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Document Title:	Perkins CEC Data Request Response Set #1 for the Opt-in Application 24-OPT-01 Part 2
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Filer:	Emily Capello
Organization:	Panorama Environmental, Inc.
Submitter Role:	Applicant Consultant
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Attachment G Demographics in Project Area (DR SOCIO-2)

Demographics

Race and Ethnicity Composition in the Project Area

Location	Not Hispanic or Latino – Total Not Hispanic or Latino	Not Hispanic or Latino – White alone	Not Hispanic or Latino – Black or African American alone	Not Hispanic or Latino – American Indian and Alaska Native alone	Not Hispanic or Latino – Asian alone	Not Hispanic or Latino – Native Hawaiian and Other Pacific Islander alone	Not Hispanic or Latino – Some other race alone	Not Hispanic or Latino – Two or more races	Not Hispanic or Latino – Two races including some other race	Not Hispanic or Latino – Two races excluding some other race, and three or more races	Hispanic or Latino – Total Hispanic or Latino	Hispanic or Latino – White alone	Hispanic or Latino – Black or African American alone	Hispanic or Latino – American Indian and Alaska Native alone	Hispanic or Latino – Asian alone	Hispanic or Latino – Native Hawaiian and Other Pacific Islander alone	Hispanic or Latino – Some other race alone	Hispanic or Latino – Two or more races	Hispanic or Latino – Two races including some other race	Hispanic or Latino – Two races excluding some other race, and three or more races	Percent Minority
California	60.3%	35.2%	5.3%	0.3%	14.9%	0.3%	0.4%	3.8%	0.5%	3.3%	39.7%	12.9%	0.3%	0.7%	0.2%	0.0%	15.8%	9.7%	8.4%	1.3%	64.8%
Non-metro California	60.9%	47.3%	2.8%	0.6%	5.7%	0.3%	0.4%	3.8%	0.6%	3.3%	39.1%	14.0%	0.2%	0.7%	0.2%	0.0%	14.3%	9.7%	8.5%	1.2%	52.7%
Arizona	68.0%	53.0%	4.3%	3.5%	3.3%	0.2%	0.3%	3.4%	0.5%	3.0%	32.0%	13.7%	0.3%	0.7%	0.1%	0.0%	7.3%	10.0%	8.8%	1.1%	47.0%
Avenue B and C CDP	21.92%	17.06%	4.26%	0.00%	0.00%	0.00%	0.23%	0.36%	0.00%	0.36%	78.08%	33.61%	0.55%	0.23%	0.00%	0.00%	17.79%	25.90%	25.90%	0.00%	82.94%
Brawley City, CA	15.4%	12.9%	0.3%	0.4%	1.2%	0.0%	0.0%	0.7%	0.0%	0.7%	84.6%	39.4%	0.6%	1.2%	0.0%	0.0%	26.7%	16.5%	15.4%	1.1%	87.1%
Calexico City, CA	2.2%	0.8%	0.1%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	97.8%	40.9%	0.0%	0.6%	0.3%	0.0%	35.1%	21.0%	20.5%	0.5%	99.2%
Donovan Estates, AZ	7.2%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	92.8%	40.8%	0.0%	0.0%	0.0%	0.0%	16.1%	35.9%	35.9%	0.0%	92.8%
Drysdale CDP, AZ	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	90.6%	0.0%	0.0%	0.0%	0.0%	9.4%	0.0%	0.0%	0.0%	100.0%
El Centro City, CA	11.8%	7.1%	3.1%	0.1%	1.3%	0.0%	0.0%	0.2%	0.0%	0.2%	88.2%	20.1%	0.5%	0.8%	0.2%	0.0%	46.0%	20.7%	19.6%	1.1%	92.9%
Fort Yuma Indian Reservation , CA-AZ	76.5%	7.9%	0.0%	66.3%	0.4%	0.0%	0.0%	2.0%	0.0%	2.0%	23.5%	4.4%	0.3%	4.1%	0.0%	0.0%	3.1%	11.6%	9.2%	2.4%	92.1%
Gadsden CDP, AZ	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	45.1%	0.0%	0.0%	0.0%	0.0%	0.0%	54.9%	54.9%	0.0%	100.0%
Heber CDP, CA	1.9%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.8%	98.1%	38.6%	0.3%	1.9%	0.3%	0.0%	27.5%	29.4%	29.2%	0.3%	99.4%
Holtville City, CA	17.8%	14.0%	1.2%	0.0%	1.1%	0.0%	0.0%	1.5%	1.2%	0.4%	82.2%	26.0%	0.0%	0.1%	0.2%	0.0%	43.7%	12.0%	12.0%	0.0%	86.0%
Imperial City, CA	19.5%	13.5%	1.9%	0.0%	3.3%	0.0%	0.2%	0.7%	0.0%	0.7%	80.5%	36.7%	0.1%	0.1%	0.2%	0.0%	24.8%	18.6%	17.7%	1.0%	86.5%

ATTACHMENT G

Location	Not Hispanic or Latino – Total Not Hispanic or Latino	Not Hispanic or Latino – White alone	Not Hispanic or Latino – Black or African American alone	Not Hispanic or Latino – American Indian and Alaska Native alone	Not Hispanic or Latino – Asian alone	Not Hispanic or Latino – Native Hawaiian and Other Pacific Islander alone	Not Hispanic or Latino – Some other race alone	Not Hispanic or Latino – Two or more races	Not Hispanic or Latino – Two races including some other race	Not Hispanic or Latino – Two races excluding some other race, and three or more races	Hispanic or Latino – Total Hispanic or Latino	Hispanic or Latino – White alone	Hispanic or Latino – Black or African American alone	Hispanic or Latino – American Indian and Alaska Native alone	Hispanic or Latino – Asian alone	Hispanic or Latino – Native Hawaiian and Other Pacific Islander alone	Hispanic or Latino – Some other race alone	Hispanic or Latino – Two or more races	Hispanic or Latino – Two races including some other race	Hispanic or Latino – Two races excluding some other race, and three or more races	Percent Minority
Orange Grove Mobile Manor CDP, AZ	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	30.9%	0.0%	0.0%	0.0%	0.0%	0.0%	69.1%	69.1%	0.0%	100.0%
Padre Ranchitos, CDP, AZ	40.6%	40.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	59.4%	0.0%	0.0%	0.0%	0.0%	0.0%	18.8%	40.6%	40.6%	0.0%	59.4%
San Luis City, AZ	5.8%	3.6%	1.3%	0.4%	0.1%	0.0%	0.0%	0.4%	0.1%	0.3%	94.2%	46.2%	0.0%	0.7%	0.0%	0.0%	3.3%	44.0%	43.9%	0.1%	96.4%
Somerton City, AZ	3.8%	3.7%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	96.2%	44.5%	3.3%	0.0%	0.0%	0.0%	8.5%	39.8%	39.6%	0.2%	96.3%
Wall Lane CDP, AZ	1.9%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	98.1%	57.4%	0.0%	0.0%	0.0%	0.0%	8.7%	32.1%	28.8%	3.2%	98.1%
Winterhaven, CDP, CA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	73.6%	0.0%	0.0%	0.0%	0.0%	0.0%	26.4%	26.4%	0.0%	100.0%
Yuma City, AZ	37.9%	30.6%	2.0%	0.6%	1.9%	0.0%	0.1%	2.7%	0.3%	2.3%	62.1%	27.3%	0.3%	0.4%	0.1%	0.0%	14.8%	19.3%	18.0%	1.3%	69.4%
Census Tract 108	67.2%	60.8%	0.6%	0.0%	1.4%	0.0%	0.2%	4.3%	1.2%	3.1%	32.8%	3.3%	0.0%	0.0%	0.0%	0.0%	17.3%	12.2%	7.7%	4.5%	39.2%
Census Tract 109	17.3%	14.0%	1.1%	0.0%	0.9%	0.0%	0.0%	1.3%	1.0%	0.3%	82.7%	25.0%	0.0%	0.9%	0.2%	0.0%	40.9%	15.7%	15.2%	0.5%	86.0%
Census Tract 119.03	4.0%	0.4%	0.1%	0.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	96.0%	30.2%	0.0%	2.0%	0.0%	0.0%	33.2%	30.6%	30.6%	0.0%	99.6%
Census Tract 124	88.8%	57.7%	12.4%	0.0%	0.0%	0.0%	5.4%	13.2%	0.0%	13.2%	11.2%	4.2%	0.0%	2.5%	2.0%	0.0%	2.4%	0.0%	0.0%	0.0%	42.3%

Source: (U.S. Census Bureau 2023e; 2023a; 2023c)

Attachment H Updated Redacted Socioeconomic Section (DR SOCIO-5)

4.10 Socioeconomics

This section discusses the Project's potential effects on socioeconomic issues and environmental justice (EJ) communities of concern, which include Project-related economic expenditures and job creation, fiscal impacts, population and housing impacts as well as potential for adverse health or environmental effects to EJ communities, consistent with Executive Order (EO) 12898 Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations (EOP 1994) and EO 14096 Revitalizing Our Nation's Commitment to Environmental Justice for All (EOP 2023).

Section 4.10.1 discusses the environmental setting. Section 4.10.2 identifies the potential environmental and socioeconomic impacts, including to EJ communities, that may result from the Project construction, operation and maintenance, and decommissioning. Section 4.10.3 evaluates potential cumulative impacts. Section 4.10.4 discusses measures to address impacts. Section 4.10.5 provides an overview of applicable federal, State, and local LORS and the Project's compliance therewith.

4.10.1 Environmental Setting

Socioeconomics

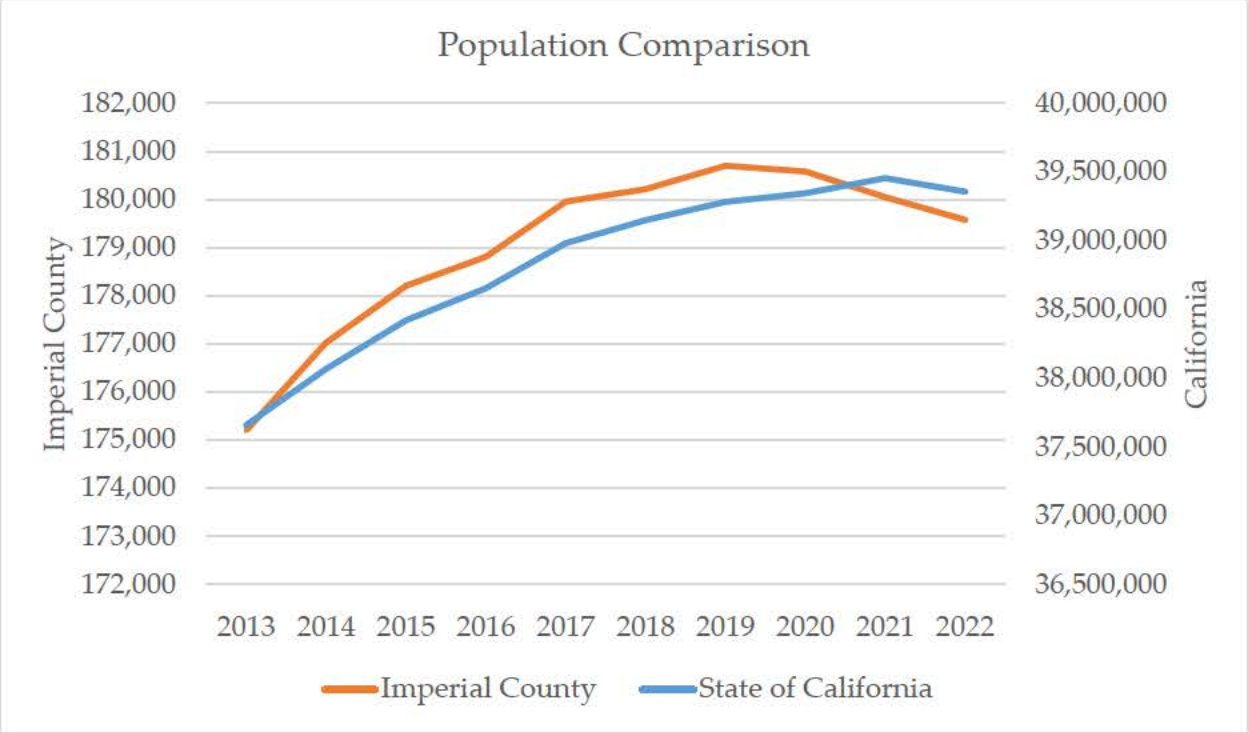
The Project Application Area is located in the southern portion of unincorporated Imperial County, which shares its border to the east with San Diego County, to the north with Riverside County, to the west with Yuma County, Arizona, and to the south with Mexico. Given the expected peak workforce of 1,000 individuals during construction, and given the Project Application Area's location, approximately 65 percent of the workforce is expected to be sourced from Imperial County, California, and 35 percent of the workforce is expected to be sourced from Yuma County, Arizona. The majority of local economic benefits from the Project would occur within Imperial County, with some occurring in Yuma County, Arizona. Therefore, this socioeconomic analysis focuses primarily on impacts in Imperial County, California, but also analyzes impacts within Yuma County, Arizona.

Population

Imperial County

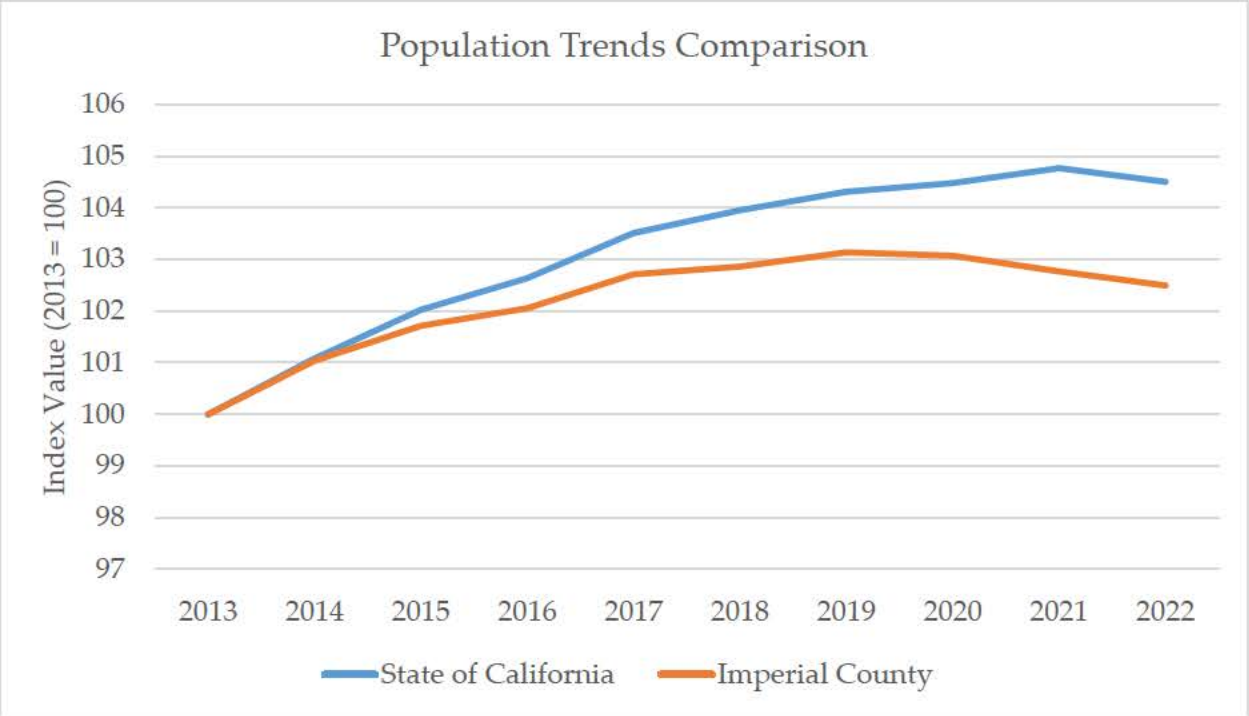
As of 2022, the total population of Imperial County was 178,578. Overall, the population of Imperial County grew by 4,377 from 2013 to 2022; however, the growth has not been consistent. Through 2019, the population grew at an annual average growth rate of 0.52 percent, or 917 persons per year. Since then, the population has declined annually by an average of 0.21 percent, or 374 per year. In comparison, California's population grew at an annual average rate of 0.58 percent from 2013 through 2021, or 224,522 per year, before declining modestly in 2022 (refer to Figure 4.10-1). Figure 4.10-2 illustrates Imperial County's population growth trends compared to the state of California's, with 2013 as the base year.

Figure 4.10-1 Imperial County and California Populations Comparison



Source: (Triple Point Strategic Consulting 2024)

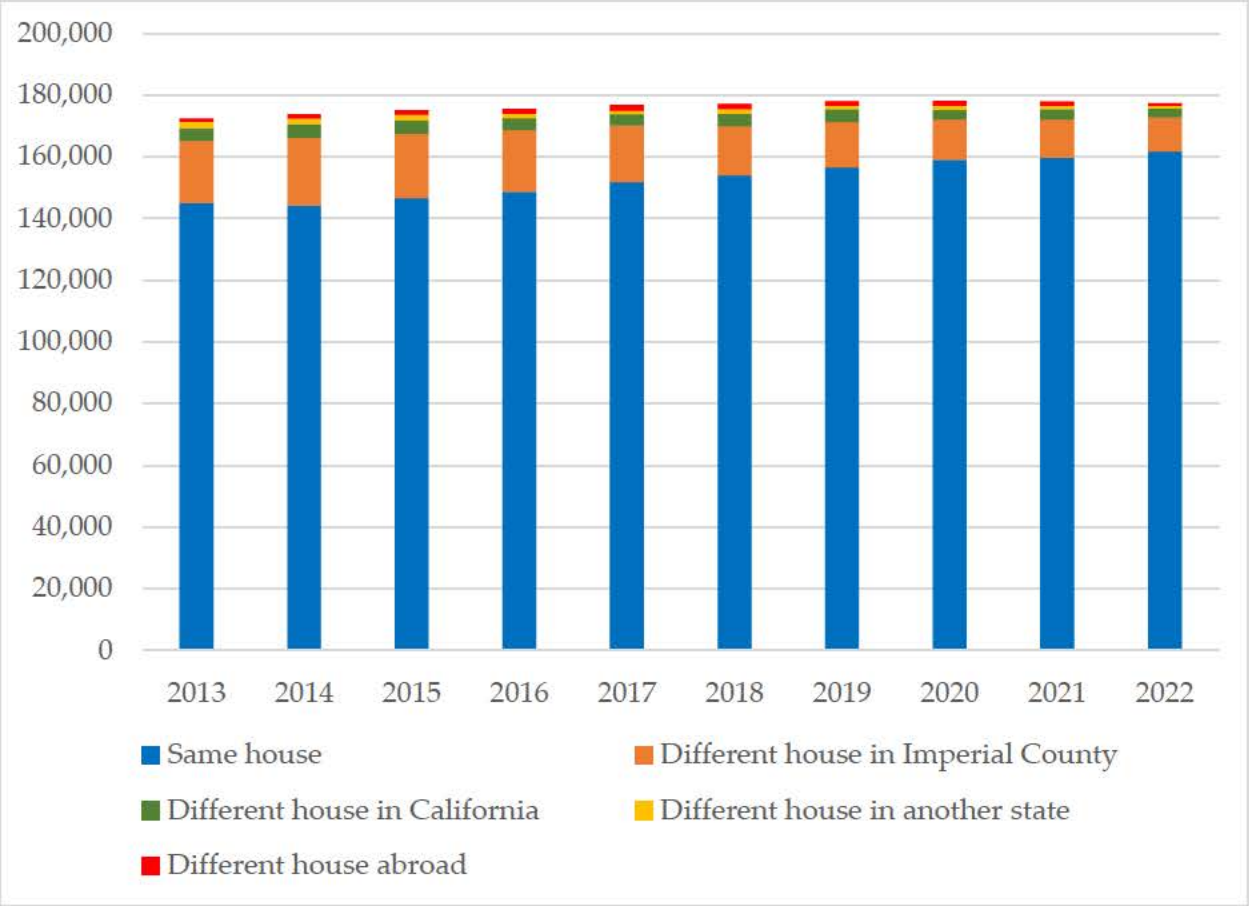
Figure 4.10-2 Imperial County and California Population Trends Comparison



Source: (Triple Point Strategic Consulting 2024)

Demographers break down population growth into two primary components of change: natural increase[1] and net-migration.[2] Figure 4.10-3 displays the mobility of the region's population from one year to the next, based on surveying the location of residents' home base in the previous year. Increased mobility is an indication of economic activity and opportunity as well as an indication of population change. In 2022, only 2.6 percent of Imperial County's population had lived outside the Country in the previous year. In comparison, this figure was 4.2 percent in 2013. Almost two-thirds of the in-migration came from outside California.

Figure 4.10-3 Residence of Imperial County's Population



Source: (Triple Point Strategic Consulting 2024)

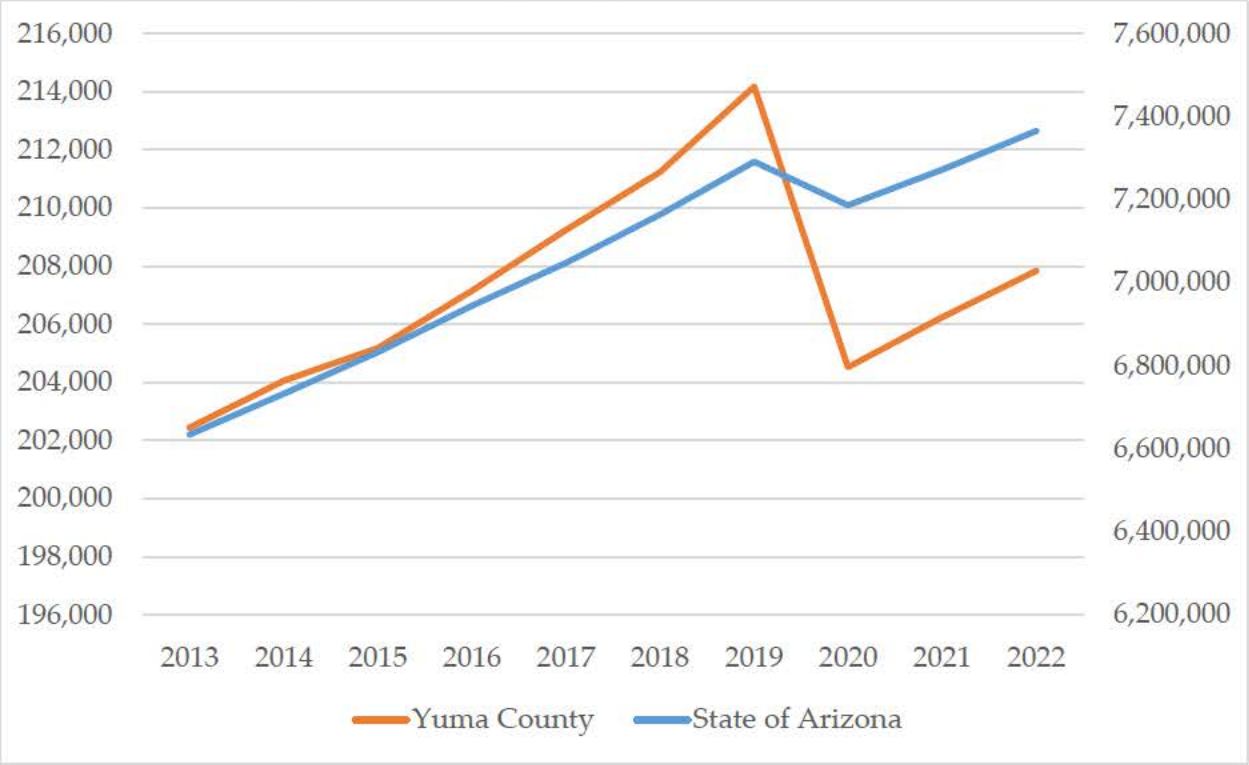
[1] Natural increase occurs when births exceed deaths.

[2] Net migration increases population when the number of people moving into an area exceeds the number emigrating from an area.

Yuma County

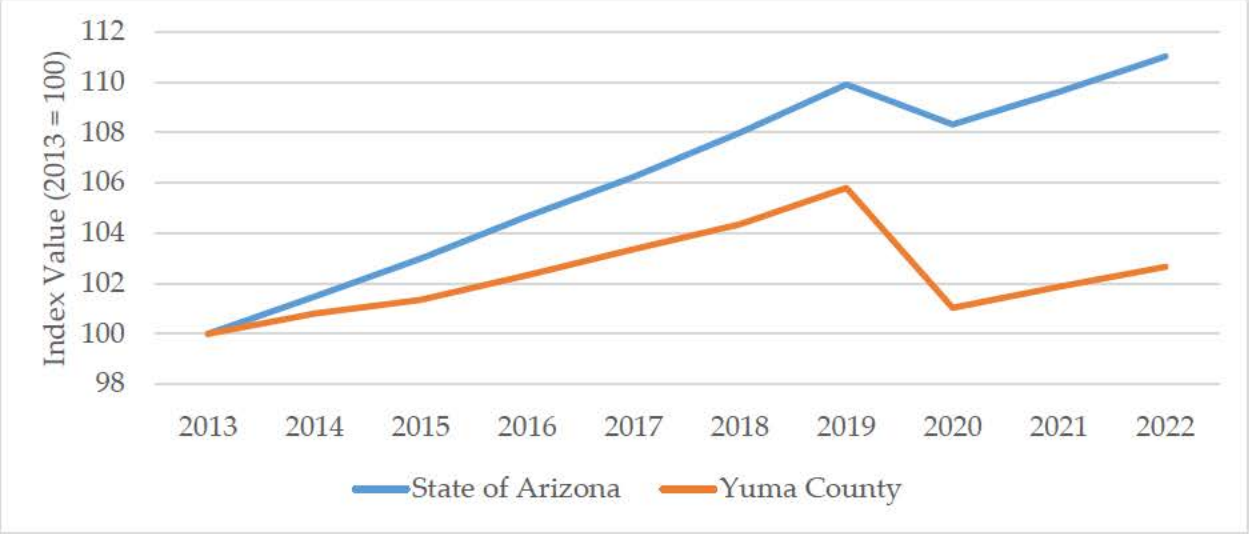
As of 2022, the total population of Yuma County was 207,842. Overall, the population of Yuma County grew by 5,395 from 2013 to 2022. From 2002 to 2012, the population grew at an annual average growth rate of 2 percent or by 3,577 persons per year. Since then, the population has increased annually by an average of 0.23 percent or by 451 per year. During 2020, the population declined by 4.5 percent, or 9,654. In comparison, Arizona's population grew at an annual average growth rate of 1.2 percent from 2013 through 2023 or by 79,545 per year, only declining in 2020 by 1.4 percent, or 105,160 (refer to Figure 4.10-4). Note that 2023 data is available at the state level but not yet at the county level. Figure 4.10-5 illustrates Yuma County's population growth trends compared to the state of California's, with 2013 as the base year.

Figure 4.10-4 Yuma County and Arizona Population Comparison



Source: (Triple Point Strategic Consulting 2024)

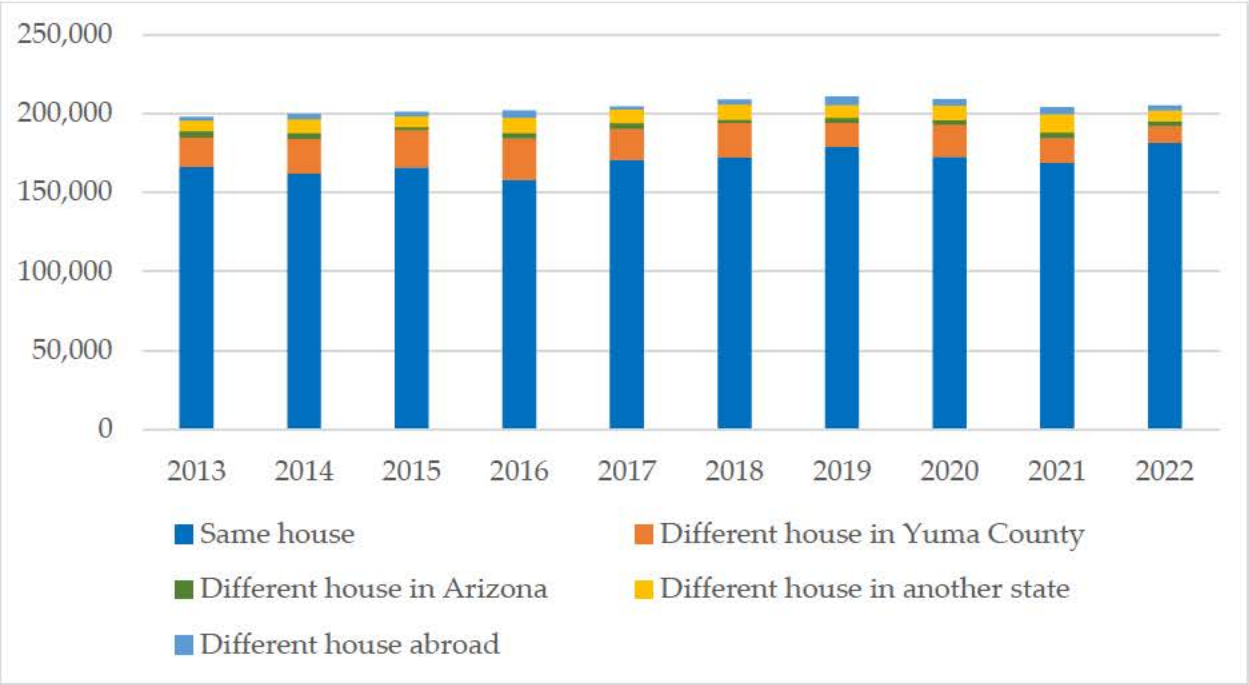
Figure 4.10-5 Yuma County and Arizona Population Trends Comparison



Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-6 shows the mobility of the Yuma County's population from one year to the next, based on surveying the location of residents' home base in the previous year. Increased mobility is an indication of economic activity and opportunity, as well as an indication of population change. In 2022, 6.4 percent of Yuma County's population had lived outside the county in the previous year. This number was 6.5 percent in 2013.

Figure 4.10-6 Residence of Yuma County's Population



Source: (Triple Point Strategic Consulting 2024)

Employment, Income, and Economy

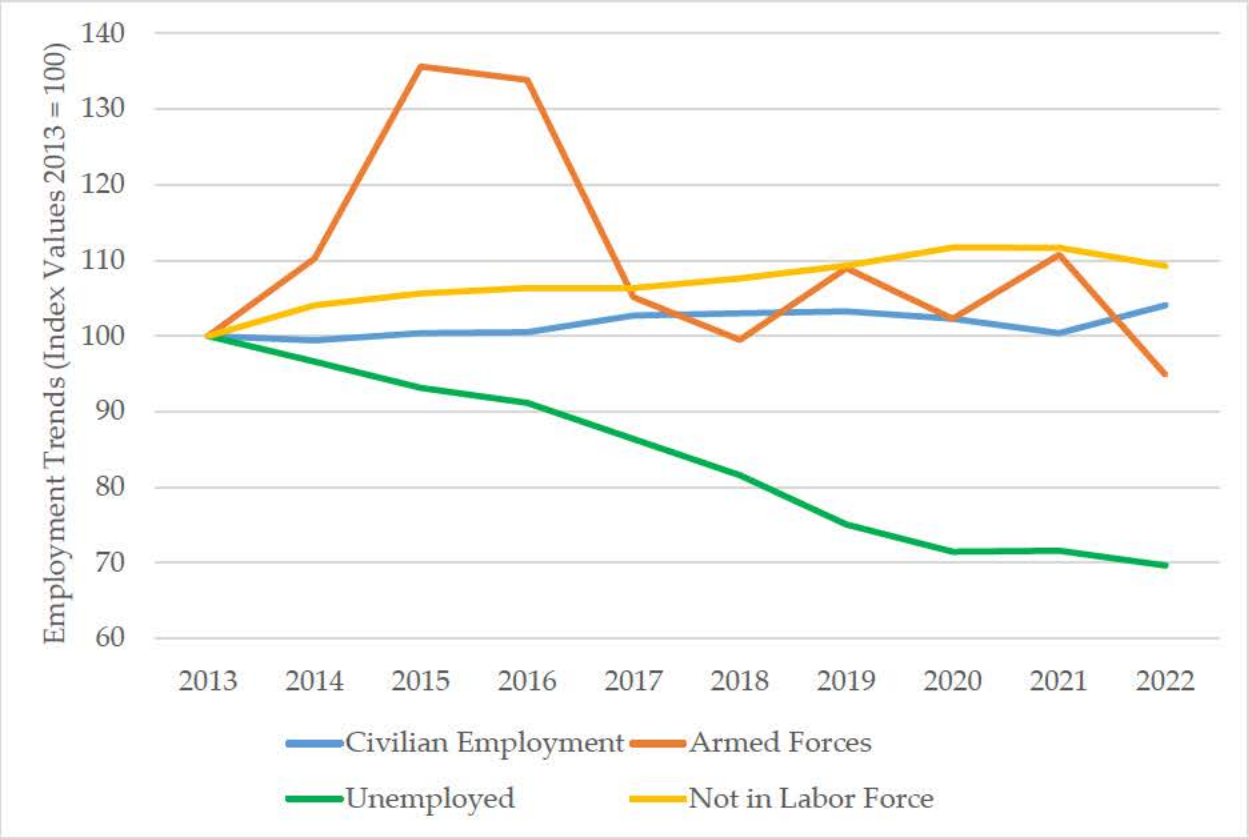
Imperial County

Over the last decade, the number of civilian employed persons 16 years and older in Imperial County increased at an annual average rate of 0.5 percent from 2013 to 2022 (refer to Figure 4.10-7). The number of persons not in the labor force increased at an annual rate of 1 percent. The number of unemployed declined at an average annual rate of 3.9 percent. As of November 2023, there were 14,048 unemployed persons in Imperial County, representing an 18.7-percent unemployment rate (refer to Figure 4.10-8) (U.S Bureau of Labor Statistics 2024).

The median household income in Imperial County grew at an annual average rate of 2.9 percent over the last 10 years, including a steep increase from 2020 to 2022, reaching almost $54,000. The mean income grew at an annual rate of 3.7 percent on average, including a significant increase from 2020 to 2022, reaching almost $73,000 (refer to Figure 4.10-9). Median income increasing at a lower rate than mean income is an indication of rising income disparity.

