

APPENDIX 5.10A

Screening-level Environmental Justice Analysis

Environmental Justice

Introduction

This report was prepared in compliance with Presidential Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (EO 12898), dated February 11, 1994. The purpose of this report is to determine whether or not disproportionately high and adverse human health or environmental effects of the proposed Turlock Irrigation District Almond 2 Power Plant (A2PP) project are likely to fall on minority and/or low-income populations. This report focuses on the populations that are located within the area potentially affected by the A2PP project. In accordance with EO 12898, this report documents where minority and low-income populations reside and examines if there are high and adverse impacts identified (as reported in the various environmental analysis sections of this AFC) where these impacts fall relative to these populations. This report also discusses the specific outreach efforts made to involve minority and low-income populations in the decision-making process. No high and adverse impacts are expected as a result of this project; therefore, no high and adverse human health or environmental effects of this project are expected to fall disproportionately on minority or low-income populations.

Studies Performed and Coordination Conducted

Overview of Executive Order 12898

EO 12898, issued by President Clinton in 1994, requires that “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations....” In his memorandum transmitting EO 12898 to federal agencies, President Clinton further specified that, “each Federal agency shall analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by the National Environmental Policy Act of 1969.” Guidance on how to implement EO 12898 and conduct an Environmental Justice analysis has been issued by the President’s Council on Environmental Quality (CEQ, 1997).

Methodology and Approach

The A2PP project was evaluated for compliance with EO 12898. For this type of analysis, three fundamental evaluation measures are used.

1. *A determination is made as to which impacts of the project are high and adverse.*

The series of environmental analyses prepared for the A2PP AFC were reviewed, and discussions with the environmental professionals who prepared these sections were conducted to determine which environmental or human health impacts could reach the level of high and adverse after proposed mitigation measures were implemented. Neither EO 12898, nor any of the environmental justice guidance documents, contain official guidance on the definition of “high and adverse.” For purposes of this analysis, adverse impacts identified by the professional analysts working on this AFC as “significant” under CEQA were considered to be synonymous with high and adverse impacts as described in EO 12898.

2. *A determination is made as to whether minority or low-income populations exist within the high and adverse impact zones.*

For information on the distribution of minority and low-income populations in the A2PP project area, 2000 Census data were used. Race/ethnicity and income data were reviewed at the finest level available from the Census (i.e., Census Block Groups for race/ethnicity and income). Tables 5.10A-1 and 5.10A-2 show the distribution of the population within the 6-mile radius by race/ethnicity and income, respectively. These tables are located at the end of this appendix.

3. *The spatial distribution of high and adverse impacts is reviewed to determine if these impacts are likely to fall disproportionately on the minority or low-income population.*

Since there is no specific guidance in EO 12898, the test of disproportionately is made on the basis described in the U.S. Environmental Protection Agency’s (USEPA) *Draft Revised Guidance for Investigating Title VI Administrative Complaints Challenging Permits* (USEPA, June 2000). This guidance suggests using two to three standard deviations above the mean as a quantitative measure of disparate effect.

While the first two elements of this approach were conducted, no detailed distribution analysis was required to make a final determination. This was because professional analysts in each environmental and human health discipline reviewed for this AFC determined that no high and adverse (i.e., CEQA significant) human health or environmental effects were expected to remain after implementation of proposed mitigation measures.

Outreach to Minority and Low-Income Populations

EO 12898 requires Federal agencies to ensure effective public participation and access to information. Consequently, a key component of compliance with EO 12898 is outreach to the potentially affected minority and/or low-income population to discover issues of importance that may not otherwise be apparent.

As part of the AFC process, the California Energy Commission will provide information to residents in the area and provide opportunities for their involvement.

