

1 **3.7 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE**

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE – Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2 **3.7.1 Environmental Setting**

3 A solid body of scientific evidence supports the theory that rising global Greenhouse
 4 Gas (GHG) emissions are significantly affecting the Earth’s climate (IPCC 2014). GHG
 5 emissions are defined as any gas that absorbs infrared radiation in the atmosphere,
 6 including but not limited to, water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous
 7 oxide (N₂O), and fluorocarbons. These GHGs lead to the trapping and buildup of heat in
 8 the atmosphere near the earth’s surface, commonly known as the Greenhouse Effect.

9 The release of GHGs in the atmosphere, especially Carbon Dioxide Equivalent (CO₂e),
 10 is a result of human induced emissions such as the burning certain types of fuels and
 11 other various natural cycles. However, Federal guidelines request that Federal, State
 12 and local agencies consider the amount of emissions that may be produced as a result
 13 of proposed Federal actions and projects.

14 The quantification of GHG emissions associated with a project can be complex and
 15 relies on a number of assumptions. GHG emissions are generally classified as direct
 16 and indirect. Direct emissions are associated with the production of GHG emissions
 17 from the immediate Project area. These include the combustion of natural gas as well
 18 as the combustion of fuel in engines and construction vehicles used on the site. In
 19 addition, direct emissions include fugitive emissions from valves and connections of
 20 equipment used during implementation or throughout the project life. Indirect emissions
 21 include the emissions from vehicles (both gasoline and diesel) delivering materials and
 22 equipment to the site (e.g., haul trucks).

23 The County as a whole emitted an estimated 28 million metric tons (MT) of CO₂e in
 24 2002 (SBC 2009).⁸ Currently, the Project area is within the Park and is designated for
 25 recreation where CO₂e are primarily generated by the recreational boating, OHV use,
 26 RVs, and other recreational emission generating activities. In 2012, the County
 27 proposed to conduct Park improvements to accommodate these activities and facilities
 28 for recreation and estimated that the Park’s CO₂e emissions would be 263.49 MT CO₂e
 29 per year, below the County and MDAQMD thresholds (SBC 2012).

⁸ SBC’s calculations combined MDAQMD and the South Coast Air Quality Management District’s CO₂e emission data from 2002 since County is located in two basins. SBC used emissions data from within its land use jurisdiction (SBC 2009).

1 3.7.2 Regulatory Setting

2 The following Federal and State laws and regulations pertaining to this issue area and
 3 relevant to the Project are identified in Table 3.7-1.

Table 3.7-1. Laws, Regulations, and Policies (Greenhouse Gas Emissions and Climate Change)

U.S.	Federal Clean Air Act (FCAA) (42 USC 7401 et seq.)	In 2007, the U.S. Supreme Court ruled that carbon dioxide (CO ₂) is an air pollutant as defined under the FCAA, and that the USEPA has authority to regulate GHG emissions.
CA	California Global Warming Solutions Act of 2006 (AB 32)	Under AB 32, CARB is responsible for monitoring and reducing GHG emissions in the State and for establishing a statewide GHG emissions cap for 2020 that is based on 1990 emissions levels. CARB (2009) has adopted the AB 32 Climate Change Scoping Plan (Scoping Plan), which contains the main strategies for California to implement to reduce CO ₂ equivalent (CO ₂ e) emissions by 169 million metric tons (MMT) from the State’s projected 2020 emissions level of 596 MMT CO ₂ e under a business-as-usual scenario. The Scoping Plan breaks down the amount of GHG emissions reductions the CARB recommends for each emissions sector of the State’s GHG inventory, but does not directly discuss GHG emissions generated by construction activities.
CA	Senate Bills (SB) 97 and 375	<ul style="list-style-type: none"> • Pursuant to SB 97, the State Office of Planning and Research prepared and the Natural Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. Effective as of March 2010, the revisions to the CEQA Environmental Checklist Form (Appendix G) and the Energy Conservation Appendix (Appendix F) provide a framework to address global climate change impacts in the CEQA process; State CEQA Guidelines section 15064.4 was also added to provide an approach to assessing impacts from GHGs. • SB 375 (effective January 1, 2009) requires CARB to develop regional reduction targets for GHG emissions, and prompted the creation of regional land use and transportation plans to reduce emissions from passenger vehicle use throughout the State. The targets apply to the regions covered by California’s 18 metropolitan planning organizations (MPOs). The 18 MPOs must develop regional land use and transportation plans and demonstrate an ability to attain the proposed reduction targets by 2020 and 2035.
CA	Executive Orders (EOs)	<p>EO B-30-15 (Governor Brown, April 2015) established a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It additionally directed all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve GHG emissions reductions to meet the 2030 and 2050 targets.</p> <p>EO S-01-07 (Governor Schwarzenegger, January 2007) established a low carbon fuel standard for California, and directed the carbon intensity of California’s transportations fuels to be reduced by at least 10 percent by 2020.</p> <p>EO S-3-05 (Governor Schwarzenegger, June 2005) directed the state to reduce GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 level by 2050.</p>