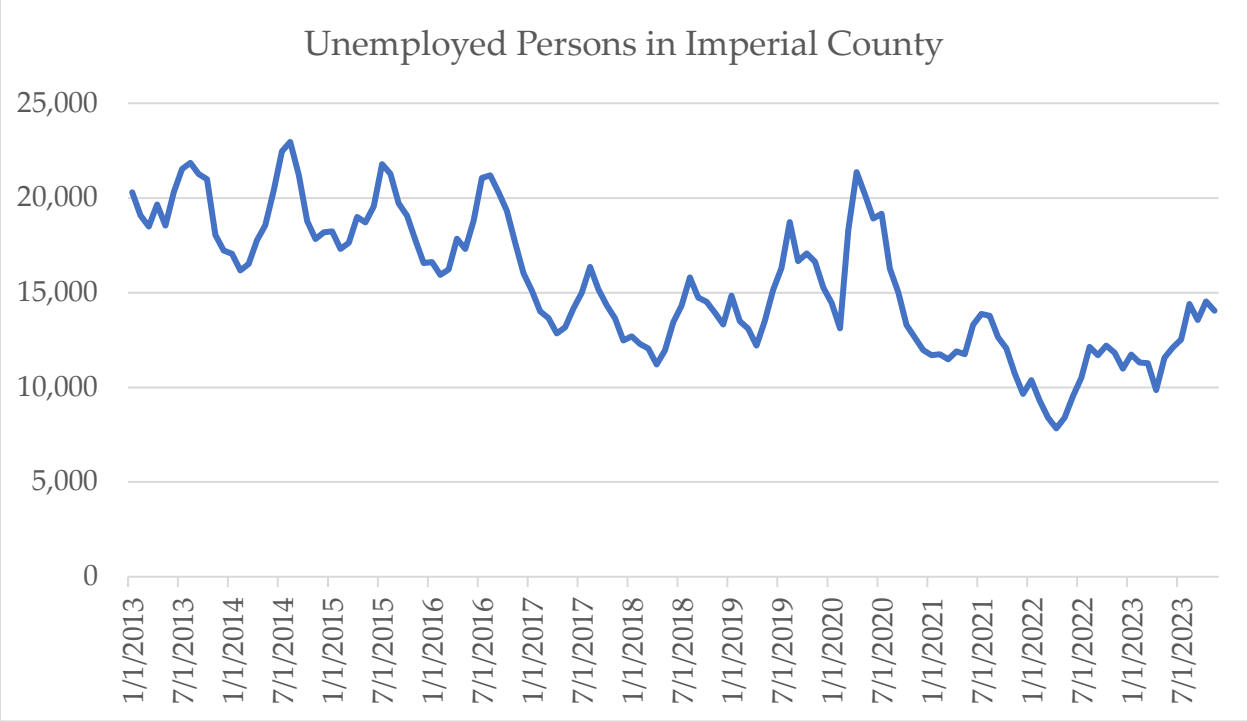
The total combined output (the value of all products and services produced) of Imperial County was $15.1 billion in 2022, including $9.1 billion of gross domestic product. There are 244 industries operating in the region. Table 4.10-1 lists the top 15 Imperial County industries by total economic output in 2023 dollars.

Figure 4.10-7 Imperial County Employment Trends (2013 to 2022)



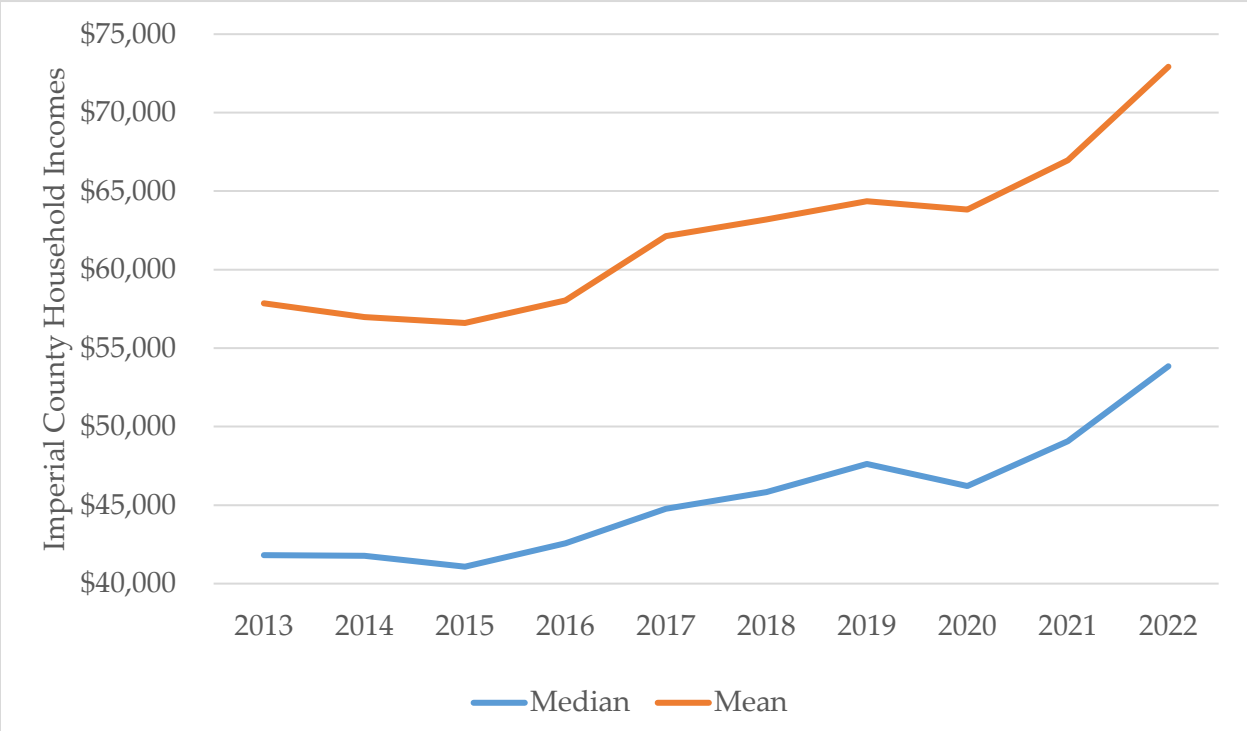
Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-8 Imperial County Unemployment



Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-9 Imperial County Mean and Median Household Income Growth



Source: (Triple Point Strategic Consulting 2024)

Table 4.10-1 Imperial County Industries by Total Economic Output

Industry	Total output (2023 dollars)
Local government enterprises	$826,230,807
Vegetable and melon farming	$708,089,188
Employment and payroll of local government, education	$657,850,441
Employment and payroll of federal government, non-military	$640,928,785
Owner-occupied dwellings	$638,889,571
Local government electric utilities	$425,323,311
Support activities for agriculture and forestry	$423,039,792
Wholesale petroleum products	$421,400,115
All other crop farming	$421,071,330
Nondurable goods merchant wholesalers	$401,935,179
Truck transportation	$331,611,542
Beef cattle ranching and farming, including feedlots	$290,536,919
Other real estate	$269,384,090
Employment and payroll of local government, other services	$265,006,094
Animal, except poultry, slaughtering	$264,667,180

Source: (Triple Point Strategic Consulting 2024)

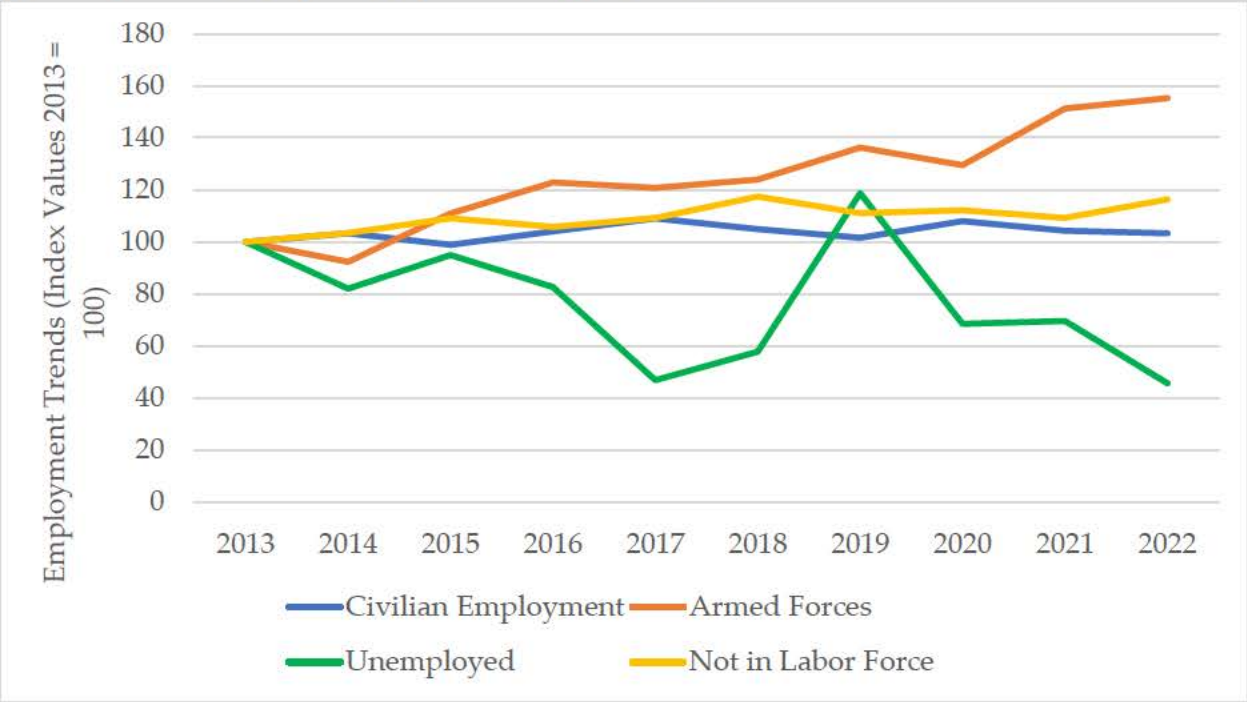
Yuma County

Over the last decade, the number of civilian employed persons 16 years and older in Yuma County increased marginally at an annual average rate of 0.4 percent from 2013 to 2022 (refer to Figure 4.10-10). Employment has increased almost every year in the last three decades and currently stands at 90,011. The number of persons not in the labor force increased at an annual rate of 1.8 percent. The number of unemployed declined at an average annual rate of 0.5 percent. Armed forces employment increased by an average of 5.4 percent. As of November 2023, there were 14,768 unemployed persons in Yuma County, representing a 14.1 percent unemployment rate compared to a national unemployment rate of 3.7 percent (refer to Figure 4.10-11) (U.S Bureau of Labor Statistics 2024).

The median household income in Yuma County grew at an annual average rate of 3.2 percent over the last 10 years, including a steep increase from 2020 to 2021, reaching almost $57,304 and falling to $53,994 in 2022. The mean income grew at an annual rate of 3.2 percent on average, rising from $55,512 in 2013 to $72,733 in 2022 (refer to Figure 4.10-12). Mean and median income increasing at the same rate indicates income disparity that is neither increasing nor decreasing.

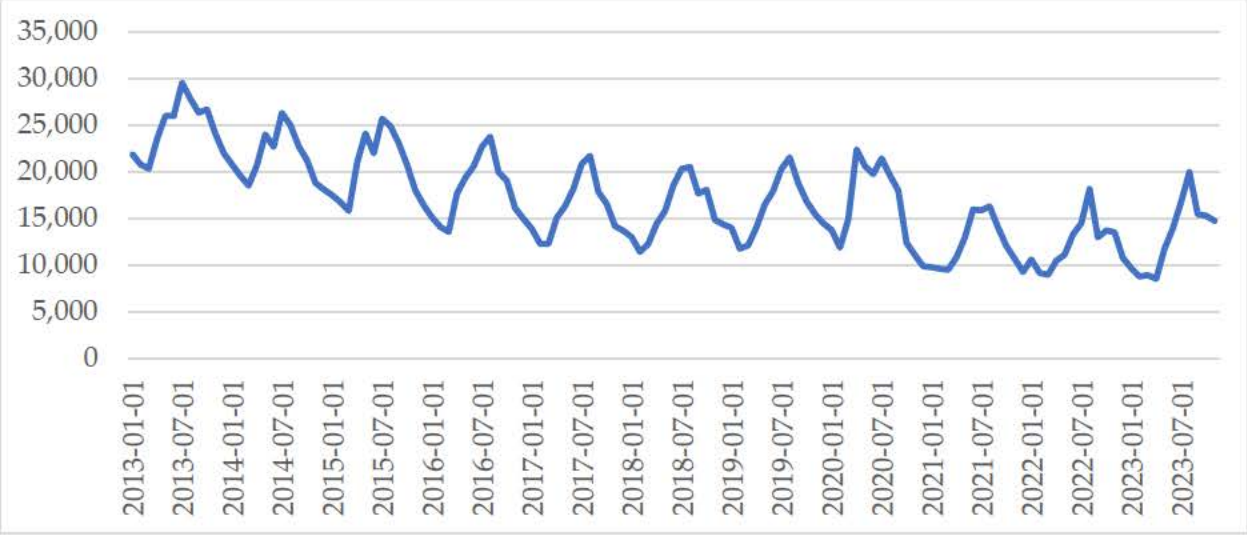
The total combined output (the value of all products and services produced) of Yuma County was $17.4 billion in 2022, including $9.1 billion of gross domestic product. There are 256 industries operating in the region. Table 4.10-2 lists the top 15 industries as measured by total economic output in 2023 dollars.

Figure 4.10-10 Yuma County Employment Trends (2013 to 2022)



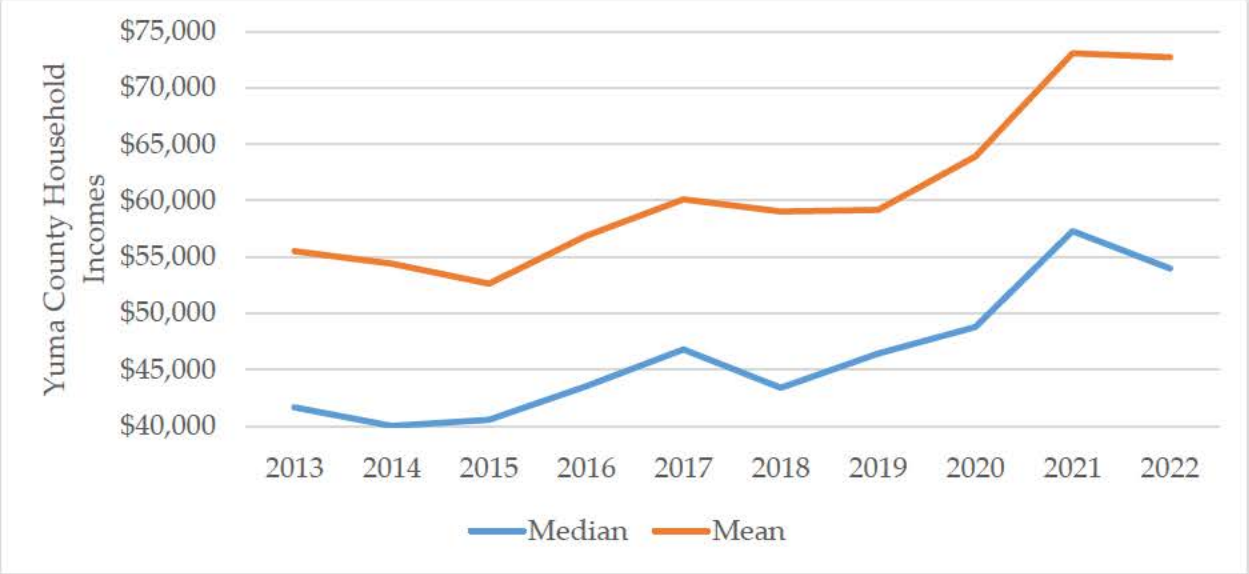
Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-11 Yuma County Unemployment



Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-12 Yuma County Mean and Median Household Income Growth



Source: (Triple Point Strategic Consulting 2024)

Table 4.10-2 Yuma County Industries by Total Economic Output

Industry	Total output (2023 dollars)
Employment and payroll of military	$1,167,688,474
Owner-occupied dwellings	$973,016,433
Insurance carriers, except direct life	$852,259,443
Vegetable and melon farming	$815,878,282
Other local government enterprises	$727,623,033
Employment and payroll of federal govt, non-military	$565,809,521
Other real estate	$552,443,306
Hospitals	$520,208,847
Pesticide and agricultural chemical manufacturing	$498,827,799
Support activities for agriculture and forestry	$469,259,519
Employment and payroll of local govt, education	$363,987,303
Limited-service restaurants	$316,082,756
Architectural, engineering, and related services	$293,195,980
Nonstore retailers	$251,211,846
General merchandise stores	$238,795,521

Source: (Triple Point Strategic Consulting 2024)

Imperial County Fiscal Resources

Property Tax

In California, the State Board of Equalization oversees compliance by county assessors with property tax laws and regulations. Business personal property is taxable and valued annually on January 1. Following construction of the Project in 2026 and 2027, the facility would be taxable as of January 1, 2028, which would be payable in August of that year.

Personal property is subject to depreciation. The valuation estimate of the personal property for the Project uses the percent good factors for machinery and equipment found in the California Assessor's Handbook Section 581 (California State Board of Equalization 2023). The taxable value is the assessed value subject to depreciation. The current tax rate for the private portion of the Project Application Area is 1.1301 percent.

The California Constitution requires all property to be taxed unless otherwise exempted under the California Constitution or United States Constitution. Eight private, vacant parcels may be purchased for the Project and would be subject to real property taxes at 1.1301 percent.

Sales Tax

The transfer of personal property for value is taxable. This estimate assumes the Applicants will take possession of the specialty equipment at the Project site where it is to be assembled and operated and, thus, will be subject to Imperial County sales taxes.

The State of California provides for a partial sale and use tax exemption for the generation of electric power. The partial exemption is generally known as the Manufacturing and Research & Development Equipment Exemption, found in Assembly Bills 398 and 131 (California Department of Tax and Fee Administration 2024). This exemption reduces Imperial County's nominal rate of 7.75 percent by 3.9375 to 3.8125 percent.

Federal Fees

The Federal Land Policy and Management Act of 1976 provides that right-of-way holders must generally pay fair market value for use of public lands. In May 2022, the BLM announced reductions of fees and rents charged for renewable energy projects on public lands.

The MW capacity fee is based on a project's nameplate capacity. The fee is $500 per MWac in the first year, $1,000 per Mwac in the second year, and $2,000 per MWac in the third year and each thereafter for the remainder of the Project's useful life. The acreage rent depends on the number of acres and various factors published by the BLM (BLM 2022).

Possessory Interest

Possessory interest is the private, beneficial use of publicly owned, non-taxable real property. In California, possessory interests are subject to property taxes unless a qualifying exemption applies. Thus, the Project would be liable for possessory interest tax. The tax would be paid annually corresponding to the 48 operating years. In order to estimate the amount of tax that would be paid over the 48 years, it is assumed the annual federal megawatt capacity fee payment of $2.3 million is the basis for valuing the possessory interest to be paid (refer to Table

4.10-37). The tax rate is 1.1301 percent. By using a 9 percent discount rate gives the net present value of the combined annual payments of $10,704,907.

Housing

The following section includes information on Imperial County and Yuma County housing, including housing inventory and distribution, home values, and rental rates.

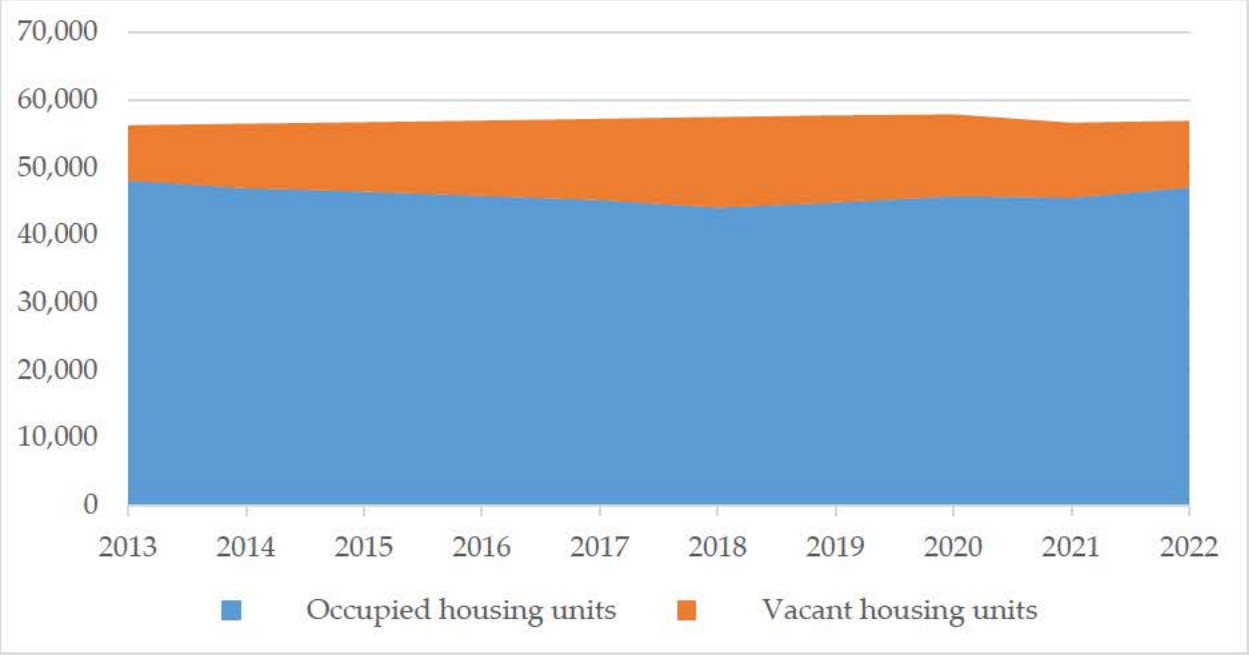
Housing Inventory

Imperial County

According to the U.S. Census, the total number of housing units in Imperial County increased at 0.1 percent annual average growth rate over the past 10 years. As of 2022, there were 47,024 occupied and 9,883 vacant housing units (refer to Figure 4.10-13). Two-thirds of the 56,907 housing units are single-family detached, and the remaining balance is a mix of multifamily and mobile homes (refer to Table 4.10-3). The 2018–2019 Health Status Report found 43 percent of Imperial County housing units have one or more substandard condition (e.g., lacking complete plumbing facilities, lacking complete kitchen facilities) (Imperial County, California, Public Health 2020).

In 2022, the majority of the vacant housing units—7,585 or 77 percent—were rental units. Since 2013, the rental share of vacant units has ranged between 65 percent and 77 percent. In 2022, there were 2,298 vacant owner units and 7,585 vacant rental units (refer to Figure 4.10-14). Of the 7,585 vacant rental units available in Imperial County in 2022—5,405 units or 71 percent—were within 30 miles west of the Project Application Area. Table 4.10-4 presents the distribution of vacant rental units available within 30 miles west of the Project Application Area in 2022.

Figure 4.10-13 Imperial County Vacant and Occupied Housing Units



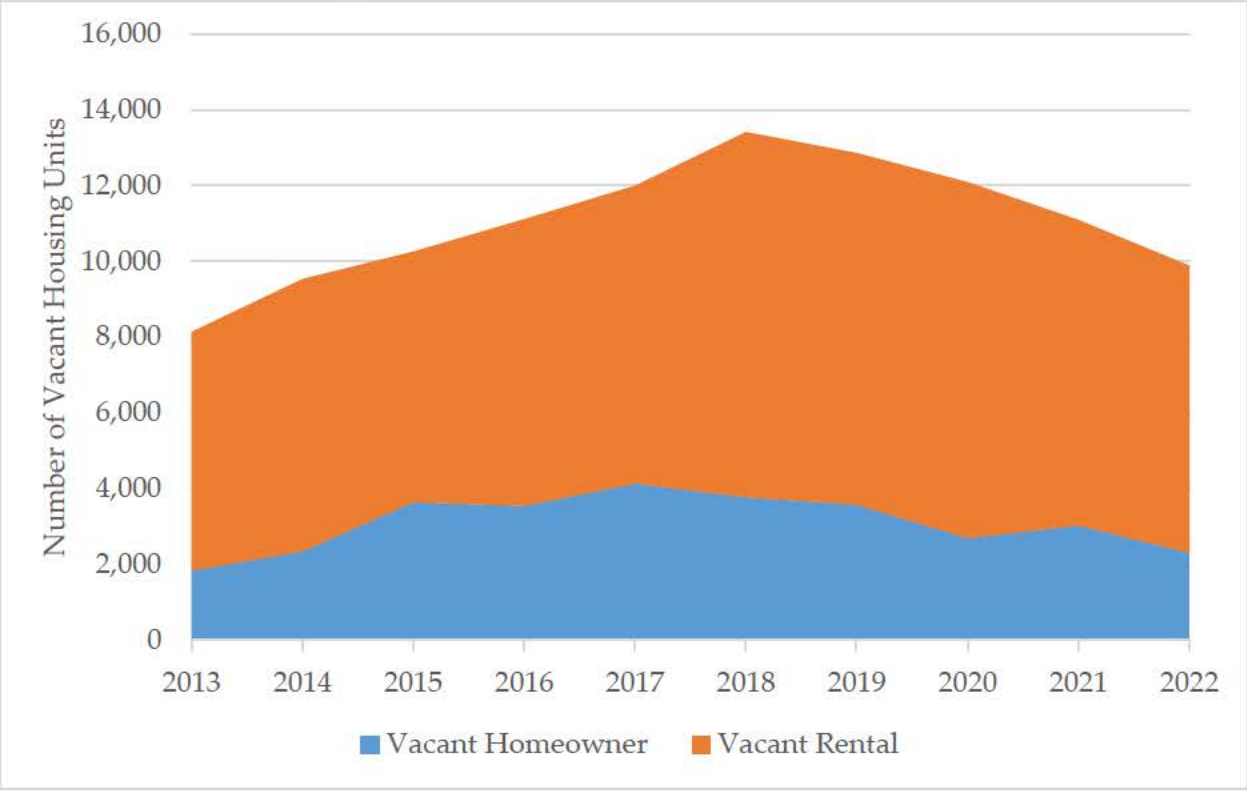
Source: (Triple Point Strategic Consulting 2024)

Table 4.10-3 Imperial County Distribution of Housing Units by Type, 2022

Housing type	Count	Share
1 unit, detached	35,947	63%
1 unit, attached	1,129	2%
2 units	1,522	3%
3 or 4 units	3,931	7%
5 to 9 units	4,265	7%
10 to 19 units	1,927	3%
20 or more units	2,330	4%
Mobile home	5,612	10%
Boat, recreational vehicle, van, etc.	244	0%
Total	**56,907**	**100%**

Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-14 Imperial County Vacant Housing Unit by Tenure



Source: (Triple Point Strategic Consulting 2024)

Table 4.10-4 Vacant Rental Units within 30 Miles of Project Application Area, Imperial County

Location	Count	Share
Brawley City	1,205	22%
Calexico City	1,970	36%
El Centro City	1,459	27%
Herber CDP	0	0%
Holtville CDP	0	0%
Imperial City	771	14%
Winterhaven CDP	0	0%
Total	**5,405**	**100%**

Note: Numbers may not total due to rounding.

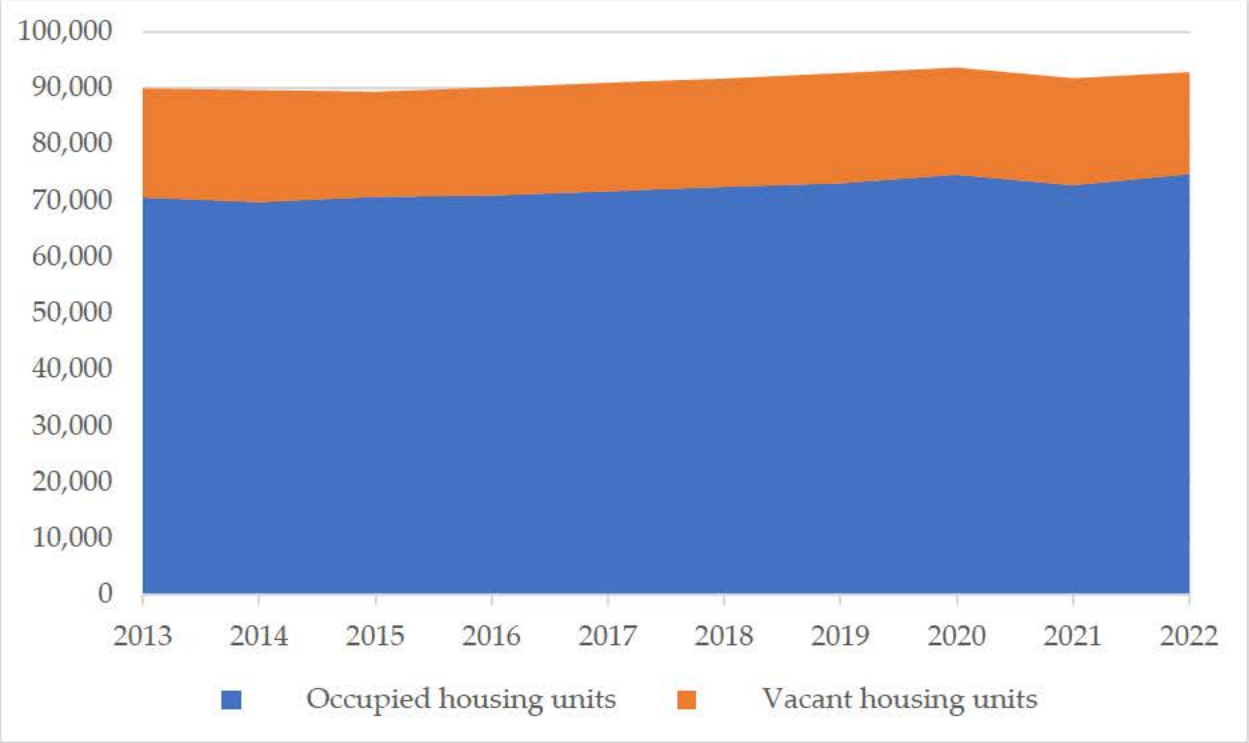
Source: (U.S. Census Bureau 2023d)

Yuma County

According to the U.S. Census, the total number of housing units in Yuma County increased at 0.4 percent annual average growth rate over the past 10 years. As of 2022, there were 74,710 occupied and 18,098 vacant housing units (refer to Figure 4.10-15). A little over half of the 92,808 housing units are single-family detached, and the remaining balance is a mix of multifamily and mobile homes (refer to Table 4.10-5). The Morrison Institute describes widespread housing insecurity in Yuma County, either as a result of rising prices in urban areas such as the City of Yuma or as result of age and poor-quality housing in rural areas (Arizona State University Morrison Institute for Public Policy 2022).

In 2022, the majority of the vacant housing units – 15,213_or 84 percent – were rental units. Since 2013, the rental share of vacant units has ranged between 75 and 84 percent. In 2022, there were 2,885 vacant owner units and 15,213 vacant rental units (refer to Figure 4.10-16). Of the 15,213 vacant rental units available in Yuma County in 2022 – 5,913_units or_39_percent – were within 30_miles east of the Project Application Area. Table 4.10-6 presents the distribution of vacant rental units available within 30 miles east of the Project Application Area in 2022.

Figure 4.10-15 Yuma County Vacant and Occupied Housing Units



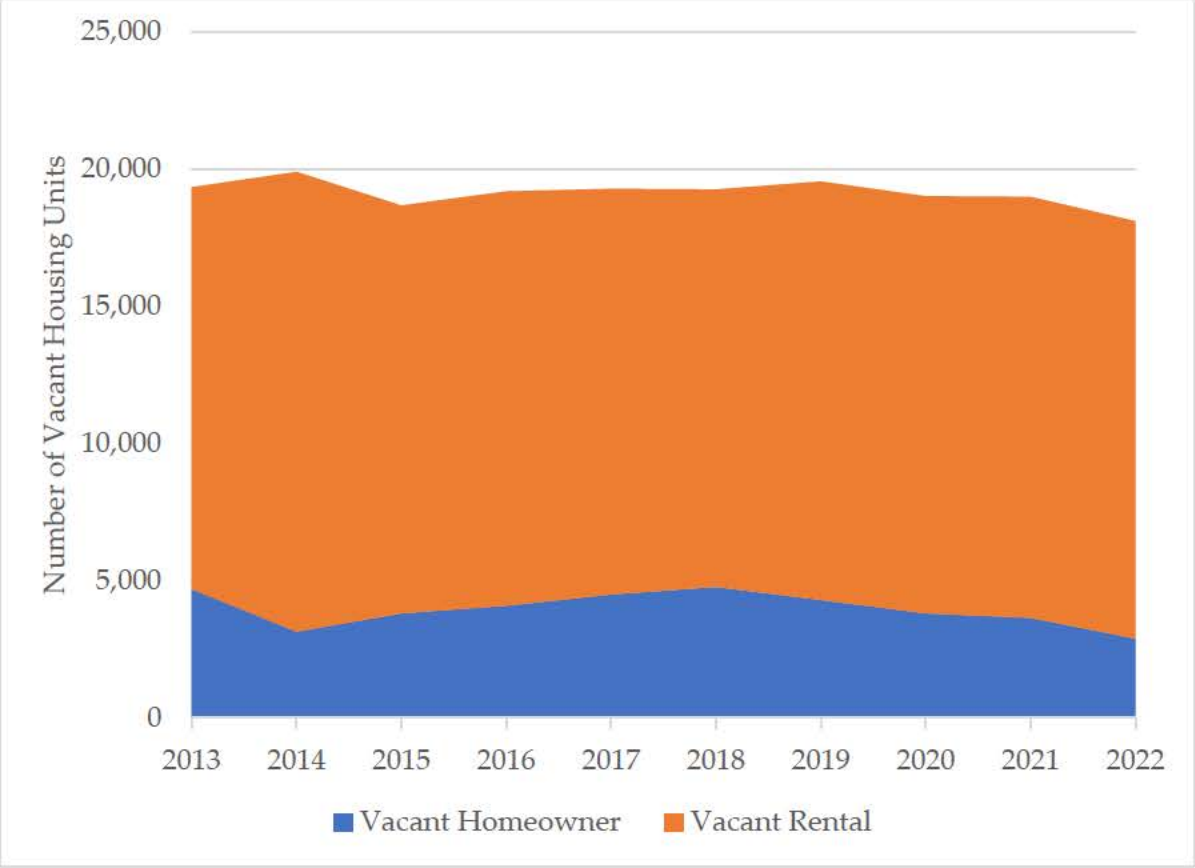
Source: (Triple Point Strategic Consulting 2024)

Table 4.10-5 Yuma County Distribution of Housing Units by Type, 2022

Housing type	Count	Share
1 unit, detached	50,673	54.6%
1 unit, attached	3,248	3.5%
2 units	928	1.0%
3 or 4 units	3,248	3.5%
5 to 9 units	2,413	2.6%
10 to 19 units	1,485	1.6%
20 or more units	2,413	2.6%
Mobile home	26,822	28.9%
Boat, recreational vehicle, van, etc.	1,578	1.7%
Total	**92,808**	**100%**

Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-16 Yuma County Vacant Housing Unit by Tenure



Source: (Triple Point Strategic Consulting 2024)

Table 4.10-6 Vacant Rental Units within 30 Miles of Project Application Area, Yuma County

Location	Count	Share
Avenue B and C CDP	224	3.8%
Donovan Estates CDP	0	0%
Drysdale CDP	0	0%
Wall Lane CDP	0	0%
Yuma City	5,689	96.2%
Total	**5,913**	**100%**

Note: The additional cities and CDPs of Gadsden, Orange Grove Mobile Manor, Padre Ranchitos, San Luis City, and Somerton were conservatively not included as the driving distance would exceed 45 minutes to the Project Application Area and therefore less likely to temporarily house the construction workforce. The Fort Yuma Indian Reservation was also not included due to a federal law statute that prohibits any non-native from settling on lands granted to a Native American Indian group.