The California Energy Commission typically:

- Mails written notice to all property owners within 1,000 feet of the site and within 500 feet of the centerline of all linear corridors
- Publishes notice in the local newspaper announcing public workshops and hearings

- Provides access to information by submitting copies of key documents to local libraries and providing materials via a web page
- Holds hearings and workshops in the local community
- Assigns a public advisor to assist the public in participating in the process

Demographic Analysis

Distribution of the Minority Population

Based on the 2000 Census, the total population within a 6-mile radius of the A2PP site is approximately 179,678. The racial minority population, in the Census Blocks within the 6-mile radius of the A2PP site, comprises approximately 37 percent of this total population while the ethnic minority (as represented by individuals of Hispanic origin) comprises about 38 percent (see Table 5.10A-1). Figure 5.10A-1 (figures are at the end of this appendix) identifies the non-White racial and ethnic minority population percentages of Census Block Groups in the vicinity of the A2PP based on 2000 Census data. As shown in Figure 5.10A-1, about a quarter of the Census Block Groups in the vicinity of the A2PP are above 50 percent minority. These Census Block Groups have minority population densities high enough (i.e., greater than 50 percent) to be considered minority populations based on the guidance contained in CEQ (1997).

Distribution of the Low-Income Population

Based on the 2000 Census, the total population for whom poverty status is determined within a 6-mile radius of the A2PP site was approximately 176,876. The low-income population, in the Census Block Groups within the 6-mile radius of the A2PP site, comprised about 20 percent of this total population (see Table 5.10A-2). Figure 5.10A-2 identifies the low-income population percentages of Census Block Groups in the vicinity of A2PP based on 2000 Census data. Unlike the CEQ (1997) guidance on minority population, none of the environmental justice guidance documents contain a quantitative definition of how many low-income individuals it takes to comprise a low-income population. In the absence of guidance, for this analysis the density used to identify minority populations (i.e., 50 percent or greater) was also used to identify low-income populations. As shown on Figure 5.10A-2, there are a few Census Block Groups in the project vicinity with 50 percent or more low-income population.

Results and Conclusion

As discussed in the *Methodology and Approach* section above, for purposes of this analysis, CEQA-significant adverse impacts are considered synonymous with high and adverse impacts as described in EO 12898. As reported in the series of environmental analyses prepared for the A2PP AFC, and further confirmed through discussions with the environmental professionals who prepared those sections, no significant adverse impacts are expected as a result of this project after proposed mitigation measures are implemented. Consequently, none of the impacts of this project can be described as high and adverse in the context of EO 12898. As there are no high and adverse impacts expected as a result of

this project, this analysis concludes that no high and adverse human health or environmental effects of this project are expected to fall disproportionately on minority or low-income populations. The A2PP project can, therefore, be considered to be consistent with the policy established in EO 12898.

Bibliography and References

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U.S. Environmental Protection Agency. 1998. *Draft Title VI Guidance for EPA Assistance Recipients Administering Environmental Permitting Programs (Draft Recipient Guidance) and Draft Revised Guidance for Investigating Title VI Administrative Complaints Challenging Permits (Draft Revised Investigation Guidance)*. Federal Register Volume 65, Number 124, pages 39649-39701. Washington, D.C. June 27, 2000.

