Alternative (San Gabriel River to Norwalk Blvd.)	Artesia Alternative (Artesia Blvd. from SG River to 166 <sup>th</sup> St.)
<b>Major Issues</b>			
<b>Land Use &amp; Recreation; Noise</b>	■ Pipeline accidents and construction impacts could affect approximately 250 residential units; 7 non-residential sensitive receptors	■ Pipeline accidents and construction impacts could affect approximately 300 residential units; 5 non-residential receptors	⊕ Pipeline accidents and construction impacts could affect approximately 50 residential units; 4 non-residential sensitive receptors
<b>System Safety</b>	Similar impacts (no overall difference in segment length)		
<b>Hydrology &amp; Water Res.</b>	■ Pipeline would pass the reservoir on Studebaker Road and one water well could be affected by a pipeline accident	⊕ One water well could be affected by a pipeline accident	■ Two water wells could be affected by a pipeline accident
<b>Air Quality</b>	Similar impacts (no difference in segment length)		
<b>Socioeconomics &amp; Public Services</b>	⊕ Few businesses affected by construction or pipeline accidents	⊕ Some businesses affected by construction on Alondra Blvd.	■ Many businesses affected by construction on Artesia Blvd.
<b>Transportation &amp; Traffic</b>	⊕ Low traffic volume on 166th Street (10,000 vehicles/day)	■ High traffic volume on Alondra Blvd. (40,000 to 47,000 vehicles/day)	■ Higher traffic volumes on Artesia and Norwalk Blvds. (17,000 to 25,000 vehicles/day)
<b>Minor Issues</b>			
<b>Biological Res.</b>	Similar impacts (no waterway crossings or sensitive areas)		
<b>Cultural Res.</b>	Similar impacts (no sites affected)		
<b>Env. Contamination</b>	± A maximum of six medium potential sites could affect construction safety	± A maximum of two high potential sites; six medium potential sites could affect construction safety	± Two high potential sites and three medium sites could affect construction safety
<b>Geology &amp; Soils</b>	Similar impacts (all segments in moderate to high liquefaction area where an earthquake could cause pipeline rupture)		
<b>Visual Resources</b>	No difference (all segments include mixed land uses; construction in streets)		

Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- ⊕ Indicates that segment has fewer environmental impacts
- Indicates that the segment has more environmental impacts.

### 3.2.6 Shoemaker Alternative Segment

The proposed pipeline route has been determined to be environmentally superior to the Shoemaker Alternative Segment. In the Draft EIR, the Shoemaker Alternative Segment was considered to be environmentally superior to the proposed route. Further analysis of these segments, and additional information presented in comments on the Draft EIR resulted in the revised conclusion, which is explained in Table ES-9.

The Shoemaker Alternative Segment would eliminate an approximately one-half mile segment of the proposed route involving construction on Norwalk Boulevard (between Alondra Boulevard and the Norwalk Station) and within the Norwalk Station itself. However, construction would occur on Alondra Boulevard (for one mile between Norwalk Boulevard and Shoemaker Avenue) and Shoemaker Avenue (one-half mile from Alondra Boulevard to Excelsior Drive).

Another consideration in evaluation of this segment is that use of the Shoemaker Alternative segment would require that SFPP install a block valve near the corner of Shoemaker Avenue and Excelsior Drive. CEQA requires consideration of the “proponent’s control over alternative sites” [CEQA Guidelines §15126(d)]; because this alternative site is not within SFPP’s control, this is a disadvantage of this alternative.

The City of Norwalk, in its comment letter on the Draft EIR (March 25, 1998), stated a first and second preference for routes affecting the City: the Shoemaker Alternative is the first preference due to the concern regarding existing contamination at the Norwalk Station, and the proposed route is the second preference (acknowledging the several disadvantages of the Shoemaker Alternative described above). There is a potential environmental benefit resulting from consolidation of risk in the Norwalk Station location rather than adding a new risk by installing the new pipeline in Shoemaker Avenue, where no pipelines currently exist between Excelsior Drive and Alondra Boulevard.

The environmental impacts of the Shoemaker Alternative and the proposed route segment are described in Table ES-9 for each environmental issue area.