Source: (U.S. Census Bureau 2023d)

Home Values

Imperial County

Over half of the homes in Imperial County are owner occupied (refer to Table 4.10-7). These residents are paying property taxes, and their property values are partially dependent upon the strength of the local economy.

Table 4.10-7 Imperial County Housing Tenure, 2022

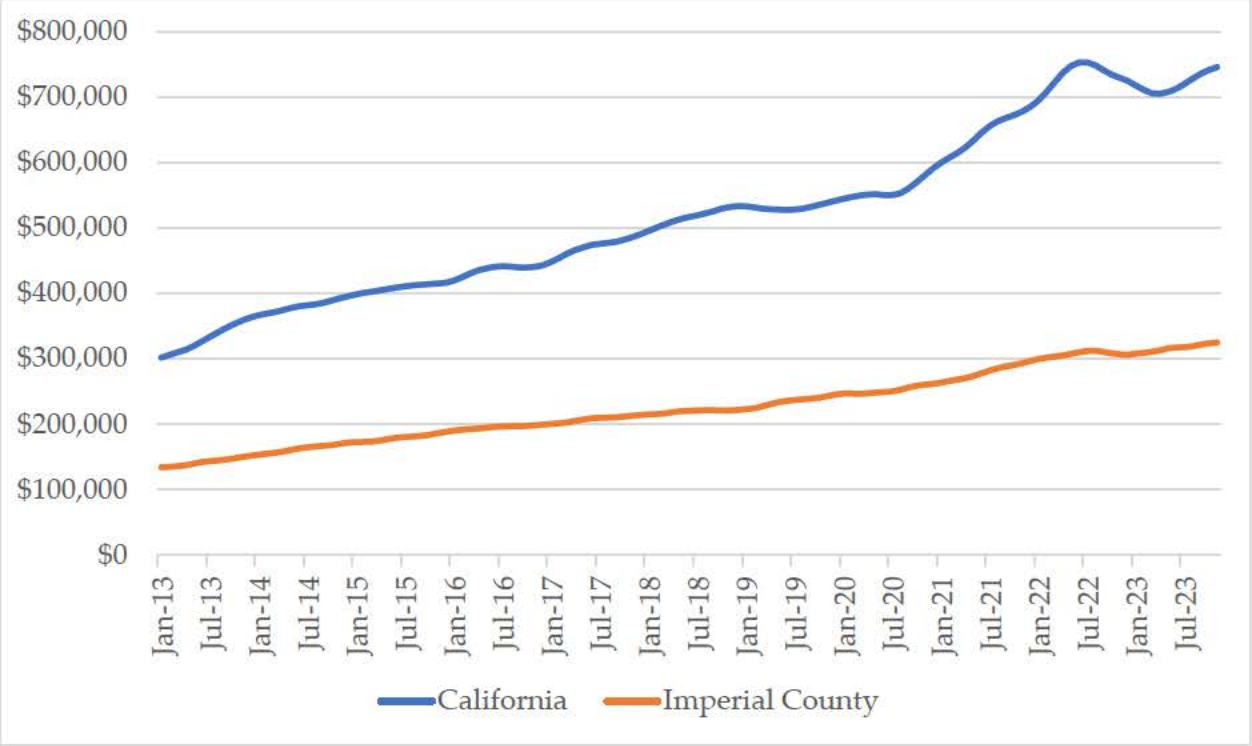
Tenure	Imperial County	Percent
Owner occupied	27,122	58%
Renter occupied	19,902	42%
Total	**47,024**	**100%**

Source: (Triple Point Strategic Consulting 2024)

The Zillow Home Value Index is a smoothed, seasonally adjusted measure of the typical home value and market changes across a given region and housing type (Zillow 2023). It reflects the typical value of homes in the 35th to 65th percentile range. Figure 4.10-17 shows home values in Imperial County rising steadily from 2013 to just over $325,000 in November 2023.

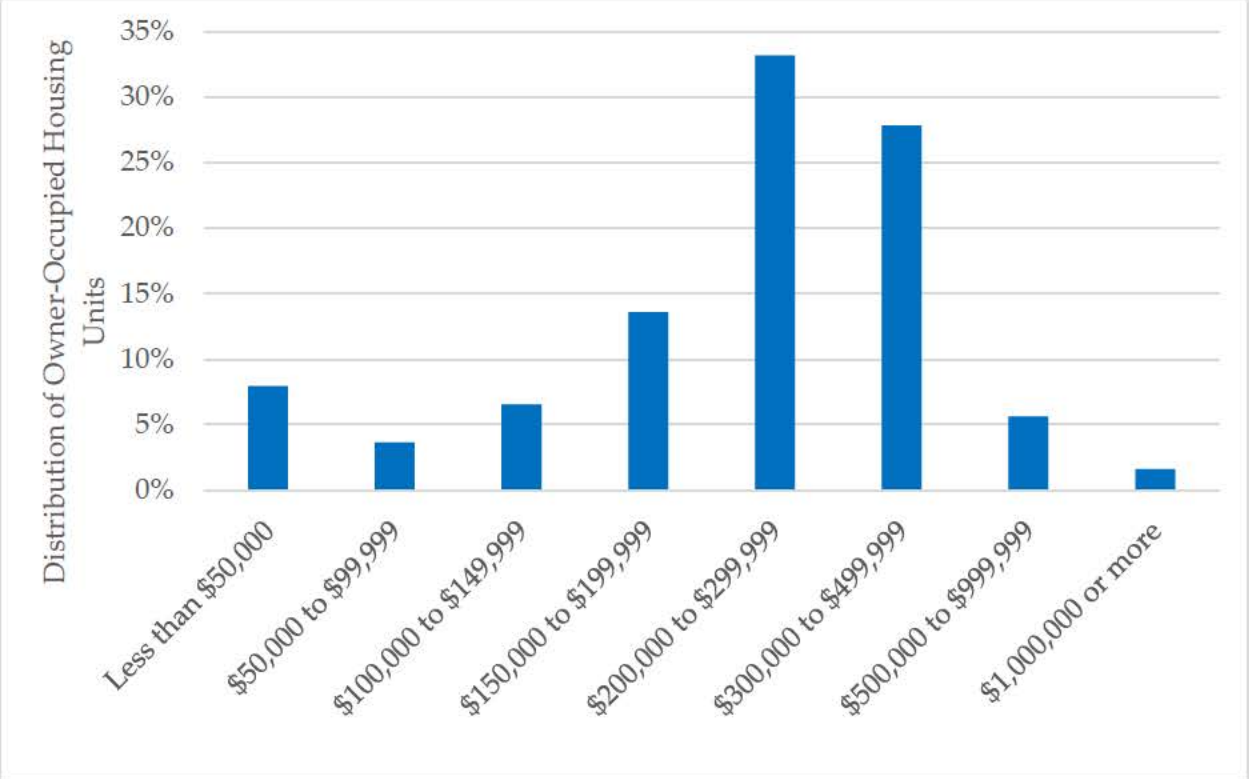
Assuming an interest rate of 7.5 percent and a 30-year fixed mortgage, a $325,000 home in Imperial County would require a household income of at least $84,000. The distribution of owner-occupied home values for Imperial County is shown in Figure 4.10-18. Over 60 percent of the homes are valued between $200,000 and $500,000.

Figure 4.10-17 Imperial County and California Home Value Index (Mid-Tier Homes)



Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-18 Imperial County Distribution of Owned-unit Home Value (2022)



Source: (Triple Point Strategic Consulting 2024)

Yuma County

More than 70 percent of the homes in Yuma County are owner occupied (refer to Table 4.10-8). These residents are paying property taxes, and their property values are partially dependent on the strength of the local economy.

Table 4.10-8 Yuma County Housing Tenure, 2022

Tenure	Yuma County	Percent
Owner occupied	51,602	69%
Renter occupied	23,076	31%
Total	**74,678**	**100%**

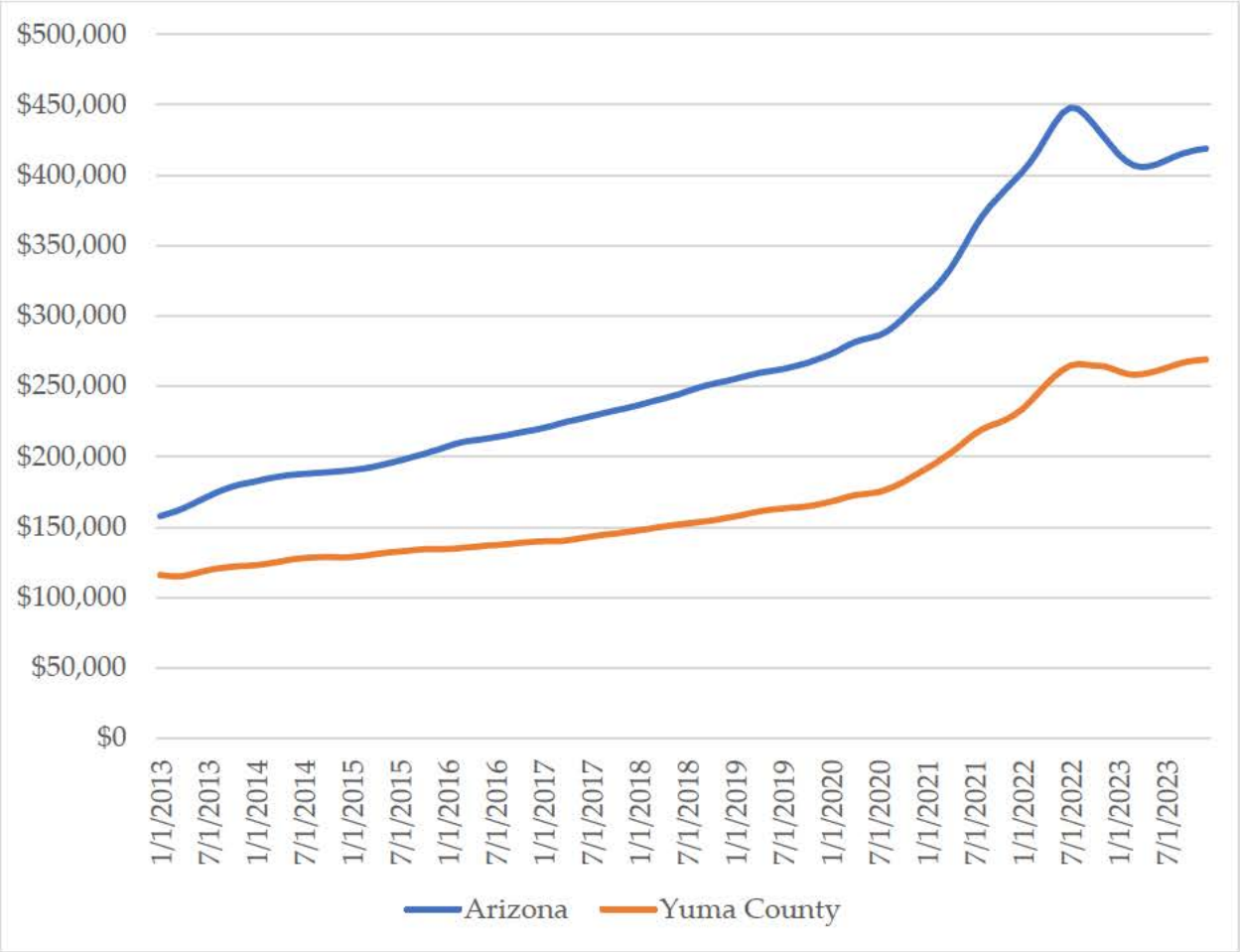
Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-19 shows home values in Yuma County rising steadily from January 2013 to almost $270,000 in December 2023. Yuma County housing has appreciated less than the State of Arizona, increasing 132 percent, compared to Arizona's 165 percent since 2013.

Assuming an interest rate of 7.5 percent and a 30-year fixed mortgage, a $270,000 home in the City of Yuma would require a household income of at least $70,000. The distribution of owner-occupied home values for Yuma County is shown in Figure 4.10-20. Close to 36 percent of the

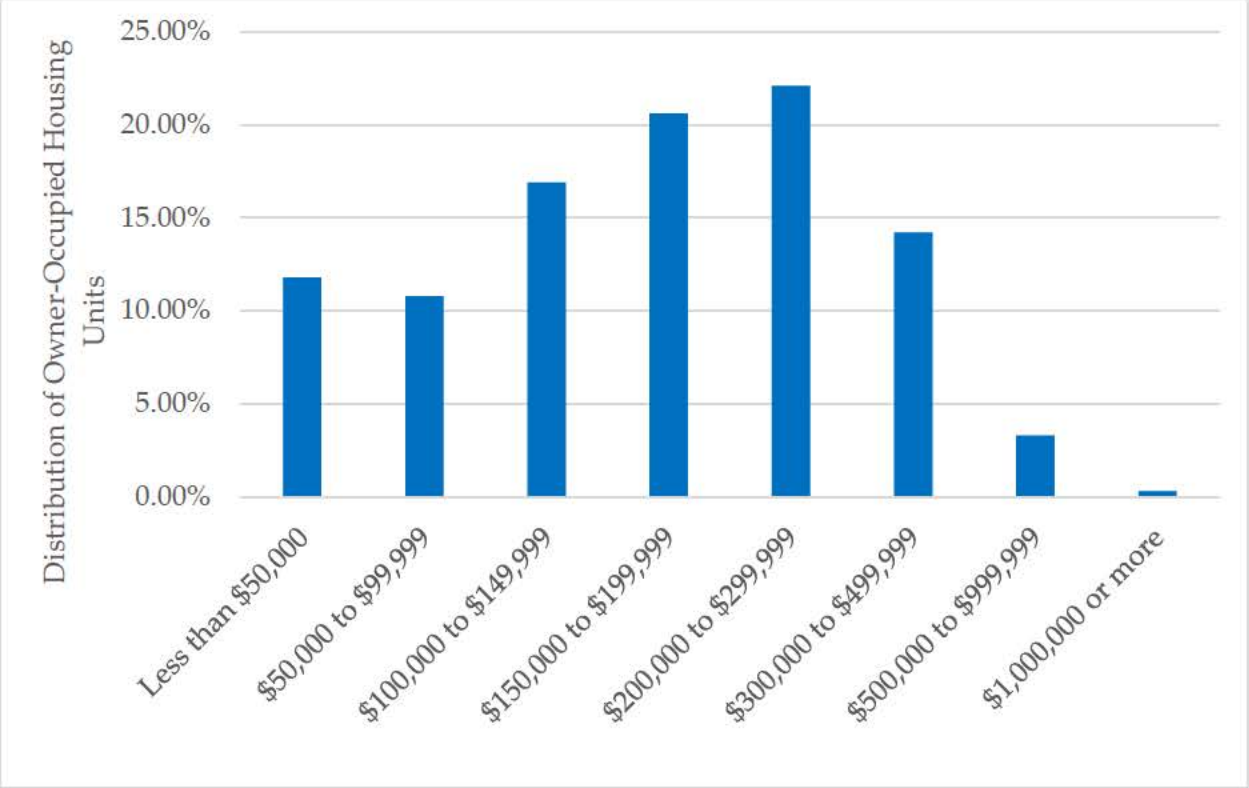
homes are valued between $200,000 and $500,000. A small percentage of homes are valued above $500,000.

Figure 4.10-19 Yuma County and Arizona Home Value Index (Mid-Tier Homes)



Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-20 Yuma County Distribution of Owned-unit Home Value (2022)



Source: (Triple Point Strategic Consulting 2024)

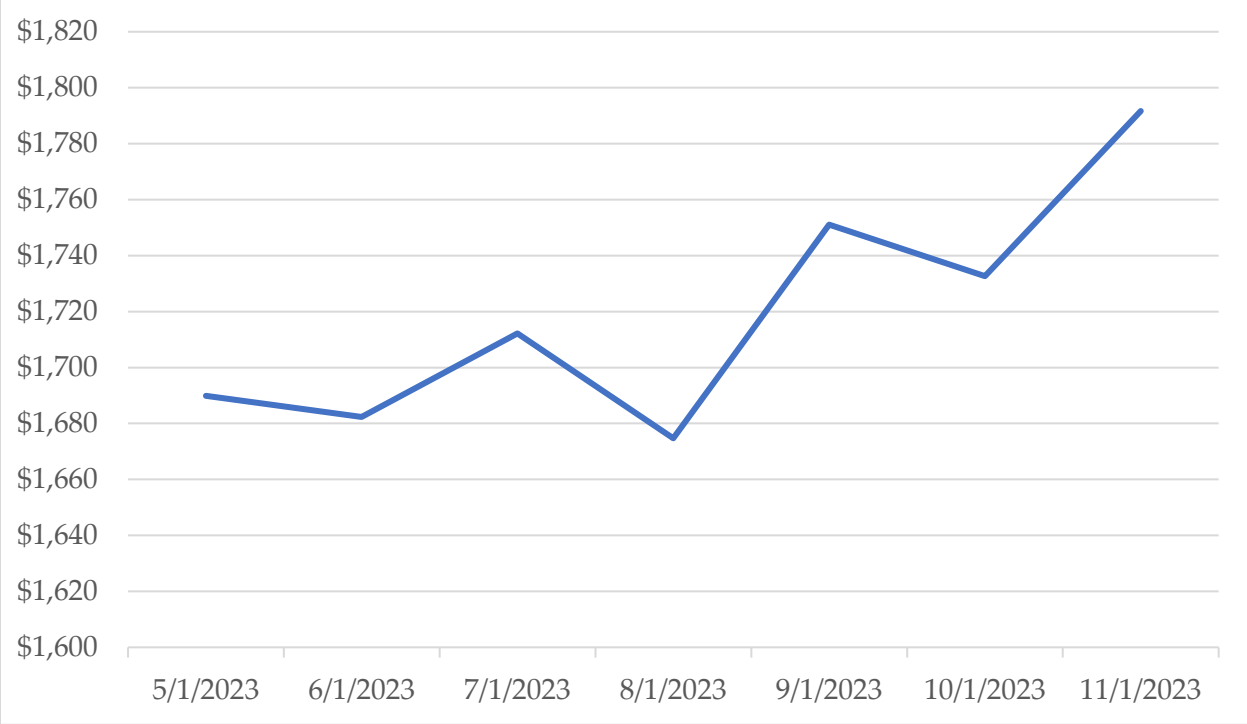
Rental Rates

Imperial County

Considering Imperial County's population is growing at a slower rate than household incomes (refer to Figure 4.10-1 and Figure 4.10-9), this would suggest rising incomes, as opposed to population growth, are putting upward pressure on rental rates. In addition, housing units are converting to ownership and rental vacancies are decreasing, resulting in increasing rental rates. Zillow started reporting the Zillow Observed Rate Index[3] for imperial County in May 2023. As of November 2023, the Zillow Observed Rule Index value was $1,792, affordable to a household income of at least $72,000, which is about the mean income and well over the median income level in Imperial County (refer to Figure 4.10-21). For renter households, more than 40 percent are spending 35 percent or more of the household income on rent (refer to Figure 4.10-21). These households are housing-cost burdened or rent-burdened.

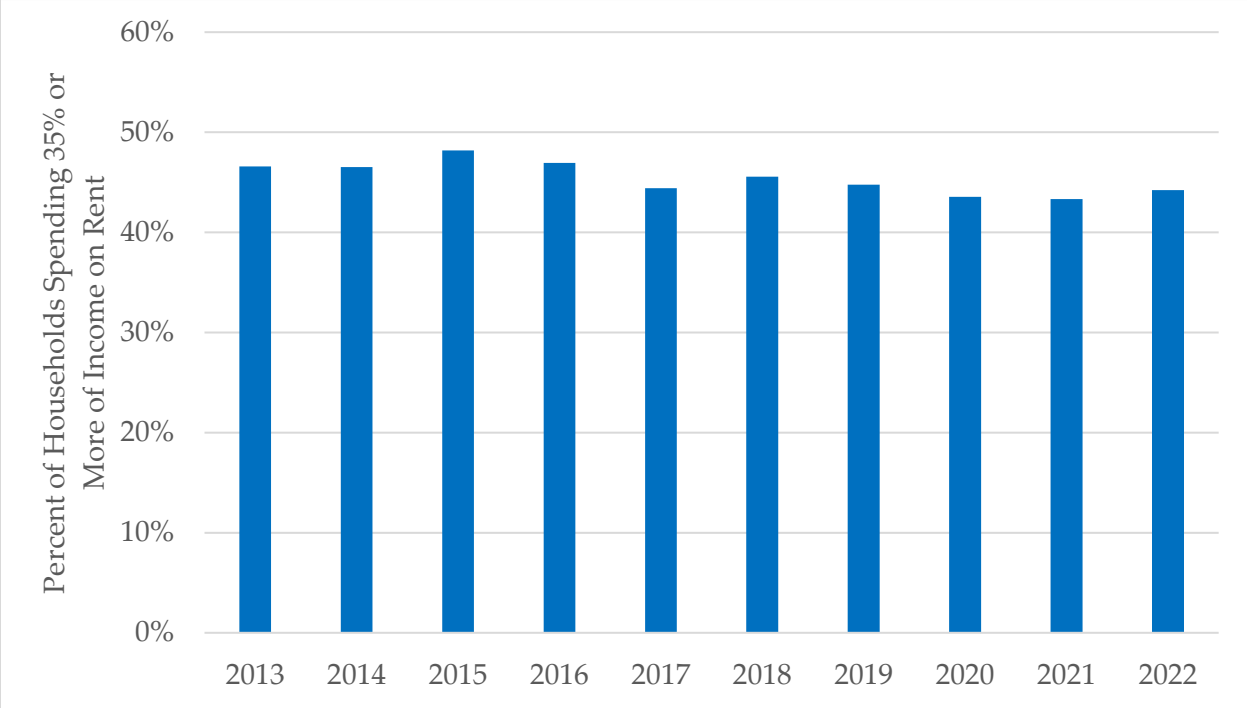
[3] The Zillow Observed Rate Index is a weighted index designed to represent the mean of the entire market, rather than just current listings.

Figure 4.10-21 Imperial County Zillow Observed Rent Index Values



Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-22 Imperial County Share of Rent-burdened Households

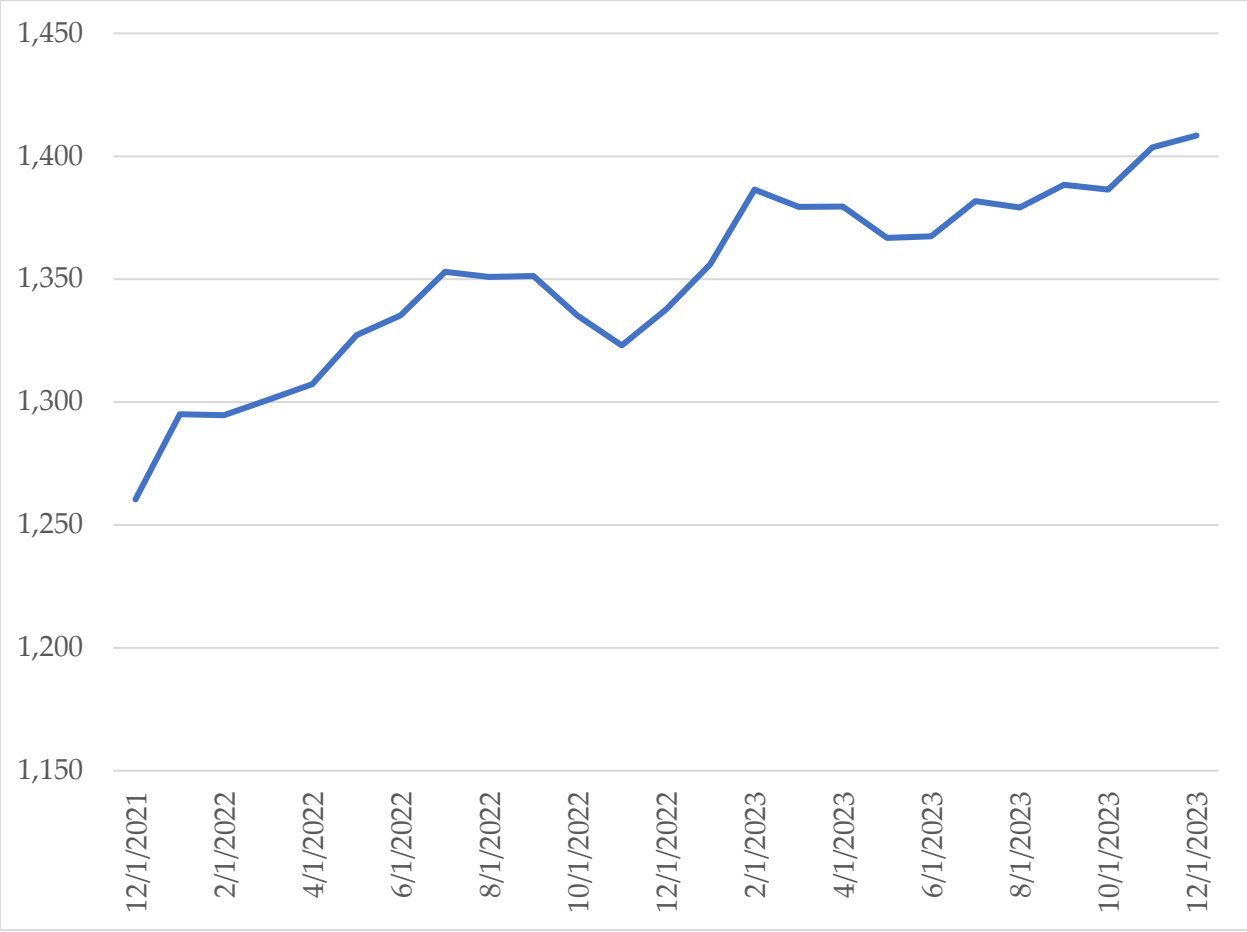


Source: (Triple Point Strategic Consulting 2024)

Yuma County

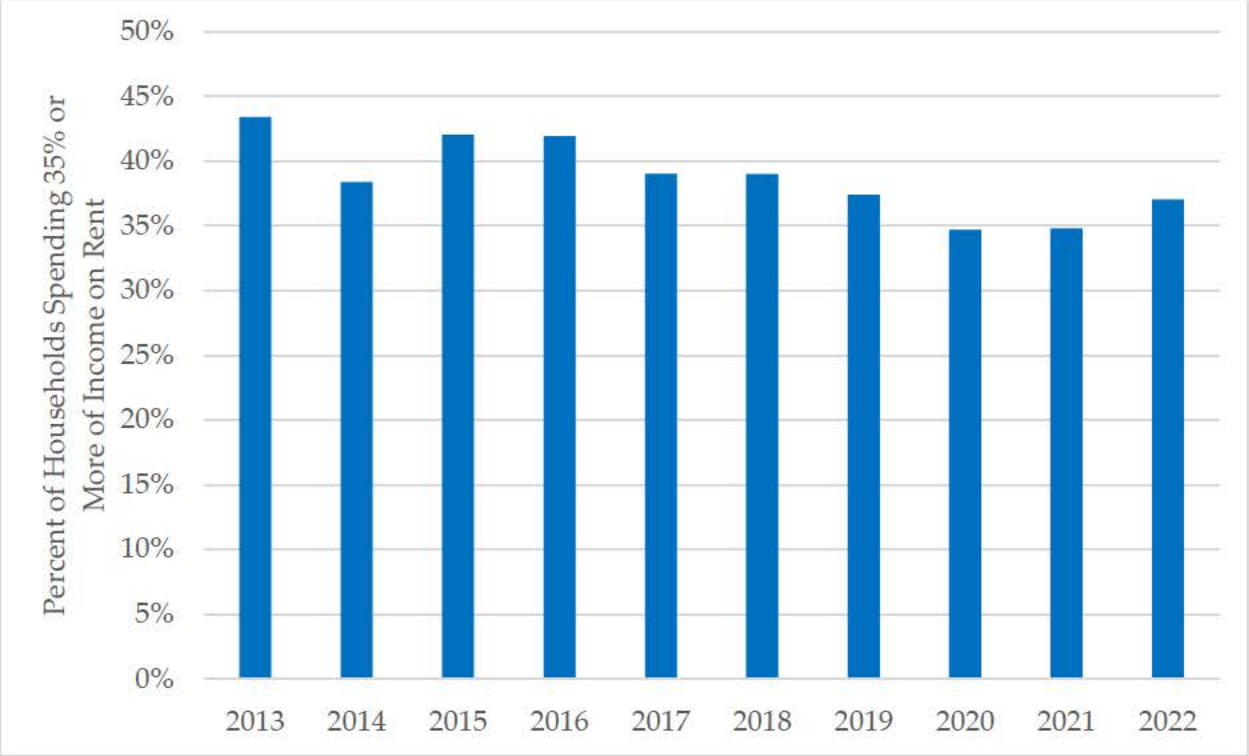
Considering Yuma County's population is growing at a slower rate than household incomes (refer to Figure 4.10-4 and Figure 4.10-12), this would suggest rising incomes, as opposed to population growth, are putting the upward pressure on rental rates. In addition, housing units are converting to ownership and rental vacancies are decreasing, resulting in increasing rental rates. Zillow started reporting the Zillow Observed Rule Index for Yuma County in early 2021. As of December 2023, the Zillow Observed Rule Index value was $1,408, affordable to a household income of at least $73,000, which is about the mean income and well over the median income level in Yuma County (refer to Figure 4.10-23). For renter households, 37 percent are spending 35 percent or more of the household income on rent (refer to Figure 4.10-24). These households are housing-cost burdened or rent-burdened. This number has ranged between 35 and 43 percent, with a lightly downward trend since 2013.

Figure 4.10-23 Yuma County Zillow Observed Rent Index Values



Source: (Triple Point Strategic Consulting 2024)

Figure 4.10-24 Yuma County Share of Rent-burdened Households



Source: (Triple Point Strategic Consulting 2024)

Public Services and Facilities

The following section includes information on Imperial County and Yuma County public services and facilities, including law enforcement, fire protection and emergency response, health care and medical facilities, school districts and facilities, parks and recreational facilities, and libraries.

Law Enforcement

Imperial County. The Imperial County Sheriff is responsible for the enforcement of State Laws and County Ordinances, the prevention of crime and apprehension of criminals in unincorporated areas, the operation of jail facilities, the enforcement of court orders and coroner investigations, and is the Officer of the Superior Court (County of Imperial 2019).

The Sheriff-Coroner Department is a net expense to Imperial County. Table 4.10-9 displays the sheriff's revenues and expenses in the county budget, which includes a total of 342 approved job allocations or about 1.9 employees per 1,000 residents(Imperial County, California 2023). The 2022 per capita sheriff's office expense was $240.18.

Table 4.10-9 Imperial County Sheriff's Office Budget Summary

Category	2022 actual	2023 actual	2024 budget
Total revenue	$9,007,057	$12,257,591	$17,881,573

Total expense	$42,891,684	$50,082,696	$48,549,198
Net	**($33,884,627)**	**($37,825,105)**	**($30,667,625)**

Source: (Triple Point Strategic Consulting 2024)

The Communications Center (Dispatch) is the critical link between the community and patrol units in the field. The Imperial County Sheriff Office Communications Center is staffed by a team of highly trained dispatchers that operate 24 hours a day, 7 days a week. The unit is staffed by 13 full-time Public Safety Dispatchers and 1 Public Safety Dispatch Supervisor. Public Safety Dispatchers are trained to handle a variety of law enforcement, fire, and medical emergencies as well as nonemergency calls and allied agency requests. The unit handles over 99,000 telephone calls annually; of those, 23,000 are 911 calls. The Project would be located within the South County Patrol Division headquartered in El Centro. Deputies from this division would be the first responders to emergency calls from the Project Application Area.

In addition to the Imperial County Sheriff, law enforcement is provided by police departments in Calexico City, Imperial City, Westmorland Town, El Centro City, and Brawley City and by the California Highway Patrol. The BLM law enforcement rangers also patrol and respond to law enforcement emergencies in Imperial County on BLM-administered lands. BLM law enforcement partners with the Imperial County Sheriff's Office on law enforcement issues.

Yuma County. The Yuma County Sheriff is responsible for law enforcement, including the enforcement of state laws and county ordinances, as well as criminal investigations and border security in Yuma. In addition, the Yuma County Sheriff's Office maintains and runs detention and correction centers and oversees community engagement (Yuma County Sheriff's Office n.d.). The Yuma Police Department in the City of Yuma has similar responsibilities in its jurisdiction (City of Yuma, n.d.). The City of Yuma is directly on the border of Imperial County and is the closest office in Yuma County to the Project Application Area. The City of Yuma comprises the majority of the population and economic activity in Yuma County, hence their police budget is significantly higher than the county (refer to Table 4.10-10). The 2022 per capita sheriff's expense was $231.12.

Table 4.10-10 Yuma County Sheriff's Office Budget Summary

Category	2022 actual	2023 actual	2024 budget
Yuma County	$10,261,756	$11,275,181	$11,912,666
City of Yuma	$87,755,784	$36,763,054	$38,098,632
Net	**$98,017,540**	**$48,038,235**	**$50,011,298**

Source: (Triple Point Strategic Consulting 2024)

Yuma County and the City of Yuma each have their own dispatch service for their respective police departments. Public Safety Dispatchers are trained to handle a variety of law enforcement, fire, and medical emergencies as well as nonemergency calls and allied agency

requests. The Yuma County Sheriff's Office handled a total of 133,482 phone calls in 2023; of those, 34,973 were 911 calls.

Fire Protection and Emergency Response

Imperial County. The Project Application Area is located within an area designated as a Federal Responsibility Area and a Local Responsibility Area. Agencies that would provide wildfire protection to the Project Application Area are the BLM Fire and the Imperial County Fire Department. The local BLM Fire office to the Project Application Area is the BLM El Centro Field Office, which is responsible for responding to wildfires located within BLM Direct Protection Areas in conjunction with the Imperial County Fire Department. Because BLM land is commonly intermixed with other federal, State, and local jurisdictions, the BLM uses partnerships and collaborative efforts for fire management. BLM Fire consists of fire suppression, preparedness, predictive services, vegetative fuels management, community assistance and protection, and fire prevention through education.