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APPENDIX

Table 5.10A-1

2000 Census Racial/Ethnic Data by Census Block Groups
Almond 2 Power Plant 6-mile Radius

Census Block	Population	White	Minority	Percent Minority	Hispanic Origin*	Percent Hispanic
15000US060990005083	905	727	178	19.7	227	25.1
15000US060990006013	1,786	1,311	475	26.6	406	22.7
15000US060990006021	1,074	917	157	14.6	222	20.7
15000US060990006022	1,864	1,175	689	37.0	568	30.5
15000US060990009052	2,753	2,286	467	17.0	368	13.4
15000US060990009053	1,884	1,561	323	17.1	229	12.2
15000US060990009063	1,921	1,641	280	14.6	231	12.0
15000US060990010012	1,186	1,077	109	9.2	96	8.1
15000US060990010013	827	723	104	12.6	78	9.4
15000US060990010014	1,176	1,003	173	14.7	142	12.1
15000US060990010015	1,617	1,322	295	18.2	294	18.2
15000US060990010021	964	825	139	14.4	144	14.9
15000US060990010022	1,522	1,149	373	24.5	310	20.4
15000US060990010023	883	703	180	20.4	156	17.7
15000US060990011001	948	717	231	24.4	196	20.7
15000US060990011003	982	789	193	19.7	145	14.8
15000US060990011004	951	750	201	21.1	206	21.7
15000US060990012001	857	721	136	15.9	124	14.5
15000US060990012002	1,325	1,005	320	24.2	243	18.3
15000US060990012003	1,738	1,434	304	17.5	274	15.8
15000US060990013002	624	553	71	11.4	92	14.7
15000US060990013004	1,383	1,249	134	9.7	129	9.3
15000US060990013005	1,016	887	129	12.7	108	10.6
15000US060990013006	805	746	59	7.3	55	6.8
15000US060990014003	615	349	266	43.3	182	29.6

Census Block	Population	White	Minority	Percent Minority	Hispanic Origin*	Percent Hispanic
15000US060990014004	1,745	1,414	331	19.0	239	13.7
15000US060990014005	798	427	371	46.5	227	28.4
15000US060990015001	2,049	1,161	888	43.3	919	44.9
15000US060990015002	1,902	792	1,110	58.4	868	45.6
15000US060990015003	1,859	1,049	810	43.6	762	41.0
15000US060990015004	565	433	132	23.4	124	21.9
15000US060990015005	618	478	140	22.7	156	25.2
15000US060990016011	1,154	405	749	64.9	622	53.9
15000US060990016012	1,799	784	1,015	56.4	916	50.9
15000US060990016013	1,699	651	1,048	61.7	880	51.8
15000US060990016031	1,459	567	892	61.1	1,021	70.0
15000US060990016032	1,789	630	1,159	64.8	1,122	62.7
15000US060990016033	821	548	273	33.3	315	38.4
15000US060990016034	1,583	1,025	558	35.2	718	45.4
15000US060990016041	1,402	437	965	68.8	724	51.6
15000US060990016042	1,395	438	957	68.6	853	61.1
15000US060990016043	1,122	475	647	57.7	776	69.2
15000US060990017001	2,001	565	1,436	71.8	1,300	65.0
15000US060990017002	817	334	483	59.1	404	49.4
15000US060990018001	833	616	217	26.1	255	30.6
15000US060990018002	1,294	948	346	26.7	313	24.2
15000US060990018003	373	308	65	17.4	144	38.6
15000US060990019001	1,979	1,551	428	21.6	376	19.0
15000US060990019002	740	615	125	16.9	151	20.4
15000US060990019003	1,173	914	259	22.1	272	23.2
15000US060990019004	803	610	193	24.0	170	21.2
15000US060990019005	815	711	104	12.8	97	11.9
15000US060990020022	757	560	197	26.0	221	29.2
15000US060990020023	1,052	790	262	24.9	284	27.0
15000US060990020031	1,878	1,074	804	42.8	501	26.7
15000US060990020032	2,091	1,244	847	40.5	590	28.2
15000US060990020033	2,389	1,493	896	37.5	477	20.0