Table ES-9 Shoemaker Alternative Compared to Proposed Route Segment

Issue Areas	Proposed Route Segment	Shoemaker Alternative
<b>Major Issues</b>		
<b>Land Use &amp; Recreation; Noise<sup>1</sup></b>	■ Pipeline accidents and construction impacts could affect approximately 110 residential units and 1 non-residential sensitive receptor	⊕ Pipeline accidents and construction impacts could affect approximately 90 residential units and 3 non-residential sensitive receptors
<b>System Safety</b>	⊕ Shorter route (reduced probability of an accident) ⊕ Consolidation of risk at existing industrial site	■ Longer route (increased probability of an accident) ■ Addition of new risk to Shoemaker Avenue (no pipelines currently exist between Alondra Blvd. and Excelsior Dr.)
<b>Hydrology &amp; Water Resources</b>	Similar impacts (one well affected by both segments)	
<b>Air Quality</b>	⊕ 0.6 miles of construction (fewer air emissions)	■ 1.5 miles of construction (more air emissions)
<b>Socioeconomics</b>	⊕ No businesses affected	■ Businesses along Shoemaker Avenue and Alondra Blvd. affected by construction or a pipeline accident
<b>Transportation &amp; Traffic</b>	± High traffic volumes on Norwalk Blvd. (27,000 vehicles/day) over 0.6 miles	± Lower traffic volumes on Shoemaker Ave. (10,000 vehicles/day) and Alondra Blvd. (20,000 vehicles/day) over 1.5 miles
<b>Minor Issues</b>		
<b>Biological Res.</b>	Similar impacts (no waterway crossings)	
<b>Cultural Res.</b>	Similar impacts (no cultural resources identified)	
<b>Environmental Contamination</b>	± Construction through Norwalk Station with contaminated soil and groundwater could affect construction safety	± One high potential contaminated site and two medium sites could affect construction safety
<b>Geology &amp; Soils</b>	⊕ 0.6 miles of construction in area of moderate/high liquefaction where an earthquake could cause pipeline rupture	■ 1.5 miles of construction in area of moderate/high liquefaction where an earthquake could cause pipeline rupture
<b>Visual Resources</b>	Similar impacts (urban construction primarily within streets)	

<sup>1</sup> Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

⊕ Indicates that segment has fewer environmental impacts

■ Indicates that the segment has more environmental impacts.

± Indicates that trade-offs between impacts in this issue area so neither segment has an advantage.

### 3.2.7 No Project Alternative

The No Project Alternative is described in Section B.9 and consists of using existing pipelines in combination with significantly increased trucking of petroleum products over time. Although use of existing pipelines under the No Project Alternative would offer short-term environmental advantages when compared to construction of a new pipeline, the long-term continuation and potential increase of truck transportation that is required due to lack of sufficient pipeline capacity render the No Project Alternative environmentally inferior. In contrast, the development and utilization of a new pipeline would substantially reduce the trucking of petroleum products.

No new construction would occur if this alternative were selected, so the short-term construction impacts associated with the Proposed Project or other new pipeline alternatives would not occur. Table ES-10 summarizes the impacts of the No Project Alternative in comparison to a new pipeline.

**Table ES-10 No Project Alternative Compared to New Pipeline**

Issue Areas	No Project Alternative	Proposed Route Segment
<b>Major Issues</b>		
<b>Land Use &amp; Recreation; Noise<sup>1</sup></b>	■ Residents and sensitive receptors along truck routes (hundreds of miles of freeways and surface streets) would experience traffic and noise impacts	⊕ Residences and sensitive receptors along the 13-mile pipeline route would experience construction impacts and risk of spill or fire
<b>System Safety</b>	■ The No Project Alternative would require nearly 500 trucks to travel approximately 170 miles per day. Fatality rates for truck transportation are 300 times higher than for pipelines. Spill risks are also much higher because a truck accident would be expected every 4-5 days and 15 to 20 % of accidents result in spilled product. Truck accidents can also result in significant traffic and air quality concerns (from evaporated product), in addition to safety.	⊕ Residential areas, sensitive land uses, businesses, and water resources between Carson and Norwalk would be subjected to new fuel spill risks associated with the proposed 13-mile pipeline project (or pipeline alternatives)
<b>Hydrology &amp; Water Resources; Biological Res.</b>	■ Greater risk that trucking accident would contaminate waterways and affect biological resources	⊕ Less risk that pipeline accident would contaminate waterways and affect biological resources
<b>Air Quality</b>	■ Air pollutant emissions are significantly increased by truck transportation of crude oil, and emissions would occur over many years rather than in a period of months (for pipeline construction). Truck transportation also requires substantially greater consumption of non-renewable fuels.	⊕ Short-term construction emissions would occur
<b>Socioeconomics</b>	■ Increased accident likelihood could affect businesses and utilities along southern California regional roadways	⊕ Short-term construction impacts or pipeline accidents could affect businesses along the 13-mile pipeline route
<b>Transportation &amp; Traffic</b>	■ Long-term traffic impacts would result from increased trucking. The greatly increased truck traffic would affect the regional transportation network.	⊕ Short-term traffic impacts would occur
<b>Minor Issues</b>		
<b>Cultural Res.</b>	± Cleanup of truck spills could impact cultural resources	± Slight possibility that construction could impact unrecorded cultural sites
<b>Geology &amp; Soils</b>	⊕ Trucking is less susceptible to accidents caused by earthquakes	■ New pipeline subject to rupture by the Newport-Inglewood Fault.
<b>Visual Resources</b>	± No new construction would occur; truck traffic would increase	± Short-term construction activities visible

<sup>1</sup> Although Noise is not considered to be a major issue, it is considered with Land Use because for both issue areas impacts are based on sensitive land uses.

- ⊕ Indicates that alternative segment has fewer environmental impacts
- Indicates that the alternative segment has more environmental impacts.