The Imperial County Fire Department is responsible for fire protection in unincorporated areas of the County (Imperial County, California 2023). To enhance its central core of firefighting personnel, the County has entered into contractual agreements with four incorporated cities and one special district for those agencies to provide fire suppression services to the unincorporated areas contiguous to their own jurisdictions. The county has fire stations in the townships/cities of Heber, Imperial, Niland, Ocotillo, Seeley, Palo Verde, and East County (Winterhaven). In addition to fire suppression, the department provides mandatory fire and safety inspections of various businesses and facilities, arson investigations, medical responses, Basic Life Support/Advanced Life Support, hazardous device responses, heavy rescue services, hazardous materials incident response, airport fire/crash/rescue support, and mutual aid support to all other departments and special districts both locally and throughout the State of California.

Table 4.10-11 presents the fire protection revenue and expenses in the Imperial County budget, which includes a total of 73 approved job allocations. The Project Application Area is located approximately 26 miles from the Heber Fire Station and 32 miles from the El Centro Fire Station. Based on the 2022 county population of 178,578, the per capita fire protection expense was $69.87.

Table 4.10-11 Imperial County Fire Protection Budget Summary

Category	2022 actual	2023 actual	2024 budget
Total revenue	$9,513,159	$10,501,074	$7,199,727
Total expense	$12,476,937	$11,083,763	$8,891,126
Net	**($2,963,778)**	**($582,689)**	**($1,691,399)**

Source: (Triple Point Strategic Consulting 2024)

Yuma County. In Yuma County, Arizona, fire protection operates through a joint effort involving multiple agencies, including the rural fire districts and municipal fire departments. The Yuma County Fire Department, along with Rural/Metro Fire Department, coordinates with the Yuma Fire Department in the City of Yuma to provide fire protection services across Yuma County. The Yuma County Fire Department oversees several rural fire districts. These districts work closely with the Yuma Fire Department, which serves the City of Yuma and coordinates emergencies. Additionally, agreements exist to facilitate assistance between different jurisdictions during large-scale emergencies, such as wildfires.

Table 4.10-12 presents the fire protection expenses in the county budget (Yuma County, Arizona, n.d.). Based on the 2022 county population of 207,842, the per capita fire protection expense was $108.87.

Table 4.10-12 Yuma County Fire Protection Budget Summary

Category	2022 actual	2023 actual	2024 budget
City of Yuma	$68,808,508	$22,628,221	$21,905,976

Source: (Triple Point Strategic Consulting 2024)

Health Care and Medical Facilities

Imperial County. The Imperial County Public Health Department is part of the local public health system that delivers essential services to county residents. The department's primary focus areas are infectious disease control and prevention, chronic disease prevention and health promotion, family health, health equity, laboratory services, emergency and disaster preparedness, vital records and statistics, environmental health, and food safety (Imperial County Public Health Department 2024). Table 4.10-13 displays Imperial County's Public Health Department budget. The 2022 per capita public health expense was $93.62.

Imperial County Behavioral Health Services is the agency designated by the County to manage the Mental Health Plan for Imperial County. Imperial County Behavioral Health Services has created a provider network that includes staff, contract providers, and fee-for-service providers of specialty mental health services and substance use disorder services to provide adequate levels of care to Imperial County residents. Table 4.10-14 presents Imperial County's Behavioral Health Department budget. The 2022 per capita behavioral health expense was $427.26.

The El Centro Regional Medical Center (ECRMC), in affiliation with the UC San Diego Health Care Network, is the primary medical care facility in proximity to the Project Application Area (El Centro Regional Medical Center 2024). ECRMC is an acute-care medical center, serving the health care needs of the Imperial Valley since 1956. In addition to the 161-bed hospital, ECRMC also owns and operates the Oncology & Hematology of Imperial Valley, Wound Healing Center, and outpatient clinics in El Centro and Calexico. If needed, patients of ECRMC will have access to tertiary and quaternary care services of UC San Diego Health. These services include highly specialized and advanced diagnostic, imaging, surgical, transplant, oncologic, and cardiac services typically only found in academic health centers.

Table 4.10-13 Imperial County Public Health Budget Summary

Category	2022 actual	2023 actual	2024 budget
Total revenue	$14,518,144	$17,540,632	$29,201,159
Total expense	$16,718,589	$17,835,786	$29,451,159
Net	**($2,200,445)**	**($295,154)**	**($250,000)**

Source: (Triple Point Strategic Consulting 2024)

Table 4.10-14 Imperial County Behavioral Health Budget Summary

Category	2022 actual	2023 actual	2024 budget
Total revenue	$76,357,620	$100,369,962	$115,126,256
Total expense	$76,356,743	$84,627,270	$115,126,256
Net	**$877**	**$15,742,692**	**$0**

Source: (Triple Point Strategic Consulting 2024)

Yuma County. The Yuma County Public Health System offers:

- Yuma Regional Medical Center – The largest hospital in Yuma County provides acute care, a Level 3 trauma center, and specialized services
- Yuma District Hospital – Offers emergency care, surgery, and rehabilitation
- Urgent Care – Walk-ins for urgent care services
- Yuma Cancer Center – Offers radiation therapy, chemotherapy, and other services
- Yuma Heart Institute – Provides cardiology services
- Orthopedic Specialists
- Yuma County Behavioral Health
- Yuma Crisis Center – Provides crisis intervention for emotional distress

Table 4.10-15 shows Yuma County's Public Health Department budget. The 2022 per capita public health expense was $50.55.

Table 4.10-15 Yuma County Public Health Budget Summary

Category	2022 actual	2023 actual	2024 budget
Total revenue	$10,881,311	$12,225,122	$13,816,827
Total expense	$10,507,302	$10,748,238	$26,290,848
Net	**$374,009**	**$1,476,884**	**($12,474,021)**

Source: (Triple Point Strategic Consulting 2024)

School Districts and Facilities

Imperial County. The Imperial County Office of Education serves 16 school districts (Imperial County Office of Education 2024). The Project Application Area is located within the boundaries of the Holtville Unified School District. There are about 1,600 students in the Holtville Unified School District and, according to the California School Board, almost 80 percent of the students are considered socioeconomically disadvantaged (State of California Department of Education 2023). The Project would be located approximately 6.2 miles east of the former Verde school (Verde Elementary). The Verde school opened in 1980 and closed operations in 1989 (California Department of Education, n.d.). Three schools are located in Holtville, approximately 9.5 miles from the Project Application Area.

Education Code Section 17620(a)(1) allows any school district to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district for the purpose of funding the construction or reconstruction of school facilities. State and local agencies are precluded from imposing additional fees or other required payments on development projects for mitigating possible enrollment impacts to schools.

The Holtville Unified School District is entitled to collect school impact fees for new construction within their district under the California Education Code section 17620. The one-time school development fee is calculated at $0.47 per square foot of development according to Carol Taylor, Administrative Assistant at the Holtville Unified School District, for commercial projects (The Holt Group, Inc. 2019). This fee would apply only to private land under jurisdiction of Imperial County. Based on the fee amount and a conservative assumption that the entire private land portion of the Project Application Area would be developed, the anticipated school impact fee would be approximately $2,880.

According to the U.S. Census, there were almost 55,000 Imperial County students enrolled in 2022, of which 42,260 were high school age or younger (refer to Table 4.10-16).

Table 4.10-16 Imperial County School Enrollment (2022)

Grade level	Enrollment
Nursery school, preschool	2,882
Kindergarten	2,436
Elementary school (grades 1–8)	22,716
High school (grades 9–12)	14,226
College or graduate school	12,712
Total enrollment	**54,972**

Source: (Triple Point Strategic Consulting 2024)

Yuma County. According to the U.S. Census, there were almost 48,000 Yuma County students enrolled in 2022, of which 38,147 were high school age or younger (refer to Table 4.10-17). The Project Application Area is located in southern Imperial County, California; however, some people may decide to relocate to neighboring City of Yuma while working. The City of Yuma is located in Yuma Elementary School District One, which has 8,772 students. Forty-nine percent of these students qualify for free or reduced-price lunch (Yuma Elementary School District One 2024).

Table 4.10-17 Yuma County School Enrollment (2022)

Grade level	Enrollment
Nursery school, preschool	2,526
Kindergarten	2,731
Elementary school (grades 1–8)	21,521
High school (grades 9–12)	11,369
College or graduate school	9,803
Total enrollment	**47,950**

Source: (Triple Point Strategic Consulting 2024)

Parks and Recreation Facilities

The Tamarisk Long Term Visitation Area is located approximately 700 feet south of the Project site on BLM-administered land. Visitors are permitted to stay up to 14 days with a short-term permit, or for the entire season or any part of the season which runs from September 15 to April 15 with a long-term permit (BLM, n.d.). BLM notified Applicant via email on January 22, 2024, that BLM has unofficially closed the Tamarisk Long Term Visitation Area site due to lack of use.

The Imperial Sand Dunes are located over 9 miles to the east of the Project Application Area, extending over 40 miles in a band averaging 5 miles wide (Bureau of Land Management (BLM), n.d.). The Imperial Sand Dunes is an active off-highway vehicle (OHV) use area that receives more than one million visitors a year (Franco 2017).

There are no local, State, or national parks in the Project vicinity. The closest local park to the Project Application Area, Holt Park, is approximately 10.4 miles northwest. The closest state parks to the Project Application area are the Heber Dunes State Vehicle Recreation Area and the Robert Bates Memorial Park, located approximately 9.5 miles west and 27.5 miles west, respectively. The closest National Park, Joshue Tree, is located over 70 miles north of the Project Application Area.

Libraries

There are no libraries in the Project vicinity. The closest libraries to the Project Application Area are the Imperial County Free Library in Holtville and the Calexico City Library in Calexico, located approximately 10.3 miles northwest and 15.9 miles west, respectively.

Utilities

The following section includes information on utilities within Imperial County, including gas, water, wastewater, and solid waste.

Natural Gas

Natural gas service within Imperial County is provided by SoCalGas. The Project would not require any natural gas during construction, operation and maintenance, or decommissioning; therefore, this utility is not further assessed.

Water

The Project would not be connected to a municipal water system. Water supply for the Project would be sourced from a combination of up to four new on-site groundwater wells or would be trucked in from off-site.

Wastewater Discharge

The Project would not require connection to a wastewater services system, and no wastewater would be discharged within the Project Application Area. During Project construction, wastewater production would be limited to temporary toilets and sanitary facilities, which would be serviced by a third-party contractor; therefore, this utility is not further assessed.

Solid Waste

Recycling and solid waste disposal services in Imperial County fall under the jurisdiction of the Imperial County Public Health Department. Eleven active, permitted transfer stations and disposal facilities with remaining capacity are available within Imperial County that accept common construction and demolition materials including, but not limited to, concrete, excavated soil, wood pallets, scrap metal, and incidental office waste (paper, wood, plastic, insulation, and glass). The applicant would pay all applicable land use, gate, and disposal fees. As the owner of improved private property, the Project may also be liable for the County's solid waste land use fee. Additional information on waste management is presented in Section 4.14 Waste Management. This service is not further assessed in this section.

Special Assessment Districts

The Project Application Area is also located within several special assessment districts listed in Section 4.10.2 Impact Analysis, Table 4.10-35.

Environmental Justice

The analysis area for impacts to EJ communities is a 10-mile radius around the Project Application Area and cities and census designated placed (CDPs) within a 30-mile radius of the Project Application Area (shown in Figure 4.10-25). Demographic data for census tracts that fall partially or wholly within the 10-mile radius have been used for this analysis. The 30-mile analysis area conservatively represents the populated cities and CDPs that could experience construction impacts due to temporary worker commute trips, hauling of construction equipment or debris, and permanent impacts due to operational worker commute trips. Due to the range of cities and CDPs in the 30-mile-radius area, including urban, suburban, and rural communities, the analysis for the 30-mile radius cities and CDPs in California uses the state of

California, as a whole, as the geographic reference area. Similarly, the analysis for the 30-mile radius cities and CDPs in Arizona uses the state of Arizona, as a whole, as the geographic reference area.

The 10-mile proximity analysis area is intended to account for low-density and rural setting proximate to the Project Application Area that could experience construction, operation and maintenance, and decommissioning impacts associated with dust, noise, air quality, and aesthetics. The analysis uses non-metropolitan California as the reference area.[4] The EJ analysis for California includes Brawley City, Calexico City, El Centro City, Heber CDP, Holtville City, Imperial City, and Winterhaven CDP, as well as four census tracts within the 10-mile proximity analysis area: 108, 109, 119.03, and 124. The EJ analysis for Arizona includes Avenue B and C CDP, Donovan Estates, Drysdale CDP, Gadsden CDP, Orange Grove Mobile Manor CDP, Padre Ranchitos CDP, San Luis City, Somerton City, Wall Lane CDP, and Yuma City. No census tracts within Arizona were within the 10-mile proximity analysis area. The Fort Yuma Indian Reservation in California and Arizona was also included in the EJ Analysis (refer to Figure 4.10-25).

This analysis uses the CEQ's Environmental Justice Guidance Under NEPA to determine EJ communities. Table 4.10-18 provides the low-income, minority, and Native American/indigenous population composition for each of the reference areas along with the threshold applied for the low-income, minority, and tribal/indigenous analyses.

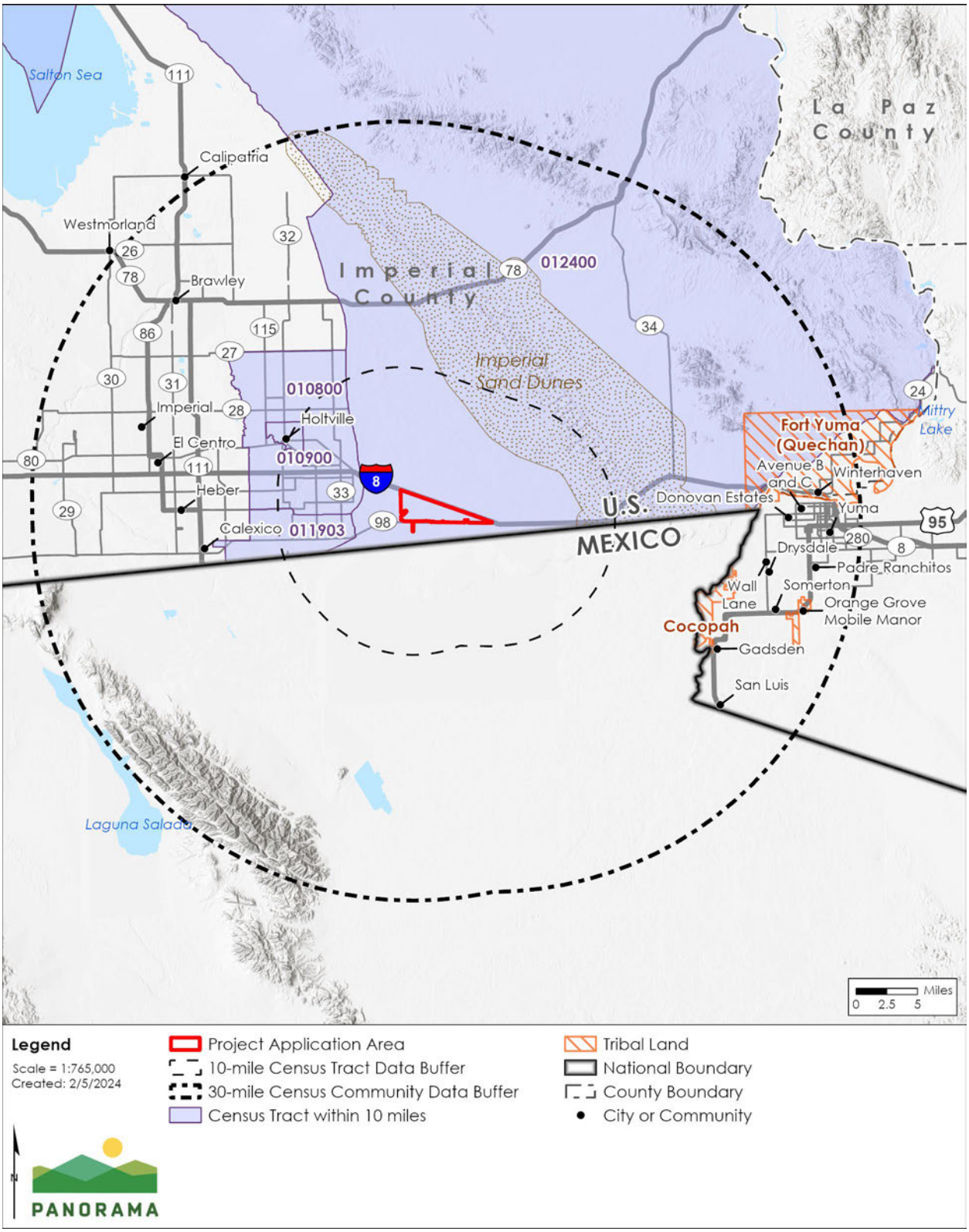
Table 4.10-18 Reference Areas for EJ Screening

Reference area	Low-income percentage	Low-income threshold	Minority percentage	Minority threshold	Tribal/ indigenous Percentage	Tribal/ indigenous threshold
California	28.0%	28.0%	64.8%	50.0%	2.6%	2.6%
Non-metro California	31.5%	31.5%	52.7%	50.0%	3.3%	3.3%
Arizona	30.8%	30.8%	47.0%	47.0%	1.1%	1.1%

Source: (U.S. Census Bureau 2023e; 2023a; 2023c)

[4] The data for non-metropolitan California reference area was calculated by omitting the counties that are primarily considered urban, as defined by the California State Association of Counties, from California county-level data provided by the U.S. Census Bureau, which include Alameda, Contra Costa, Fresno, Los Angeles, Orange, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Joaquin, San Mateo, Santa Clara, and Ventura counties.

Figure 4.10-25 Environmental Justice Analysis Area



Source: (Intersect Power 2023) (Esri 2023) (BLM 2012) (Bureau of Indian Affairs 2021)

EJ communities in the analysis area are identified in Table 4.10-19 and Table 4.10-20. The reference area for EJ communities screening and methodology is provided below in Section 4.10.2 Impact Analysis.

In addition to using the CEQ's Environmental Justice Guidance, the California Office of Environmental Health (OEHHA) CalEnviroScreen 4.0 was also reviewed for the cities and CDPs within the 30-mile radius of the Project Application Area, which resulted in a range between 50 to 60 (closer to the Project Application Area) up to the highest score of 90 to 100 (Brawly, El Centro, and Calexico) (OEHHA 2024). A score ranging from 50 to 100 highlights that the area is within the mid to highest percentile of very disadvantaged populations and is burdened by poor socioeconomic conditions including poverty and limited access to health and education. The CalEnviroScreen 4.0 results are consistent with the detailed data obtained from the U.S. Census Bureau provided in this analysis.

The following communities within the 30-mile-radius area in California and Arizona were identified as EJ low-income communities of concern: Avenue B and C CDP, Brawley City, Calexico City, Donovan Estates CDP, Drysdale CDP, El Centro City, Fort Yuma Indian Reservation, Gadsden CDP, Heber CDP, Imperial City, Orange Grove Mobile Manor CDP, San Luis City, Somerton City, Winterhaven CDP, and Yuma City. The following census tracts within the 10-mile-proximity area were identified as EJ low-income communities of concern: 109 and 124. Census Tract 109 surrounds Holtville City. Census Tract 124 encompasses the Project Application Area and extends from the U.S.–Mexico border to the south to Imperial County's northern boundary. Figure 4.10-26 shows the EJ low-income communities of concern within the analysis area.

The following communities within the 30-mile radius analysis area in California and Arizona were identified as EJ minority communities of concern: Avenue B and C CDP, Brawley City, Calexico City, Donovan Estates CDP, Drysdale CDP, El Centro City, Fort Yuma Indian Reservation, Gadsden CDP, Heber CDP, Holtville City, Orange Grove Mobile Manor CDP, Padre Ranchitos CDP, San Luis City, Somerton City, Wall Lane CDP, Winterhaven CDP, and Yuma City. Census tracts 109 and 119.03 within the 10-mile-proximity analysis area were identified as EJ minority communities of concern. Census Tract 119.03 encompasses agricultural land to the west of the Project Application Area. Figure 4.10-27 shows the minority communities of concern within the analysis area.

The following communities within the 30-mile-radius analysis area in California and Arizona were identified as EJ tribal indigenous communities of concern: Brawley City, Fort Yuma Indian Reservation, Heber CDP, San Luis City, and Yuma City. Census tracts 108 and 124 within the 10-mile-proximity analysis area were identified as EJ tribal communities of concern. Census Tract 108 encompasses agricultural land, is located just north of Census Tract 119.03, and extends north to East Keystone Road. Figure 4.10-28 shows the EJ tribal communities of concern.

The distances of all EJ communities from the Project site and 500 kV loop-in transmission corridors are provided in Table 4.10-21 and Table 4.10-22.

Table 4.10-19 Cities and Census Designated Places within the 25-mile-radius Area

Study area	Low-income	EJ low-income community of concern?	Minority	EJ minority community of concern?	Tribal/indigenous	EJ tribal/indigenous community of concern?
Avenue B and C CDP, AZ	67.9%	**Yes**	82.9%	**Yes**	0.6%	No
Brawley City, CA	48.1%	**Yes**	87.1%	**Yes**	2.6%	**Yes**
Calexico City, CA	47.7%	**Yes**	99.2%	**Yes**	1.0%	No
Donovan Estates CDP, AZ	68.0%	**Yes**	92.8%	**Yes**	0.0%	No
Drysdale CDP, AZ	70.3%	**Yes**	100%	**Yes**	0.0%	No
El Centro City, CA	48.0%	**Yes**	92.9%	**Yes**	1.5%	No
Fort Yuma Indian Reservation, CA-AZ [a]	60.2%	**Yes**	92.1%	**Yes**	80.4%	**Yes**
Gadsden CDP, AZ	56.1%	**Yes**	100%	**Yes**	0.0%	No
Heber CDP, CA	51.1%	**Yes**	99.4%	**Yes**	2.6%	**Yes**
Holtville City, CA	47.8%	**Yes**	86.0%	**Yes**	1.0%	No
Imperial City, CA	30.4%	**Yes**	86.5%	**Yes**	0.7%	No
Orange Grove Mobile Manor CDP, AZ	30.9%	**Yes**	100%	**Yes**	0.0%	No
Padre Ranchitos CDP, AZ	0.0%	No	59.4%	**Yes**	0.0%	No

San Luis City, AZ	61.2%	**Yes**	96.4%	**Yes**	1.6%	**Yes**
Somerton City, AZ	51.6%	**Yes**	96.3%	**Yes**	0.3%	No
Wall Lane CDP, AZ	25.6%	No	98.1%	**Yes**	0.0%	No
Winterhaven, CA	100%	**Yes**	100%	**Yes**	0.0%	No
Yuma City, Z	39.7%	**Yes**	69.4%	**Yes**	3.0%	**Yes**

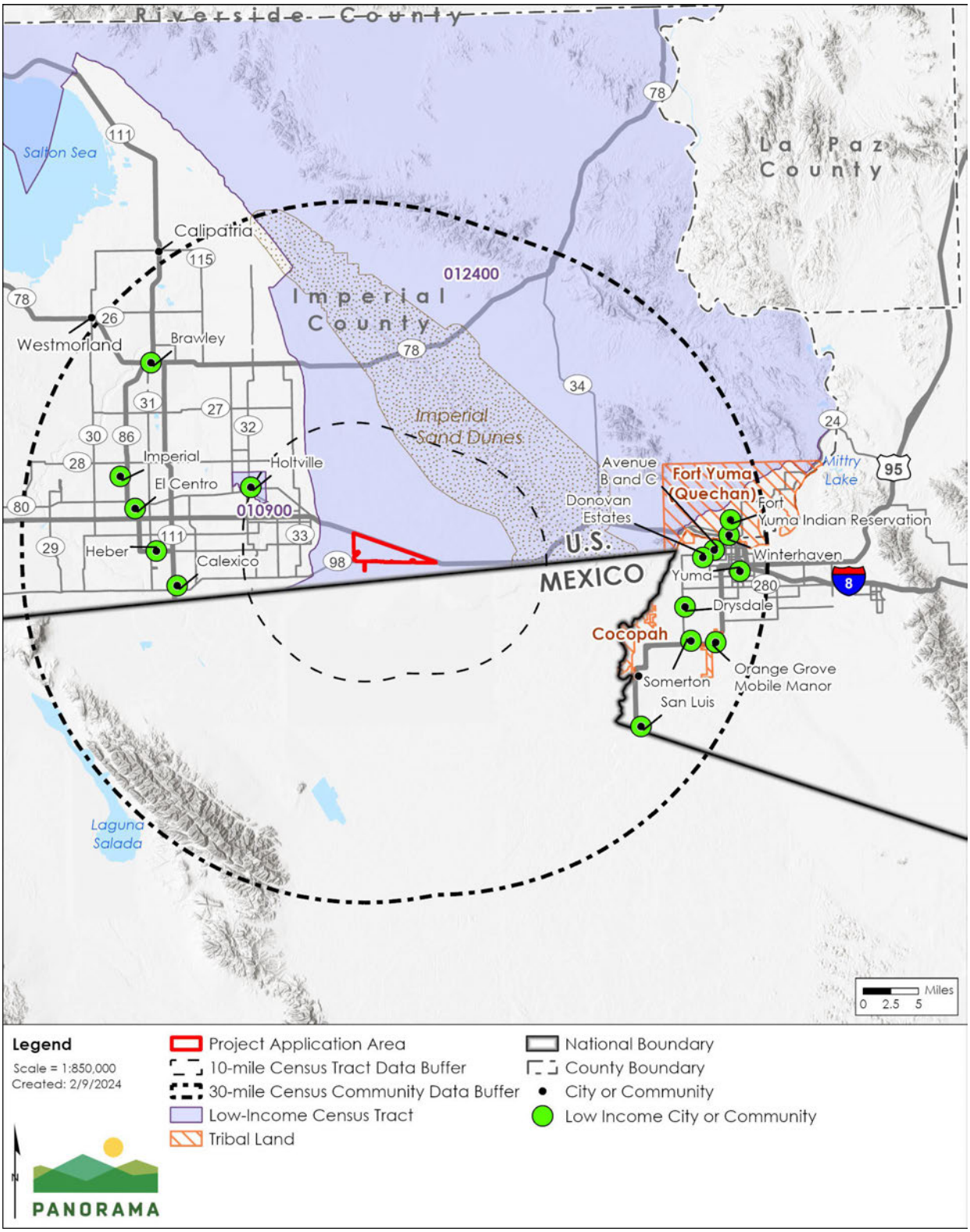
Source: (U.S. Census Bureau 2023e; 2023a; 2023c)

Table 4.10-20 Census Tracts within the 10-mile-proximity Radius Area

Study area	Low-income	EJ low-income community of concern?	Minority	EJ minority community of concern?	Tribal/indigenous	EJ tribal/indigenous community of concern?
Census Tract 108	29.3%	No	39.2%	No	6.8%	**Yes**
Census Tract 109	40.8%	**Yes**	86.0%	**Yes**	2.1%	No
Census Tract 119.03	17.4%	No	99.6%	**Yes**	2.1%	No
Census Tract 124	77.2%	**Yes**	42.3%	No	4.2%	**Yes**

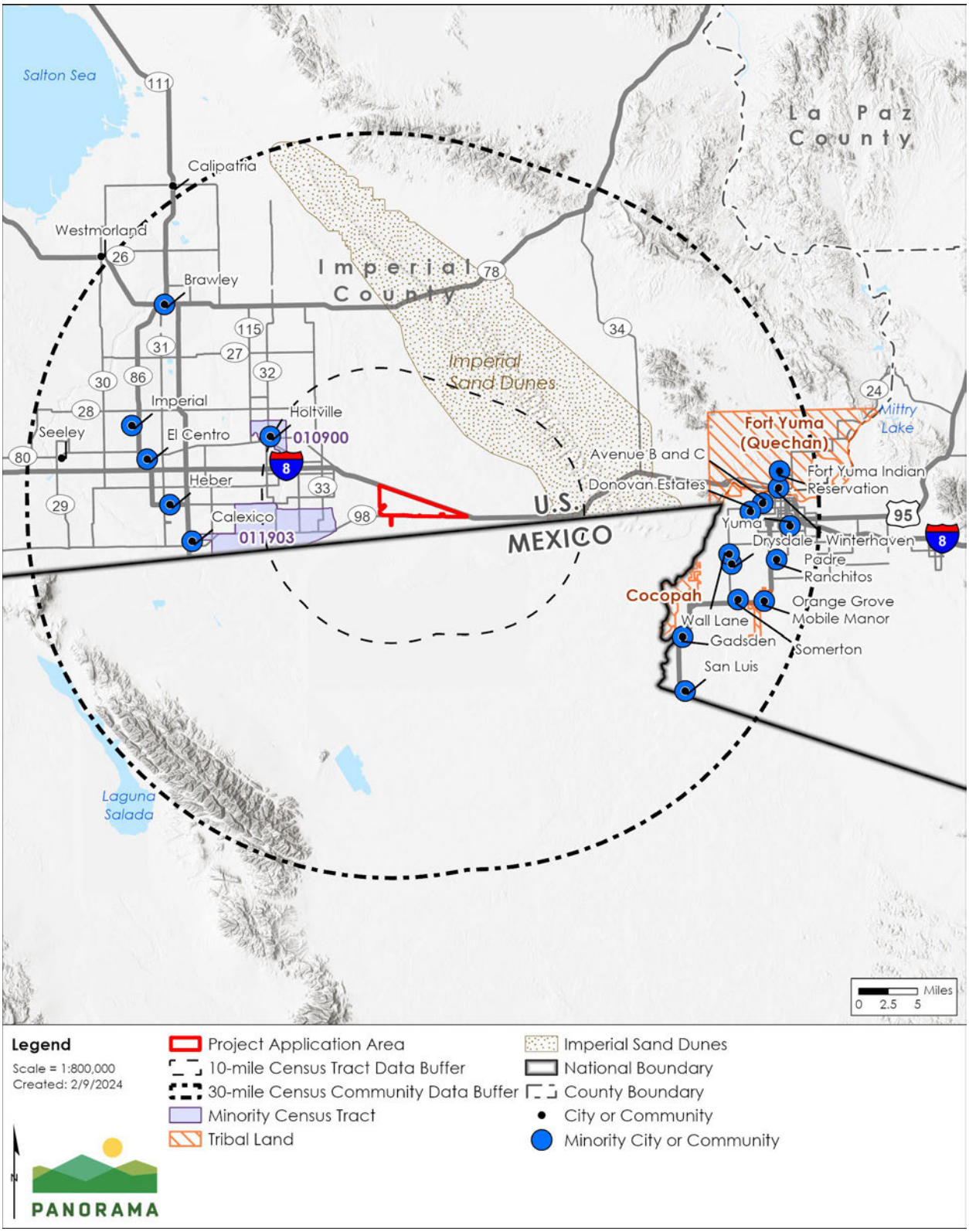
Source: (U.S. Census Bureau 2023e; 2023a; 2023c)

Figure 4.10-26 Environmental Justice Low-income Communities of Concern within the Analysis Area



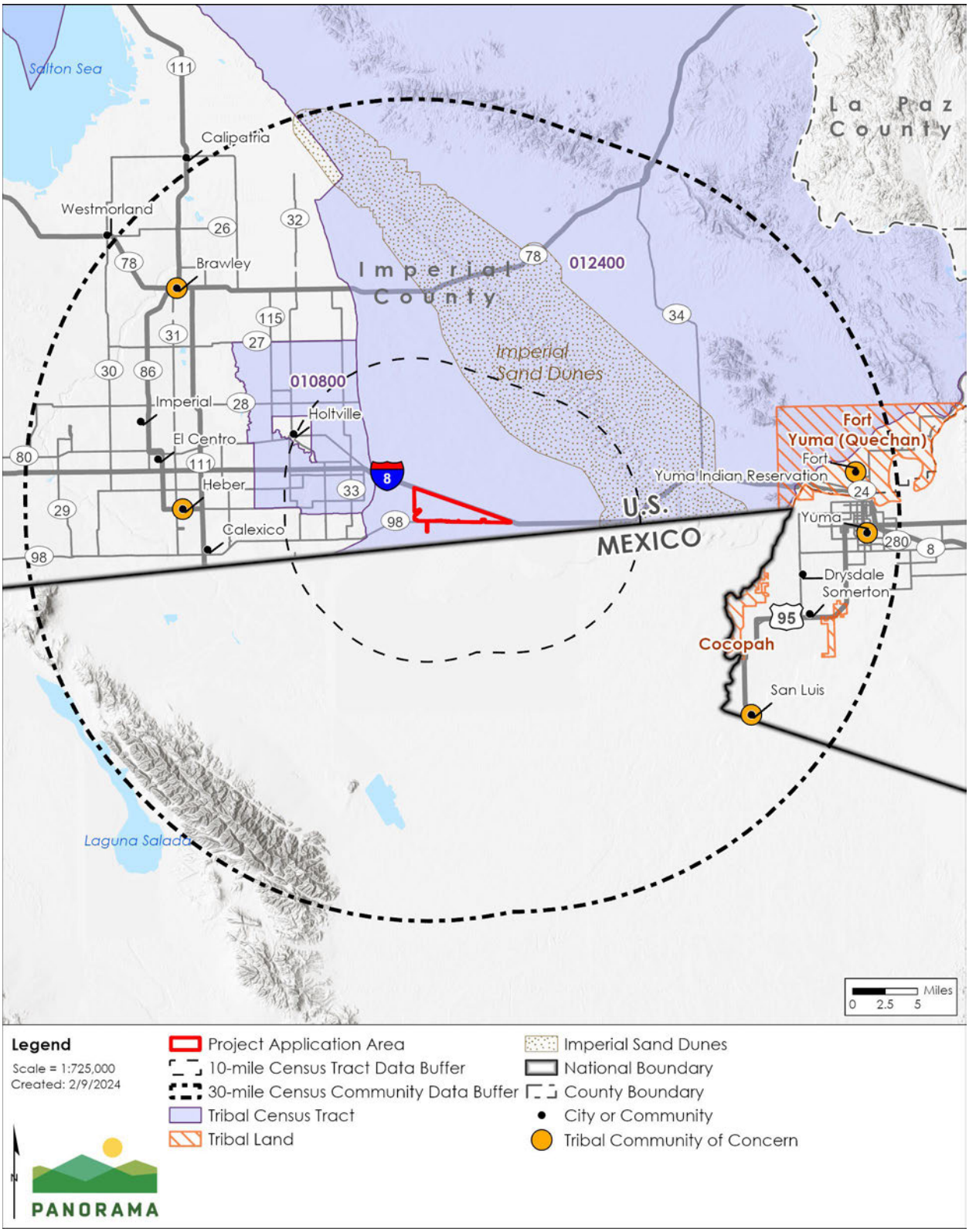
Source: (Intersect Power 2023) (Esri 2023) (Bureau of Land Management (BLM) 2012) (Bureau of Indian Affairs (BIA) 2021)

Figure 4.10-27 Environmental Justice Minority Communities of Concern within the Analysis Area



Source: (Intersect Power 2023) (Esri 2023) (Bureau of Land Management (BLM) 2012) (Bureau of Indian Affairs (BIA) 2021)

Figure 4.10-28 Environmental Justice Tribal Community of Concern within the Analysis Area



Source: (Intersect Power 2023) (Esri 2023) (Bureau of Land Management (BLM) 2012) (Bureau of Indian Affairs (BIA) 2021)

Table 4.10-21 Environmental Justice Communities of Concern within the 30-mile-radius Area

EJ community of concern	EJ designation(s)	Distance from Project site	Distance from BAAH switchyard and loop-in transmission lines
Avenue B and C, AZ	Low-income, minority	25 miles east	31.5 miles east
Brawley City, CA	Low-income, minority, tribal/indigenous	24 miles northwest	24 miles northwest
Calexico City, CA	Low-income, minority	14 miles west	14 miles west
Donovan Estates CDP, AZ	Low-income, minority	24 miles east	30.5 miles east
Drysdale CDP, AZ	Low-income, minority	23 miles east	29 miles east
El Centro City, CA	Low-income, minority	19 miles west	19 miles west
Fort Yuma Indian Reservation, CA-AZ	Low-income, minority, tribal/indigenous	20 miles east	27 miles east
Gadsden CDP, AZ	Low-income, minority	20.8 miles east	26.4 miles east
Heber CDP, CA	Low-income, minority, tribal/indigenous	18 miles west	18 miles west
Holtville City, CA	Low-income, minority	10 miles northwest	10 miles northwest
Imperial City, CA	Low-income, minority	21 miles northwest	21 miles northwest
Orange Grove Mobile Manor CDP, AZ	Low-income, minority	26.2 miles east	32.4 miles east
Padre Ranchitos, AZ	Minority	26.6 miles east	33 miles east
San Luis City, AZ	Low-income, minority, tribal/indigenous	23.3 miles east	28.3 miles east
Somerton City, AZ	Low-income, minority	23.6 miles east	29.6 miles east
Wall Lane CDP, CA	Minority	22.5 miles east	28.8 miles east
Winterhaven CDP, CA	Low-income, minority	26.5 miles east	33.0 miles east
Yuma City, AZ	Low-income, minority, tribal/indigenous	26.4 miles east	32.8 miles east

Note: Distances reflect a linear measurement. In some cases, driving distances may be much further.