Census Block	Population	White	Minority	Percent Minority	Hispanic Origin*	Percent Hispanic
15000US060990020034	2,247	1,494	753	33.5	598	26.6
15000US060990020041	1,443	988	455	31.5	347	24.0
15000US060990020042	905	688	217	24.0	201	22.2
15000US060990020043	2,090	1,351	739	35.4	655	31.3
15000US060990020044	2,001	1,121	880	44.0	750	37.5
15000US060990021001	2,195	1,261	934	42.6	1,414	64.4
15000US060990021002	2,107	1,251	856	40.6	1,093	51.9
15000US060990022001	1,701	831	870	51.1	1,070	62.9
15000US060990022002	2,459	1,071	1,388	56.4	1,567	63.7
15000US060990022003	576	330	246	42.7	309	53.6
15000US060990022004	1,816	811	1,005	55.3	1,124	61.9
15000US060990023011	2,419	1,116	1,303	53.9	1,509	62.4
15000US060990023012	1,725	915	810	47.0	891	51.7
15000US060990023013	1,059	745	314	29.7	427	40.3
15000US060990023014	2,048	882	1,166	56.9	1,607	78.5
15000US060990023021	1,853	906	947	51.1	1,075	58.0
15000US060990023022	1,956	957	999	51.1	1,334	68.2
15000US060990024001	2,736	1,134	1,602	58.6	2,060	75.3
15000US060990024002	3,445	1,445	2,000	58.1	2,247	65.2
15000US060990024003	1,052	452	600	57.0	775	73.7
15000US060990024004	2,042	879	1,163	57.0	1,282	62.8
15000US060990025011	2,788	1,457	1,331	47.7	1,693	60.7
15000US060990025012	471	354	117	24.8	127	27.0
15000US060990025021	1,363	741	622	45.6	569	41.7
15000US060990025022	2,469	1,548	921	37.3	1,053	42.6
15000US060990025023	1,518	1,036	482	31.8	516	34.0
15000US060990025024	1,518	960	558	36.8	703	46.3
15000US060990025025	1,186	847	339	28.6	403	34.0
15000US060990026021	1,020	706	314	30.8	415	40.7
15000US060990026022	2,513	1,532	981	39.0	1,045	41.6
15000US060990026023	1,273	859	414	32.5	441	34.6
15000US060990026031	789	603	186	23.6	192	24.3

Census Block	Population	White	Minority	Percent Minority	Hispanic Origin*	Percent Hispanic
15000US060990026032	1,998	1,694	304	15.2	365	18.3
15000US060990026041	973	635	338	34.7	327	33.6
15000US060990026042	1,240	568	672	54.2	648	52.3
15000US060990026043	1,613	906	707	43.8	931	57.7
15000US060990026051	1,764	1,309	455	25.8	499	28.3
15000US060990026052	2,036	1,517	519	25.5	555	27.3
15000US060990027011	1,671	1,127	544	32.6	499	29.9
15000US060990027012	1,971	1,446	525	26.6	518	26.3
15000US060990027021	1,705	583	1,122	65.8	1,073	62.9
15000US060990027022	1,837	832	1,005	54.7	1,021	55.6
15000US060990027023	1,376	760	616	44.8	762	55.4
15000US060990027024	904	633	271	30.0	249	27.5
15000US060990027025	1,267	747	520	41.0	453	35.8
15000US060990028024	1,516	1,171	345	22.8	288	19.0
15000US060990029015	1,275	1,078	197	15.5	210	16.5
15000US060990029021	1,265	1,065	200	15.8	241	19.1
15000US060990029022	1,820	1,188	632	34.7	782	43.0
15000US060990029024	594	464	130	21.9	122	20.5
15000US060990030011	1,899	1,432	467	24.6	454	23.9
15000US060990030012	636	506	130	20.4	129	20.3
15000US060990030013	1,387	1,044	343	24.7	360	26.0
15000US060990030021	1,247	985	262	21.0	367	29.4
15000US060990030022	1,306	1,021	285	21.8	331	25.3
15000US060990030023	3,158	1,739	1,419	44.9	1,545	48.9
15000US060990031001	1,174	798	376	32.0	388	33.0
15000US060990031002	768	550	218	28.4	379	49.3
15000US060990031003	1,351	962	389	28.8	551	40.8
15000US060990031004	73	71	2	2.7	6	8.2
15000US060990031005	733	606	127	17.3	259	35.3
15000US060990036022	2,995	2,110	885	29.5	688	23.0
15000US060990036031	765	569	196	25.6	242	31.6
15000US060990036033	1,002	788	214	21.4	203	20.3

Census Block	Population	White	Minority	Percent Minority	Hispanic Origin*	Percent Hispanic
15000US060990036034	764	617	147	19.2	210	27.5
15000US060990036035	738	544	194	26.3	285	38.6
15000US060990038011	1,714	1,181	533	31.1	504	29.4
TOTAL	179,678	114,184	65,494	36.5	67,958	37.8

Source: 2000 Census.