4 The following goal related to aesthetics is from the San Bernardino County 2007
 5 General Plan (SBC 2007), Chapter V. Conservation Element (Section C. Countywide
 6 Goals and Policies of the Conservation Element – 3. Air Quality):

- **Goal 4.13.** The County will ensure good air quality for its residents, businesses, and visitors to reduce impacts on human health and the economy by reducing GHG emissions within the County boundaries.

3.7.3 Impact Analysis (CEQA)

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Less than Significant Impact. Estimated Project-generated GHGs were calculated using the criteria pollutant emission factors obtained from the EPA WebFIRE (EPA 2015). Project generated operational emissions were calculated based on Project specific information. The Project is estimated to generate 907.86 Metric Tonne (ton)/MT of CO₂e annually. Table 3.7-2 below compares the Project’s GHG emissions against the thresholds established by the San Bernardino County Greenhouse Gas Emissions Reduction Plan adopted in September, 2011 and the thresholds established by the MDAQMD AQMP. GHG calculations for the use of low sulfur diesel fuel for heavy equipment and gasoline for equipment and crew transportation vehicles are shown in Table 3.7-2.

Table 3.7-2 Estimated Annual Greenhouse Gas Emissions and Thresholds

Pollutant	Maximum Unmitigated Annual Emissions (MT/yr)	San Bernardino County Annual Threshold (MT/yr)	MDAQMD Annual Threshold (MT/yr)	Exceeds Annual Thresholds/ Reference Points?
Carbon Dioxide Equivalent (CO ₂ e)	907.86	3,000	100,000	NO

According to the San Bernardino County Greenhouse Gas Emissions Reduction Plan, small projects that do not exceed 3,000 MTCO₂e per year will be considered to be consistent with the Plan. As shown on Table 3.7-2, the Project’s annual operational emissions are 907.86 MT CO₂e per year for 3 years, which does not exceed the 3,000 MT/yr CO₂e threshold for the County.

The annual CO₂e emissions generated from the implementation of the Project would not exceed the 100,000 MT CO₂e threshold for MDAQMD, thus the Project would not substantially contribute to regional emissions.

The CEQ (2014) Draft Guidance on Consideration of GHGs and the Effects of Climate Change in NEPA Reviews provides Federal guidance on addressing GHG in NEPA reviews. Since the Project would not exceed the County and MDAQMD annual thresholds, the Project’s impacts to Regional GHG emissions would not be significant and would not be evaluated in further detail.

Therefore, the Project’s GHG emissions are not anticipated to exceed the established GHG emissions threshold. A less than significant impact would be forecasted.