### 3.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Determination of which of the project alternatives is environmentally superior is quite difficult and depends on many factors. In order to meet the CEQA requirements to identify an environmentally superior alternative, we primarily considered the importance of “major” issue areas that have potential long-term, widespread significant impacts (i.e., land use, system safety, hydrology, and air quality), and the most significant construction impacts (i.e., socioeconomics and transportation). These six issue areas represent the key to the alternatives comparison, as shown in Tables ES-4 through ES-10 above. Even in these issue areas, determining a superior alternative is difficult because of the tradeoffs associated with different route segments.

#### 3.3.1 Summary of Conclusions

**A New Pipeline vs. No Project Alternative.** As shown in Table ES-10, the Proposed Project or a new pipeline alternative is environmentally superior to the No Project Alternative by a wide margin. The No Project Alternative would not be the environmentally superior alternative due to the regional, long-term significant and unavoidable risks and impacts associated with extensive trucking of petroleum products from Los Angeles and Colton to various destinations and associated with increased use of existing pipelines. The impacts of trucking offset any advantages of the No Project Alternative with regard to avoidance of short-term construction impacts associated with the proposed project or alternative segments.

**Proposed Project vs. Alternative Pipeline Segments.** As explained in Sections 3.2.1 through 3.2.6 above, the following alternative segments were found to be environmentally superior:

- Santa Fe Alternative is superior to the proposed route segment (Section 3.2.1)
- Cherry Alternative is superior to the proposed route segment (Section 3.2.2)
- Paramount Alternative is superior to the proposed segment (Section 3.2.3)
- Bellflower Rail Alternative is superior to the proposed segment (Section 3.2.4)
- Artesia Alternative is superior to the proposed segment (Section 3.2.5)
- Proposed route segment is superior to the Shoemaker Alternative (Section 3.2.6).

#### 3.3.2 Creation of a Complete Environmentally Superior Pipeline Route

Figure ES-2 illustrates the Environmentally Superior Pipeline Route: the route that combines the pipeline segments of the proposed and alternative segments in a manner that reduces the impacts of the proposed project to the greatest extent feasible. It should be noted that this combination route is 14.3 miles long, approximately 1.3 miles (or 10%) longer than the originally proposed route. This additional overall length results in potential increased impacts, particularly in two issue areas:

- **System Safety:** Since the probability of a spill occurring is directly related to the length of the pipeline, a 10% increase in overall length increases the likelihood that an accident could occur. The overall probability of a leak occurring would therefore increase slightly.
- **Air Quality:** A longer pipeline would be expected to produce proportionately more air emissions during construction. However, since the additional length primarily results from construction in the railroad right-of-way

where construction would proceed at a much faster rate, overall emissions are expected to be similar to those of the proposed route.

In spite of these impacts, the additional length is considered to be necessary to reduce significant impacts in other issue areas. These areas of overall superiority include:

- **Land Use:** The environmentally superior route would affect about half as many residences as the proposed route.
- **System Safety:** The environmentally superior route includes the opportunity to bore under the San Gabriel River, as well as the use of the railroad right-of-way where third-party and co-locational risk are reduced.
- **Hydrology and Water Resources:** The environmentally superior route would affect about one third of the water wells that the proposed route would affect.
- **Transportation:** With the use of the railroad ROW, transportation impacts would be reduced.

Figure ES-2 map 8.5 x 11 of Environmentally Superior Pipeline Route

## 4. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### 4.1 INTRODUCTION

Section 4 summarizes the findings from the environmental analysis for each of the 12 environmental issue areas evaluated in the EIR. Within each issue area the following information is summarized: impacts identified for the proposed project, proposed mitigation measures, significant unavoidable impacts, and alternatives. Impacts were evaluated in each issue area using the following classification of the impacts:

- Class I:** Significant; cannot be mitigated to a level that is not significant
- Class II:** Significant; can be mitigated to a level that is not significant
- Class III:** Adverse, but not significant
- Class IV:** Beneficial impacts.

### 4.2 AIR QUALITY

**Impacts of the Proposed Project.** The South Coast Air Quality Management District (SCAQMD) has developed emission thresholds for pollutants resulting from construction and operation of proposed projects, based on daily and quarterly emissions. Construction of the proposed pipeline and associated station modifications would generate significant amounts of emissions [primarily oxides of nitrogen ( $\text{NO}_x$ ), carbon monoxide (CO), and fine particulates ( $\text{PM}_{10}$ )]. The Southern California Air Basin is currently in violation of air quality standards for ozone ( $\text{O}_3$ ), created partly by oxides of nitrogen emissions,  $\text{PM}_{10}$ , and CO. While SFPP proposed several emission control measures, the emissions reductions could not be calculated or adequately enforced. Therefore, the following impacts would result from project construction and operation:

- Emissions from diesel- and gasoline-powered construction equipment, which would also create dust. These emissions exceed SCAQMD significance thresholds for  $\text{NO}_x$  and  $\text{PM}_{10}$  (Class I for  $\text{NO}_x$  and Class II for  $\text{PM}_{10}$ )
- Emissions from operation of the pipeline (storage tanks, inspection and maintenance activities, power generation) would result in adverse, but not significant impacts (Class III)
- Based on the low probability of a spill or leak, emissions from a pipeline accident could be adverse (Class III), but not significant. The released hydrocarbons during a spill may contribute to ozone formation in the atmosphere which would be considered adverse (Class III), but less than significant.