* Hispanics or Latinos are those people who classified themselves in one of the specific Spanish, Hispanic, or Latino categories listed on the Census 2000 questionnaire—"Mexican, Mexican Am., Chicano," "Puerto Rican," or "Cuban"—as well as those who indicate that they are "other Spanish/Hispanic/Latino." People who identify their origin as "other Spanish/Hispanic/Latino" may be of any race. Thus, the percent Hispanic should not be added to percentages for racial (i.e., minority) categories.

APPENDIX

Table 5.10A-2

2000 Census Low Income Data by Census Block Groups
Almond 2 Power Plant 6-mile Radius

Census Block Group	Total Population*	Population below Poverty Level	Percent Low-Income
060990005083	915	54	5.9
060990006013	1,731	131	7.6
060990006021	933	97	10.4
060990006022	1,863	180	9.7
060990009052	2,824	302	10.7
060990009053	1,779	45	2.5
060990009063	1,970	146	7.4
060990010012	1,217	73	6.0
060990010013	748	82	11.0
060990010014	1,208	82	6.8
060990010015	1,558	333	21.4
060990010021	914	23	2.5
060990010022	1,617	249	15.4
060990010023	825	171	20.7
060990011001	915	115	12.6
060990011003	1,023	117	11.4
060990011004	929	251	27.0
060990012001	843	83	9.8
060990012002	1,379	307	22.3
060990012003	1,686	357	21.2
060990013002	661	36	5.4
060990013004	1,367	100	7.3
060990013005	999	0	0.0
060990013006	748	97	13.0
060990014003	584	171	29.3
060990014004	1,749	359	20.5

Census Block Group	Total Population *	Population below Poverty Level	Percent Low-Income
060990014005	852	217	25.5
060990015001	2,008	288	14.3
060990015002	1,913	470	24.6
060990015003	1,897	230	12.1
060990015004	507	72	14.2
060990015005	622	63	10.1
060990016011	1,160	557	48.0
060990016012	1,657	474	28.6
060990016013	1,822	583	32.0
060990016031	1,570	494	31.5
060990016032	2,003	407	20.3
060990016033	744	178	23.9
060990016034	1,529	417	27.3
060990016041	1,314	559	42.5
060990016042	1,381	670	48.5
060990016043	1,158	239	20.6
060990017001	1,995	781	39.1
060990017002	798	381	47.7
060990018001	741	212	28.6
060990018002	1,026	394	38.4
060990018003	0	0	NA
060990019001	2,032	529	26.0
060990019002	709	86	12.1
060990019003	1,200	107	8.9
060990019004	843	134	15.9
060990019005	715	52	7.3
060990020022	695	119	17.1
060990020023	1,014	304	30.0
060990020031	1,838	275	15.0
060990020032	2,057	290	14.1
060990020033	2,316	101	4.4
060990020034	2,312	95	4.1
060990020041	1,381	106	7.7

