

SANBAG CAP Implementation Tools Final Report

Tracking Reductions Using the Screening Tables

OCTOBER 2015



SANBAG CAP Implementation Tools Final Reports

On Tracking Reductions Using the Screening Tables

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Acronyms and Abbreviations

AB 32 Assembly Bill 32
BAU business-as-usual
CAP Climate Action Plan

CAPITT CAP Implementation Tracker Tool
CARB California Air Resources Board
CEC California Energy Commission

CH₄ methane

CO₂ carbon dioxide

CO₂e carbon dioxide equivalent

FTE full-time-equivalent GHG greenhouse gas kWh kilowatt-hour

LCFS low carbon fuel standard

MDAQMD Mojave Desert Air Quality Management District

MG million gallons

MMBtu million British thermal units

MT metric tons N₂O nitrous oxide

SANBAG San Bernardino County Associated Governments SCAG Southern California Association of Governments

SCS Sustainable Communities Strategy

SCAQMD South Coast Air Quality Management District

VMT vehicle miles traveled

Chapter I Introduction

The San Bernardino County Regional Greenhouse Gas (GHG) Reduction Plan provided San Bernardino County Associated Governments (SANBAG) and the 21 Participating Cities with an inventory of GHG emissions, targets, and provided reduction strategies for each City, which are the first two steps in a six step process of climate action planning. The Climate Action Plan (CAP) Implementation Tools Project provided vital tools for the Participating Cities to use in the development, adoption, implementation, and monitoring of city specific CAPs, which will fulfills the remaining steps in the climate action planning process. This Final Report on Tracking Reductions Using the Screening Tables is one of three Final Reports for the Project and summarizes the Screening Tables and documents the tools delivered to SANBAG and the Participating Cities during the execution of the Project. The purpose of this report is two-fold: provide SCAG and SANBAG with documentation of the deliverables, and provide additional guidance to SANBAG and the Participating Cities on the use of the documents and tools provided during this Project.

This Final Report is structured in the following way:

- **Development Review Process Screening Tables:** Provides an easy, quantified and documented process of implementing the GHG Performance Standard.
- Screening Table Tracking Tool Users Guide: Screening Table tracking is accomplished within Excel based Screening Tables Tracking Tool. The User's Guide provides step by step instructions on the use of the tracking tool.
- SCS Exemptions Description and Checklist: Provides an easy way of determining if a Project fulfills a partial or full CEQA exemption because it is a Transit Priority Project (TPP) or a Sustainable Community Project (SCP).





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Chapter 2 Development Review Process Screening Tables

The Draft Screening Tables were provided to SANBAG and the Participating Cities in April 2015 and a training session on using the screening tables occurred on April 22, 2015. The PowerPoint presentation used during that training session is provided in Appendix A-1 of this Final Report. The purpose of this Screening Tables is to provide a measureable way of determining if a development project is implementing the GHG Performance Standard and be able to quantify the reduction of emissions attributable to certain design and construction measures incorporated into development projects. The Screening Table assigns points for each option incorporated into a project as mitigation or a project design feature (collectively referred to as "feature"). The point values correspond to the minimum emissions reduction expected from each feature. The menu of features allows maximum flexibility and options for how development projects can implement the GHG Performance Standard. Projects that garner enough points will be consistent with the reductions anticipated in the City's CAP.

Screening Tables were customized for each of the 21 Participating Cities. The number of points needed for a development project to be considered consistent with the reduction quantities anticipated in the CAP varies which each Participating City dependent upon the amount of GHG emissions the City chose to reduce through the GHG Performance Standard. The Screening Tables for each City defines the "fair-share" amount of points needed by development projects within that City. The following Table provides the details of how points needed to fulfill the Performance Standard (PS) were assigned to each City. Note that the Valley cities have a white background and the Mountain and Desert cities have a blue background. Different energy consumption levels and vehicle trip distances, are afforded energy efficiency and trip reductions for those cities within the San Bernardino Valley as compared to those cities within the Mountains and Desert portion of the County.