Source: (Google Earth 2023) (U.S. Census Bureau 2023e; 2023a; 2023c; 2023b)

Table 4.10-22 Environmental Justice Communities of Concern within the 10-mile-proximity Radius Area

EJ community of concern	EJ designation(s)	Distance from Project site	Distance from breaker-and-a-half loop-in transmission corridors
Census Tract 108	Tribal/indigenous	3.0 miles west	4.4 miles west
Census Tract 109	Low-income, minority	7.8 miles northwest	9.5 miles northwest
Census Tract 119.03	Minority	3.8 miles west	4.6 miles west
Census Tract 124	Low-income	Project vicinity, including Project Application Area	Project vicinity, including Project Application Area

Source: (Google Earth 2023) (U.S. Census Bureau 2023e; 2023a; 2023c)

4.10.2 Impact Analysis

The following subsections discuss the potential direct and indirect impacts related to socioeconomic impacts, including to EJ communities, from construction, operation and maintenance, and decommissioning activities of the Project.

Methodology

Socioeconomic Analysis

To assess the socioeconomic characteristics of Imperial County, California, and Yuma County, Arizona, a variety of documents and publications have been reviewed from local, State, federal, academic, nonprofit, and other private organizations. A list of primary organizations is shown below, with specific citations provided throughout the report.

- California Department of Tax and Fee Administration
- California State Board of Equalization
- El Centro Regional Medical Center
- IMPLAN
- Imperial County
- Imperial County Planning & Development Services
- Imperial County Public Health Department
- City of Yuma
- Yuma County
- Yuma Elementary School District One
- State of California
- State of California Department of Education
- State of Arizona
- U.S. Census Bureau
- Zillow

The U.S. Census Bureau data presented is primarily form the American Community Survey (ACS). For some metrics, Decennial Census (PL 94-171) data is available and may vary from ACS estimates.

The economic impact assessment estimates the impact of constructing, operating, and maintaining the Project over its planned lifetime within the context of Imperial County's economy. Impacts to Yuma County's economy were also addressed where relevant. The direct impacts resulting from development of the Project, as well as the multiplier effects (indirect and induced impacts), were estimated. An Input-Output modeling approach, using IMPLAN software, was used to estimate Project impacts (IMPLAN Group LLC 2022).

The economic impacts resulting from the Project construction were modeled using IMPLAN Industry 52 (Construction of New Power and Communication Structures). Developing an IMPLAN model for the Project's construction requires estimates of capital construction and budget. Additional inputs include specifying a region of impact, identifying representative industry sectors, and selecting the years that the impacts would occur. To model the economic and fiscal impacts, the cost of specialty equipment must be separate from construction costs (labor and basic materials). Construction costs are labor and materials, such as concrete and solder, which can generally be purchased locally and have local economic impacts that are well estimated using IMPLAN. Specialized equipment, such as PV panels, inverters, and BESS, do not result in local economic impacts because they are not manufactured in the region; however, they are generally taxable and thus do have fiscal impacts. In IMPLAN, results are presented as the number of jobs per year, with the duration of one job being one year. For the construction industries, IMPLAN jobs are approximately equal to full-time equivalents. The IMPLAN construction model was customized to account for a maximum of 1,000 workers at peak periods based on the actual construction labor force for previous projects constructed by the Applicant, appropriately scaled to reflect the size of the Project.

The economic impact resulting from operation and maintenance of the Project was modeled and is best represented by Industry 42 (Electric Power Generation – Solar). Developing an IMPLAN model for the Project's operation and maintenance phase requires an operating budget, the starting year of operations, and the Project lifespan. The economic impact analysis is based on a 1,150 MW solar PV facility and BESS, construction duration of 2 years (2026 and 2027) with the assumption that half of the Project would be constructed each year, and a total planned operating lifespan of 48 years (for a grand total of 50 years, including the 2-year construction period and full operational life). The annual operating expense figure is used to model the annual operations of the Project using IMPLAN's Industry Impact Analysis modeling option, which allows the Applicant's specific staffing plans to be incorporated. These annual operating expenses do not include out-of-county replacement equipment that would not have local economic impact.

IMPLAN modeling methods, as well as analysis assumptions and uncertainties, are described further in the Socioeconomic, Economic Impact, and Fiscal Analysis (Triple Point Strategic Consulting 2024).

Environmental Justice Analysis

Consistent with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, the analysis in this section addresses the potential for disproportionately high and adverse human health and environmental effects on low-income, minority, and tribal communities of concern that would result from the Project. The OEHHA also provides a California Communities Environmental Health Screening, per Public Resource Code section 71090, and a screening for Environmental Justice, per Public Resource Code Section 71113. Review of OEHHA's CalEnviroScreen 4.0 was also utilized in this analysis (OEHHA 2024), which was consistent with the specific detailed data method utilized for the analysis. Table 4.10-19 and Table 4.10-20 lists the identified communities of concern within the analysis area. The analysis of direct and indirect effects is focused on those communities.

The EJ analysis identifies EJ communities in the analysis area and assesses potential disproportionate adverse effects. According to the CEQ's Environmental Justice Guidance Under NEPA, agencies should consider the composition of the affected area to determine whether minority populations or low-income populations are present in the area affected by the Project and, if so, whether those human health or environmental effects may be adverse and disproportionately high (CEQ 1997).

The purpose of the EJ analysis is to identify EJ communities within the analysis area and determine whether they would be disproportionately impacted by adverse effects of Project activities. Since the Project Application Area is primarily located on land managed by the BLM, the BLM's guidance and definitions per Instructional Memorandum (IM) 2022-059 Environmental Justice Implementation were also used for the purposes of this analysis (BLM 2022). An EJ community is an area of geographic concentration of people who are low income (EJ low-income), considered to be racial minorities (EJ minority), or considered to be a tribal population (EJ tribal). An EJ low-income community is identified as one in which the percentage of people living at or below 200 percent of the poverty line is 50 percent or greater than that of the reference area (threshold analysis) or is equal to or greater than that of the reference area (low-income threshold analysis) An EJ minority community is identified by the BLM as one in which the percentage of minority persons is 50 percent or greater than that of the reference area (threshold analysis) or meets or exceeds 110 percent of the reference area's minority percentage (meaningfully greater analysis). An EJ tribal/indigenous community is identified as one in which the percentage of the population who are members of a state or federally recognized tribe, or who identify as American Indian or Native Alaskan, Hawaiian, or Pacific Islander, is equal to or greater than that of the reference population. The BLM defines an indigenous person as "a person having origins in any of the original people of North and South America (including Central America), and who maintains tribal affiliation or community attachment (BLM 2022). Note that anyone who identifies as American Indian or Alaska native qualifies as an indigenous person regardless of whether or not they are a member of a federally recognized tribe.

Impact Evaluation Criteria

The potential for impacts to socioeconomics was evaluated using the criteria described in the California Environmental Quality Act (CEQA) Environmental Checklist (Appendix G for the CEQA Guidelines) as specified in California Code of Regulations, title 14, chapter 3, sections 15000–15387 as well as criteria to address CEC requirements for Opt-In Applications, as specified in California Code of Regulations, title 20, section 1704, Appendix B, for Socioeconomics (including EJ communities). The Project would have a significant impact on socioeconomics if the project would:

- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere;
- Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which would cause significant environmental impacts; in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
  - Fire protection;
  - Police protection;
  - Schools;
  - Parks; and/or
  - Other public facilities;
- Result in substantial adverse impacts on the local economy and employment;
- Create adverse fiscal impacts on the community;
- Result in substantial adverse impacts on educational facilities;
- Result in substantial adverse impacts on the provision of utility services;
- Change the character of nearby local communities or affect the ability of the local population to address its needs; or create substantial change in community interaction patterns, social organization, social structure, or social institutions; substantial conflict with community attitudes, values or perception; or substantial inequalities in the distribution of the costs and benefits;
- Result in disproportionately high and adverse impacts to EJ populations.

Impact SC-1

Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (*Less than Significant*)

Construction

Project Site Components

Construction of the Project would require an average direct workforce of 700 over a 2-year period. According to IMPLAN, total Imperial County employment is 85,623, total Yuma County

employment is 90,011, and unemployment is high in both counties. The Applicant intends to hire union workers, and wages would be very competitive and likely sought after. Thus, it does not appear likely that a significant number of workers would need to relocate temporarily to work on the Project. Workers during construction of the Project are anticipated to be majorly sourced from the nearby cities and CDPs of Brawley, Calexico, El Central, Heber, Holtville, and Imperial. Some workers during construction may also be sourced from the greater Yuma City area in Arizona. The number of construction workers that would move closer to the Project Application Area is unknown but would not likely be more than 10 percent of the peak workforce, or approximately 100 workers. It is possible that no workers would need to relocate based on the worker availability and economy size within a 30-mile radius of the Project site, and therefore 10 percent was selected as a conservative estimate. Based on this and conservatively assuming all 100 workers relocate to Imperial County, the population in Imperial County could temporarily increase by less than 1 percent during Project construction. Similarly, assuming all 100 workers relocate to Yuma County, the population in Yuma County could temporarily increase by less than 1 percent during Project construction. This would not produce a discernable change in population or represent unplanned population growth. The workforce during construction would not be expected to stay in the area permanently; therefore, this estimate is representative of the likely temporary regional population change, and impacts would be less than significant.

Breaker-and-a-half Switchyard

Construction of the Project would require an average direct workforce of 700 over a two-year period, which includes the estimated 50-person workforce needed for the construction of the BAAH switchyard. Impacts would be the same as described for the Project site. Construction and decommissioning of the BAAH switchyard would not produce substantial unplanned population growth in the area, and impacts would be less than significant.

Loop-in Transmission Lines

Construction of the Project would require an average direct workforce of 700 over a two-year period, which includes the 50-person workforce needed for the construction of the 500 kV loop-in transmission lines. Impacts would be the same as described for the Project site. Construction and decommissioning of the 500 kV loop-in transmission lines would not produce substantial unplanned population growth in the area, and impacts would be less than significant.

Operation and Maintenance

Project Site Components

Operation and maintenance of the Project would require an average direct workforce of approximately 18 over the life of the Project. The workforce during operation and maintenance would be primarily sourced from the surrounding cities or CDPs. A portion of this workforce could relocate to the area permanently; however, the workforce during operation and maintenance would not produce a discernable change in population or represent unplanned population growth, as a conservative assumption that all 18 individuals relocate to the area yields an approximately 0.01-percent change. Impacts during operation and maintenance would be less than significant.

The workforce and temporal duration for decommissioning is expected to be similar to that of the construction period. Although it is difficult to forecast employment and population conditions 50 years into the future, based on the overall growth projections in Imperial and Yuma counties, it is expected that the available labor pool would be greater than under existing conditions. This would result in less of the workforce having to relocate during Project decommissioning than during the construction phase. In addition, the workforce during decommissioning of the Project would not be expected to stay in the area permanently. Project impacts during decommissioning would be less than significant.

Breaker-and-a-half Switchyard

Operation and maintenance of the Project would require an average direct workforce of approximately 18 over the life of the Project, including SDG&E's workforce for operation of the BAAH switchyard. It is anticipated that the same workers who already maintain SDG&E's South West Power Link (SWPL) transmission line and associated equipment would also maintain the BAAH switchyard, though one to two new worker(s) could be hired to assist in maintenance of the BAAH switchyard. The operations and maintenance workforce for the BAAH switchyard would not induce unplanned population growth in the Project vicinity. The operation and maintenance of the BAAH switchyard would not produce substantial unplanned population growth in the area, and impacts would be less than significant.

Loop-in Transmission Lines

Operation and maintenance of the Project would require an average direct workforce of approximately 18 over the life of the Project, including SDG&E's workforce for operation of the loop-in transmission lines. It is anticipated that the same workers who already maintain SDG&E's SWPL transmission line and associated equipment would also maintain the new loop-in transmission lines, though one to two new worker(s) could be hired to assist in maintenance of the loop-in transmission lines. The operations and maintenance workforce for the loop-in transmission lines would not induce unplanned population growth in the Project vicinity. The operation and maintenance of the BAAH switchyard would not produce substantial unplanned population growth in the area, and impacts would be less than significant.

Impact SC-2

Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (*Less than Significant*)

Construction

Project Site Components

Construction of the Project would temporarily increase housing demand within Imperial and Yuma Counties and, more specifically, within an estimated 30 miles of the Project site. It is anticipated that up to 100 workers could relocate closer to the Project site within the surrounding cities and CDPs. As of 2022, Imperial County contained 9,883 vacant housing units with approximately 77 percent, or 7,585 units, available for rent (refer to Figure 4.10-13). Of the 7,585 vacant housing units, approximately 71 percent, or 5,405 units, are distributed amongst cities within 30 miles of the Project Application Area, including Brawley, Calexico, El Centro,

and Imperial (refer to Table 4.10-4). Calexico City contains the largest share of available housing units for rent of the surrounding cities, with a total of 1,970 housing units. In addition, Avenue B and C CDP and Yuma City contained an additional 5,913 vacant housing units available for rent in 2022 (refer to Table 4.10-6). Therefore, sufficient housing supply is available to meet the demand within commuting distance (approximately 45 minutes) without displacing existing populations or the need to construct or replace housing elsewhere. Project impacts during construction would be less than significant.

Breaker-and-a-half Switchyard

Construction of the Project would require an average direct workforce of 700 over a 2-year period, which includes the workforce needed for the construction of the BAAH switchyard. Decommissioning of the Project would require a similar workforce as the construction phase. Project impacts during construction and decommissioning of the BAAH switchyard would be the same as described for the Project site components and less than significant.

Loop-in Transmission Lines

Construction of the Project would require an average direct workforce of 700 over a 2-year period, which includes the workforce needed for the construction of the 500 kV loop-in transmission lines. Decommissioning of the Project would require a similar workforce as the construction phase. Project impacts during construction and decommissioning of the 500 kV loop-in transmission lines would be the same as described for the Project site components and less than significant.

Operation and Maintenance

Project Site Components

Operation and maintenance of the Project would require an average direct workforce of approximately 18 over the life of the Project. The workforce during operation and maintenance of the Project site would primarily be sourced from the surrounding cities or CDPs. A portion of this workforce could relocate to the area permanently; however, the workforce during operation and maintenance would not produce a discernable change in population that could result in the displacement of existing people or housing. Project impacts during operation and maintenance would be less than significant.

Breaker-and-a-half Switchyard

Operation and maintenance of the Project would require an average direct workforce of approximately 18 over the life of the Project, including SDG&E's workforce for operation of the BAAH switchyard. It is anticipated that the same workers who already maintain SDG&E's SWPL transmission line and associated equipment would also maintain the BAAH switchyard, though one to two new worker(s) could be hired to assist in maintenance of the BAAH switchyard. The operation and maintenance of the BAAH switchyard would not produce substantial unplanned population growth in the area, and impacts would be less than significant.

The cities and CDPs of Brawley, Calexico, El Centro, and Imperial have a total of 5,405 vacant housing units available for rent (refer to Figure 4.10-13). In addition, Avenue B and C CDP and Yuma City contained an additional 5,913 vacant housing units available for rent in 2022. Therefore, sufficient housing supply is available to meet the demand within commuting distance (approximately 45 minutes) without displacing existing populations or the need to construct or replace housing elsewhere. Project impacts during operation and maintenance of the BAAH switchyard would be less than significant.

Loop-in Transmission Lines

Operation and maintenance of the Project would require an average direct workforce of approximately 18 over the life of the Project, including SDG&E's workforce for operation of the loop-in transmission lines. It is anticipated that the same workers who already maintain SDG&E's SWPL transmission line and associated equipment would also maintain the new loop-in transmission lines, though one to two new worker(s) could be hired to assist in maintenance of the loop-in transmission lines. The operation and maintenance of the BAAH switchyard would not produce substantial unplanned population growth in the area, and impacts would be less than significant.

The cities and CDPs of Brawley, Calexico, El Centro, and Imperial have a total of 5,405 vacant housing units available for rent (refer to Figure 4.10-13). In addition, Avenue B and C CDP and Yuma City contained an additional 5,913 vacant housing units available for rent in 2022. Therefore, sufficient housing supply is available to meet the demand within commuting distance (approximately 45 minutes) without displacing existing populations or the need to construct or replace housing elsewhere. Project impacts during operation and maintenance of the BAAH switchyard and the 500 kV loop-in transmission lines would be less than significant.

Impact SC-3

Result in a substantial adverse impact associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which would cause significant environmental impacts; in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks, and/or other public facilities? (*Less than Significant*)

Construction

Project Site Components

Construction of the Project would not result in construction of new or physically altered governmental facilities; however, it could result in impacts related to maintaining acceptable service ratios and response times. Construction of the Project could temporarily result in an increased demand for law enforcement, fire protection, emergency medical services, and medical facilities. It is not anticipated to result in a substantial increased demand for schools, parks and recreation facilities, libraries, or other public facilities based on the temporary nature of construction and limited number of workers anticipated to relocate with their families during Project construction.

The relocation of approximately 100 workers distributed throughout cities and CDPs within 30 miles of the Project site would temporarily increase the risk of emergency incidents requiring public safety and medical attention, and the increased concentration of workers may increase the frequency of responses to the Project site. The number of workers temporarily commuting to the Project site may also increase the risk of traffic accidents. Emergency response to the Project site would increase demand on County Sheriff, BLM fire, and Imperial County Fire Department resources.

Emergency response personnel would have access to the Project site via a locked gate to facilitate response time. The Project would implement a Security and Emergency Preparedness Plan and comply with BMP 131 (Wildfire) and BLM Conservation and Management Action (CMA) LUPA-SW-7, which would require the adherence to a fire safety plan, a Health, Safety, and Noise Plan, and worker training to reduce fire risks and injuries at the Project site. Minimizing risks of emergency incidents at the Project site would reduce emergency service and medical attention needs, as well as service ratios on and off the Project site. The Project would also implement a Construction Traffic Control Plan, which would include the implementation of a trip reduction (i.e., rideshare/carpool) program for the construction workforce to reduce commuter traffic by approximately 50 percent. Reducing the number of cars on roadways during construction of the Project would reduce the risks of traffic accidents that would require emergency or medical services. The Project would also comply with PDF FIRE-1, which requires the preparation and implementation of a Fire Management and Prevention Plan, in coordination with BLM Fire and Imperial County Fire Department to identify the fire hazards and response scenarios that may be required for the Project site. The Fire Management and Prevention Plan and coordination with BLM Fire and Imperial County Fire Department would ensure acceptable service ratios and response times are maintained during Project construction. With the implementation of the Security and Emergency Preparedness Plan, BMP 131 (Wildfire), CMA LUPA-SW-7, Construction Traffic Control Plan, and PDF FIRE-1, the Project would maintain acceptable service ratios, response times, or other performance objectives during Project construction and impacts would be less than significant.

Breaker-and-a-half Switchyard

Construction of the Project would not result in construction of new or physically altered governmental facilities; however, it could result in impacts related to maintaining acceptable service ratios and response times. Construction of the Project would require an average direct workforce of 700 over a 2-year period, which includes the up to 50 person workforce needed for the construction of the BAAH switchyard. Decommissioning of the Project would require a similar workforce as the construction phase. Impacts of the BAAH switchyard would be the same as those described for the Project site. With the implementation of the Security and Emergency Preparedness Plan, BMP-WILDFIRE-131, LUPA-SW-7, Construction Traffic Control Plan, and PDF FIRE-1, the Project would maintain acceptable service ratios, response times, and other performance objectives during Project construction and decommissioning of the BAAH switchyard and impacts would be less than significant.

Loop-in Transmission Lines

Construction of the Project would not result in construction of new or physically altered governmental facilities; however, it could result in impacts related to maintaining acceptable service ratios and response times. Construction of the Project would require an average direct workforce of 700 over a 2-year period, which includes the up to 50 person workforce needed for the construction of the 500 kV loop-in transmission lines. Decommissioning of the Project would require a similar workforce as the construction phase. Impacts of the 500 kV loop-in transmission lines would be the same as those described for the Project site. With the implementation of the Security and Emergency Preparedness Plan, BMP-WILDFIRE-131, LUPA-SW-7, Construction Traffic Control Plan, and PDF FIRE-1, the Project would maintain acceptable service ratios, response times, and other performance objectives during Project construction and decommissioning of the 500 kV loop-in transmission lines, and impacts would be less than significant.

Operation and Maintenance

Project Site Components

Operation and maintenance of the Project would not result in construction of new or physically altered governmental facilities; however, it could result in impacts related to maintaining acceptable service ratios and response times. Operation and maintenance of the Project could result in increased demand for law enforcement, fire protection, and emergency medical services. It is not anticipated to result in adverse impacts on schools, parks and recreation facilities, libraries, or other public facilities based on the limited number of workers needed during operation and maintenance of the Project. Once constructed, the Project could potentially increase demand for law enforcement, fire protection, and emergency medical services through increased risk of trespass, vandalism, and theft compared to current land uses. Solar facilities have been known to attract people looking for metal and other valuable materials to sell. Although infrequent, sometimes trespass and theft can lead to accidents, injuries, and fire that require both law enforcement and medical response. The Project would adhere to a Security and Emergency Preparedness Plan, which would identify the site security measures to be implemented during construction and operation and maintenance of the Project.

The Project facilities, including the solar panels and BESS, would increase the risk of fire compared to existing land use conditions, which may result in increased demand for fire resources and personnel. As detailed in Section 4.17: Worker Safety, a Fire Management and Prevention Plan would be adhered to in coordination with BLM Fire and Imperial County Fire Department to identify the fire hazards and response scenarios that may be required during operation of the solar facility. The Fire Management and Prevention Plan meets the requirement of the CMA DFA-VPL-BIO-FIRE-1, which requires site-specific fire prevention/protection actions. The plan includes information on response to accidents involving downed power lines or accidents involving damage to solar arrays and appurtenant facilities. The Plan would include measures to safeguard human life, prevent personnel injury, preserve property, and minimize downtime due to fire or explosion. Of concern would be fire-safe conditions, reduction of ignition sources, control of fuel sources, availability of water, and proper

maintenance of firefighting systems. The same measures required during Project construction would apply during Project decommissioning.

With the implementation of the Security and Emergency Preparedness Plan, BMP 131 (Wildfire), CMA LUPA-SW-7, Construction Traffic Control Plan, and PDF FIRE-1, the Project would maintain acceptable service ratios, response times, or other performance objectives during Project decommissioning, and impacts would be less than significant.

Breaker-and-a-half Switchyard

Operation and maintenance of the Project would not result in construction of new or physically altered governmental facilities; however, it could result in impacts related to maintaining acceptable service ratios and response times. Operation and maintenance of the Project would require an average direct workforce of approximately 18 over the life of the Project, including SDG&E's one to two person workforce for operation of the BAAH switchyard. It is anticipated that the same workers who already maintain SDG&E's SWPL transmission line and associated equipment would also maintain the BAAH switchyard, though one new worker could be hired to assist in maintenance of the BAAH switchyard. The operations and maintenance workforce would not significantly increase the demand on public services, including law enforcement, fire protection, emergency medical services, schools, parks and recreation facilities, or other public facilities. The Project could also potentially increase demand for law enforcement, fire protection, and emergency medical services through increased risk of trespass, vandalism, and theft compared to current land uses. With implementation of BMPs, PDFs, and CMAs, impacts would be less than significant.

Loop-in Transmission Lines

Operation and maintenance of the Project would not result in construction of new or physically altered governmental facilities; however, it could result in impacts related to maintaining acceptable service ratios and response times. Operation and maintenance of the Project would require an average direct workforce of approximately 18 over the life of the Project, including SDG&E's one to two workforce for operation of the loop-in transmission lines. It is anticipated that the same workers who already maintain SDG&E's SWPL transmission line and associated equipment would also maintain the loop-in transmission lines, though one new worker could be hired to assist in maintenance of the loop-in transmission lines. The operations and maintenance workforce would not significantly increase the demand on public services, including law enforcement, fire protection, emergency medical services, schools, parks and recreation facilities, or other public facilities. The loop-in transmission lines have the potential to contribute to wildfire risk, especially when they are near or traverse undeveloped areas. The Project could also potentially increase demand for law enforcement, fire protection, and emergency medical services through increased risk of trespass, vandalism, and theft compared to current land uses. With implementation of BMPs, PDFs, and CMAs, impacts would be less than significant.

Impact SC-4

Result in substantial adverse impacts on the local economy and employment? (*No Impact*)

Construction

Project Site Components

The total construction budget for the Project is [redacted] in 2023 dollars. Table 4.10-23 displays the budgeted capital expenditures between four categories of construction expenses.

The Project would result in direct, indirect, and induced benefits to Imperial and Yuma Counties. The direct impact component consists of expenditures made specifically for the proposed project, such as construction labor and materials. These direct impacts generate economic activity elsewhere in the local economy through the multiplier effect, as initial changes in demand "ripple" through the local economy and generate indirect and induced impacts. Indirect impacts are generated by expenditures on goods and services by suppliers who provide goods and services to the construction project. Indirect effects are often referred to as "supplychain" impacts because they involve interactions among businesses. Induced impacts are generated by the spending of households associated either directly or indirectly with the proposed project. Workers employed during construction, for example, would use their income to purchase groceries and other household goods and services. Workers at businesses that supply the project during construction or operation would do the same. Induced effects are also referred to as "consumption-driven" impacts.

Table 4.10-24 presents an estimate of the total economic benefit to Imperial County that would result from construction of the Project, including approximately $216.2 million of direct investment. Table 4.10-25 presents an estimate of total economic benefit to Yuma County that would result from construction of the Project, including approximately $122.7_million of direct investment. The direct investment of $216.2 million in Imperial County, and $122.7 million in Yuma County, would economically benefit many industries. The electric power transmission and distribution industry (Industry 47), the power and communication industry (Industry 52),

Table 4.10-23 Project Capital Construction Budget (2023 Dollars)

Construction expense	Construction expenses (local materials and labor)	Equipment (specialty items purchased from outside of the region)	Total
PV panels	[redacted]	[redacted]	[redacted]
BESS	[redacted]	[redacted]	[redacted]
Project substation and gen-tie line	[redacted]	[redacted]	[redacted]
BAAH switchyard and loop-in transmission lines	[redacted]	[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted]

Source: (Triple Point Strategic Consulting 2024)

Table 4.10-24 Total Construction Impact in Imperial County by Impact Type and Category (2023 Dollars)

Impact type	Labor income	Intermediate expenditures	Other property income	Taxes on products	Total output
Direct	$70,226,641	$101,505,735	$42,232,927	$2,219,111	$216,184,414
Indirect	$13,018,987	$22,053,266	$8,445,285	$6,475,596	$49,993,134
Induced	$8,455,257	$12,753,332	$6,972,287	$2,434,028	$30,614,905
Total	**$91,700,885**	**$136,312,333**	**$57,650,499**	**$11,128,735**	**$296,792,452**

Source: (Triple Point Strategic Consulting 2024)

Table 4.10-25 Total Construction Impact in Yuma County by Impact Type and Category (2023 Dollars)

Impact type	Labor income	Intermediate expenditures	Other property income	Taxes on products	Total output
Direct	$37,875,481	$56,325,981	$26,424,991	$2,053,268	$122,679,721
Indirect	$8,767,127	$14,374,694	$4,356,161	$1,914,643	$29,412,626
Induced	$8,248,273	$11,330,505	$6,356,560	$1,742,302	$27,677,640
Total	**$54,890,881**	**$82,031,180**	**$37,137,711**	**$5,710,214**	**$179,769,986**

Source: (Triple Point Strategic Consulting 2024)

and construction of new highways and streets (Industry 54 utilized for site preparation) would experience the most benefit since it is where the direct capital investment would occur; however, 230 industries in Imperial County, and 241 industries in Yuma County, would receive at least some economic benefit. The indirect and induced labor income impact account for 14.2 and 9.2 percent of total labor income impacts from the Project in Imperial County, respectively. The total indirect and induced labor income impact account for 16.0 and 15.0 percent of total labor income impacts from the Project in Yuma County, respectively. The total output for indirect and induced impacts accounts for 16.8 and 10.3 percent of total output from the Project in Imperial County, respectively. The total output for indirect and induced impacts account for 16.4 percent and 15.4 percent of total output from the Project in Yuma County, respectively.

The Project would produce approximately $43.2 million dollars, and $21.1 million dollars, in total tax revenue from construction in Imperial County and Yuma County, respectively. Table 4.10-26 presents the tax impacts resulting from construction, a portion of which would go to Imperial County. Table 4.10-27 presents the tax impacts resulting from construction, a portion of which would go to Yuma County.

Table 4.10-26 Tax Impact of Construction by Type and Category in Imperial County (2023 Dollars)

Impact type	Sub-county	Special districts	County	State	Federal	Total tax
Direct	$267,813	$370,810	$322,810	$6,705,191	$19,012,516	$26,679,140
Indirect	$754,555	$1,020,560	$894,886	$4,511,944	$3,830,464	$11,012,408
Induced	$284,170	$384,803	$337,294	$2,039,492	$2,459,895	$5,505,654
Total	**$1,306,538**	**$1,776,173**	**$1,554,990**	**$13,256,627**	**$25,302,875**	**$43,197,202**

Source: (Triple Point Strategic Consulting 2024)

Table 4.10-27 Tax Impact of Construction by Type and Category in Yuma County (2023 Dollars)

Impact type	Sub-county	Special districts	County	State	Federal	Total tax
Direct	$328,145	$330,743	$334,039	$1,990,217	$9,753,255	$12,736,400
Indirect	$278,813	$293,272	$296,329	$1,188,421	$2,200,102	$4,256,938
Induced	$256,882	$267,665	$270,455	$1,102,936	$2,206,631	$4,104,569
Total	**$863,840**	**$891,680**	**$900,823**	**$4,281,574**	**$14,159,988**	**$21,097,907**

Source: (Triple Point Strategic Consulting 2024)

The total number of direct jobs supplied by the Project would be an average of 700 per year for 2 years. The average annual labor income per direct job would be $77,216 and average annual labor income for all jobs would be $70,290. Table 4.10-28 presents the number of jobs supported by construction.

In conclusion, the economic benefits to Imperial County would be significant during construction of the Project. Yuma County would benefit from the spending of labor income. Constructing the Project would generate almost $477 million in economic activity over a 2-year period compared to Imperial and Yuma Counties' annual total output of $32.2. billion. In addition, the workforce at the Project site during the 2-year construction period would be a maximum of 1,000 workers at peak periods. As of November 2023, there were 14,048 unemployed persons in Imperial County, as well as 14,768 unemployed persons in Yuma County, representing 18.7 and 14.1 percent unemployment rates, respectively. In addition, the average compensation associated with the Project's construction would exceed Imperial County's mean income and is about the mean income and well over the median income level in Yuma County. Construction of the Project would temporarily create direct, indirect, and induced jobs for Imperial County and Yuma County residents and would decrease the rate of unemployment. The Project would have an overall positive benefit on the local economy and employment during construction, and no adverse impacts would occur.

Table 4.10-28 Employment Impacts from Construction

Impact type	Average annual jobs
Direct	700
Indirect	166
Induced	177
Total	**1,043**

Source: (Triple Point Strategic Consulting 2024)

Breaker-and-a-half Switchyard

Construction of the Project, including the BAAH switchyard, would require an expenditure and result in the payment of taxes that would have beneficial economic impacts and is included in the discussion under Project site. The effects on the local economy and employment from construction of the BAAH switchyard would be beneficial, and no adverse impacts would occur.

Loop-in Transmission Lines

Construction of the Project, including the 500kV loop-in transmission lines, would require an expenditure and result in the payment of taxes that would have beneficial economic impacts and is included in the discussion under Project site. The effects on the local economy and employment from construction of the loop-in transmission lines would be beneficial, and no adverse impacts would occur.

Operation and Maintenance

Project Site Components

The annual direct spending in Imperial County resulting from Project operation and maintenance is anticipated to be $13.6 million in 2023 dollars. The direct investment of $13.6 million would impact many industries. The solar generation industry (Industry 42) would experience the most impact since that is where the direct capital investment would occur; however, 228 industries would receive at least some economic benefit. Refer to the Socioeconomic, Economic Impact, and Fiscal Analysis for a list of industries that would economically benefit from Project operation and maintenance (Triple Point Strategic Consulting 2024).

