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Appendix 5.10A

Low Income Population Distribution



Environmental Justice

Introduction

This Appendix 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 Black Rock Geothermal, LLC's Black Rock Geothermal Project (BRGP or Project) are likely to fall on minority and/or low-income populations. The Appendix focuses on the populations that are located within the area potentially affected by the BRGP project. In accordance with EO 12898, the Appendix 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) 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 BRGP 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 BRGP 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 BRGP project area, 2020 Census data and the 2016-2020 American Community Survey (ACS) 5-year data were used. Minority and income data were reviewed at the finest level available from the Census (i.e., Census Tract). Tables 5.10A-1 and 5.10A-2 show the distribution of the population within the 10-mile radius by minority 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 undertaken to make a final determination. This was because the area within the 10-mile radius of BRGP has a minority population that constitutes more than 50 percent of the population (Table 5.10A-1) and the acute health risk that are expected to remain after implementation of proposed mitigation measures are likely to fall on this population.

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 2020 Census, the total population within a 10-mile radius of the BRGP site is approximately 22,869. The minority population, in the Census Tracts within the 10-mile radius of the BRGP site, comprises 84.4 percent of this total population (see Table 5.10A-1). Figure 5.10A-1 (figures are at the end of this appendix) identifies the minority population percentages of Census Tracts in the vicinity of the BRGP based on 2020 Census data. As shown in Figure 5.10A-1, all but one of the Census Tracts in the vicinity of the BRGP are above 50 percent minority. These Census Tracts 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 2020 ACS 5-year estimates dataset, the total population for whom poverty status is determined within a 10-mile radius of the BRGP site was approximately 15,663. The low-income population, in the Census Tracts within the 10-mile radius of the BRGP site, comprised 31.9 percent of this total population (see Table 5.10A-2). Figure 5.10A-2 identifies the low-income population percentages of Census Tracts in the vicinity of BRGP based on ACS 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 is one Census Tract (CT 101.01) within 10 miles of the project 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 BRGP AFC, and further confirmed through discussions with the environmental professionals who prepared those sections, the only significant adverse impacts expected as a result of this project after proposed mitigation measures are implemented are those associated with acute health risks. Unless feasible mitigation measures are implemented with respect to the acute health risks, the impacts of this project can be described as high and adverse in the context of EO 12898 and are expected to fall disproportionately on minority or low-income populations. The BRGP project can, therefore, be considered to be inconsistent with the policy established in EO 12898.

Bibliography and References

Clinton, William. 1994. Memorandum for the Heads of All Departments and Agencies; Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Presidential Documents, Vol. 30, No. 6, 279-280. February 11.

CEQ (Council on Environmental Quality). 1997. *Environmental Justice; Guidance Under the National Environmental Policy Act*. Council on Environmental Quality, Executive Office of the President, Washington, DC. December 10. Released July 1998.

Executive Order 12898. 1994. *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. Federal Register, Vol. 59, No. 32, 7629-7633. February 11.

U.S. Census Bureau. 2022a. 2020 Redistricting Data SF (PL 94-171) – *Hispanic or Latino, and Not Hispanic or Latino By Race*. Available online: <http://factfinder2.census.gov/>. Accessed December 12.

U.S. Census Bureau. 2022b. 2020 American Community Survey (ACS) 5-Year Estimates – *Poverty in the Past 12 Months*. Available online: <http://factfinder2.census.gov/>. Accessed December 12.

U.S. Environmental Protection Agency, Office of Federal Activities. 1995. *Draft Guidance for Consideration of Environmental Justice in Clean Air Act 309 Reviews*. USEPA, Office of Federal Activities, NEPA Compliance Division, Washington, DC. July 19.

U.S. Environmental Protection Agency. 1998. *Guidance for Incorporating Environmental Justice in USEPA's NEPA Compliance Analyses*. USEPA, Office of Federal Activities, NEPA Compliance Division, Washington, DC. April.

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.

U.S. Environmental Protection Agency. 1998. *Interim Guidance for Investigating Title VI Administrative Complaints Challenging Permits*. Washington, D.C. February 5, 1998.