Table 2-1. Screening Table Point Proportioning Between Participating Cities

					* l ll	Jobs/	Regional Plan			aua /	GHG/				0/ 5 . 1 . 1:
	Total Reduction	from PS	Residential Units	Commercial Space	Total buidling area	Housing Ratio	Reduction Target	PS Residential	PS Comm	GHG/ DU	K sq.ft. Com	Res Points	Com	Average Points	% Reduction from BAU
Adelanto	27,266.00	8,796.00	4,230.00	1,881,000.00	9,495,000.00	0.20	30%/2020	7,053.47	1,742.53	1.67	0.93	59.55	77.20	70.00	0.19
Big Bear Lake	163.00	163.00	204.00	211,000.00	578,200.00	0.36	15%/2008	103.52	59.48	0.51	0.28	18.12	23.49	25.00	0.12
Chino	21,320.00	286.00	4,434.00	4,975,000.00	12,956,200.00	0.38	15%/2008	176.18	109.82	0.04	0.02	3.18	2.94	12.00	0.09
Chino Hills	41,500.00	3,200.00	1,830.00	1,130,000.00	4,424,000.00	0.26	20%/2020	2,382.64	817.36	1.30	0.72	104.16	96.44	100.00	0.25
Colton	31,541.00	3,618.00	2,887.00	1,506,000.00	6,702,600.00	0.22	15%/2008	2,805.08	812.92	0.97	0.54	77.73	71.97	75.00	0.20
Fontana	66,464.00	13,575.00	8,909.00	6,030,000.00	22,066,200.00	0.27	15%/2008	9,865.38	3,709.62	1.11	0.62	88.59	82.03	85.00	0.22
Grand Terrace	4,369.00	6.00	251.00	141,000.00	592,800.00	0.24	15%/2008	4.57	1.43	0.02	0.01	1.46	1.35	12.00	0.09
Hesperia	45,942	13,418	2,626	4,901,000	9,627,800	0.51	29%/2020	6,588	6830	2.51	1.39	90	116	100	25%
Highland	18,282	3,114	2,277	1,720,000	5,818,600	0.30	22%/2020	2,193	921	0.96	0.54	77	71	75	20%
Loma Linda	16,773	6,094	1,784	5,684,000	8,895,200	0.64	26%/2020	2,200	3894	1.23	0.69	99	91	100	25%
Monclair	11,140	678	1,100	522,000	2,502,000	0.21	20%/2008	537	141	0.49	0.27	39	36	41	15%
Needles	1,485	22	38	89,000	157,400	0.57	15%/2008	10	12	0.25	0.14		12	12	9%
Ontario	316,901	39,769	16,489	36,940,000	66,620,200	0.55	30%/2020	17,718	22051	1.07	0.60	86	80	100	25%
Rancho Cucamunga	36,708	550	2,739	1,407,000	6,337,200	0.22	15%/2008	428	122	0.16	0.09	12	12	12	9%
Redlands	71,504	7,442	3,561	5,247,000	11,656,800	0.45	15%/2008	4,092	3350	1.15	0.64	92	85	90	23%
Rialto	34,524	1,000	4,259	3,548,000	11,214,200	0.32	15%/2008	684	316	0.16	0.09	13	12	12	9%
San Bernardino	72,138	20,049	7,614	12,104,000	25,809,200	0.47	15%/2008	10,646	9403	1.40	0.78	112	104	100	25%
Twenty-Nine Palms	5,439	2,165	1,575	414,000	3,249,000	0.13	15%/2008	1,889	276	1.20	0.67		56	50	18%
Victorville	67,199	20,251	12,264	12,225,000	34,300,200	0.36	29%/2020	13,033	7218	1.06	0.59	38	49	45	16%
Yucaipa	100,564	7,443	3,646	3,879,000	10,441,800	0.37	15%/2008	4,678	2765	1.28	0.71	103	95	100	25%
Yucca Valley	811	300	1,602	496,000	3,379,600	0.15	15%/2008	256	44	0.16	0.09	6	7	12	9%



There are two tables within the Screening Tables document. Table 1 is a menu of options with assigned point values for residential development projects. Table 2 is a menu of options for commercial and industrial development projects. Note that in using the Screening Tables, the term "industrial," means typical development projects that have an industrial land use designation.

Mixed use projects provide additional opportunities to reduce emissions by combining complimentary land uses in a manner that can reduce vehicle trips. Mixed use projects also have the potential to complement energy efficient infrastructure in a way that reduces emissions. For mixed use projects, fill out both Screening Table 1 and Table 2, but proportion the points identical to the proportioning of the mix of uses. As an example, a mixed use project that is 50% commercial uses and 50% residential uses will show ½ point for each assigned point value in Table 1 and Table 2. Add the points from both tables.