The indirect and induced labor income benefits during Project operation and maintenance are significant, accounting for 34.9 percent and 9.1 percent of total labor income impacts, respectively. The total output for indirect and induced benefits during operation and maintenance would also be significant, accounting for 28.4 and 6.7 percent of total output, respectively. Table 4.10-29 presents a total annual economic impact of $20.9 million that would result from operation and maintenance of the Project. As shown in Table 4.10-30, the total lifetime output is $1 billion.

Table 4.10-29 Total Operations Impact by Impact Type and Category (2023 Dollars)

Impact type	Labor income	Intermediate expenditures	Other property income	Taxes on products	Total output
Direct	$2,365,262	$6,271,563	$4,464,719	$486,046	$13,587,590
Indirect	$1,475,555	$3,335,365	$932,006	$191,986	$5,934,912
Induced	$386,326	$582,719	$318,319	$111,220	$1,398,584
Total	**$4,227,143**	**$10,189,648**	**$5,715,043**	**$789,252**	**$20,921,085**

Source: (Triple Point Strategic Consulting 2024)

Table 4.10-30 Total Accumulative Impact by Impact Type and Category (2023 Dollars)

Impact type	Labor income	Intermediate expenditures	Other property income	Taxes on products	Total output
Direct	$113,532,561	$301,035,043	$214,306,490	$23,330,216	$652,204,309
Indirect	$70,826,652	$160,097,506	$44,736,287	$9,215,316	$284,875,760
Induced	$18,543,649	$27,970,532	$15,279,291	$5,338,546	$67,132,018
Total	**$202,902,861**	**$489,103,080**	**$274,322,068**	**$37,884,078**	**$1,004,212,087**

Source: (Triple Point Strategic Consulting 2024)

The total number of direct annual jobs created by operation and maintenance of the Project is estimated to be an average of 18 over the Project's lifetime. The total number of jobs is estimated to be an average of 41.2 annually, including direct, indirect, and induced jobs. The average annual labor income per direct job would be $131,403, and average annual income for all jobs would be $102,599. Table 4.10-31 presents the employment created in Imperial County as the result of Project operation and maintenance.

Table 4.10-31 Operation and Maintenance Employment Impacts

Impact type	Average annual jobs
Direct	18.0
Indirect	14.4
Induced	8.8
Total	**41.2**

Source: (Triple Point Strategic Consulting 2024)

The total annual tax impact of the Project during operation and maintenance would be $2.5 million. The total accumulative tax impacts resulting from lifetime operation and maintenance of the Project would be $120.6 million. Table 4.10-32 presents the tax benefit resulting from annual operation and maintenance of the Project, a portion of which would

accrue directly to Imperial County. Table 4.10-33 presents the accumulative tax benefit of operation and maintenance of the Project.

Table 4.10-32 Annual Tax Impact by Operation and Maintenance by Type and Category (2023 Dollars)

Impact type	Sub-County	Special districts	County	State	Federal	Total tax
Direct	$56,870	$77,094	$67,553	$571,075	$783,542	$1,556,134
Indirect	$22,440	$30,490	$26,697	$218,301	$408,065	$705,993
Induced	$12,985	$17,583	$15,412	$93,178	$112,380	$251,538
Total	**$92,295**	**$125,167**	**$109,662**	**$882,554**	**$1,303,987**	**$2,513,665**

Source: (Triple Point Strategic Consulting 2024)

Table 4.10-33 Accumulative Tax Impact of Operations and Maintenance by Type and Category (2023 Dollars)

Impact type	Sub-County	Special districts	County	State	Federal	Total tax
Direct	$2,729,760	$3,700,512	$3,242,544	$27,411,600	$37,610,016	$74,694,432
Indirect	$1,077,120	$1,463,520	$1,281,456	$10,478,448	$19,587,120	$33,887,664
Induced	$623,280	$843,984	$739,776	$4,472,544	$5,394,240	$12,073,824
Total	**$4,430,160**	**$6,008,016**	**$5,263,776**	**$42,362,592**	**$62,591,376**	**$120,655,920**

Source: (Triple Point Strategic Consulting 2024)

The economic benefits to Imperial County would be significant during operation and maintenance of the Project. The operation and maintenance of the Project would generate $1 billion in economic activity over the life of the Project, compared to Imperial County's annual total output of $15.1 billion. The workforce at the Project site during operation and maintenance would be an average of approximately 18 workers, which would provide permanent jobs for the life of the Project (approximately 48 years). In addition, the average compensation associated with the Project's operation and maintenance would exceed Imperial County's mean income. The operation and maintenance of the Project would create direct, indirect, and induced jobs for Imperial County residents and would decrease the rate of unemployment. The Project would have an overall positive benefit on the local economy and employment during operation and maintenance, and no adverse impacts would occur.

At the end of the Project's 50-year life, decommissioning would require an expenditure having beneficial economic impacts, similar to those resulting from constructing and operation of the Project. Decommissioning is expected to temporarily decrease unemployment in the Project area, similar to construction. The effects on employment from decommissioning of the Project would be beneficial. Economic output would be beneficial during decommissioning; however, after decommissioning, the jobs associated with operation and maintenance would be lost. The

Project would have an overall positive benefit on the local economy and employment during decommissioning, and no adverse impacts would occur.

Breaker-and-a-half Switchyard

During operations, the workforce for the BAAH switchyard is anticipated to be sourced from the existing SDG&E workforce, with the potential for up to 1 additional worker to assist in operation of the new infrastructure. The Project would have no adverse effects on employment from operation and maintenance of the BAAH switchyard as the workforce would be approximately the same as existing conditions. In addition, the average compensation associated with the Project's construction, operation and maintenance and, likely, decommissioning would exceed Imperial County's mean income. The Project, including the BAAH switchyard, would have an overall positive benefit on the local economy and employment during construction, operation and maintenance, and decommissioning, and no adverse impacts would occur.

Loop-in Transmission Lines

During operations, the workforce for the 500kV loop-in transmission lines is anticipated to be sourced from the existing SDG&E workforce, with the potential for up to 1 additional worker to assist in operation of the new infrastructure. The Project would have no adverse effects on employment from operation and maintenance of the loop-in transmission lines as the workforce would be approximately the same as existing conditions. In addition, the average compensation associated with the Project's construction, operation and maintenance and, likely, decommissioning would exceed Imperial County's mean income. The Project, including the 500kV loop-in lines, would have an overall positive benefit on the local economy and employment during construction, operation and maintenance, and decommissioning, and no adverse impacts would occur.

Impact SC-5

Create adverse fiscal impacts on the community? (*Less than Significant*)

This section discusses the revenues that would accrue to Imperial County resulting from the development of the land. The Project would require the purchase of considerable specialized equipment, including PV panels, inverters, and BESS, from outside Imperial County. Personal property and sales taxes would apply to the ownership and transaction of this equipment and would accrue to Imperial County. The Project's private parcels would also pay real property taxes and federal fees. Taxes would also be placed on the local purchase of basic goods and services for construction and operation and maintenance of the Project. The fiscal impacts analysis presented below is in addition to the information provided in Impact SC-4 and shows an economic benefit to Imperial County.

Construction

Project Site Components

The transfer of personal property for value is taxable. The Applicant would take possession of the specialty equipment at the Project site, where it is to be assembled, and is subject to Imperial County sales taxes. The State of California provides for a partial sale and use tax exemption,

generally known as the Manufacturing and Research & Development Equipment Exemption, found in Assembly Bills 398 and 131 (California Department of Tax and Fee Administration, n.d.)(California Department of Tax and Fee Administration, 2024). This exemption reduces Imperial County's nominal rate of 7.75 percent by 3.9375 percent to 3.8125 percent. Effective tax rates per authority and estimated revenues are shown in Table 4.10-34.

Construction of the Project would result in a positive fiscal impact. Construction spending would result in local sales tax revenue amounting to over $73 million over the approximate 2-year construction schedule. This amount could more than fund the incremental demands on public services previously discussed. Impacts from construction of the Project would be less than significant.

Breaker and a half Switchyard

The economic and fiscal impacts of the construction of the BAAH switchyard are included in the analysis above for Project site components and would result in a positive fiscal impact. Construction spending would result in local sales tax revenue amounting to over $73 million over the approximate 2-year construction schedule. This amount could more than fund the incremental demands on public services previously discussed. Impacts from construction of the BAAH switchyard would be less than significant.

Loop-in Transmission Line

The economic and fiscal impacts of the construction of the loop-in transmission lines are included in the analysis above for Project site components and would result in a positive fiscal impact. Construction spending would result in local sales tax revenue amounting to over $73 million over the approximate 2-year construction schedule. This amount could more than fund the incremental demands on public services previously discussed. Impacts from construction of the loop-in transmission lines would be less than significant.

Table 4.10-34 Sales Tax Revenue from Construction Phase Specialty Equipment (2023 Dollars)

Sales and use tax authority	Rate	Tax revenue
Local public safety fund – criminal justice	0.5000%	$9,644,912
Local revenue fund – health and social services	0.5000%	$9,644,912
Local revenue fund 2011	1.0625%	$20,495,437
County transportation funds	0.2500%	$4,822,456
City/County operations	1.0000%	$19,289,823
Imperial County Local Transportation Authority	0.5000%	$9,644,912
Total	**3.8125%**	**$73,542,452**

Source: (Triple Point Strategic Consulting 2024)

Operation and Maintenance

Project Site Components

Following construction of the Project in 2026 and 2027, the facility would be taxable as of January 1, 2028, and would be payable in August of that year. This estimate of personal property tax payments assumes the budgeted amounts to purchase the specialty equipment, less sales tax, totals the assessed valuation (refer to Table 4.1023). The total valuation of the PV panels and transmission components is assumed to be [redacted], and the total valuation of the BESS is assumed to be [redacted], as provided by the Applicant based on previous experience. The net present value of specialty parts purchased annually over the lifetime of the Project is projected to be [redacted].

The current tax rate for the Project site is 1.1301 percent. Table 4.10-35 estimates the personal property tax revenue that would be generated by the Project by taxing authority. The Project is estimated to generate a total of $508 million in property tax revenue over the Project's lifetime. Final and actual property tax revenue would depend on the assessor's determination and other factors upon completion of construction.

Eight private, vacant parcels may be purchased for the Project and would be subject to real property taxes at 1.1301 percent. The current combined value of these parcels is $101,038, or about $193 per acre. The total amount of annual real property tax would be $1,142. Purchase of PV panels and associated Project equipment would increase assessed values to purchase prices. While unknown at this time, if the average purchase price is $10,000 per acre, the total valuation would increase to over $5 million, and the annual real property tax revenue would be approximately $60,000. This estimate is an average based on purchase price information for two of the private properties provided.

Table 4.10-35 Net Present Value of Estimated Lifetime Personal Property Tax Payments

Property tax authority	Tax rate	Total tax
One percent full value	1.0000%	$449,713,217
Holtville unified bond	0.0207%	$9,309,064
Holtville USD bond 2014	0.0098%	$4,407,190
Holtville USD 2016 ref bond	0.0033%	$1,484,054
Holtville USD 2018 ser A	0.0293%	$13,176,597
Imperial Community College bond 2004	0.0670%	$30,130,786
Total	**1.1301%**	**$508,220,906**

Source: (Triple Point Strategic Consulting 2024)

During the operation and maintenance of the Project, specialty equipment such as PV panels would be purchased from outside the region to replace worn and broken equipment. Table 4.10-36 applies sales tax rates to the net present value of the estimated total replacement equipment purchases over the 48 years of operation and maintenance, generating $5.3 million sales tax revenue.

Table 4.10-36 Sales Tax Revenue from Operation Phase Specialty Equipment (2023 Dollars)

Sales and use tax authority	Rate	Tax revenue
Local public safety fund – criminal justice	0.5000%	$696,031
Local revenue fund – health and social services	0.5000%	$696,031
Local revenue fund 2011	1.0625%	$1,479,066
County transportation funds	0.2500%	$348,015
City/County operations	1.0000%	$1,392,062
Imperial County Local Transportation Authority	0.5000%	$696,031
Total	**3.8125%**	**$5,307,236**

Source: (Triple Point Strategic Consulting 2024)

The Project is required to pay federal fees per the Federal Land Policy and Management Act of 1976. Under current BLM policies, the fee would be $500 per MWac in the first year, $1,000 per MWac in the second year, and $2,000 per MWac in the third year and for the rest of the lifespan. The acreage rent depends on the number of acres and various factors published by the BLM. Estimates of lifetime payments are shown in Table 4.10-37. While these fees are paid to the federal government, a portion of the fees would be provided to the County.

Operation and maintenance of the Project site would result in a positive fiscal impact.

A total of almost $600 million in property and sales tax revenues over the lifetime of the Project (construction and operation) would provide a local benefit including health, safety, transportation, education, and other needs of Imperial County's residents. Impacts of the Project would be less than significant.

At the end of the Project's 50-year life, decommissioning would require an expenditure having beneficial economic impacts just as impacts would occur from construction and operation of the Project. The Project would have an overall positive fiscal impact on the local economy at the end of its life, and no adverse impacts would occur.

Table 4.10-37 Estimated Lifetime Megawatt Capacity Fee and Acreage Rent

BLM fees	Megawatt fee	Acreage rent	Federal fees total
Lifetime totals	$107,525,000	$40,126,147	$147,651,147

Source: (Triple Point Strategic Consulting 2024)

Breaker and a half Switchyard
The economic and fiscal impacts of the operation and maintenance of the BAAH switchyard are included in the analysis above for Project site components and would result in a positive fiscal impact. A total of almost $600 million in property and sales tax revenues over the lifetime of the Project (construction and operation) would provide a local benefit including health, safety, transportation, education, and other needs of Imperial County's residents. The Project, including the BAAH switchyard, would have an overall positive fiscal impact on the local economy at the end of its life, and no adverse impacts would occur.

Loop-in Transmission Line
The economic and fiscal impacts of the operation and maintenance of the loop-in transmission lines are included in the analysis above for Project site components and would result in a positive fiscal impact. A total of almost $600 million in property and sales tax revenues over the lifetime of the Project (construction and operation) would provide a local benefit including health, safety, transportation, education, and other needs of Imperial County's residents. The Project, including the loop-in transmission lines, would have an overall positive fiscal impact on the local economy at the end of its life, and no adverse impacts would occur.

Impact SC-6

Result in substantial adverse impacts on educational facilities? *(No Impact)*

Project Site Components
Construction, operation and maintenance, and decommissioning of the Project is not anticipated to result in a significant increased demand on schools based on the temporary nature of construction and decommissioning and the limited number of workers anticipated to relocate with their families for construction and operations and maintenance. The Project would provide a positive benefit to educational facilities through increased incremental tax revenue that would accrue in the district (refer to Table 4.10-35). No substantial adverse impacts on educational facilities would occur from the Project.

Breaker-and-a-half Switchyard
Construction, operation and maintenance, and decommissioning of the BAAH switchyard is not anticipated to result in a significant increased demand on schools based on the temporary nature of construction and decommissioning and the limited number of workers anticipated to relocate with their families for construction and operations and maintenance. The Project (including the BAAH switchyard) would provide a positive benefit to educational facilities through increased incremental tax revenue that would accrue in the district (refer to Table 4.10-35). No substantial adverse impacts on educational facilities would occur from the BAAH switchyard.

Loop-in Transmission Lines
Construction, operation and maintenance, and decommissioning of the 500 kV loop-in transmission lines is not anticipated to result in a significant increased demand on schools based on the temporary nature of construction and decommissioning and the limited number of workers anticipated to relocate with their families for construction and operations and

maintenance. The Project (including the 500 kV loop-in transmission lines) would provide a positive benefit to educational facilities through increased incremental tax revenue that would accrue in the district (refer to Table 4.10-35). No substantial adverse impacts on educational facilities would occur from the loop-in transmission lines.

Impact SC-7

Result in substantial adverse impacts on the provision of utility services? (*No Impact*)

No net financial impacts to local utilities area anticipated.

Construction

Project Site Components

Power would be supplied from temporary generators during construction; therefore, no impacts to electrical utilities would occur during the construction phase of the Project site.

During construction, it is anticipated that a total of up to 1,000 acre-feet of water would be used for dust control and suppression (including truck wheel washing) and other construction activities. Water use during construction would be sourced from up to four on-site groundwater wells. If on-site wells are not able to supply the full water quantity required for construction, the water supply would be supplemented from off-site local water purveyor(s) and trucked in from an off-site location. The purchase of water would be subject to local water requirements per the applicable agency; therefore, no substantial adverse impacts on the provision of water services is anticipated during construction of the Project site.

Breaker-and-a-half Switchyard

Power would be supplied from temporary generators during construction; therefore, no impacts to electrical utilities would occur during the construction phase of the BAAH switchyard.

Construction of the BAAH switchyard would require approximately 2.5 percent of total construction water use (1000 acre-feet), so the water used in construction of the BAAH switchyard would be approximately 25 acre-feet. Water use for the BAAH switchyard would be sourced from the Project's on-site groundwater wells or supplemented from off-site local water purveyor(s) and trucked in. The use and purchase of water would be subject to local water requirements per the applicable agency. No substantial adverse impacts on the provision of water services are anticipated.

Loop-in Transmission Lines

Power would be supplied from temporary generators during construction; therefore, no impacts to electrical utilities would occur during the construction phase of the 500 kV loop-in transmission lines.

Construction of the loop-in transmission lines would require approximately 2.5 percent of total construction water use (1000 acre-feet), so the water used in construction of the BAAH switchyard would be approximately 25 acre-feet. Water use for the BAAH switchyard would be sourced from the Project's on-site groundwater wells or supplemented from off-site local water

purveyor(s) and trucked in. The use and purchase of water would be subject to local water requirements per the applicable agency. No substantial adverse impacts on the provision of water services are anticipated.

Operation and Maintenance

Project Site Components

Power would be supplied from an existing 12 kV Imperial Irrigation District transmission line approximately 750 feet (0.15 mile) south of the Project site. The Project would be required to coordinate with the Imperial Irrigation District prior to using the energy for operation and maintenance and would pay the Imperial Irrigation District for use of this energy; therefore, no substantial adverse impacts on the provision of electrical services is anticipated during operation and maintenance of the Project.

During operation and maintenance of the Project, water would be required for panel washing and maintenance as well as for workforce restroom facilities. During operation and maintenance, the Project would require the use of approximately 50 acre-feet annually for panel washing (up to four times per year) and other uses. No wastewater would be generated during panel washing as water would be absorbed into the surrounding soil or would evaporate. Alternatively, waterless panel washing options would also be explored in coordination with regulatory agencies including the CEC, BLM, BOR, and Imperial County. Water for operation and maintenance would be sourced from one of the Project site groundwater wells or from an off-site local water purveyor. Limited water would also be used for the operation and maintenance facility staff, including restrooms. The purchase of water would be subject to local water requirements per the applicable agency. Water use during decommissioning would be sourced from one of the onsite wells or an offsite purveyor and would be subject to local water requirements per the applicable agency. Therefore, no substantial adverse impacts on the provision of water services are anticipated during operation and maintenance of the Project site.

Breaker-and-a-half Switchyard

Operation and maintenance and decommissioning of the BAAH switchyard would require power supply from an existing 12 kV Imperial Irrigation District transmission line approximately 750 feet (0.15 mile) south of the Project site. The Project would be required to coordinate with the Imperial Irrigation District prior to operation and maintenance as well as decommissioning; therefore, no substantial adverse impacts on the provision of electrical services is anticipated during operation and maintenance or decommissioning of the BAAH switchyard.

Operation and maintenance of the BAAH switchyard are not anticipated to require water. Water use during decommissioning would be sourced from one of the onsite wells or an offsite purveyor and would be subject to local water requirements per the applicable agency. Therefore, no substantial adverse impacts on the provision of water services are anticipated.

Loop-in Transmission Lines

Operation and maintenance and decommissioning of the 500 kV loop-in transmission lines would require power supply from an existing 12 kV Imperial Irrigation District transmission line approximately 750 feet (0.15 mile) south of the Project site. The Project would be required to coordinate with the Imperial Irrigation District prior to operation and maintenance as well as decommissioning; therefore, no substantial adverse impacts on the provision of electrical services is anticipated during operation and maintenance or decommissioning of the 500 kV loop-in transmission lines.

Operation and maintenance of the 500 kV loop-in transmission lines are not anticipated to require water. Water use during decommissioning would be sourced from one of the onsite wells or an offsite purveyor and would be subject to local water requirements per the applicable agency; therefore, no substantial adverse impacts on the provision of water services are anticipated.

Impact SC-8

Change the character of nearby local communities or affect the ability of the local population to address its needs; or create substantial change in community interaction patterns, social organization, social structure, or social institutions; substantial conflict with community attitudes, values or perception; or substantial inequalities in the distribution of the costs and benefits? (*Less than Significant*)

Construction

Project Site Components

Construction of the Project could result in temporary changes to community character. The number of construction workers that would move closer to the Project Application Area is unknown but would not likely be more than 10 percent of the peak workforce, or approximately 100 workers, as a conservative estimate. This population could result in increased disruption and traffic, which could adversely affect residents within the CDPs and cities up to 30 miles from the Project site; however, the increase would constitute a less than a 1-percent population increase in Imperial County or Yuma County during construction and would be temporary. Project workers would also purchase goods and services in the local CDPs and cities in the Project vicinity, resulting in beneficial impacts for nearby residents and businesses. Project impacts would be less than significant.

The Project has developed a draft Community Benefits Agreement, which outlines a plan to invest $1,500,000 over a 10-year period to local organizations, Native American Tribes, and workforce development training opportunities in partnership with organized labor in Imperial County, see Appendix S. The Project would invest in resources that community leaders, in collaboration with the Applicant, identified as priority needs that could contribute to enhanced community character and quality of life for residents.

Breaker-and-a-half Switchyard

Construction of the Project, including the BAAH switchyard, could result in temporary changes to community character. The small local population increase that could result from construction could result in increased disruption and traffic however, the increase would constitute a less

than a 1-percent population increase in Imperial County or Yuma County during construction and would be temporary. Project workers would also purchase goods and services in the local CDPs and cities in the Project vicinity, resulting in beneficial impacts for nearby residents and businesses. Impacts of construction of the BAAH switchyard would be less than significant.

Loop-In Transmission Line

Construction of the Project, including the 500kV loop-in transmission lines, could result in temporary changes to community character. The small local population increase that may result from construction could result in increased disruption and traffic; however, the increase would constitute a less than a 1-percent population increase in Imperial County and Yuma County during construction and would be temporary. Project workers would also purchase goods and services in the local CDPs and cities in the Project vicinity, resulting in beneficial impacts for nearby residents and businesses. Impacts of construction of the loop-in transmission lines would be less than significant.

Operation and Maintenance

Project Site Components

Operation and maintenance of the Project could result in changes to community character. Public perception of the overall Project would be variable, as some may perceive the Project as positive while others may perceive it as a loss of rural and undeveloped character.

As noted, the Project has developed a Community Benefits Agreement, which outlines a plan to invest financial resources in Imperial County for the benefit of the local population. The Project would invest in resources that community leaders, in collaboration with the Applicant, identified as priority needs that could contribute to enhanced community character and quality of life for residents extend into operation and maintenance of the Project. Decommissioning of the Project could result in temporary changes to community character, similar to the construction phase. Project workers during decommissioning would also purchase goods and services in the local CDPs and cities in the Project vicinity, resulting in beneficial impacts for nearby residents and businesses. Project impacts during operation and maintenance would be less than significant.

Breaker-and-a-half Switchyard

Operation and maintenance of the Project, including the BAAH switchyard, could result in changes to community character. Public perception of the overall Project would be variable, as some may perceive the Project as positive while others may perceive it as a loss of rural and undeveloped character. Overall operation and maintenance impacts of the Project, including the BAAH, would be less than significant.

Loop-in Transmission Lines

Operation and maintenance of the Project, including the loop-in transmission lines, could result in changes to community character. Public perception of the overall Project would be variable, as some may perceive the Project as positive while others may perceive it as a loss of rural and

undeveloped character. Overall operation and maintenance impacts of the Project, including the loop-in transmission lines, would be less than significant.

Impact SC-9

Result in disproportionately high and adverse impacts to EJ populations? (*Less than Significant)*

Adverse effects on the physical environment or human quality of life could be disproportionately higher for EJ communities of concern within proximity to the Project site, along commuter and delivery truck routes, and within communities where Project construction workers might be housed temporarily. The following topics are those where EJ communities would be impacted.

Construction and decommissioning

Project Site Components

Housing. The total number of direct jobs supplied by the Project would be up to 1,000 per year for 2 years. The number of workers that would move closer to the Project site is unknown but would likely not be more than 10 percent of the peak workforce (or an estimated 100 workers). An estimated 7,585 vacant rental housing units were available in Imperial County in 2022, with 71 percent, or 5,405 units, within an approximate 30-mile distance of the Project site in Imperial County. Project impacts to housing inventories within Imperial County would be on the order of a 0.1-percent reduction in vacancies within Imperial County, or an approximate 1.9-percent reduction in vacancies within 30 miles of the Project site in Imperial County. Additionally, an estimate of 5,913 vacant rental units were available in Yuma County in 2022 within an approximate 30-mile distance of the Project site. Similarly, Project impacts to housing inventories in Yuma County within 30 miles would be on the order of 1.7 percent under the conservative scenario that all 100 workers relocate to Yuma Counties. The Project could place localized pressure on the housing rental market and demand for short-term housing within 30 miles of the Project site, where EJ communities of concern are located; however, the housing demand would be temporary and distributed throughout the cities and CDPs within 30 miles of the Project site. Disproportionate and adverse housing impacts to EJ communities of concern during construction would be less than significant.

The workforce and temporal duration for decommissioning is expected to be similar to that of the construction period. A small influx of workers may move into the Project vicinity, similar to the construction phase. Although it is difficult to forecast employment and housing availability conditions 50 years into the future, based on the overall housing projections in Imperial County and Yuma County, it is expected that the housing supply would be greater than under existing conditions and, therefore, impacts would be less than significant.

Economic Conditions. The temporary construction and decommissioning workforce would increase the demand for services within an approximate 30 mile radius of the Project site and along commuter routes, including law enforcement, fire protection, emergency medical services, and medical facilities. This increase in demand could place additional pressure on these services, adversely affecting service ratios to EJ communities of concern within 30 miles of the Project site in Imperial County and Yuma County, including Avenue B and C CDP, Brawley

City, Calexico City, Donovan Estates CDP, Drysdale CDP, El Centro City, Fort Yuma Indian Reservation, Gadsden CDP, Heber CDP, Holtville, Imperial City, Orange Grove Mobile Manor CDP, Padre Ranchitos CDP, San Luis City, Somerton City, Wall Lane CDP, Winterhaven CDP, and Yuma City, and Census Tracts 108, 109, 119.03, and 124.

The Project would implement a Security and Emergency Preparedness Plan and comply with BMP 131 and CMA LUPA-SW-7, which would require the adherence to a fire safety plan, a Health, Safety, and Noise Plan, and worker training to reduce fire risks and injuries at the Project site. Minimizing risks of emergency incidents at the Project site would reduce emergency services, medical attention needs, and service ratios on and off the Project site. The Project would also implement a Construction Traffic Control Plan, which would include the implementation of a trip reduction (i.e., rideshare/carpool) program for the construction workforce to reduce commuter traffic by 50 percent. Reducing the number of cars on roadways during construction of the Project would reduce the risks of traffic accidents that would require emergency or medical services. The Project would also comply with PDF FIRE-1, which requires the preparation and implementation of a Fire Management and Prevention Plan in coordination with BLM Fire and Imperial County Fire Department to identify the fire hazards and response scenarios that may be required for the Project site. The Fire Management and Prevention Plan and coordination with BLM Fire and Imperial County Fire Department would ensure acceptable service ratios and response times are maintained during Project construction. With the implementation of the Security and Emergency Preparedness Plan, BMP 131, CMA LUPA-SW-7, Construction Traffic Control Plan, and PDF FIRE-1, disproportionate and adverse impacts to EJ communities of concern during construction would be less than significant.

Biological and Cultural Resources. The Project would alter an area of natural habitat that could contain important plants or archaeological sites to the EJ tribal communities of concern. The Project would conduct Class III surveys to identify archaeological sites within the Project site. The Project would also implement PDF CUL-5 and PDF CUL-6, which would require a Tribal Participation Plan for Monitoring, which would afford representatives designated by Native American tribes the opportunity to be on site during construction to observe initial grading, trenching, or other excavation as appropriate, and treatment of human remains would be conducted in compliance with California Health and Safety Code section 7050.5 and California Public Resources Code section 5097.98. With the implementation of PDF CUL-5 and PDF CUL-6, impacts to EJ communities of concern during construction would be less than significant. Refer to Section 4.3 Cultural Resources for additional information.

Noise, air quality and public health, visual resources, and traffic. The closest EJ community of concern to the Project site is Census Tract 124, which encompasses the Project site. The closest residence or public space within Census Tract 124 is a residence located approximately 3.3 miles to the west on agricultural land. The next closest EJ communities of concern are Census Tracts 108 and 119.03, approximately 3.0 miles west and 3.8 miles west, respectively. These communities would not be disproportionately affected by noise due to distance and noise attenuation during either construction or decommissioning.

As discussed in Section 4.1 Air Quality, uncontrolled construction emissions would exceed nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter 10 microns or smaller (PM10) thresholds established by the Imperial County Air Pollution Control District (ICAPCD). The project would implement BMPs, PDFs, CMAs, and a Fugitive Dust Control Plan; however, emissions of NOx, CO, and PM10 would still exceed the ICAPCD threshold. To mitigate this impact, Applicant proposes Mitigation Measure AIR-1, which, in accordance with ICAPCD Policy Number 5,[5] "Off-site Mitigation/In-lieu Fee," would require contribution to an ICAPCD regional mitigation program to reduce emissions of both ozone precursors, including NO_x and CO. With implementation of Mitigation Measure AIR-1, the impact from NO_x and CO emissions would be less than significant. To further reduce PM10 emissions to below the IAPCD threshold, the Applicant proposes Mitigation Measure AIR-2, which would apply ICAPCD's Rule 310, which requires in-lieu fee mitigation for fugitive dust produced by operational sources, to the Project's construction-phase fugitive dust emissions. In accordance with ICAPCD Rule 310, Applicant would either, in coordination with ICAPCD, create an off-site mitigation project or program that would demonstrate the required PM10 reductions or would pay an in-lieu of mitigation fee. With implementation of Mitigation Measure AIR-2, the impact from PM10 emissions would be less than significant. The Project would not result in an adverse and disproportionate impact to EJ communities of concern with the 30-mile radius of the Project site.

The Project construction could be visible from some of these EJ communities of concern, but views would not be contiguous due to intervening infrastructure and cropland. The closest EJ community of concern within the CDP and cities within 30 miles is Holtville. A large portion of the Holtville area would have views of the Project site but would be at a distance of approximately 10 miles from the Project site with much intervening infrastructure and cropland. At a distance of more than 10 miles, visual contrast and visibility are greatly diminished and this community would not be disproportionately affected by the Project's visual impacts.

Project construction and decommissioning would also temporarily increase vehicle trips on highways and local roads near or within EJ communities of concern. Potential impacts include increased commute times from traffic delays, wear and tear on local roads, and increased service ratios at gas stations, food establishments, or other community resources. However, these impacts would be temporary, and the Project would implement a Construction Traffic Control Plan to reduce commuter traffic by approximately 50 percent. Impacts to EJ communities of concern during construction would be less than significant.

[5] https://apcd.imperialcounty.org/wp-content/uploads/2023/05/P5-Offsite-Mitigation-In-Lieu-Fee-FINAL-Nov.-2022.pdf

Breaker-and-a-half Switchyard
The effects of construction of the BAAH switchyard on EJ communities is included in the discussion of the Project site components above. Impacts to biological resources, cultural resources, noise, air quality and public health, visual resources, and traffic would be the same or reduced compared with Project site components. From an EJ perspective, the effects during construction would be indistinguishable as the Project site and BAAH switchyard would be constructed simultaneously.

Loop-in Transmission Lines
The effects of construction of the loop-in transmission line construction on EJ communities is included in the discussion of the Project site components above. Impacts to biological resources, cultural resources, noise, air quality and public health, visual resources, and traffic would be the same or reduced compared with Project site components. From an EJ perspective, the effects during construction would be indistinguishable as the Project site and 500 kV loop-in transmission line would be constructed simultaneously.

Operation and Maintenance
Project Site Components
Housing. The Project would require an average direct workforce of approximately 18 over the life of the Project. The workforce during operation and maintenance of the Project site would primarily be sourced from the surrounding cities or CDPs. Some of the permanent positions could be filled by migrating workers; however, due to the small number of permanent workers needed during operation and maintenance, no disproportionate housing effects are expected to EJ communities of concern. Due to the Project site's remote location, the solar facility is not expected to impact neighboring property values of EJ communities of concern and, overall, impacts would be less than significant.

Economic Conditions. Operation and maintenance of the Project could result in increased demand on law enforcement, fire protection, and emergency medical services due to increased risk of trespass, vandalism and theft, as well as increased risk to contribute to wildfires, compared to current land uses. This increase in demand could place additional pressure on these services, adversely affecting service ratios to EJ communities of concern within 30-miles of the Project site. The Project would implement a Security and Emergency Preparedness Plan and comply with BMP 131 (Wildfire) and BLM Conservation and Management Action (CMA) LUPA-SW-7, which would require the adherence to a fire safety plan, a Health, Safety, and Noise Plan, and worker training to reduce fire risks and injuries at the Project site.

With the implementation of these plans, service ratios and response times would be coordinated with the service providers and maintained during Project operation and maintenance. Disproportionate and adverse impacts to EJ communities of concern are not anticipated during Project operation and maintenance.

Biological and Cultural Resources. Potential ecological and cultural impacts from operation and maintenance of the Project would remain the same as, or be reduced compared to, the

construction phase. No new disturbance footprint would be required, and therefore, operation and maintenance is not expected to result in impacts to previously undiscovered archaeological resources. Disproportionate and adverse ecological and cultural impacts to EJ communities of concern are not anticipated during Project operation and maintenance.

Noise, Air Quality and Public Health, Visual Resources, and Traffic. Project operation and maintenance would not result in new ground disturbance, and the number of average daily workers would be approximately 18. Dust generation or noise during Project operation and maintenance would not adversely or disproportionately impact EJ communities of concern. Similar to construction, visual resource impacts are not anticipated to disproportionately or adversely impact EJ communities of concern due to distance, intervening cropland, and infrastructure. Disproportionate and adverse impacts to EJ communities of concern related to human health and social conditions are not anticipated during operations and maintenance.