1 Although GHG emission are not expected to violate air quality standards or
2 negatively contribute to existing or projected air quality conditions and is
3 forecasted to be less than significant, Reclamation is committed to reducing
4 pollutant emissions and reducing GHGs to the extent practicable in accordance
5 with Federal policies. As a result, Reclamation would implement **BMP GHG-1** to
6 further reduce GHGs emitted by the Project:

7 **BMP GHG-1: Reduction of GHG Emissions.** Reclamation shall ensure the
8 reduction of GHG emissions by implementing the following:

- 9 • Select construction equipment based on low GHG emissions factors and
10 high-energy efficiency. When reasonably available, accessible and/or
11 affordable, all diesel/gasoline-powered construction equipment shall be
12 replaced with equivalent electric or Compressed Natural Gas equipment.
- 13 • All construction equipment engines shall be properly tuned and
14 maintained in accordance with the manufacturers' specifications prior to
15 arriving on site and throughout construction duration.
- 16 • All construction equipment (including electric generators) shall be shut off
17 by work crews when not in use and shall not idle for more than 5 minutes.

18 Long-term improvements to the Project area's air quality, including the offset of
19 Project related GHG emissions, would potentially occur from re-vegetation of
20 native plants as a part of the Project design.

21 ***b) Conflict with an applicable plan, policy or regulation adopted for the***
22 ***purpose of reducing the emissions of greenhouse gases?***

23 **Less than Significant Impact.** The state and local regulatory programs for GHG
24 emissions and climate change are described in the response to item **a)** above.
25 **BMP GHG-1** would provide additional assurance that there would be no conflict
26 with any applicable plan, policy, or regulation and that emissions are being
27 reduced to the extent practicable. Therefore, impacts would be less than
28 significant, and no imposed mitigation would be required.

29 **3.7.4 Environmental Consequences (NEPA)**

30 **No Action Alternative**

31 The No Action Alternative would have no impact on GHG emissions. Air quality and
32 GHGs would remain the same in the vicinity of the Project area with the exception of an
33 unpredictable wildfire event. In the event of a wildfire on this site, the fire would likely
34 burn the established vegetation and may continue past the delineated boundaries of the
35 Project area. Smoke emissions resulting from an unplanned fire on this site may result
36 in much larger smoke and dust emissions.

1 **Proposed Action (Project)**

2 The Project would use fuel-based construction equipment during removal/clearing,
3 construction, maintenance, and operational activities, as well as transportation vehicles
4 that would burn fossil fuels and generate GHG emissions. These emissions would be
5 considered as short-term and would not violate air quality standards or negatively
6 contribute to existing or projected air quality conditions as defined by County and
7 MDAQMD (Section 3.3).

8 In accordance with the draft CEQ GHG Guidance, the GHG emissions generated by the
9 Project were calculated (Table 3.7-2). These emissions did not exceed the threshold
10 established by the County at 3,000 MT/yr and are not expected to substantially add to
11 Regional GHG emissions.

12 Although GHG emission are not expected to violate air quality standards or negatively
13 contribute to existing or projected air quality conditions, **BMP GHG-1** would be
14 incorporated into the Project to further reduce GHGs emitted by the Project.

15 Long-term improvements to the Project area's air quality, including the offset of Project
16 related GHG emissions, would potentially occur from re-vegetation of native plants as a
17 part of the Project design.

18 The risk of wildfire would decrease due to the removal of the dense stands of saltcedar
19 and increased management of the site. This decrease in wildfire potential can be
20 translated into a decreased probability of the occurrence of reduced air quality resulting
21 from smoke and airborne dust originating from wildland fires at the Project area after the
22 Project is implemented.

23 After the initial clearing and ground contouring portions of the Project, the vegetation
24 restoration component would be implemented. Thus, GHG emission and climate
25 change impacts are anticipated to be less than significant.

26 **Cumulative Impacts**

27 The analysis area for potential cumulative impacts GHG emissions was defined as the
28 MDAQMD within the County because thresholds established GHG emissions for the
29 Project area are set by these entities. No cumulative impacts are anticipated because
30 although implementation of the Project would generate GHG emissions, according to
31 the calculations for GHG emissions in Table 3.7-2, emissions do not exceed the annual
32 thresholds established by the County and MDAQMD. Emissions would not be
33 cumulatively considerable. No cumulative impacts are anticipated when included with
34 other past, present, and foreseeable future projects for the emission of GHGs.

35 **3.7.5 Mitigation Summary (CEQA Only)**

36 The Project would not result in significant impacts related to GHG emissions. Therefore
37 no mitigation is required.