Feature	Description	Assigned Point Values	Project Points			
Reduction Measure R2 E5: Energy Efficiency for Commercial Development						
Building Env	velope					
Insulation	Title 24 standard (required) Modestly Enhanced Insulation (5% > Title 24) Enhanced Insulation (15% > Title 24) Greatly Enhanced Insulation (20% - Title 24)	0 points 3 points 7 points 11 points				
Windows	Title 24 standard (required) Modestly Enhanced Window Insulation (5% > Title 24) Enhanced Window Insulation (15% > Title 24) Greatly Enhanced Window Insulation (20% > Title 24)	0 points 3 points 7 points 11 points				
Doors	Title 24 standard (required) Modestly Enhanced Insulation (5% > Title 24) Enhanced Insulation (15% > Title 24) Greatly Enhanced Insulation (20% > Title 24)	0 points 3 points 7 points 11 points				
Air Infiltration	Minimizing leaks in the building envelope is as important as the insulation properties of the building. Insulation does not work effectively if there is excess air leakage.					
	Title 24 standard (required) Modest Building Envelope Leakage (5% > Title 24) Reduced Building Envelope Leakage (15% > Title 24) Minimum Building Envelope Leakage (20% > Title 24)	0 points 3 points 7 points 11 points				
		- 6	1 6 1			

Chapter 3 Screening Table Tracking Tool Users Guide

The Screening Table Tracking Tool with User's Guide was provided to SANBAG and the Participating Cities in April 2015. A training session on the use of Screening Tables and the tool was provided on April 22, 2015. The Screening Tables Tracker Tool is an Excel based spreadsheet program that can be used to track implementation of the various menu options within the Screening Tables. This spreadsheet allows the Participating Cities to track cumulative points garnered by projects within their jurisdiction and predict emissions reductions. These values of reductions can then be input into the GHG Performance Standard within the CAP Implementation Tracker Tool (CAPITT).

The Screening Tables Tracker Tool User's Guide is provided on the first tab of the Screening Tables Tracker Tool. It is also provided in Appendix B-1 of this Final Report. The following summarizes the User's Guide:

- 1) If a development project is classified as residential, work within the "Residential Measures" Tab. Otherwise, if a project is classified as commercial, use the "Commercial Measures Tab. For mixed used projects, use the measures from both Tab. Refer to the "Greenhouse Gas Emissions Screening Tables" document for a complete guideline.
- 2) Manually enter project name and date.
- 3) Select applicable reduction measures by typing "x" in the orange boxes for each measure. By default, this tool assigns the prescribed point value for each menu option. In some cases a verity of points are possible depending upon the details of the option. In those cases the maximum number of points is the default. If manual entry of the points is desired, type in the points in the designated fields, noted with "User-defined" in the title of the measure. Some measures require further analysis and need to be reviewed before assigning points. These measures are noted with "TBD" (to be determined).
- 4) A summary of the project measures and points can be viewed on the "Project Measure Summary" sheet.

Note: This tool is designed to be used for both individual projects (Residential, Commercial, and/or Mixed-Use) and track points for all development projects in the City.

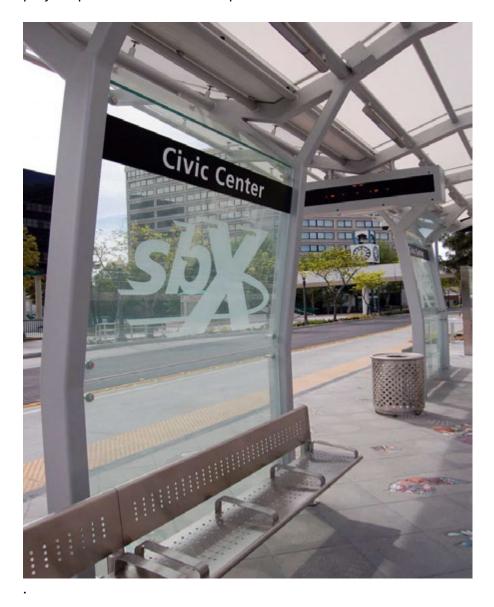
Simply fill in the Residential and/or Commercial/Industrial Tabs of the tool. The total points for all Projects using the Screening Table are shown on the Projects Measures Summary tab of the tool.



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Chapter 4 SCS Exemptions Description and Checklist

There are exemption opportunities within the California Environmental Quality Act (CEQA) associated with transit oriented development (TOD) associated with the Sustainable Communities Strategy (SCS) for the region developed by the Southern California Association of Governments (SCAG) and first introduced in the 2012 Regional Transportation Plan (RTP). Exemptions associated with TOD are divided into two categories, transit priority projects (TPP), and Sustainable Community Projects (SCP). A TPP and SCP Checklist is provided in Appendix C-1 of this Final Report and also included as Appendix B to the Development Review Process Screening Tables assist project applicants in determining if a project qualifies for these exemptions under CEQA.