APPENDIX

Table 5.10A-1

2020 Census Minority Data by Census Tracts Black Rock Geothermal Plant 10-mile Radius

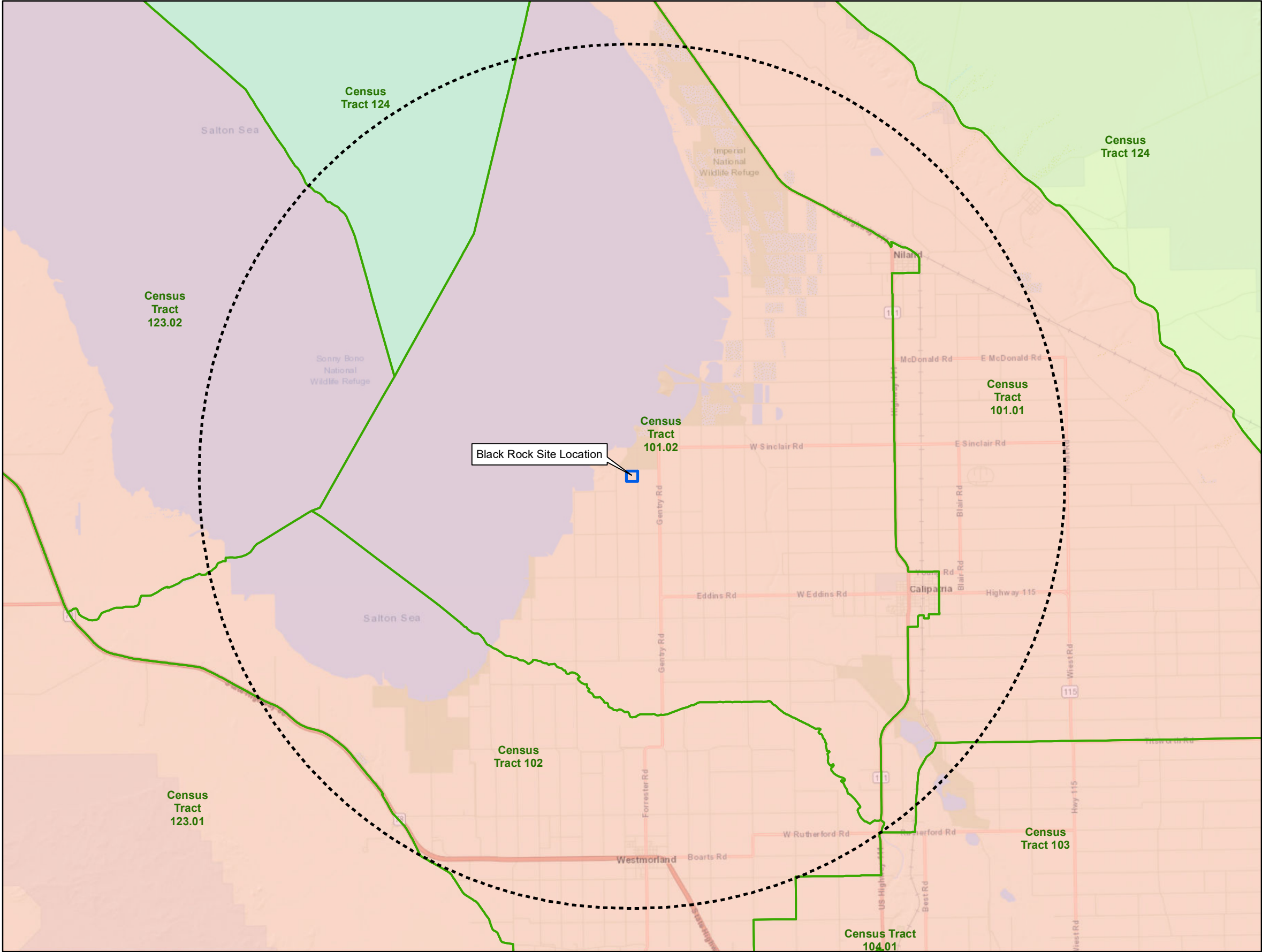
Census Tract	Population	White	Minority	Percent Minority
Census Tract 101.01	3,499	478	3,021	86.3
Census Tract 101.02	4,738	451	4,287	90.5
Census Tract 102	2,293	283	2,010	87.7
Census Tract 103	802	302	500	62.3
Census Tract 123.01	4,493	650	3,843	85.5
Census Tract 123.02	6,288	894	5,394	85.8
Census Tract 124	756	503	253	33.5
TOTAL	22,869	3,561	19,308	84.4
Source: U.S. Census Bureau, 2020a.				