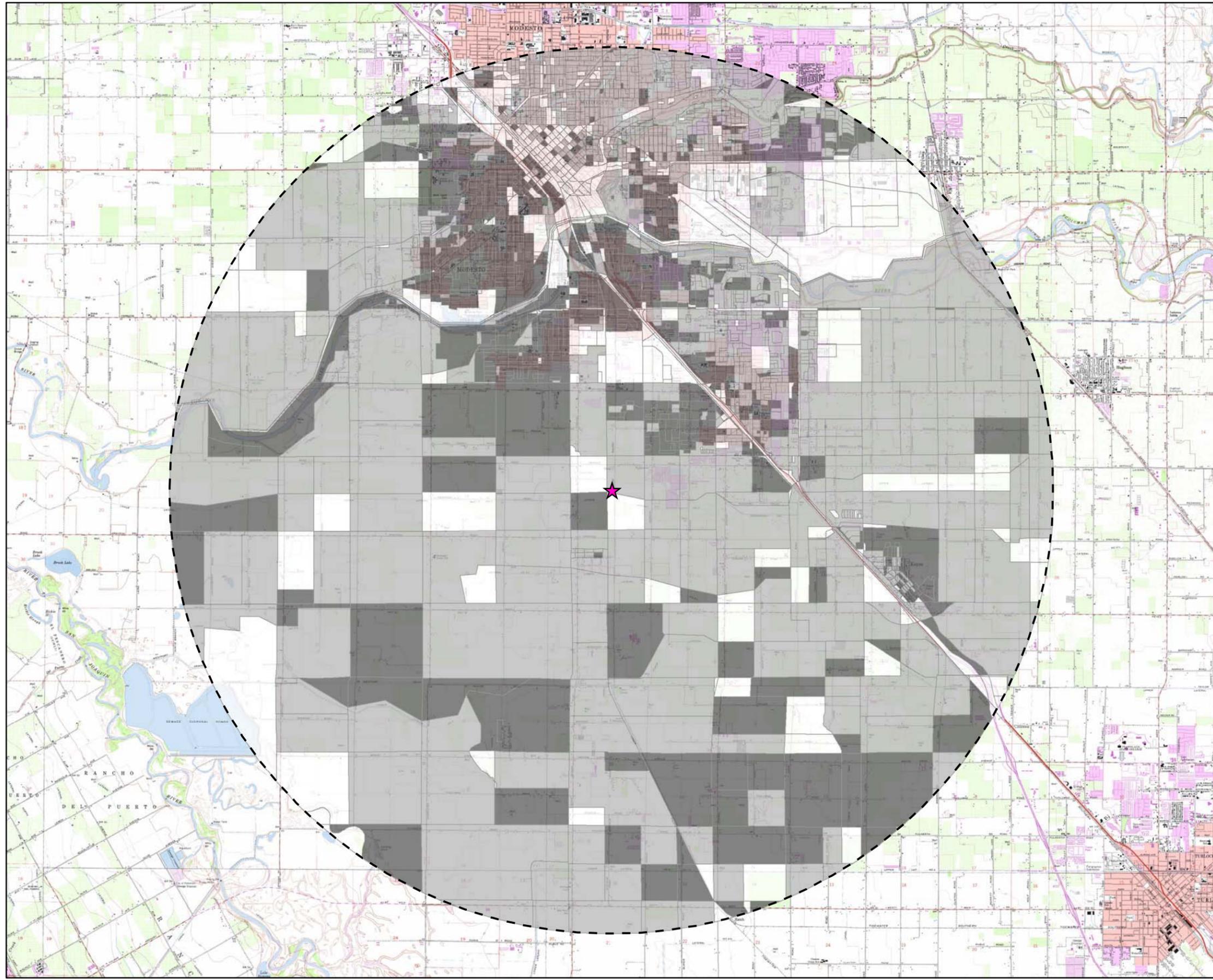
Census Block Group	Total Population *	Population below Poverty Level	Percent Low-Income
060990020042	921	206	22.4
060990020043	2,223	486	21.9
060990020044	1,895	239	12.6
060990021001	2,173	901	41.5
060990021002	2,103	619	29.4
060990022001	1,570	466	29.7
060990022002	2,513	1,305	51.9
060990022003	584	251	43.0
060990022004	1,842	921	50.0
060990023011	2,421	416	17.2
060990023012	1,878	541	28.8
060990023013	955	592	62.0
060990023014	1,940	438	22.6
060990023021	1,840	415	22.6
060990023022	1,934	766	39.6
060990024001	2,711	1,150	42.4
060990024002	3,428	1,029	30.0
060990024003	965	204	21.1
060990024004	2,100	548	26.1
060990025011	2,693	621	23.1
060990025012	0	0	NA
060990025021	1,240	39	3.1
060990025022	2,490	149	6.0
060990025023	1,562	238	15.2
060990025024	1,530	307	20.1
060990025025	1,235	379	30.7
060990026021	1,040	340	32.7
060990026022	2,414	610	25.3
060990026023	1,330	218	16.4
060990026031	761	79	10.4
060990026032	1,901	98	5.2
060990026041	1,003	59	5.9
060990026042	1,123	331	29.5