**Mitigation Measures.** Nineteen mitigation measures are presented, including measures recommending revised scheduling of construction to limit concurrent station and pipeline construction, impose dust reduction techniques, and modify construction equipment to reduce  $\text{NO}_x$  and other emissions.

**Significant Unavoidable Impacts.** While  $\text{NO}_x$  emissions could be significantly reduced by implementation of the mitigation measures proposed, construction activities would still cause exceedances of California's one-hour  $\text{NO}_x$  standards and the SCAQMD 3-month  $\text{NO}_x$  thresholds.

**Alternatives.** Alternative segments that are longer than the proposed route or require additional construction time have the potential for more emissions than the proposed project. Therefore, alternative segment length

is a major variable in evaluating the air impacts for the proposed and alternative segments. However, in the case of the Bellflower Rail Alternative which is longer than the proposed route, the significantly greater speed of construction in the rail ROW as opposed to construction in urban streets would result in comparable emissions.

### 4.3 BIOLOGICAL RESOURCES

**Impacts of the Proposed Project.** Because construction and operation of the proposed project would occur within an urbanized area, there are few locations where biological resources could be affected. The primary concern is the crossings of the three waterways: Compton Creek, Los Angeles River, and San Gabriel River. Several species of concern use the lower reaches of these rivers and the shores of the harbors for foraging or nesting (California least terns, brown pelicans, and western snowy plover). The following impacts on biological resources were identified:

- Open-cut crossing of Compton Creek or maintenance activities in Compton Creek could create sedimentation or erosion, affecting downstream resources (Class II)
- Construction in DeForest Park could damage eucalyptus trees, winter roosting habitat for raptors (Class III)
- A pipeline accident (spill or leak) could cause products to flow into the Los Angeles or San Gabriel Rivers, resulting in death or injury to species living or feeding in downstream areas (Class I or II).
- Pipeline maintenance or spill response activities post-installation could disturb riparian vegetation in Compton Creek (Class II).

**Mitigation Measures.** Six mitigation measures are proposed to reduce potential impacts to biological resources. Four measures would protect Compton Creek during construction and maintenance activities, and two measures would protect raptors roosting in trees in DeForest Park. An additional measure (included in the system safety section) would establish an Urban Spill Response Plan for the protection of aquatic and marine biological resources.

**Significant Unavoidable Impacts.** The potential for a large pipeline spill to contaminate the Los Angeles or San Gabriel Rivers, and possibly the harbor area, is considered to be a significant unavoidable impact. While the probability is very small that such a spill would occur, it is not possible to eliminate the possibility that it could occur, and that a large spill could be damaging to coastal species and habitats.

**Alternatives.** Impacts of the Santa Fe and Alondra Alternative route segments are similar to those of the proposed project because they have the same type of waterway crossings. Several segments (Cherry, Paramount, Artesia, and Shoemaker) involve no waterway crossings. The Bellflower Rail Alternative is preferred to the comparable segment of the proposed route because it would have a bored crossing of the San Gabriel River (less risk of rupture).

#### 4.4 CULTURAL RESOURCES

**Impacts of the Proposed Project.** The proposed pipeline would traverse urban areas that have been disturbed by construction of roads and structures for over 100 years. A records search and survey was performed for the entire area of the proposed route and alternative segments. One recorded archaeological site (CA-LAN-389 west of Compton Creek, reported as having been destroyed) may be within the area that would be affected by the proposed pipeline. There are also a few historic sites near the route (Long Beach Dairy, Dominguez Ranch Adobe, Carpenter Dairy, and the site of the first US Air Meet), but they are not expected to be affected by pipeline construction or operation. There is the possibility that during trenching for the pipeline, unexpected resources will be found. Potential impacts include the following:

- Construction of the proposed project would involve trenching in and near Compton Creek, which has the potential to disturb intact deposits from site LAN-389 (Class II).
- Previously unrecorded cultural resources could be discovered during trenching (Class II).
- Spill cleanup activity could impact archaeological resources (Class II).

**Mitigation Measures.** Three mitigation measures are proposed, recommending that an environmental monitor be present during all trenching and excavation and that an archaeologist shall be on call, and that appropriate testing and data recovery be performed if resources are discovered. Components of the Urban Spill Response Plan (included in the System Safety Section) address the potential for disturbance of cultural resources during spill cleanup.

**Significant Unavoidable Impacts.** No significant unavoidable impacts to cultural resources were identified.

**Alternatives.** There are no significant differences between the alternatives with respect to cultural resources because construction and operation is not expected to affect the identified cultural sites.

#### 4.5 ENVIRONMENTAL CONTAMINATION

This section evaluates potential for the proposed and alternative routes to encounter existing contaminated materials in the environment. The potential for the proposed project to cause contamination (resulting from a pipeline leak or rupture) is addressed in the section on System Safety and Risk of Upset (see Section 4.11).