APPENDIX

Table 5.10A-2

2020 Low Income Data by Census Tracts Black Rock Geothermal Plant 10-mile Radius

Census Tract	Total Population*	Population below Poverty Level	Percent Low- Income
Census Tract 101.01	57	50	87.7
Census Tract 101.02	4,149	1,714	41.3
Census Tract 102	3,050	1,074	35.2
Census Tract 103	1,046	210	20.1
Census Tract 123.01	1,009	165	16.4
Census Tract 123.02	5,888	1,719	29.2
Census Tract 124	464	58	12.5
TOTAL	15,663	4,990	31.9
Source: U.S. Census Bureau, 2022b.			



- Legend**
- Black Rock Site Boundary
 - 10-mile Black Rock Site Radius
 - Census Tract Boundary
 - Population >50% Racial or Ethnic Minority
 - Population <50% Racial or Ethnic Minority

Source: 2020 Decennial Census

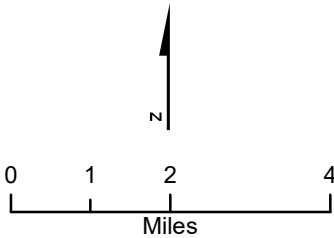
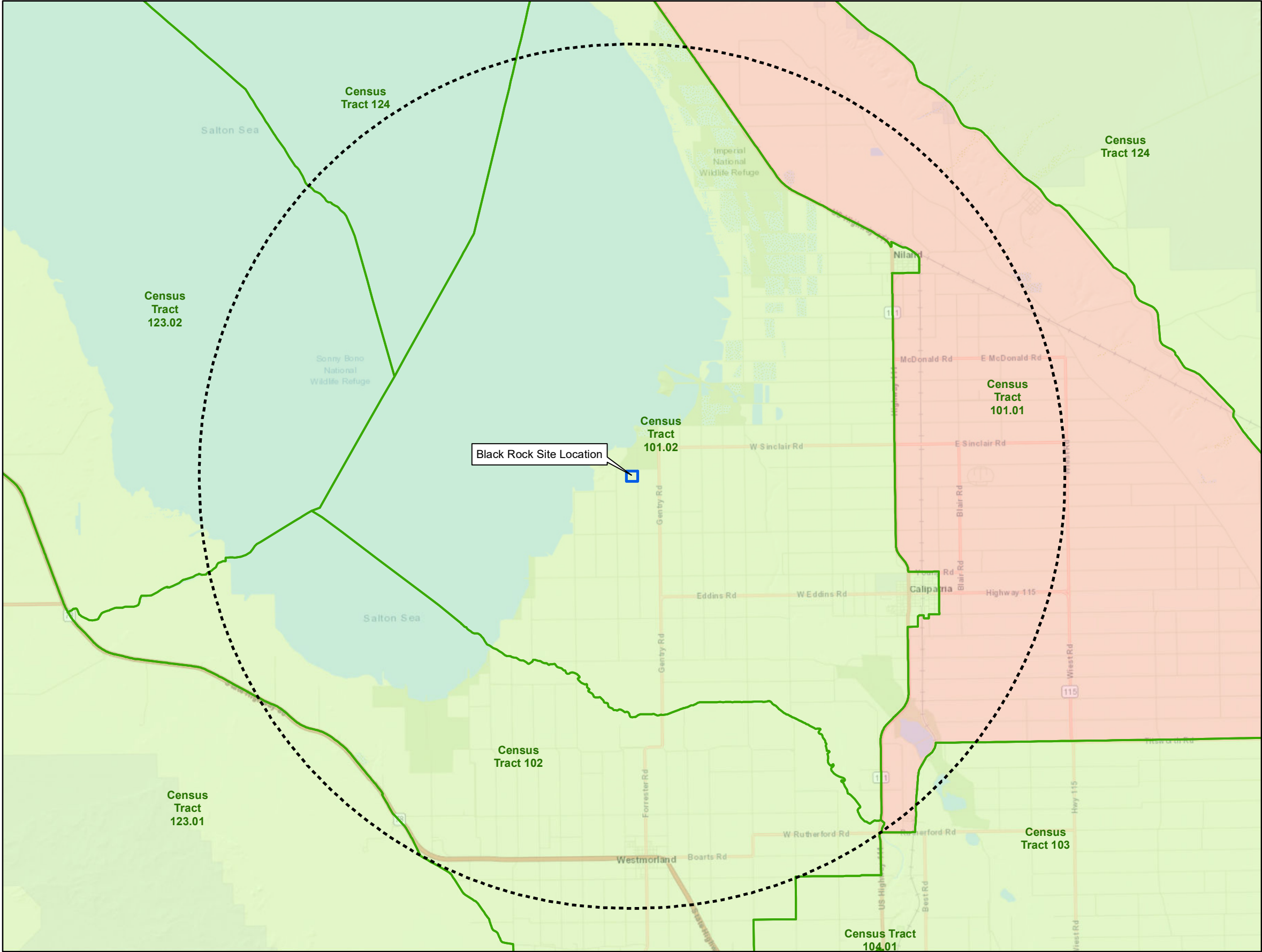