Breaker-and-a-half Switchyard

Housing. The effects of operations of the BAAH switchyard on EJ communities is included in the discussion of the Project site components above. Impacts to housing would be the same or reduced compared with Project site components. From an EJ perspective, the effects during operations would be indistinguishable as the Project site and BAAH switchyard would be constructed simultaneously. No disproportionate adverse impacts to EJ communities of concern during operation and maintenance would occur.

Economic Conditions. The same measures required during Project construction, operation and maintenance, and decommissioning of the Project site would apply to the BAAH switchyard including the Security and Emergency Preparedness Plan, BMP 131, CMA LUPA-SW-7, Construction Traffic Control Plan, PDF FIRE-1, and a Fire Management and Prevention Plan in coordination with BLM Fire and Imperial County Fire Department. Disproportionate and adverse impacts to EJ communities of concern associated with the BAAH switchyard would be less than significant.

Biological and Cultural Resources. Potential ecological and cultural impacts from operation and maintenance of the BAAH switchyard would remain the same as or be reduced compared with the construction phase. Impacts to EJ communities of concern during operation and maintenance would be less than significant. Refer to Section 4.2 Biological Resources and Section 4.3 Cultural Resources for additional information.

Noise, Air Quality and Public Health, Visual Resources, and Traffic. The effects of operations of the BAAH switchyard on EJ communities is included in the discussion of the Project site components above. Impacts to biological resources, cultural resources, noise, air quality and public health, visual resources, and traffic would be the same or reduced compared with Project site components. From an EJ perspective, the effects during operations would be less than significant.

Loop-in Transmission Lines

Housing. The effects of operations of the 500 kV loop-in transmission lines on EJ communities is included in the discussion of the Project site components above. No disproportionate adverse impacts to EJ communities of concern during operation and maintenance would occur.

Economic Conditions. The same measures required during Project construction, operation and maintenance, and decommissioning of the Project site would apply to the 500 kV loop-in transmission lines including the Security and Emergency Preparedness Plan, BMP 131, CMA LUPA-SW-7, Construction Traffic Control Plan, PDF FIRE-1, and a Fire Management and Prevention Plan in coordination with BLM Fire and Imperial County Fire Department. Disproportionate and adverse impacts to EJ communities of concern associated with the 500 kV loop-in transmission lines would be less than significant.

Biological and Cultural Resources. Potential ecological and cultural impacts from operation and maintenance of the 500 kV loop-in transmission lines would remain the same as or be reduced compared with the construction phase. Impacts to EJ communities of concern during operation and maintenance would be less than significant. Refer to Section 4.2 Biological Resources and Section 4.3 Cultural Resources for additional information.

Noise, Air Quality and Public Health, Visual Resources, and Traffic. The effects of operations of the 500 kV loop-in transmission lines on EJ communities is included in the discussion of the Project site components above. Impacts to biological resources, cultural resources, noise, air quality and public health, visual resources, and traffic would be the same or reduced compared with Project site components, less than significant.

4.10.3 Cumulative Impacts

Project Site Components

This impact analysis highlights that most of the Project's economic impacts would be beneficial to the local economy or neutral to insignificant. Cumulative impacts associated with socioeconomics and EJ could occur within the region if construction schedules overlap, which would require a large construction workforce and temporary housing for multiple projects at the same time. Cumulative projects listed in Section 4.0 are not expected to produce substantial traffic, housing, and associated public services overlaps with the construction phase of the Project. As noted in Table 4-1, few projects would have any potential to overlap construction phases within a 6-mile radius. Of the projects that could potentially have an overlapping construction schedule, VEGA SES 4 Solar Energy Project, Viking Solar Energy Generation and Battery Storage Project, and the North Gila–Imperial Valley 500 kV Transmission Project are not anticipated to result in a cumulative traffic impact (refer to Section 4.12 Traffic and Transportation). The Project would also not result in a cumulatively considerable visual impact (refer to Section 4.13, Visual Resources). As discussed in Section 4.1 Air Quality, the Project would exceed ICACPD thresholds for NOx, CO, and PM_{10} and contribute to a potentially cumulatively significant impact. Mitigation Measure AIR-1 and provides a regional solution for reduction of NOx and CO to reduce the cumulative impacts to less than significant and

Mitigation Measure AIR-2 provides a regional solution for reduction of PM_{10} to reduce the cumulative impacts to less than significant. The Project's Fire Management and Prevention Plan, Security and Emergency Preparedness Plan and other measures would ensure that service ratios and response times would be maintained during Project construction and operation and maintenance. Therefore, with the Project's implementation of MM AIR-1 and MM AIR-2, along with all other BMPs, PDFs, and CMAs, the Project's contribution to significant cumulative impacts would be reduced to less than significant. A disproportionate and adverse cumulative impact to EJ communities of concern would not occur.

Breaker-and-a-half Switchyard

Construction and operation of the BAAH switchyard is considered in the cumulative impact analysis of the overall Project discussed above; therefore, similar to the overall Project, the BAAH switchyard would not contribute to cumulative, disproportionate impacts to EJ populations.

Loop-In Transmission Line

Construction and operation of the 500kV loop-in transmission lines is considered in the cumulative impact analysis of the overall Project discussed above; therefore, similar to the overall Project, the loop-in transmission lines would not contribute to cumulative, disproportionate impacts to EJ populations.

4.10.4 Proposed Best Management Practices, Project Design Features, Conservation Management Actions, and Mitigation Plans

As part of the Project, the Applicant, and the other entities involved in construction and operation, would implement BMPs, PDFs, and CMAs. The Applicant has also prepared mitigation plans as required by the BLM.

Project Site Components

Best Management Practices and Project Design Features

The Project would implement the following BMPs and PDFs related to socioeconomics and EJ:

- BMP-1 through BMP-16 (Air Quality)
- BMP-40 through BMP-54 (Hazardous Materials)
- BMP-55, BMP-98, BMP-102, and BMP-103 (Traffic)
- BMP-63 and BMP-64 (Native American Concerns)
- BMP-131 (Wildfire)
- BMP-65 through BMP-78 (Noise)
- BMP-105 through BMP-116 (Visual)
- PDF FIRE-1
- PDF CUL-5 and PDF CUL-6

Conservation Management Actions

The Project would implement the following DRECP CMAs relevant to socioeconomics and EJ:

- LUPA-AIR-1 through LUPA-AIR-5

- LUPA-CUL-3, LUPA-CUL-4, LUPA-CUL-7 through LUPA-CUL-9, LUPA-CUL-11
- LUPA-SW-1, LUPA-SW-6, LUPA-SW-7, LUPA-SW-22 through LUPA-SW-24
- LUPA-VRM-1 through LUPA-VRM-3
- LUPA-TRANS-CUL-1 through LUPA TRANS-CUL-7
- LUPA-COMP-1
- DFA-VPL-BIO-FIRE-1
- DFA-VPL-VRM-2 and DFA-VPL-VRM-3
- DFA-VRM-1 and DFA-VRM-2

Mitigation Plans
The Project would implement the following mitigation plans relevant to socioeconomics and EJ:

- Groundwater Resources Technical Report
- Groundwater Monitoring and Reporting Plan
- Security and Emergency Preparedness Plan
- Health, Safety, and Noise Plan
- Construction Traffic Control Plan
- Fire Management and Prevention Plan
- Fugitive Dust Control Plan

Community Benefits Agreement
The Project would implement a Community Benefits Agreement with various community organizations in Imperial County. The Project has developed a draft Community Benefits Agreement, which outlines a plan to invest financial resources in Imperial County for the benefit of the local population. The scope and scale of the agreement(s) and potential beneficiaries is in progress. The Project would invest in resources that community leaders, in collaboration with the Applicant, identified as priority needs that could contribute to enhanced community character and quality of life for residents.

Mitigation Measures
The Project would implement the following mitigation measures relevant to air quality (refer to Section 4.1 Air Quality for the full language):

- Mitigation Measure AIR-1: Ozone Mitigation
- Mitigation Measure AIR-2: PM_{10} (Fugitive Dust) Mitigation

Breaker-and-a-half Switchyard
The same BMPs, PDFs, CMAs, mitigation plans, and mitigation measures would apply to the BAAH switchyard.

Loop-in Transmission Corridors
The same BMPs, PDFs, CMAs, mitigation plans, and mitigation measures would apply to the 500 kV loop-in transmission lines.

4.10.5 Laws, Ordinances, Regulations, and Standards Compliance

Socioeconomics and EJ requirements for the Project would be governed applicable by federal, State, and local LORS to address impacts to socioeconomics and disproportionate and adverse impacts to EJ communities. Table 4.10-38, Table 4.10-39, and Table 4.10-40 present a summary of the federal, State, and local LORS applicable to socioeconomics and EJ communities of concern.

Table 4.10-38 Federal Laws, Ordinances, Regulations and Standards

LORS	Applicability	Compliance
Civil Rights Act of 1964	Prohibits discrimination on the basis of race, color, or national origin; Applies to all federal agencies and agencies receiving federal funds	The Project would comply with the Civil Rights Act in all aspects.
Executive Order 12898	Avoid disproportionately high and adverse impacts on minority and low-income members of the community; Applies only to federal agencies	The Project is located, in part, on federal land and would comply with the Executive Order 12898 in all aspects.
Executive Order 14096	Policy to pursue a whole-of-government approach to environmental justice	The Project would comply with Executive Order 14096.
Council on Environmental Quality's Environmental Justice Guidance Under the National Environmental Policy Act	Agencies should consider the composition of affected areas to determine whether minority or low-income populations are affected by a proposed action, and, if so, whether those environmental effects may be disproportionately high or adverse (EPA, 1998 and CEQ, 1997).	The Project would adhere to these considerations.
BLM Land Use Planning Handbook	Guidance for assessing potential impacts on population, housing, and employment as they relate to environmental justice	The Project would adhere to these considerations.

Instructional Memorandum 2022-059	Provides requirements to elevate environmental justice in the NEPA process. The IM also provides guidance on identification of environmental justice groups in a project area, including the types of groups to identify, geographic scale for analysis, and recommended data sources as well as how best to engage the environmental justice populations, identify possible effects, and approach to mitigation.	The analysis considered this Instructional Memorandum, and the Project would adhere to these considerations.

Table 4.10-39 State Laws, Ordinances, Regulations and Standards

LORS	Applicability	Compliance
Government Code Sections 65996–65997	Establishes that the levy of a fee for construction of an industrial facility be considered mitigating impacts on school facilities	The Project would consider nearby schools in the development stages of the Project.
Education Code § 17620	Allows a school district to levy a fee against any construction within the boundaries of the district for the purpose of funding construction of school facilities	The Project is within the boundaries of the Holtville Unified School District and would be required to pay a fee for the private parcels used by the Project.
Gov. Code, § 65040.12, subd. (e)	Defines environmental justice and requires fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies	The Project considered EJ communities in the design of the Project and would consider EJ communities in the implementation of the Project.
Title 14 California Code, Section 15131 (CEQA)	CEQA identifies several environmental factors that are addressed or referenced in this analysis, including Population/Housing, Utilities/Service Systems, Public Services, and Agriculture Resources.	These issues have been addressed throughout this Opt-In Application; the Project is not expected to result in any significant and unavoidable impacts in these areas.

Table 4.10-40 Local Laws, Ordinances, Regulations and Standards

LORS	Applicability	Compliance
Imperial County Voluntary Public Benefit Program	Establishes a voluntary program for solar projects in the County to address impacts to agricultural land and public services	Although the Project does not propose to enter into a public benefit agreement under the County's voluntary program, the Project is consistent with the purpose of this program. The Project would not impact agricultural land uses, as no portion of the Project site has historically been, or is currently, in use for agriculture. (See LU-4 and LU-5, Section 4.6). The Project also would not have a significant impact on the provision of public services. (See SC-3, SC-5, and SC-7, above). The Project provides significant benefits to the County through tax revenues and the community benefit agreements described in this section.

4.10.6 Agencies Contacted and Permits

A list of agencies that were contacted during preparation of this application is provided in Appendix E.1. Permits required to construct, operate, and maintain the project, including the BAAH, and loop-in transmission line, are summarized in Table E.2. Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable statute, ordinance, or regulation of a local district. The Applicant and CEC would collaborate with local districts on review of this Opt-in Application to ensure compliance with rules and regulations.

4.10.7 References

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Attachment I Updated Laws, Ordinances, Regulations, and Standards Compliance Tables for Socioeconomics (DR SOCIO-7)

ATTACHMENT I

Table 1 Federal Laws, Ordinances, Regulations and Standards Applicable to Socioeconomics

LORS	Applicability	Compliance	Opt-In Application Reference
Civil Rights Act of 1964	Prohibits discrimination on the basis of race, color, or national origin; Applies to all federal agencies and agencies receiving federal funds	The Project would comply with the Civil Rights Act in all aspects.	Environmental Justice analysis within Section 4.10.2, Impact SC-9
Executive Order 12898	Avoid disproportionately high and adverse impacts on minority and low-income members of the community; Applies only to federal agencies	The Project is located, in part, on federal land and would comply with the Executive Order 12898 in all aspects.	Environmental Justice analysis within Section 4.10.2, Impact SC-9
Executive Order 14096	Policy to pursue a whole-of-government approach to environmental justice	The Project would comply with Executive Order 14096.	Environmental Justice analysis within Section 4.10.2, Impact SC-9
Council on Environmental Quality's Environmental Justice Guidance Under the National Environmental Policy Act	Agencies should consider the composition of affected areas to determine whether minority or low-income populations are affected by a proposed action, and, if so, whether those environmental effects may be disproportionately high or adverse (EPA, 1998 and CEQ, 1997).	The Project would adhere to these considerations.	Environmental Justice analysis within Section 4.10.2, Impact SC-9
BLM Land Use Planning Handbook	Guidance for assessing potential impacts on population, housing, and employment as they relate to environmental justice	The Project would adhere to these considerations.	Environmental Justice analysis within Section 4.10.2, Impact SC-9

Instructional Memorandum 2022-059	Provides requirements to elevate environmental justice in the NEPA process. The IM also provides guidance on identification of environmental justice groups in a project area, including the types of groups to identify, geographic scale for analysis, and recommended data sources as well as how best to engage the environmental justice populations, identify possible effects, and approach to mitigation.	The analysis considered this Instructional Memorandum, and the Project would adhere to these considerations.	Environmental Justice analysis within Section 4.10.2. Impact SC-9

State Laws, Ordinances, Regulations and Standards Applicable to Socioeconomics

LORS	Applicability	Compliance	Opt-In Application Reference
Government Code Sections 65996–65997	Establishes that the levy of a fee for construction of an industrial facility be considered mitigating impacts on school facilities	The Project would consider nearby schools in the development stages of the Project.	School Districts and Facilities discussion within Section 4.10.1. This information has been updated as part of this Response Set #1 in response to DR SOCIO-4.
Education Code § 17620	Allows a school district to levy a fee against any construction within the boundaries of the district for the purpose of funding construction of school facilities	The Project is within the boundaries of the Holtville Unified School District and would be required to pay a fee for the private parcels used by the Project.	School Districts and Facilities discussion within Section 4.10.1. This information has been updated as part of this Response Set #1 in response to DR SOCIO-4.

Gov. Code, § 65040.12, subd. (e)	Defines environmental justice and requires fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies	The Project considered EJ communities in the design of the Project and would consider EJ communities in the implementation of the Project.	Environmental Justice analysis within Section 4.10.2. Impact SC-9
Title 14 California Code, Section 15131 (CEQA)	CEQA identifies several environmental factors that are addressed or referenced in this analysis, including Population/Housing, Utilities/Service Systems, Public Services, and Agriculture Resources.	These issues have been addressed throughout this Opt-In Application; the Project is not expected to result in any significant and unavoidable impacts in these areas.	All sections of the Opt-In Application

Local Laws, Ordinances, Regulations and Standards Applicable to Socioeconomics

LORS	Applicability	Compliance	Opt-In Application Reference
Imperial County Voluntary Public Benefit Program	Establishes a voluntary program for solar projects in the County to address impacts to agricultural land and public services	Although the Project does not propose to enter into a public benefit agreement under the County's voluntary program, the Project is consistent with the purpose of this program. The Project would not impact agricultural land uses, as no portion of the Project site has historically been used, or is currently in use, for agriculture. (See LU-4 and LU-5, Section 4.6). The Project also would not have a significant impact on the provision of public services. (See SC-3, SC-5, and SC-7, above). The Project provides significant benefits to the County through tax revenues and the community benefit agreements described in Section 4.10.	Section 4.6; Section 4.10.2, Impact SC-3, SC-5, and SC-7

Attachment J Revised Transportation Plan Section and VMT Memorandum (DR TRANS-1 – DR TRANS-3)

Attachment J.1 Revised Transportation Plan (DR TRANS-1)

E. Temporary Construction Mitigation Measures

Prepare a Construction Traffic Control Plan (CTC Plan). Prior to the start of construction, the applicant will prepare and submit a CTC Plan for review and approval by Caltrans and the CEC (and potentially input from the BLM and BOR) for the state highways affected by construction of the Project. The CTC Plan should include, but not be limited to:

- **Plan for implementing a trip reduction (rideshare/carpool) program for the construction workforce.** The proposed trip reduction program for the contractor workforce should implement services and measures that potentially reduce construction commute traffic by a target/goal of 50 percent during construction periods with the greatest levels of on-site workforce. The 50 percent target assumes most workers would otherwise commute to the site in a single occupant vehicle. This level of reduction is not always possible at remote construction sites for several reasons, including that many skilled tradesmen require use of their vehicle and the specialized tools it contains to do their job, variations in worker start times and shift durations that can occur at construction sites, and because a segment of commuters in all occupations prefer to drive in their own vehicle rather than rely on rideshare or transit. Traditional measures to reduce the number of vehicles on-site like ridesharing, vanpools, and frequent shuttle / coach services would be combined with measures that spread arriving and departing traffic over several hours, the most common of which is staggered shift times. Effectively meeting the target reductions will reduce the number and frequency of required flagging operations. Further information / clarification regarding implementing the trip reduction program (TRP) element of the Construction Traffic Control Plan is described below.
    - The applicant would work closely with the engineering, procurement, and construction (EPC) contractor to ensure mandatory trip reduction measures are in place in the EPC contract.
    - It would be the responsibility of the contractor to develop the trip reduction plan that effectively works for the construction workers and project's unique circumstances, selecting from identified resources and services to reduce their impact on traffic. Contractors would be required to submit brief trip reduction plans in which they are encouraged to use these resources and services.
    - The project applicant can encourage trip reduction by providing resources to assist contractors with preparing their plans, or by partially or fully funding certain services and benefits.
    - Trip reduction programs are most effective when applied to laborer workers that work together with similar shift times and temporarily reside in proximity to each other during their period of employment at the construction site.
    - Trip reduction programs are time-of-day and direction dependent. Construction traffic only needs to be reduced during a relatively small window of time in the peak periods and peak directions to be effective.
    - Trip reduction programs require monitoring to determine if the program is achieving the established target. Monitoring is usually based on Average Vehicle Occupancy (AVO) determined through spot surveys at site access gates.

- The trip reduction target may change over the course of the construction project depending on the worker population on-site during any given phase of construction, the type of workers, and the daily start and end times most of the workers experience. During phases of low worker activity, the trip reduction program may have a significantly reduced target or be suspended altogether until worker activity rises again. An evolving trip reduction program in response to the ebb and flow of construction activity requires regular updates to the program (and to the individual contractor trip reduction plans).

1. Resources, tools, or services that may be considered in the program:
   - Assignment of a part-time Construction Traffic Control Plan Coordinator who:
     1) Is highly familiar with the project's construction schedule, workforce / equipment demand over the course of the construction project, working relationships with the various contractors, and actively involved in, or regularly notified of, changes in the construction phase schedule and contractor work schedules, or
     2) has access to someone with the above qualifications, or
     3) is an experienced transportation management contractor, consultant, association, or service provider who has access to the above information and serves as a resource and liaison to service providers the contractors use to implement the trip reduction plans.
   - Potential services that may be considered in the program:
     - Guaranteed return trip in the event of emergency (via Uber, Lyft, or Taxi/Shuttle).
     - Rideshare matching services (service that matches a driver with passenger(s) with similar work times, work sites, and origin points). Passengers share in the commute costs.
     - Vanpool subsidies comprised of full or partial reimbursement to workers who join a commercial vanpool program (e.g., Commute with Enterprise) or arrange an independent vanpool.
     - Carpooling incentives for workers who voluntarily share a ride to/from the site including reimbursement for fuel, meals, and insurance or other monetary compensation.
     - Hotel to site shuttle or coach service (private service provider to operate a round trip scheduled shuttle / coach service to the site from hotels in El Centro, California and Yuma, Arizona).

     Partial or full funding of these services by the applicant may be necessary due to the remote location of the project.

- Further, the trip reduction program will require continuous monitoring and refinement to maintain its effectiveness throughout the 24-month duration of the Project's construction and adapt to the needs of a changing workforce that comes with the different technical specializations introduced in each stage of construction, and the ebb and flow of the workforce population as construction progresses. Monitoring is also important to hold participants accountable for their role in the success of the program, as well as enforcing violations of the program's rules and restrictions.

  The applicant and/or contractors should consider engaging a single entity to manage the trip reduction program rather than leaving it to each contractor to manage their own workers. A

Transportation Management Association (TMA) or a private Transportation Management Services (TMS) organization can be an efficient and cost-effective way of achieving the objectives and having access to a more wide-ranging array of options to meet the trip reduction targets. The common services described earlier including leased remote parking served by shuttles, and organized and incentivized vanpools, can be augmented with customized services including developing and maintaining a rideshare matching service for individual workers, preparing and tracking the logistics involved in implementing staggered contractor work schedules, and ensuring the availability of lifeline supportive services like a guaranteed ride home program.

- **Flagging operations.** Temporary construction related impacts may periodically require flagging operations[1] during periods of maximum or concentrated inbound or outbound worker traffic or unique events for the delivery of large pieces of equipment or large number of materials. The need for flagging operations should be triggered when indicated through monitoring day to day traffic operations on routes to/from the site and determined to be required during construction stage planning. The workforce either needs to include Certified Flaggers available on demand or the managing entity retains Certified Flaggers on call.

  Impacts related to the volume of construction traffic causing intolerable delays to conflicting traffic movements or vehicle queuing that backs up into freeway mainline lanes and creating a safety risk may be addressed with manual traffic direction provided by officers of the California Highway Patrol instead of flagging crews. This service may not always be available and should be reserved for a unique event planned for a specific data and time (advance coordination with Caltrans and the California Highway Patrol required) or if serious traffic congestion related to the Project occurs unexpectedly due to unforeseen circumstances or an incident the California Highway Patrol may be dispatched to site.

  

  The CTC Plan should identify the locations and use of flaggers, warning signs, lights, barricades, delineators, cones, arrow boards, etc., according to standard guidelines outlined in the Manual on Uniform Traffic Control Devices, the Standard Specifications for Public Works Construction, and/or the California Temporary Traffic Control Handbook.

- **Corridor Wide safety measures coordinated with Caltrans**. Prior to the start of construction, the applicant should meet with Caltrans to identify measures that could effectively improve safety in the Highway 98 corridor between Interstate 8 and the Project's western boundary during the construction period. Measures to improve safety could include signs warning of TRUCKS ENTERING EXITING C44(CA) highway or, if permitted by Caltrans, advanced intersection warning signs such as W2-2 (see illustration) giving advance warning of an upcoming access intersection at each of the five access points in both directions. Alternatively, trailer mounted Changeable Message Signs (CMS) with an appropriate message could be stationed at the beginning of the Project's site frontage in both directions of Highway 98. Temporary regulatory changes may be

[1] Flagging operations will require a plan in accordance with California Code of Regulations, Title 8, Section 1599, (8 CCR 1599) "Flaggers," and Chapter 6E, "Flagger Control," of the *California MUTCD*. This plan should be prepared and approved by Caltrans before beginning construction.

justified such as a reduced speed limit through the Project's site frontage, or prohibiting left turns into the Project access points from eastbound Highway 98.

- **Plan for monitoring and responding to construction traffic conditions**. The CTC Plan should include a traffic monitoring plan that spans the full duration of the Project's construction, includes monitoring of anticipated special events in each stage of construction, and includes contingencies for rapid deployment monitoring in unexpected situations. The traffic monitoring plan should maintain a hierarchy of contact persons identifying roles and responsibilities. Initial monitoring of day-to-day traffic conditions on the routes to the work sites while the trip reduction program is in its early stages is essential to determine efficacy and to adjust the plan. Monitoring should be conducted continuously in the initial two weeks of construction and whenever a new stage of construction begins or the number of workers and/or daily deliveries of equipment changes materially to identify when flagging operations are needed. Major equipment and material deliveries should be monitored before and during planned use of flagging operations. After the initial continuous monitoring, traffic monitoring should continue periodically but regularly, and work force commuters should be solicited to report on traffic conditions they observe daily. Monitoring can use traditional roaming vehicle techniques or take advantage of current technology such as closed-circuit camera systems, sensors, drones, or even "big data" if the resolution is fine enough to identify real-time problems.

  Monitoring must include observation of the I-8 off-ramp queues during inbound and outbound commute periods to identify normal queue lengths and the potential for queues to extend into the freeway mainline lanes resulting in a safety risk. Coordinate monitoring with Caltrans and the California Highway Patrol to establish criteria that trigger implementation of flagging operations or other traffic control measures.

- **Encroachment permits for temporary construction access to work sites**. The applicant will be required to obtain encroachment permits from Caltrans before constructing the five proposed access driveways, and the CTC Plan should identify the steps in the permitting process, the timeline, and submittals required from the permitting division. Coordinate with Caltrans early in the planning process to identify the information / submittals Caltrans will require including temporary traffic control measures, signing and pavement marking plans, restrictions, and shoulder and roadside modifications within Caltrans right of way to improve safety and reduce damage. Caltrans may also require pavement damage monitoring and rehabilitation once construction has been completed.

Attachment J.2 VMT Memo (DR TRANS-2 and DR TRANS-3)

Project Memorandum July 18, 2024
Perkins Renewable Energy Project

Subject: Perkins Renewable Energy Project Construction Vehicle Miles Traveled (VMT) Response to DR TRANS-3

In response to the California Energy Commission's request to calculate and list estimated one-way trip lengths for workers, deliveries, and truck haul trips generated during the construction and operation of the project (DR TRANS-3), this memo presents a summary and qualitative impact analysis for the Perkins Renewable Energy Project (Perkins Project) under the California Environmental Quality Act (CEQA). A *qualitative* (instead of quantitative) VMT analysis is appropriate for the Perkins Project because of the temporary nature of traffic impacts, which occur only during construction (approximately 2-yr period), whereas the majority of the Project life would see no traffic impacts due to the lack of appreciable trips to/from the site during operations (approximately 50 years).

The VMT approach is useful when a project results in facilities or locations that generate trips year-in and year-out, such as office buildings and shopping centers. The Perkins project, however, will generate a relatively high volume of trips during construction and significantly fewer during operations. During construction, these and other projects generate temporary vehicle trips from workers and materials deliveries, which conclude with the end of construction. The principal concern during construction is the effect of worker and truck traffic on congestion in the Project vicinity. This is the case with the Perkins Project. After construction, during operations and maintenance, the Project would generate few trips – not enough to have a significant impact on traffic, congestion, air quality, greenhouse gas emissions, noise, or similar concerns. Therefore, this memo demonstrates that a quantitative VMT analysis is not necessary given the minimal vehicle usage and insignificant VMT proposed during the operations and maintenance of the proposed solar photovoltaic and battery energy storage project.

Background

The aim of Senate Bill (SB) 743, which took effect July 1, 2020, is to help reduce transportation's impacts on the environment by requiring agencies to look at a metric known as Vehicle Miles Traveled (VMT) instead of Level of Service (LOS). VMT measures

how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project would add excessive car travel onto roads, the project may cause a significant transportation impact under CEQA. The biggest difference between what VMT and LOS measure is that VMT measures how much actual auto travel a proposed project would create on California roadways, whereas LOS measures the traffic congestion levels on those roadways.

SB 743 changed the focus of the CEQA transportation analysis methodology to considering actual auto travel (in the form of VMT), because reducing VMT reduces associated greenhouse emissions from vehicles, which contribute to climate change, and it also reduces air pollution, which contributes to respiratory and cardiovascular disease. VMT reduction is needed to achieve State climate goals such as travel per capita, given that passenger vehicle emissions have continued to grow despite improvements in vehicle fuel efficiency and other strategies to reduce emissions The more that travelers are able to make the same trips by walking, bicycling, using transit, or carpooling, the less VMT increases even as new development occurs.

Specifically, VMT measures the amount of travel for all vehicles in a geographic region over a given period. VMT is calculated by adding up all the miles driven by all the cars and trucks on all the roadways in a region. This metric plays an integral role in transportation planning, policymaking, and revenue estimation processes due to its ability to indicate travel demand and behavior. Per CEQA Guidelines section 15064.3, subdivision (b), a VMT analysis under CEQA may be based on the following:

- Qualitative Analysis: If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

- Methodology: A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled

and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

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The proposed Perkins Project would generate most of its traffic during the 24-month construction period but very little thereafter during operations.

- Construction. During construction, the Project would generate a maximum of 1,024 AM peak period and 1,024 PM peak period vehicle trips from workers, delivery trucks, and water trucks. However, the Construction Traffic Control Plan detailed in the Transportation Impact Analysis Report in Appendix T would implement a rideshare program that would reduce worker vehicle trips by a target 50 percent. Therefore, construction would generate between 514 to 1,024 AM peak period and 514 to 1,024 PM peak period vehicle trips with the proponent and its EPC and union partners striving for the lower target. Truck trips associated with materials and equipment deliveries would likely come from within the El Centro, Yuma, and/or Calexico area, with some materials trips likely originating from the Ports of Long Beach and San Diego. Water would likely be trucked from a municipal provider or other local water agency within 70 miles of the site. Many temporary workers needed for construction of the gen-tie would reside within a 30 to 90- minute drive time of the Project area. This assumption is based on observations regarding worker commute habits during construction monitoring efforts for recent, similar renewable energy and transmission projects in the area. However, it is likely that some construction workers would come from outside a reasonable commute area and seek temporary housing proximate to the work area. Based on construction of other solar projects in the region, workers often carpool because of the distance traveled and cost savings.

- Operations and Maintenance. During operations of the proposed Project, up to 24 permanent staff could be on the site at any one time for ongoing facility maintenance and repairs. Additionally, approximately five Project operators would be located off site and would be on call to respond to alerts generated by the monitoring equipment at the Project site. Based on expected operational and maintenance requirements, the vehicle trips associated with the up-to 29 operations and maintenance personnel would be negligible and would not impact transportation or traffic within the project vicinity.

Per State CEQA Guidelines Section 15064.3(b)(3), a qualitative VMT analysis of construction trips is appropriate, given that the construction-related trips and traffic volume are temporary and would cease after construction is completed; thus, they would not change transportation or traffic patterns in the long term. As the site is developed, workers and trucks would travel to and from the site. The remote location of the site limits the opportunity to improve how efficiently workers reach the site. Living locally or carpooling are two ways to reduce VMT in the region. Although there are very few housing opportunities nearby, workers could (and on other projects currently under construction do) carpool. Few, if any, alternative means to reach the Project site are available. The ability to use public transit is limited by distance from the nearest transit stop to the site and the very infrequent service; the same is true for walking and bicycling.

Due to the remote location of the Project site, many construction truck trips may require high VMT to access the site. However, all construction-related truck trips would be temporary and only in volumes necessary to deliver equipment and materials to the site. Upon completion of construction, all construction truck trips and construction worker commute trips would cease. At this time, no known applicable VMT thresholds of significance for temporary construction trips that may indicate a significant impact are known. Implementation of the Construction Traffic Control Plan) recommended in the Section 4.12 Traffic and Transportation would require the Applicant to prepare a Construction Traffic Control Plan, with the Plan providing means to encourage or provide ridesharing opportunities for construction workers. Therefore, while the proposed Project would include temporary construction trips that may result in high VMT, they would not affect existing transit uses or corridors on an ongoing basis and are presumed to cause a less than significant transportation impact.

Once constructed, operations and maintenance of the Project would generate very few vehicle trips. It is assumed operational workers would either be located in, or seek permanent residence within, a reasonable commute distance. For example, El Centro is approximately 27 miles west of the Project Site and Yuma is a slightly further (40 miles) but similar distance to the east. This would require a 30-45-minute commute. The estimated commute time and VMT for operational workers is considered to be within a reasonable range typical of the remote desert communities nearest to the Project. Due to the remote location of the Project site, limited residential and transit opportunities to the site, and low number of daily trips, the Project operation is not considered as resulting in high VMTs that could adversely affect transit or transportation planning for the area. The Applicant would prepare a Construction Traffic Control Plan to affected

jurisdictions, with the Plan providing means to encourage or provide ridesharing opportunities for operational workers as well. Therefore, operational-related trips would not affect existing transit uses or corridors and are presumed to cause a less-than-significant transportation impact.