**Impacts of the Proposed Project.** The proposed pipeline would traverse lands that have been used for industrial and commercial purposes, including oil production and refining, for many years. Therefore, there are numerous contaminated sites recorded with the various State and Federal contamination oversight agencies. The principal environmental impact involving these sites is the excavation and handling of contaminated soil, which can expose both construction workers and the public to contaminants. A detailed list of contaminated sites was prepared, and this list is ranked to identify sites with High, Medium, and Low potential for releasing contaminants during construction.

The proposed pipeline would also require construction within the Defense Fuels Supply Point (DFSP) Norwalk Station, which has been contaminated with jet fuels and gasoline from a storage tank and pipeline leakage. The contaminated groundwater below this site is deeper than the level of the pipeline trench that would be required; therefore, the existing contamination at this location may not be encountered.

The following potential impacts were identified:

- Construction through areas with known, existing contamination or areas where unexpected contamination is found, poses risks to construction workers and the nearby public (Class II).
- Contamination at the Norwalk Station could affect workers and the nearby public (Class II)
- Pipeline construction could interfere with abandoned or inactive oil wells (Class II).

**Mitigation Measures.** Eight mitigation measures are suggested. Three measures require additional investigation of existing sites prior to construction, as well as preparation of a contingency plan defining actions required if unexpected contamination is encountered. The contingency plan would define specific requirements for protection of workers and the nearby public if certain contaminants were discovered. The fourth measure specifically requires sampling and investigating at the Norwalk Station prior to construction, and the fifth requires a records search for the Watson, Industry, and Colton stations prior to construction. The seventh measure requires research on possible abandoned oil wells along the pipeline route. The last measure addresses cumulative impacts by requiring the Applicant to use portable onsite treatment units of in-situ treatment.

**Significant Unavoidable Impacts.** No significant unavoidable impacts were identified for the environmental contamination issue area.

**Alternatives.** Potentially contaminated sites were identified for each alternative route segment. While the impacts of any route are considered to be mitigable to a level that is not significant, only two of the seven alternative segments were found to be preferred to the comparable route segments: Cherry Alternative and Bellflower Rail Alternative.

## 4.6 GEOLOGY AND SOILS

**Impacts of the Proposed Project.** Southern California is a seismically active area with the potential for the proposed project to be affected by several geologic hazards. The most significant hazards to the pipeline are fault rupture, strong ground shaking, and liquefaction<sup>2</sup>. The pipeline crosses the Newport-Inglewood fault zone at its western end. This is an active fault with potential for significant ground movement. In addition, corrosive soils could erode the pipeline over time, increasing the potential for a leak. The following potential impacts were identified:

- Potential rupture of the pipeline in the Newport-Inglewood fault zone (Class I)

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<sup>2</sup> Liquefaction is the phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of strong, earthquake induced, ground shaking.

- Liquefaction, lateral spreading, and differential settlement could cause pipeline rupture (Class II)
- Corrosive soils could damage the pipe, increasing the potential for leaks or ruptures (Class II).

**Mitigation Measures.** Two mitigation measures are proposed. The first requires a fault study for the Newport-Inglewood fault crossing to identify the type of fault movement anticipated, so pipeline design elements at the fault crossing can be improved for increased safety. The second measure requires geotechnical studies to further define areas of potential liquefaction; this will allow development of specific design measures for the pipeline in those areas.

**Significant Unavoidable Impacts.** While pipeline design measures, as required in mitigation, can increase the ability of the pipeline to withstand fault movement, they cannot eliminate the potential for the Newport-Inglewood Fault to cause pipeline rupture. Therefore, this fault crossing is considered to be a significant unavoidable impact.

**Alternatives.** The Newport-Inglewood Fault and corrosive soils would affect the proposed and alternative segments equally. However, there are areas of moderate to high liquefaction potential between Carson and Norwalk. The Paramount Alternative segment would avoid areas with moderate liquefaction potential along the proposed route. In this issue area the proposed route segment is preferred over the Cherry Alternative segment because it would avoid areas with moderate liquefaction potential.

#### 4.7 WATER RESOURCES AND HYDROLOGY

**Impacts of the Proposed Project.** The potential impacts of the proposed project on both surface water and ground water resources were evaluated. Maintaining groundwater quality in the project area is important because several communities along the pipeline route obtain their municipal water from wells in the vicinity of the proposed pipeline. Surface water can be affected only at or near any of the three waterway crossings. Potential impacts of the project on water resources include the following:

- Contamination of Compton Creek during open cut construction from sediment loading or accidental equipment spills/leaks (Class II)
- Contamination of groundwater from a pipeline leak or rupture could result in potential contamination of water wells; contamination of surface water could result from pipeline leak or rupture (Class I)
- Potential for scour in Compton Creek to expose buried pipeline and cause a leak or rupture (assuming that the crossing is trenched) (Class II).

**Mitigation Measures.** Five mitigation measures are recommended, including review of the pipeline location with respect to water wells, protection of the pipeline from scour at the Compton Creek crossing, and consideration of boring under Compton Creek and the San Gabriel Rivers. In addition, components of the Urban Spill Response Plan (in the System Safety Section) would identify water resources that could be affected in the event of a pipeline accident.