Figure 5.10-1
Enivornmental Justice Communities -
Racial and Ethnic Minorities
Black Rock Geothermal Project
Imperial County, California





- Legend**
- Black Rock Site Boundary
 - 10-mile Black Rock Site Radius
 - Census Tract Boundary
 - Population >50% Below Poverty Line
 - Population <50% Below Poverty Line

Source: American Community Survey, 2020

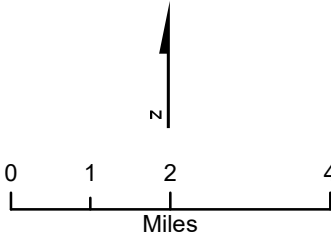


Figure 5.10-2
Enivornmental Justice Communities -
Low Income
Black Rock Geothermal Project
Imperial County, California

Appendix 5.10B

CFD and ICSO Conversations



RECORD OF CONVERSATION

Call To: Ryan Kelly, Chief Deputy, Imperial County Sheriff's Office

Phone No.: 442-265-2000

Date: March 3, 2023

Call From: Fatuma Yusuf

Time: 11:30 AM

Message

Taken By: Fatuma Yusuf

Subject: Law enforcement resources, response times, etc

Called the Imperial County Sheriff's office to find out if the project sites are located within the ICSO's service area and if so, which station would be the nearest one serving the 3 BHER project sites. Informed by the someone in admin that the best person to answer my questions is Lt. Emmet Fried and was put through to Lt. Fried. Left a vm message for Lt. Fried.

3/4/2023: Called main line again and put through to someone in admin. Told that Lt. Fried is the best source of info I needed so wait to hear back.

3/8/2023: Called back to ask if there was someone else I could talk to since I hadn't heard back from Lt. Fried. Was put through to Chief Deputy Ryan Kelly. Chief Kelly provided the following information on the ICSO:

- ICSO has 100 FT deputies
- Nearest station to 3 BHER project sites is the substation at Niland which has 10 deputies
- Next nearest station is the one in Brawley which has 10 deputies
- Response time to an emergency from any of the 3 BHER project sites is less than 20 mins.
- There's a potential for the ICSO's services to its existing service area to be impacted during the construction phase of the project due to the presence of the large construction workforce; however, the ICSO will be able to discuss this and figure out potential solutions during the permitting of the projects.
- ICSO's services to its existing service area could also be affected during the operational phase of the project; however, this is also something that the ICSO will be able to discuss with the applicant and propose solutions for during the permitting phase of the projects.

Chief Deputy
Imperial County Sheriff's Office (ICSO)
328 Applestill Road.
El Centro, CA 92243
Tel: 442-265-2003
E-mail: rkelly@icsso.org

RECORD OF CONVERSATION

Call To: Rosa Medina, Business Manager, Calipatria Unified School District

Phone No.: 714-608-5946

Date: February 16, 2023

Call From: Fatuma Yusuf

Time: 2:09 PM

Message

Taken By: Fatuma Yusuf

Subject: Projected Enrollment, School Impact Fees

Called the business manager at the school district to ask about current enrollment, projected (2023-2024) enrollment and school impact fees (or developer fees). Ms. Medina was the one who answered the phone at the business manager office and confirmed that she was the school district's Business Manager and the right person to answer my questions.