Attachment K Updated Visual Resources Section (DR VIS-1, DR VIS-2)

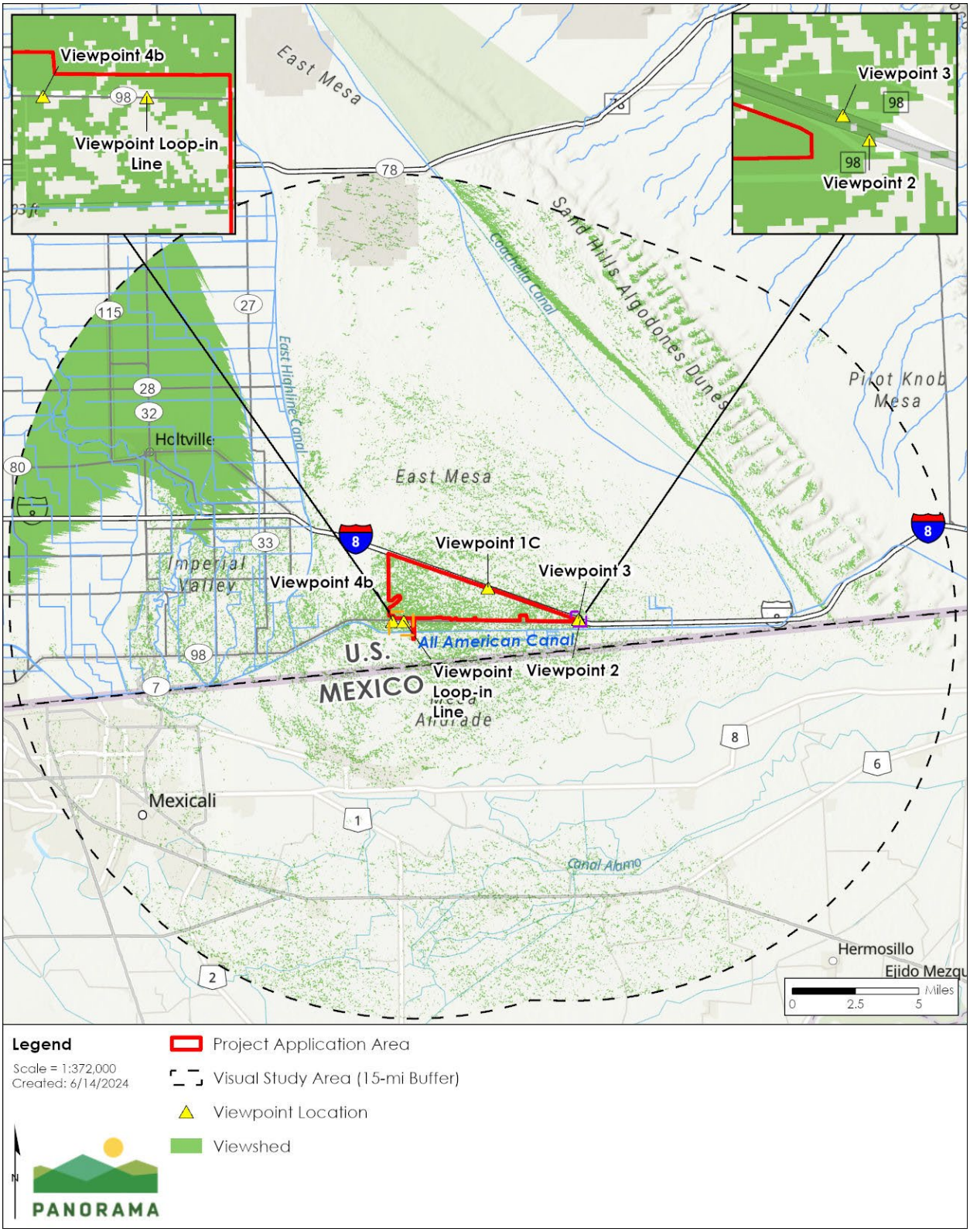
Visual Resources

Project Visibility and Viewshed

The Project viewshed is the general area from which a Project would be visible. Figure 1, below, has been updated from the version in the Opt-in Application to include one additional observation point, Viewpoint Loop-in Line.

As noted in the Opt-in Application Section 4.13, the viewshed was modeled using a height of 14 feet for the panels as this would be the tallest potential height of the panels. For describing the Project's visual setting and addressing potential visual impacts, the viewshed is divided into distances zones of foreground, middle ground, and background views. The term *foreground* describes what is visible within 0.25 to 0.5 mile of the viewer and defines the most noticeable details in the landscape and prominent objects and features. The term *middleground* describes what is visible within 0.5 mile to 3 miles of the viewer, and the term *background* describes what is visible beyond 3 to 5 miles of the viewer.

Figure 1 Project Viewshed and Key Viewpoints Considered Location Map



Selection of Key Viewpoints

As shown in Figure 1, there are limited nearby public areas with contiguous views of the Project Application Area. IP coordinated with the BLM to select five viewpoints with the highest visual quality, and affected viewers and exposure, and viewer sensitivity to changes from the Project Application Area were selected for visual rendering and detailed analysis which were described in Table 1 of Section 4.13 of the Opt-in Application. Table 1 has been updated, below, to include Viewpoint Loop-in Lines. All other elements of Table 1 remain the same.

Table 1 Visual Sensitivity

Viewpoint	Approximate distance from Project site	Visual quality	Affected viewers and exposure conditions	Visual sensitivity
Viewpoint 1C	Adjacent along the I-8 looking southwest	Moderate. Dominant views include undeveloped desert land containing desert shrub and a short metal fence, with the SWPL visible in the distance.	Low. Limited viewer exposure. Viewers would primarily be motorists passing at a high speed with a mostly level line of sight.	Low. Moderate visual quality, few affected viewers, and low exposure conditions. Direct views of the Project site.
Viewpoint 2	Adjacent looking west	Low. Dominant views include undeveloped desert land containing desert shrub, public roads and signage, aboveground transmission line and several power lines, a communication tower, and infrastructure associated with the All-American Canal present within the view.	Moderate. Viewers include motorists, passing along SR 98 at high speed looking down on the site	Low. Low visual quality and viewer duration. Direct views of the Project site.
Viewpoint 3	Adjacent looking west	Low. Dominant views include public roads and signage, traffic delineator posts, aboveground transmission lines, street light poles, a communication tower, and undeveloped desert land containing desert shrub.	Moderate. Viewers include motorists, along I-8 passing at high speed looking down on the site.	Low. Low visual quality and viewer duration. Direct views of the Project site.
Viewpoint 4B	Adjacent looking north	Moderate. Dominant views include undeveloped desert land containing desert shrub and public roads. Minimal viewing at a distance due to topography.	Moderate. Viewers include motorists, along SR 98.	Moderate. Moderate visual quality and viewer duration. Direct views of the Project site.

Viewpoint	Approximate distance from Project site	Visual quality	Affected viewers and exposure conditions	Visual sensitivity
Viewpoint Loop-in Lines	Adjacent looking southeast	Low to Moderate. Dominant views include undeveloped desert land containing desert shrub and aboveground transmission lines. Minimal viewing at a distance due to topography.	Low. Limited viewer exposure. Viewers would primarily be motorists passing at a high speed with a level line of sight.	Low. Low to moderate visual quality and viewer duration. Direct views of the Project site.

Figure 2a, Figure 3a, Figure 4a, Figure 5a, and Figure 6a are high resolution digital photographs of the existing conditions of the viewpoints. The viewpoint analysis for all the viewpoints except the Viewpoint Loop-in Lines was included in Section 4.13.1 of the Opt-in Analysis and have been copied over below for ease of review. The viewpoint analysis for the new Viewpoint Loop-in Lines has been included below.

Viewpoint Analysis

Viewpoint 1C

Viewpoint 1C is located on the northern boundary of the Project along I-8 looking southwest.

Visual Character

The existing view from Viewpoint 1C of the Project Application Area is shown in Figure 2a. The foreground includes undeveloped desert land with scattered native desert shrubs. The Project would be visible in the middleground and background and would not be screened by topography or vegetation. Viewpoint 1C is on a slightly higher elevation than the Project; however, because the surrounding area is generally flat, views of the Project area from Viewpoint 1C would be generally level.

Visual Quality

Viewpoint 1C has low visual quality, with undeveloped area being the main foreground, middle ground, and background view. Existing views of the Project site are not screened by topography, vegetation, or elevation. Viewpoint 1C contains anthropogenic elements such as the existing medium-sized metal fence and existing SWPL transmission line; however, the infrastructure does not obstruct views of the Project area.

Affected Viewers and Exposure Conditions

Views from Viewpoint 1C would be experienced by the public when driving along I-8, which runs northwest to southeast along the northern boundary of the Project site. Public exposure would be of short duration for motorists. Motorists would generally be focused on the road conditions in front of them and less likely to be focused on side-angle views of the Project.

Visual Sensitivity Conclusion
The visual quality of Viewpoint 1C is low, and the exposure conditions are low. The visual sensitivity to changes in the foreground, middleground, or background view would be low because of the limited number of viewers traveling along I-8 and the generally short duration for viewing while traveling along I-8.

Viewpoint 2
Viewpoint 2 is located on the eastern edge of the Project boundary along I-8 looking west.

Visual Character
A view from Viewpoint 2 of the Project site is shown in Figure 3a. The foreground includes undeveloped desert land with scattered native desert shrubs, roadways, road signage, traffic delineator posts, aboveground transmission lines, and a communication tower. The Project boundary would be visible in the middleground and background and would not be screened by topography or vegetation. Viewpoint 2 is on a slightly higher elevation than the Project so that the viewers would be looking down onto the Project.

Visual Quality
Viewpoint 2 has low visual quality, with scattered desert shrubs, roadways, road signage, and aboveground transmission lines being the main view in the foreground. The middleground and background continue to include views of desert land, with a communication tower in the short distance. Viewpoint 2 contains anthropogenic elements such as the roadways, road signage, traffic delineator posts, aboveground transmission lines, and a communication tower; however, these elements do not obstruct views of the Project area.

Affected Viewers and Exposure Conditions
Views from Viewpoint 2 would be experienced by the public when driving along I-8, which runs northwest to southeast along the northern boundary of the Project site. Public exposure would be of short duration and low for motorists. Motorists would generally be focused on the road conditions in front of them and less likely to be focused on side-angle views of the Project.

Visual Sensitivity Conclusion
The visual quality of Viewpoint 2 is low, and the exposure conditions are moderate. The visual sensitivity to changes in the foreground, middle ground or background view would be moderate because of the limited number of viewers traveling along I-8 and the generally short duration for viewing while traveling along I-8.

Viewpoint 3
Viewpoint 3 is near to Viewpoint 2 and is also located near the eastern edge of the Project site boundary along I-8 looking southwest.

Visual Character
A view from Viewpoint 3 of the Project site is shown in Figure 4a. The foreground includes the roadways, road signage, aboveground transmission lines, street light poles, a communication tower, and undeveloped desert land with scattered native desert shrubs. The Project site

boundary is visible in the middleground and background and would not be screened by topography or vegetation. Viewpoint 3 is on a slightly higher elevation than the Project site so that viewers would be looking down onto the Project.

Visual Quality
Viewpoint 3 has moderate visual quality, with scattered desert shrubs, roadways, road signage, aboveground transmission lines, street light poles, and a communication tower comprising the main view in the foreground. The middleground and background continue to include views of undeveloped desert land and distant aboveground transmission lines. Existing views of the Project site are not screened by topography, vegetation, or elevation. Viewpoint 3 contains anthropogenic elements such as roadways, road signage, street light poles, and a communication tower; however, these elements do not obstruct views of the Project site.

Affected Viewers and Exposure Conditions
Views from Viewpoint 3 would be experienced by the public when driving along I-8, which runs northwest to southeast along the northern boundary of the Project site. Public exposure would be of short duration and low for motorists. Motorists would generally be focused on the road conditions in front of them and less likely to be focused on side-angle views of the Project.

Visual Sensitivity Conclusion
The visual quality of Viewpoint 3 is low, and the exposure conditions are moderate. The visual sensitivity to changes in the foreground, middleground, or background view would be moderate because of the limited number of viewers traveling along I-8 and the generally short duration for viewing while traveling along I-8.

Viewpoint 4B
Viewpoint 4B is located on the southwestern border of the Project boundary along SR 98 looking northeast.

Visual Character
A view from Viewpoint 4B of the Project site is shown in Figure 5a. The foreground includes undeveloped desert land with scattered native desert shrubs, roadways, and road signage. Views of the existing structures at the Project site boundary are visible in the middleground and background and are not screened by topography or vegetation. Viewpoint 4B is at a slightly lower elevation than the Project; however, because the surrounding area is generally flat, views of the Project area from Viewpoint 4B are not obstructed by elevation. Given the elevation, KOP 4B has minimal long-distance views.

Visual Quality
Viewpoint 4B has moderate visual quality, with scattered desert shrubs, roadways, and road signage comprising the main view in the foreground. The middleground and background continue to have views of undeveloped desert land. Existing views of the Project site are not screened by topography, vegetation, or elevation. Viewpoint 4B contains anthropogenic elements such as roadways and road signage; however, these elements do not obstruct views of the Project site.

Affected Viewers and Exposure Conditions
Views from Viewpoint 4B would be experienced by the public when driving along SR 98, which runs east–west along the southern boundary of the Project site. Public exposure would be of short duration and low for motorists. Motorists would generally be focused on the road conditions in front of them and less likely to be focused on side-angle views of the Project.

Visual Sensitivity Conclusion
The visual quality of Viewpoint 4B is moderate, and the exposure conditions are moderate. The visual sensitivity to changes in the foreground, middleground, or background view would be moderate because of the limited number of viewers traveling along I-8 and the generally short duration for viewing while traveling along SR 98.

Viewpoint Loop-in Lines
Viewpoint Loop-in Lines is located on the southern Project boundary along SR 98 looking southeast.

Visual Character
A view from Viewpoint Loop-in Lines of the Project loop-in lines is shown in Figure 6a. The foreground includes undeveloped desert land with scattered native desert shrubs and transmission lines and a prominent distribution line. Views of existing structures at the locations of the Project loop-in lines are visible and are not screened by topography or vegetation. Viewpoint Loop-in Lines is at a slightly lower elevation than the Loop-in Lines; however, because the surrounding area is generally flat, views of the loop-in lines from Viewpoint are not obstructed by elevation. Given the elevation, Viewpoint Loop-in Lines has minimal long-distance views.

Visual Quality
Viewpoint Loop-in Lines has low visual quality, with undeveloped area crossed by existing distribution and transmission lines being the main foreground, middle ground, and background view. Existing views of the Loop-in Lines site are not screened by topography, vegetation, or elevation. Viewpoint Loop-in Lines contains anthropogenic elements such as the SWPL transmission line in the background and utility poles in the foreground and middleground.

Affected Viewers and Exposure Conditions
Views from Viewpoint Loop-in Lines would be experienced by the public when driving along SR 98, which runs east–west along the southern boundary of the Project site and would be crossed by the loop-in lines. Public exposure would be of short duration and low for motorists. Motorists would generally be focused on the road conditions in front of them and less likely to be focused on side-angle views of the Project.

Visual Sensitivity Conclusion
The visual quality of Viewpoint Loop-in Lines is low to moderate, and the exposure conditions are low. The visual sensitivity to changes in the foreground, middleground, or background

view would be low because of the limited number of viewers and the generally short duration for viewing while traveling along SR 98.

4.13.1 Impact Analysis

The Opt-in Application Section 4.13.2, did not include the simulation modeling details, the simulations, nor the Operations Impact Analysis for Impact VIS-3, *In nonurbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?* for operations of the Project. This detail has been added below.

Viewpoint Photography Method

Initial site reconnaissance was completed in November 2023 and again in January 2024, and several potential viewpoints were evaluated for their visual sensitivity based on visual quality, affected viewers and exposure conditions, and viewer sensitivity to changes in the viewshed. Photographs used to assess the existing conditions for representative photographs were taken using a digital single-lens reflex camera with standard 43-millimeter lens equivalent, which represents an approximately 46-degree horizontal view angle.

Table 2 provides detailed information per viewpoint below.

Table 2 Viewpoint Summary Table

Viewpoint	1C	2	3	4B	Loop-in Line
Photo Date	11/12/2023	11/12/2023	11/12/2023	11/12/2023	01/26/2024
Photo Time	3:32pm	12:41pm	12:55pm	3:48pm	2:47pm
Distance to Project Fenceline	190 feet	560 feet	875feet	750 feet	500 feet
Camera Used	EOS 5d (full frame)	EOS 5d (full frame)	EOS 5d (full frame)	EOS 5d (full frame)	EOS 5d (full frame)
Lens Used	43mm	42mm	42mm	43mm	42mm
Pre-Crop Viewing Angle	45.4	46.4	46.4	45.4	46.4
Cropped Size	4742x3117	4743x3121	4745x3150	4743x3110	4742x3117
Calculated Angle	44.8	45.84	45.86	44.86	45.83
Approximate View Angle	45	46	46	45	46

Source: Intersect Power, 2024

Simulation Modeling Methodology

Visual Simulations were created for each of the viewpoints to show pre- and post-development views. Assumptions used for the representation of the Project are based on the latest design

data and technical information provided by the Applicant described in Table 4.13-2 in Section 14.3 of the Opt-in Application. Three dimensional models of the Project components were produced using AutoCAD and rendered using AccuRender nXt. The overlay onto existing photographs was completed in Photoshop and assumptions used for size and placement were based upon information from the photographer with verification, where possible, based upon rough modeling of existing features in comparison to what is visible in the photographs. Refer to Table 2 for information regarding lens and angles. Renderings were lighted to match existing photographs by using extracted metadata.

Impact VIS -3:

In nonurbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? (*Less than significant)*

Operation

Figure 2a, Viewpoint 1C - Photograph of Existing Visual Conditions, through Figure 6b, Viewpoint Loop-in Line – Visual Simulation of the Project, are shown below, where "a" identifies existing, and "b" identifies visual simulation of the Project.

Figure 2a Viewpoint 1C Photograph of Existing Visual Conditions

Figure 2b Viewpoint 1C Simulated Project View

Figure 3a Viewpoint 2 Photograph of Existing Visual Conditions

Figure 3b Viewpoint 2 Simulated Project View

Figure 4a Viewpoint 3 Photograph of Existing Visual Conditions

Figure 4b Viewpoint 3 Simulated Project View

Figure 5a Viewpoint 4B Photograph of Existing Visual Conditions

Figure 5b Viewpoint 4B Simulated Project View

Figure 6a Viewpoint Loop-in Line Photograph of Existing Visual Conditions

Figure 6b Viewpoint Loop-in Line Simulated Project View

Project Site Components
Project Site Components would be visible from all viewpoints, as described below.

Viewpoint 1C
Figure 2a and Figure 2b display the existing view and simulated view looking southwest. Viewpoint 1C represents the limited duration views experienced by motorists along I-8. Refer to the Viewpoint Analysis section for a description of the existing views from Viewpoint 1C.

Figure 2b represents the proposed simulation from Viewpoint 1C. The simulation displays the Project which would be moderately visible in the foreground and middleground. The Project would introduce new human-made, solid, horizontal features to an area of the desert that is primarily undeveloped with scattered utility lines in the distance. Specifically, Project components such as metal fencing and solar panel arrays would be the most prominent components introduced and featured in Viewpoint 1C, and these elements would significantly contrast with the existing environment. Views of the Project from Viewpoint 1C would be most visible to traveling motorists along I-8; however, these viewers would view the Project at high traveling speeds for a short period of time. Although viewership from Viewpoint 1C would generally be short in duration due to high travel speeds, the overall change seen from Viewpoint 1C would be substantial given Viewpoint 1C's proximity to I-8. Introducing a high degree of change that would substantially impact visual character where viewer sensitivity is low would result in a potentially significant impact. The Project would incorporate BMP 111 through BMP 115 and comply with CMA DFA-VPL-VRM-3 which would reduce impacts but not to a level of less than significant given the overall size of the project panels.

Viewpoint 2
Figure 3a and 3b display the existing view and simulated view looking west. Viewpoint 2 represents limited duration views experienced by motorists along I-8. Refer to the Viewpoint Analysis section for a description of the existing views from Viewpoint 2.

Figure 3b represents the proposed simulation from Viewpoint 2. The simulation displays the Project visible in the middleground. The Project would introduce new human-made solid, horizontal features to an area of the desert that is primarily undeveloped but includes transmission and other infrastructure in the background. Specifically, Project components such as metal fencing and solar panel arrays would be the most prominent components introduced and featured in Viewpoint 2, and these elements would significantly contrast with the existing environment. Views of the Project from Viewpoint 2 would be most visible to traveling motorists along I-8 and SR 98; however, these viewers would view the Project at high traveling speeds for a short period of time. Although viewership from Viewpoint 2 would on average be short in duration due to high travel speeds, the overall change seen from Viewpoint 2 would be substantial given Viewpoint 2's proximity to I-8. Introducing a high degree of change that would substantially impact visual character where viewer sensitivity is low to moderate and viewed at a distance would be an adverse but not significant impact. The Project would incorporate BMP 111 through BMP 115 and comply with CMA DFA-VPL-VRM-3 to further reduce already less than significant impacts.

Viewpoint 3
Figure 4a and Figure 4b display the existing view and simulated view looking southwest. Viewpoint 3 represents limited duration views experienced by motorists along I-8. Refer to the Viewpoint Analysis section for a description of the existing views from Viewpoint 3.

Figure 4b represents the proposed simulation from Viewpoint 3. The simulation displays the Project would be visible in the middleground. While Viewpoint 3 is within close distance of Viewpoint 2, the view of the Project is less pronounced due to viewing angle and would introduce Project components such as metal fencing and solar panel arrays to the existing area. These elements would significantly contrast with the existing environment but to a lesser degree when compared to views of the Project as simulated from Viewpoint 2 and Viewpoint 1C, discussed above. The existing setting contains many anthropogenic features that distract from the natural desert landscape. Views of the Project from Viewpoint 3 would be most visible to traveling motorists along I-8 who would view the Project at high traveling speeds for a short period of time. Viewership from Viewpoint 3 would on average be short in duration due to high travel speeds, and the overall change seen from Viewpoint 3 would be moderately high given Viewpoint 3's viewing angle and the existing infrastructure seen from Viewpoint 3. Introducing a moderately high degree of change that would moderately impact visual character where viewer sensitivity is low would be an adverse but not significant impact. The Project would incorporate BMP 111 through BMP 115 and comply with CMA DFA-VPL-VRM-3 to further reduce already less than significant impacts.

Viewpoint 4B
Figure 5a and Figure 5b display the existing view and simulated view looking northeast. Viewpoint 4B represents short duration views experienced by motorists along SR-98. Refer to the Viewpoint Analysis section for a description of the existing views from Viewpoint 4B.

Figure 5b represents the proposed simulation from Viewpoint 4B. The simulation displays the Project Application Area would be visible in the foreground and middleground. Project components such as metal fencing, solar panel arrays, and project substation are the most prominent features in Viewpoint 4B, and these elements would significantly contrast with the existing environment. Views of the Project from Viewpoint 4B would be most visible to traveling motorists along SR 98 who would view the Project at high traveling speeds for a short period of time. Although viewership from Viewpoint 4B would on average be short in duration due to high travel speeds, the overall change seen from Viewpoint 4B would be substantial given Viewpoint 4B's proximity to SR 98 and the undeveloped nature of the area from Viewpoint 4B. Introducing a high degree of change that would substantially impact visual character where viewer sensitivity is moderate would be a potentially significant impact. The Project would incorporate BMP 111 through BMP 115 and comply with CMA DFA-VPL-VRM-3 to reduce impacts but not to a level of less than significant given the overall size of the project panels.

Breaker-and-a-Half Switchyard

The BAAH Switchyard would be visible from Viewpoint 4B. Figure 5a and Figure 5b display the existing view and simulated view looking northeast. Viewpoint 4B represents short duration views experienced by motorists along SR-98. Refer to the Viewpoint Analysis section for a description of the existing views from Viewpoint 4B.

Figure 5b represents the proposed simulation from Viewpoint 4B. The simulation displays the Project Application Area which would be visible in the foreground and middleground. The BAAH Switchyard would be visible in Viewpoint 4B; however, it would be one of various Project components visible from traveling motorists. Other Project components, such as metal fencing, solar panel arrays, and project substation are the most prominent features in Viewpoint 4B given that they would be visible to motorists for a longer period of time as they extend along SR-98. Views of the BAAH Switchyard from Viewpoint 4B would be most visible to traveling motorists along SR 98 who would view the BAAH Switchyard from a short distance as they approach the switchyard and then pass by it at high traveling speeds; thus, the BAAH Switchyard would only be visible for a very short period of time. Additionally, the BAAH Switchyard would be similar in nature to the existing views just south of the BAAH Switchyard which include transmission lines and other transmission infrastructure. Thus, the BAAH Switchyard by itself would introduce a low degree of change to visual character where viewer sensitivity is moderate, resulting in an adverse but not significant impact. The Project would incorporate BMP 111 through BMP 115 and comply with CMA DFA-VPL-VRM-3 to further reduce already less than significant impacts.

Loop-in Transmission Line

The Loop-in Transmission Line would be visible from Viewpoint 4B and Viewpoint Loop-in Line, as described below.

Viewpoint 4B
Figure 5a and Figure 5b display the existing view and simulated view looking northeast. Viewpoint 4B represents short duration views experienced by motorists along SR-98. Refer to the Viewpoint Analysis section for a description of the existing views from Viewpoint 4B.

Figure 5b represents the proposed simulation from Viewpoint 4B. The simulation displays the Project Application Area would be visible in the foreground and middleground. The two 500-kV loop-in lines would be visible in Viewpoint 4B; however, the loop-in lines would be one of various Project components visible from traveling motorists. Other Project components, such as metal fencing, solar panel arrays, and project substation are the most prominent features in Viewpoint 4B given that they would be visible to motorists for a longer period of time as they extend along SR-98. Views of the loop-in lines from Viewpoint 4B would be most visible to traveling motorists along SR 98 who would view the loop-in lines from a short distance as they approach the lines and then pass by them at high traveling speeds; thus, the loop-in lines would only be visible for a very short period of time. Additionally, the loop-in-lines would be similar in nature to the existing views just south of the loop-in lines which include transmission lines

and other transmission infrastructure. Thus, the loop-in lines by themselves would introduce a low degree of change to visual character where viewer sensitivity is moderate, resulting in an adverse but not significant impact. The Project would incorporate BMP 111 through BMP 115 and comply with CMA DFA-VPL-VRM-3 to further reduce already less than significant impacts.

Viewpoint Loop-in Lines

Figure 6a and Figure 6b display the existing view and simulated view looking south. Viewpoint Loop-in Lines represents limited duration views experienced by motorists along SR 98. Refer to the Viewpoint Analysis section for a description of the existing views from Viewpoint Loop-in Lines.

Figure 6b represents the proposed simulation from Viewpoint Loop-in Lines. The simulation displays the Project visible from the foreground and middleground in this visual simulation. Project components such as the two 500-kV loop-in lines are the most prominent features in Viewpoint Loop-in Lines, but the loop-in lines would not substantially contrast with the existing environment as there are existing transmission lines in the area. The Project would introduce a moderate change to the environment given that vertical and horizontal infrastructure elements already exist as seen from Viewpoint Loop-in Lines. While the Project components would be visible to motorists, the Project components would not attract motorists' attention for a long duration as the constructed Project features would not drastically differ from the existing human-made features, and motorists would be traveling at high speeds while passing the Viewpoint Loop-in Line. Introducing a moderate degree of change that would moderately impact visual character where viewer sensitivity is low to moderate would be an adverse but not significant impact. Nevertheless, the Project would incorporate BMP 111 through BMP 115 and comply with CMA DFA-VPL-VRM-3 to further reduce already less than significant impacts.

Solar Facility, BESS, Substation, and O&M Facility and Yard Summary

The proposed solar site components including the fenced solar PV facility with arrays, inverters, transformers, and internal access roads would be approximately 5,985 acres in size. The proposed BESS would be approximately 35 acres and would be 40- to 52-feet-long by 8-feet wide by 8.5-feet-high. The proposed substation would be approximately 20 acres in size and would be approximately 45 feet tall by 40 feet wide on the longest side. Lastly, the O&M Yard and Facility would be approximately 10 acres in size and would be maximum 15 feet tall. The operating Project components would be visible to local motorists As shown in Figure 2a through Figure 5b, and described under Impact VIS-3 Operation , the Project site would add human-made solid, horizontal features that would contrast with the existing undeveloped desert surroundings and result in a reduction of visual character and quality. Given the visually dominant features would contribute to the decrease in the visual coherence, intactness, and unity within the area, visual impacts on certain public views would be potentially significant because the Project would substantially alter the existing visual character of views. The Project would incorporate appropriate BMPs and comply with CMA DFA-VPL-VRM-3, which would reduce these potentially significant impacts at some public views but would not reduce the

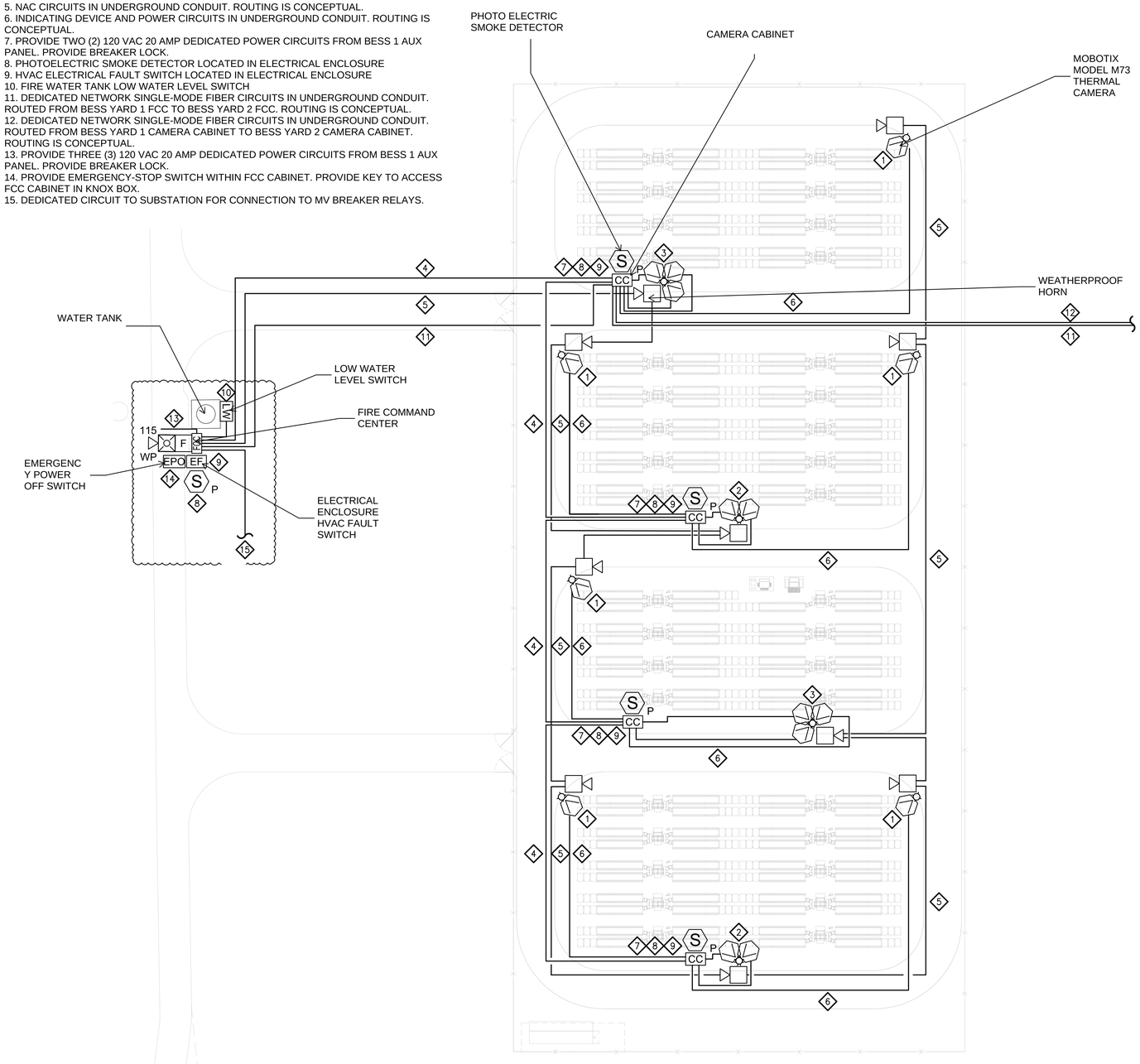
overall visual impact of the solar facility, BESS, substation, and O&M facility to a level of less than significant.

Loop-in Transmission Corridors and Breaker-and-a-Half Switchyard

The operating 500 kV loop-in transmission corridors and BAAH switchyard would be located on the southern portion of the Project site and would traverse SR 98. The two 500 kV loop-in transmission lines and BAAH switchyard combined would be approximately 75 acres total. Additionally, the BAAH switchyard's metal surfaces would be non-reflective and would not distract traveling motorists. Although the 500 kV loop-in transmission corridors and BAAH switchyard would be visible to motorists along SR 98, it would only be visible during the short duration that the motorist is passing by these Project components and would be similar in nature to the existing infrastructure running along the SR 98. Therefore, the transmission corridors and the BAAH switchyard would not substantially degrade the existing visual character or quality of public views for traveling motorists and would not substantially degrade existing visual character and quality and the impact would be less than significant.

Attachment L BESS Fire Protection Drawing (DR WS-4)

KEY NOTES:
1. (1) POLE-MOUNTED THERMAL CAMERA AND (1) HORN (TYPICAL).
2. (2) POLE-MOUNTED THERMAL CAMERA AND (1) HORN (TYPICAL).
3. (3) POLE-MOUNTED THERMAL CAMERA AND (1) HORN (TYPICAL).
4. SIGNALING LINE CIRCUITS AND ETHERNET CIRCUITS IN UNDERGROUND CONDUIT. ROUTING IS CONCEPTUAL.
5. NAC CIRCUITS IN UNDERGROUND CONDUIT. ROUTING IS CONCEPTUAL.
6. INDICATING DEVICE AND POWER CIRCUITS IN UNDERGROUND CONDUIT. ROUTING IS CONCEPTUAL.
7. PROVIDE TWO (2) 120 VAC 20 AMP DEDICATED POWER CIRCUITS FROM BESS 1 AUX PANEL. PROVIDE BREAKER LOCK.
8. PHOTOELECTRIC SMOKE DETECTOR LOCATED IN ELECTRICAL ENCLOSURE
9. HVAC ELECTRICAL FAULT SWITCH LOCATED IN ELECTRICAL ENCLOSURE
10. FIRE WATER TANK LOW WATER LEVEL SWITCH
11. DEDICATED NETWORK SINGLE-MODE FIBER CIRCUITS IN UNDERGROUND CONDUIT. ROUTED FROM BESS YARD 1 FCC TO BESS YARD 2 FCC. ROUTING IS CONCEPTUAL.
12. DEDICATED NETWORK SINGLE-MODE FIBER CIRCUITS IN UNDERGROUND CONDUIT. ROUTED FROM BESS YARD 1 CAMERA CABINET TO BESS YARD 2 CAMERA CABINET. ROUTING IS CONCEPTUAL.
13. PROVIDE THREE (3) 120 VAC 20 AMP DEDICATED POWER CIRCUITS FROM BESS 1 AUX PANEL. PROVIDE BREAKER LOCK.
14. PROVIDE EMERGENCY-STOP SWITCH WITHIN FCC CABINET. PROVIDE KEY TO ACCESS FCC CABINET IN KNOX BOX.
15. DEDICATED CIRCUIT TO SUBSTATION FOR CONNECTION TO MV BREAKER RELAYS.



SYMBOL LEGEND:

- WEATHERPROOF HORN
- MOBOTIX MODEL M73 THERMAL CAMERA
- WEATHERPROOF HORN/STROBE
- F — WEATHER PROOF MANUAL FIRE ALARM PULL STATION
- CC — WEATHERPROOF CAMERA CABINET
- EF — ELECTRICAL ENCLOSURE HVAC FAULT SWITCH
- LW — LOW WATER LEVEL SWITCH
- EPO — EMERGENCY POWER OFF SWITCH
- S P — PHOTOELECTRIC SMOKE DETECTOR
- POLE
- FCC — FIRE COMMAND CENTER (FCC)
- FIRE WATER TANK

FIRE ALARM SYSTEM SITE PLAN

1/32"=1'-0" 0 8 16 24 32 48 64 96

N

PRELIMINARY

SHEET TITLE:
FIRE ALARM SITE PLAN

FA-01

PRELIMINARY