**Significant Unavoidable Impacts.** Contamination of groundwater from a pipeline leak or rupture could result in potential contamination of water wells. Also, contamination of surface water could result from pipeline leak

or rupture if the leak was located in a place where products could flow directly or through storm drains into a waterway. While the probability of a such a leak or rupture is small, the risk cannot be eliminated. Therefore, these impacts are classified as significant and unavoidable.

**Alternatives.** The same surface waterways would be affected by all alternative segments. A pipeline accident could affect varying numbers of water wells along the alternative and proposed segments; the potential impact on water supplies would depend on the size of the spill and distance to the well.

#### 4.8 LAND USE AND RECREATION

**Impacts of the Proposed Project.** Construction of the proposed project would affect residential land uses, schools, and other adjacent land uses, by temporary disruptions of public services such as water, gas, and electricity, as well as disruption of access and parking and disturbance at some parks. Also, residents and other adjacent landowners would be subjected to short-term increased noise, dust, and odor levels due to truck traffic, equipment operation, and trenching activities. Construction within the Norwalk Station would have the potential to disturb adjacent residences to the south of the facility. In addition, a pipeline accident could result in significant impacts to adjacent land uses. Specific impacts include the following:

- Short-term disruption or inconvenience to residents and other sensitive land uses adjacent to the pipeline ROW during construction (Class II, Class III)
- Short-term disturbance to recreational users during pipeline construction (Class III).
- Pipeline accidents (spills, leaks, fire, explosion) could contaminate land or water or cause injuries or death (Class I).
- Cumulative impacts of pipeline construction with other construction projects could affect land uses on adjacent lands (Class III).

**Mitigation Measures.** Eight mitigation measures are proposed. Three measures establish the notification procedures that must be followed to notify affected property owners and residents prior to and during construction, including appointing a public liaison. Other measures requires construction scheduling to avoid peak use periods at adjacent parks and schools. Two measures are proposed to minimize cumulative impacts of pipeline construction that could result from construction of multiple projects in close proximity to each other. Additional language was incorporated into a mitigation measure in the System Safety Section to identify sensitive land uses in the Urban Spill Response Plan.

**Significant Unavoidable Impacts.** The primary land use and recreation concern with the operation of the Proposed Project is the long-term safety risk to property owners and residents uses in the vicinity of the pipeline. The potential for rupture of the pipeline near populated areas is a significant, unavoidable impact.

**Alternatives.** Each alternative route segment would experience impacts similar to those described for the Proposed Project, except that for each segment, different numbers of sensitive receptors and residences would be affected.

## 4.9 NOISE

**Impacts of the Proposed Project.** Two impacts were identified related to noise from pipeline and station construction:

- Short-term noise from pipeline and station construction could affect sensitive noise receptors adjacent to construction areas (**Class II**).
- Construction within the Norwalk Station could produce disturbing noise to the residents of the housing units adjacent to the station (**Class II**).

Construction noise can be controlled or reduced through a variety of techniques as described under Mitigation Measures below. There are no noise impacts associated with the operation of the proposed pipeline.

**Mitigation Measures.** Impacts of project construction can be reduced through implementation of five mitigation measures: limiting construction hours (particularly adjacent to schools); providing 72-hour notice prior to start of construction to adjacent businesses and landowners; establishing a toll-free telephone hotline for noise complaints; and maintaining mufflers on construction equipment. An additional measure requires use of noise reduction techniques and offers short-term alternative housing during construction within the Norwalk Station.

**Significant Unavoidable Impacts.** No significant unavoidable noise impacts would result from the proposed project.

**Alternatives.** Evaluation of noise impacts is based on impacts to sensitive and residential receptors, as in land use. The following alternatives were determined to be environmentally superior to the proposed route segments: Santa Fe Alternative, Paramount Alternative, Alondra Alternative, Bellflower Rail Alternative, Artesia Alternative, and Shoemaker Alternative.

## 4.10 SOCIOECONOMICS, PUBLIC SERVICES, AND UTILITIES

**Impacts of the Proposed Project.** Project construction and operation could result in short-term degradation of air quality, noise, traffic, and disruption or displacement impacts on businesses along the ROW. In addition, the temporary closure of traffic lanes during construction, or lane closures due to a pipeline accident during pipeline operation and subsequent impedance of traffic on several major thoroughfares, would result in a potentially significant impact on patrol and response capabilities. Socioeconomics, public services, and utilities impacts would include the following:

- Construction could have a short-term beneficial impact (Class IV) by generating employment in businesses that supply materials and services to the construction activity
- Dust generation, increased emissions from heavy equipment, and noise during construction has the potential to disrupt businesses along project route (Class II)

- Lane closures and heavy equipment traffic could impede access to businesses along the project route (Class II, III)
- Sales tax revenues during construction, property taxes on the pipeline, and ongoing franchise revenues during project operation could have beneficial impact (Class IV) on the affected jurisdictions along the pipeline ROW
- Proposed project use of water for dust suppression and hydrotesting could have an impact on water capacity (Class III)
- Spill and clean-up activities could impact businesses along the pipeline route (Class II)
- The potential consequences of a co-location accident that disrupts utility services could be significant (Class I)
- In the event of multiple ruptures of the proposed pipeline or multiple accidents in the vicinity of the proposed pipeline, there would be a significant (Class I) impact on public services.