The district has 2 elementary schools – one serving Niland and the other Calipatria. There is one middle school and one high school.

Current (2022-2023) enrollment: not yet reported to the CA Dept of Education (CDE). Reporting these numbers is typically done at the end of the school year. She said that total enrollment was at about 1,040 but that with the requirement to enroll 4 year-olds under the Universal Pre-K program, which went into effect last year, the school expects to see an increase in its enrollment numbers. I told her that the CDE shows total enrollment for the 2021-2022 school year of 1143. She said that's about right and she expects that the current number may be closer to the 1143.

Currently the school district assesses developer fees for commercial/industrial property at \$0.27/sq ft.

However, the rate is expected to increase because there is a lot of development happening in the area and the school district, being small, may not be able to meet the increased demand. Currently, the school district is conducting a study to figure out this increase.

Rosa Medina
Business Manager
Calipatria Unified School District
501 W. Main St,
Calipatria, CA 92233
Tel: (760) 348-2892
E-mail: romedina@calipat.com

RECORD OF CONVERSATION

Call To: Daniel Machain, President, Imperial County Building Trades Council

Phone No.: (760) 335-3000

Date: December 8, 2022

Call From: Fatuma Yusuf

Time: 2:09 PM

Message

Taken By: Fatuma Yusuf

Subject: Labor union

Called 760-337-9094 and spoke to someone who told me that I needed to direct my questions to the President and to call him at 760-335-3000. Called and spoke to Mr. Daniel Machain who informed me that the labor union will be able to meet the demands of all 3 BHER projects and that if there aren't enough construction workers in Imperial County, the labor union can reach out to other councils within southern CA or elsewhere in the state to ensure that there are enough workers to meet the demands of the projects.

Daniel Machain
President
P. O. Box 1327
El Centro, CA 92244-1327
(760) 335-3000 (work)
dmachain@ibew569.org

Please make sure to get the name, title and full contact information (phone #, email address, etc) of each person who gives you information. Please include all of this information in separate ROCs for each individual you talk to.

Fire Protection

Please note that the best person to provide the information is the Fire Marshal since a simple fire fighter will not be able to answer some of these questions.

1. How many stations are there?
 - a. Two stations: (1) Imperial County Fire Department (ICFD) and, (2) City of Calipatria's Fire Department (CFD).
 - i. The ICFD has one station located at 1078 Dogwood Road, Heber, California, approximately 31 miles south of the Project.
 - ii. The CFD has one station located at 125 North Park Avenue, Calipatria, California, approximately 7 miles southeast of the Project.
2. Which one is the Headquarter?
 - a. The CFD is the primary responder and has a total staff of 16 personnel who are on call. There are two to three firefighters on call seven days a week during working hours and two-to-three-night shift personnel on call. All personnel will be notified if an event occurs regardless of who is on call (Nadarro, 2023).
3. Which station serves the project site?
 - a. The CFD is the primary responder
4. How far is it from the project site?
 - a. Approximately 7 miles southeast.
5. How many personnel/staff and equipment (fire engines, water trucks, etc) are there in the dept? Please note that they may give you a number for volunteer firefighters. Make sure to note this down. We'll include it in the ROC and the text.
 - a. CFD has a total staff of 16 personnel who are on call. There are two to three firefighters on call seven days a week during working hours and two-to-three-night shift personnel on call. All personnel will be notified if an event occurs regardless of who is on call (Nadarro, 2023).
 - i. There was no mention of volunteer firefighters from our discussion (Nadarro, 2023).
6. How many of the fire fighters are at the station serving the project site?
 - a. All firefighters will be serving, as the impression was that all firefighters regardless of if on duty are on call 24/7 (Nadarro, 2023).
7. What would be the response time to an emergency from the project site from this station?