Census Block Group	Total Population *	Population below Poverty Level	Percent Low-Income
060990026043	1,731	506	29.2
060990026051	1,812	169	9.3
060990026052	1,988	147	7.4
060990027011	1,663	124	7.5
060990027012	1,979	123	6.2
060990027021	1,558	293	18.8
060990027022	1,803	497	27.6
060990027023	1,341	185	13.8
060990027024	971	61	6.3
060990027025	1,297	128	9.9
060990028024	1,570	53	3.4
060990029015	1,291	220	17.0
060990029021	1,200	39	3.3
060990029022	1,780	397	22.3
060990029024	591	67	11.3
060990030011	1,915	84	4.4
060990030012	606	69	11.4
060990030013	1,385	109	7.9
060990030021	1,403	90	6.4
060990030022	1,169	109	9.3
060990030023	3,071	710	23.1
060990031001	1,235	370	30.0
060990031002	682	91	13.3
060990031003	1,167	342	29.3
060990031004	58	0	0.0
060990031005	677	150	22.2
060990036022	3,019	428	14.2
060990036031	828	86	10.4
060990036033	966	143	14.8
060990036034	770	92	11.9
060990036035	661	191	28.9
060990038011	1,577	182	11.5
TOTAL	176,876	35,061	19.8

Census Block Group	Total Population *	Population below Poverty Level	Percent Low-Income
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Source: 2000 Census.

* Population numbers are only those for whom poverty was determined and exclude full-time college students.



LEGEND

- ★ Project Site
- ⊖ Six Mile Buffer

Percentage of Minority Population

- No Minority
- 0-50%
- 50-100%

Notes:

- Source: American Fact Finder, Census 2000 Summary File 1 (SF 3) 100-Percent Data, U.S. Census Bureau, 2008

