

Appendix D

Energy Calculations

Table 1 – Total Construction-Related Fuel Consumption

Highway 86 Water Transmission Main

Fuel	Consumption	
Diesel		
On-Road Construction Trips ¹	25,545	Gallons
Off-Road Construction Equipment ²	50,600	Gallons
Diesel Total	76,145	Gallons
Gasoline		
On-Road Construction Trips ¹	3,590	Gallons
Off-Road Construction Equipment ³	-	Gallons
Gasoline Total	3,590	Gallons

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod for construction in 2024 and fleet-average fuel consumption in gallons per mile from EMFAC2021 web based data for Salton Sea Air Basin. See Table 2 for calculation details.
2. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.
3. All emissions from off-road construction equipment were assumed to be diesel.

Table 2 – On-Road Construction Trip Estimates

Highway 86 Water Transmission Main

Trip Type	Trips	Trip length	Vehicle Miles Traveled (VMT)	Fuel Efficiency	Annual Fuel Usage ¹	
	(trips)	(miles)	(miles)	(mpg)	(Fuel)	(gallon)
Worker ^{2,3}	6,116	14.6	89,294	24.3	Gasoline	3,590
Vendor ⁴	6,176	6.2	38,291	7.6	Diesel	5,264
Hauling ⁵	6,176	20	123,520	6.1	Diesel	20,281

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod output for construction and fleet-average fuel consumption in gallons per mile from EMFAC2021 web based data for 2023 in Salton Sea Air Basin.
2. Worker trips were assumed to be 100% gasoline powered vehicles.
3. Per CalEEMod, worker Trips were assumed to be 50% LDA, 25% LDT1, and 25% LDT2.
4. Vendor trips were assumed to be 50% MHDT and 50% HHDT, split evenly between the MHDT and HHDT construction categories.
5. Per CalEEMod, hauling trips were assumed to be 100% HHDT.