**Property Values.** An analysis of the potential impact of a pipeline accident on property values was conducted. Because property values can be affected by a number of variables (lot size, home size, condition of the home, market conditions, proximity to busy streets, availability of financing, etc.), it is difficult to attribute a difference in value to just one factor (i.e., proximity to contamination). Recent sale prices of hundreds of homes in the vicinity of the Norwalk Station were compared to similar homes in nearby comparable neighborhoods to see if the contaminated soil and groundwater directly affected house prices. The data does not indicate that the contamination from the Norwalk Station has had a negative impact on property values of homes adjacent to the Station. However, other factors, such as time required to sell a house, were not analyzed.

**Mitigation Measures.** Four mitigation measures are proposed, including the development of a Business Impact Mitigation Plan and compensation to businesses. To help reduce the impacts of co-locational accidents, one of the mitigation measures requires SFPP to set priorities for disaster repair efforts on utility lines and transportation networks.

**Significant Unavoidable Impacts.** Despite the low likelihood of a spill, the cumulative socioeconomic, public services, and utilities impacts of a spill from the proposed project and the potential for co-located ruptures of other oil, gas, chemical, and/or other product pipelines would be significant and unavoidable.

**Alternatives.** In general, impacts for the alternative route segments would be similar to those described for the Proposed Project. However, the Bellflower Rail Alternative segment would eliminate 2.4 miles of construction on Artesia Boulevard which has a number of major businesses and the pipeline would be located within a 100-foot wide railroad ROW, so there would be significantly less impacts on socioeconomics, public services, and utilities than the Proposed Project.

#### **4.11 SYSTEM SAFETY AND RISK OF UPSET**

**Impacts of the Proposed Project.** Construction and operation of the proposed Carson to Norwalk Pipeline could present risks to the safety of construction workers and to the residents and businesses along the pipeline route. Construction hazards were considered to be adverse, but not significant, and can be reduced with implementation of proper workplace safety measures. Operational hazards could be potentially very serious;

they include the possibility of pipeline leaks, pipeline rupture, and fires or explosions resulting from leak or rupture.

The probability of each accident occurring is very small. Based on probability estimates, one leak would occur every 60 years of project operation, and a rupture would occur once every 100 years. A fire or explosion could result from ignition of hydrocarbon vapors at either a leak or rupture, possibly causing injury to nearby people. Despite the low likelihood that these events could occur, each of these impacts is considered to be significant. While SFPP has proposed several pipeline safety measures, and there are many more mitigation measures suggested in this EIR, it is not possible to ensure that a pipeline accident would not occur, so the impact is considered to be unmitigable (Class I).

**Mitigation Measures.** In addition to the safety and design measures that SFPP has incorporated in its proposed pipeline project, 21 additional mitigation measures are suggested:

- Five measures address construction safety and protection of existing utilities.
- Eight mitigation measures are suggested to improve SFPP's proposed leak detection system.
- Four measures address emergency response and require development of an Urban Spill Response Plan.
- Two measures are proposed to reduce fire hazards.
- Two general measures would ensure the overall safety of the project.

**Significant Unavoidable Impacts.** While pipeline accidents (leak, rupture, or fire/explosion) have a low likelihood of occurrence, they were still considered to be significant and unavoidable impacts.

**Alternatives.** There are varying numbers of residences and other sensitive land uses along the proposed and alternative segments that could be affected by a pipeline accident. The alternative segments that are longer than the proposed route segments would have slightly higher probability of an accident occurring.

The No Project Alternative would also have potentially significant safety impacts. Trucking of petroleum products results in more frequent accidents than shipping products in a pipeline, so the increase in trucking that would be required if the proposed pipeline were not built would result in increased numbers of trucking accidents. Therefore, the proposed pipeline is preferred over the No Project Alternative in the safety issue area.

#### 4.12 TRAFFIC AND TRANSPORTATION

**Impacts of the Proposed Project.** Construction within city streets would result in short-term disruption to traffic and transit services. The following impacts were identified:

- Pipeline construction would block traffic lanes, causing traffic congestion and a potential increase in traffic accidents (Class II)
- Pipeline construction would restrict access to residences and businesses along the ROW (Class II)
- Pipeline construction could disrupt pedestrian/bicycle traffic or cause increased accidents (Class II)
- Emergency response vehicles could be blocked or impeded by pipeline construction activities (Class II)

- Construction worker parking and traffic congestion could result from convergence at staging areas and construction equipment traffic (Class II)
- Parking of construction equipment on public roadways could limit available parking (Class III)
- Construction activities and vehicles could damage road surfaces (Class II)
- Construction could affect public transit operations (Class II) or rail operations (Class III)
- Construction in Alondra Boulevard would disrupt traffic adjacent to Cerritos college (Class II)
- Cumulative traffic impacts could result if construction occurs at other projects concurrent with the proposed project.

The potential transportation impacts of a pipeline accident were also considered to be significant (Class I). In the event of a pipeline rupture or leak, significant impacts on rail operations, highway traffic, pedestrian circulation, and transit activity could cause partial or complete closures of transportation facilities.