- a. The response time to an emergency to the Project site is approximately 15 to 20 minutes (City of Calipatria 2018).
 - i. This was confirmed as still being accurate (Nadarro, 2023).
- 8. How many of the fire fighters are trained medics? How many of the ones stationed at the nearest station to the project site are trained medics?
- 9. In case of major structural fire which station can come to the aid of the station near the project site? How far is this station? How many personnel/staff and equipment does it have?
 - a. The ICFD has one station located at 1078 Dogwood Road, Heber, California, approximately 31 miles south of the Project.
 - i. I was told that the website information was up to date from my contact at CFD (Nadarro, 2023).
- 10. Does the dept have a mutual aid agreement with another fire dept? If so, which one and what does the aid include?
 - a. "The CFD and ICFD have mutual aid plans with surrounding fire stations. If additional assistance is needed, the Niland Fire District (located at 8071 Luxor Avenue in Niland, California) and the California State Prison Fire Department will respond."
 - i. Based on memory one of the departments websites confirms this.
- 11. The project is expected to be under construction from _____ to _____ and will employ approximately ____ workers over the ____ months/years of construction. Does the dept anticipate that this would impact their ability to continue to provide service to their service area?
- 12. If answer to #10 is yes, then please ask them what, if any, mitigation measures they would propose.
- 13. Once the project is operational there will be ____ operational employees. Do you anticipate that this would impact your ability to continue to provide service to your service area?
- 14. If answer to #12 is yes, then please ask them what, if any, mitigation measures they would propose.
- 15. Who handles hazardous materials? If the fire department, then what is the location of the station that houses the hazmat team?
 - a. ICFD is responsible for hazmat training from stations in cities and the county (Nadarro 2023).
- 16. What would be the response time to an emergency from the project site from this station?
 - a. CFD
- 17. Is the hazmat team capable of handling any hazardous material?
 - a. Yes? Not confirmed by contact but if the ICFD, county fire department, says they have a HAZMAT task force I assumed they handle hazardous materials.

Make sure to get the name, title and contact information for each firefighter or person you talk to.

References:

Nadarro, Nydia, Engineer, City of Calipatria Fire Department. January 30, 2023. (760)-348-4144. Personal communication with Emma McGinty, Jacobs; discussed fire department current information, staffing, and provided the most updated contact information. Confirmed that the Imperial County Fire Department's contact information has changed.

ICFD Website Link: <https://firedept.imperialcounty.org/#operations>

Note – a lot of this information was taken from: City of Calipatria. 2018. Calipatria Service Area Plan. Local Agency Formation Commission, Imperial County. <https://www.iclafco.com/assets/cities/2018-city-of-calipatria-sap.pdf>. Accessed October 30, 2022. This is all based on my section in the Workers Health & Safety Manual. Some information requested was not gathered in my search. If information doesn't have a contact, websites and city area plans/government manuals were up to date. Contacts were only used in the event to fact check staffing numbers, response times, etc.

II. Hospitals

Please note that you can find out all or some of this information from the hospital's/hospitals' website once you have identified the nearest hospitals. You must also find out which is the nearest hospital with a trauma center. You can find out about the nearest hospital (and not necessarily about one with a trauma center) by asking your contact at the City/County or PD. For the name of the nearest hospital with the trauma center, please note that you may have to ask the first hospital you talk to. Please note that if the information you need is not available from the identified hospitals'/hospital's website you will then have to go ahead and call the hospitals.

1. Confirm that the La Paz Regional Hospital in Parker, AZ is the nearest hospital to the project site.
2. Identify any other hospitals that are likely to serve the project site by asking either the County fire department or the County Sheriff's department.
3. Get the following specific information for the one or two closest to project site that have a trauma or emergency center. Some of this information may already be present on the hospital's website.
 - a) Kind of medical facility, i.e., primary, secondary, and/or tertiary
 - b) Particular Specialty of hospital
 - c) Does hospital have a trauma center for industrial accidents? What level? [Here may need to actually call the hospital administration to find out this information].
 - d) Who owns the hospital
 - e) #of beds, # of physicians, # of other staff

- f) Does hospital have a helipad to transport patients to and from other hospitals for special care?
- g) Who provides ambulance services?

Make sure to get the name, title and contact information for each person you talk to.

4. Ambulance Providers & Medical Response Time

Find out the response time to a medical emergency on the project site and response time from the project site to the nearest hospital.

Make sure to get the name, title and contact information for each person you talk to.