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

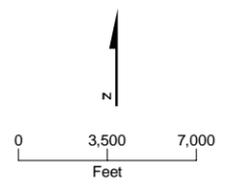
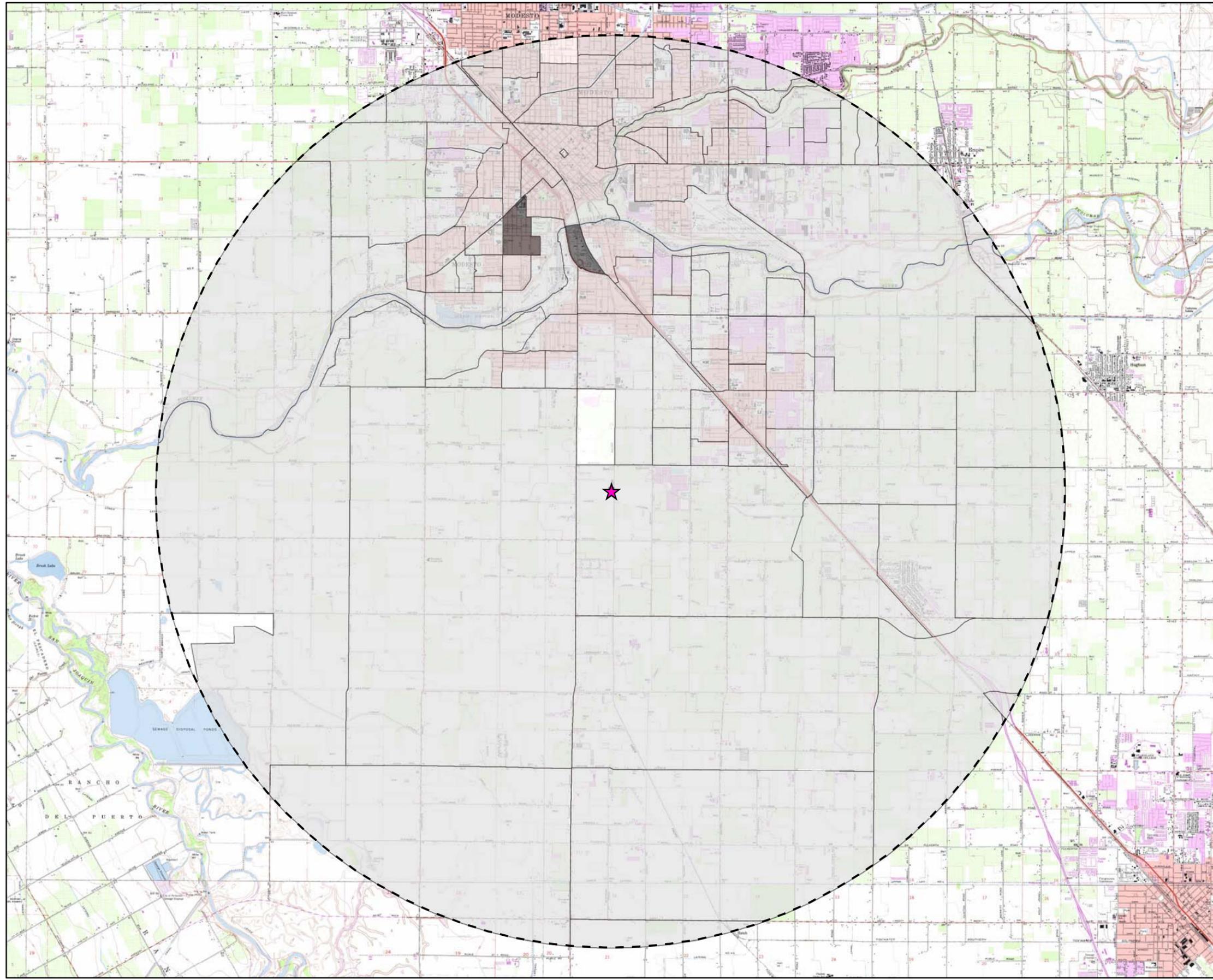


FIGURE 5.10-1
MINORITY POPULATION
DISTRIBUTION BY CENSUS BLOCKS
WITHIN SIX MILES
 ALMOND 2 POWER PLANT
 CERES, CALIFORNIA



LEGEND

- ★ Project Site
- ⊖ Six Mile Buffer

Percentage of Low Income Population

- No Low Income
- ◻ 0 - 50 Percent Low Income
- ◼ 50 - 100 Percent Low Income

Notes:

- Source: American Fact Finder, Census 2000 Summary File 1 (SF 3) 100-Percent Data, U.S. Census Bureau, 2008

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

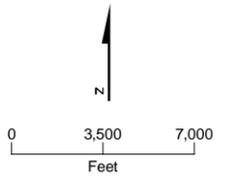


FIGURE 5.10-2
LOW INCOME POPULATION
DISTRIBUTION BY CENSUS BLOCKS
WITHIN SIX MILES
 ALMOND 2 POWER PLANT
 CERES, CALIFORNIA