**Mitigation Measures.** Eighteen mitigation measures are proposed to reduce or minimize potential impacts on traffic and transportation. These measures require development of Traffic Control Plans, minimizing lane closures and access restrictions, construction at night to reduce traffic impacts where residences are not affected, coordination with businesses and emergency service providers, provision of alternative bicycle and pedestrian routes, review of staging areas, and use of shuttle buses to transport workers. In addition, measures require replacement of parking spaces, repair of damaged road surfaces, coordination with rail and transit operators, and coordination with local agencies to minimize cumulative traffic impacts.

**Significant Unavoidable Impacts.** The disruption to traffic resulting from a pipeline accident is considered to be a significant and unavoidable impact.

**Alternatives.** The Santa Fe, Paramount, and Bellflower Rail Alternative Segments would result in lower traffic impacts than the proposed route segments. Construction of the Alondra Alternative segment would cause traffic impacts in the area of high traffic volumes adjacent to Cerritos College; a mitigation measure is proposed to require scheduling of construction to avoid major traffic periods.

#### 4.13 VISUAL RESOURCES

**Impacts of the Proposed Project.** Construction impacts on visual resources would result from the presence of equipment, materials and work force along the ROW, constituting a visual intrusion to motorists driving on adjacent streets, by residents and businesses, and by pedestrians in the project area. Although there are a large number of potential viewers within the project area, the visual impact of project construction is not considered to be significant because construction would occur primarily within urban streets. Light and glare emanating from sites where night time construction would occur, has the potential to impair the vision of motorists and pedestrians and could disturb the normal night time activities of residences.

Operation of the proposed pipeline is not expected to have a significant effect on visual resources within the study area. Upon completion of pipeline construction, the pipeline would not be visible to viewers since it is

located subsurface to streets, or it is bored under and trenched through river channels. Potential impacts of the project on aesthetics include the following:

- Construction activities and equipment would result in visual intrusion to viewers along the ROW (Class III)
- The intrusion of night time construction light sources would present a potential significant impact (Class II) on motorists, residents, and pedestrians along the ROW.

**Mitigation Measures.** Project construction impacts on visual resources can be minimized through the application of two mitigation measures: confinement of construction activities and materials storage to within the pipeline ROW and above-ground facility sites; and directing night construction lights away from the visual field of motorists and pedestrians along the ROW. In addition, night construction shall be prohibited within 500 yards of residences and sensitive receptors, and a 7 day notice to residents and landowners of night construction is required.

**Significant Unavoidable Impacts.** No significant unavoidable visual impacts have been identified for the proposed project.

**Alternatives.** Because construction in all alternative segments would occur in urban streets, visual impacts for alternative segments were found to be similar to those for the proposed route.

## 5. MITIGATION MONITORING, COMPLIANCE, AND REPORTING

As the lead agency under CEQA, the CPUC is required to monitor this project during construction and operation to ensure that the required mitigation measures are implemented. The CPUC will be responsible for ensuring full compliance with the provisions of this monitoring program and has primary responsibility for implementation of the monitoring program. The purpose of the monitoring program is to document that the mitigation measures required by the CPUC are implemented and that environmental impacts are reduced to the level identified in the Program. A detailed Implementation Plan will be developed, and provided to local jurisdictions for review and input before it is finalized. Monitoring of mitigation measures within each jurisdiction will be coordinated with that jurisdiction.

A Mitigation Monitoring Program table is included at the end of each issue area's Environmental Analysis in Part C (C.2 - C.13). For each mitigation measure, these tables list:

- The impact that was identified
- The mitigation measure (in summary)
- The location of the impact
- The monitoring action that would be taken by the CPUC or other responsible agency
- How to determine if the measure is effective
- The agency (or agencies) responsible for monitoring
- The timeframe for mitigation measure implementation.

## 6. IMPACT SUMMARY TABLES

The Impact Summary Tables which follow are a complete, condensed presentation of the significant environmental impacts and mitigation measures for the proposed Carson to Norwalk Pipeline Project and project alternatives. Full descriptions of the Proposed Project and each of the alternatives can be found in Part B of the EIR. The complete environmental analyses, along with the recommended mitigation measures for the Proposed Project and for each of the alternatives are set out fully in Part C of the EIR.

The Impact Summary Tables are organized first according to impact class and within each class according to issue area in the same order as presented in Part C of the EIR and in Section 4 of this Executive Summary. Reading from left to right across the tables, (1) each impact is described briefly, (2) the phase of the project life in which the impact would occur is given<sup>3</sup>, and (3) the mitigation measure(s) is presented. When no mitigation measure is specified, this is indicated. In-depth discussion of the three summary areas on the tables is located within Part C of the EIR. The tables summarize the significant impacts (Class I, II, and IV); Part C of the EIR presents a detailed description of these impacts as well as adverse but non-significant (Class III) impacts.

The following Impact Summary Tables comprise a stand-alone document and may be viewed as a convenient compilation of the core data presented in the EIR.

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<sup>3</sup> C: Construction O: Operation A: Accident B: Abandonment