SANBAG CAP Implementation Tools Final Reports

APPENDIX A. I



CAP IMPLEMENTATION Tools

Reduction Measures Tracking Tool Update and

Screening Tables Application

April 22, 2015

Brian Schuster—ICF

Michael Hendrix—Atkins









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Overview

- Reduction Measure Tracking Tool Update
 - Overview of the Tool
 - Functions of the Tool
 - Outputs (measure progress, graphs, charts, tables)
 - Tracking Tool Schedule
- Screening Tables
 - Overview
 - Development of the Tables
 - How they work
 - How to use them on Projects





Reduction Measure Tracking Tool



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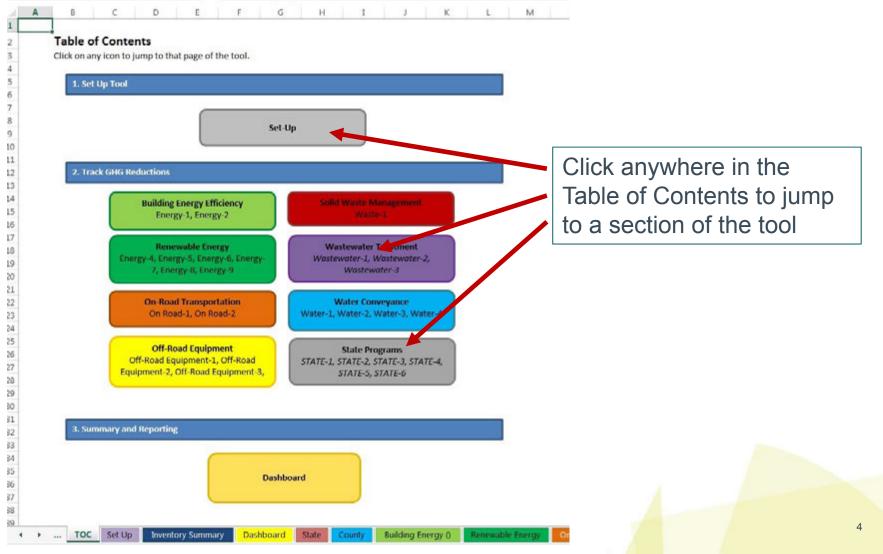
- Overview of the tool
 - How it fits into the Climate Action Planning Process
 - Functions of the Tool
 - Monitor the progress of CAP measures
 - Show if measures are on- or off- track
 - Assess overall progress toward CAP target
 - Outputs of the Tool
 - Annual GHG reductions by measure
 - Percent of target met by each measure
 - Percent of overall 2020 CAP target achieved
 - Charts and figures showing progress





Reduction Measure Tracking Tool







Reduction Measure Tracking Tool



- Tracking Tool Schedule
 - Draft Tool available on May 15th
 - Training webinar tentatively scheduled for May 20th
 - Comments on the Draft Tool needed by June 5th (3 weeks for review)
 - Final Tool available on June 19th







Overview

- Implements the Performance Standard (PS)
 - Ranges of the PS within the 21 Cities
- Goals of the Screening Tables
 - Goal 1 Keep implementation of the PS fair
 - o Goal 2 Keep it Flexible
 - Goal 3 Keep it Simple

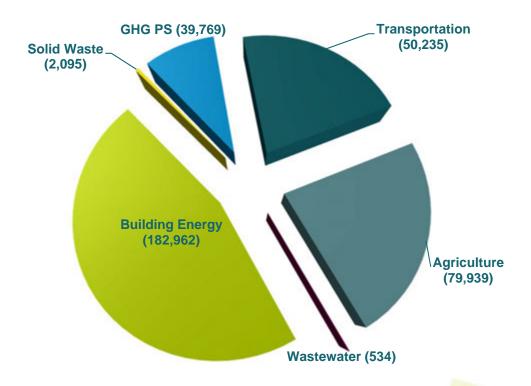






- Development of the Screening Tables
 - How the Points were Derived:

Step One: Review Total PS Reductions in each City Chapter of the Plan







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- Development of the Screening Tables
 - How the Points were Derived:

Step Two:

Determine Residential vs Commercial/Industrial Land Use Split

Category	2008	2020	Delta	Total Sq Ft New Building area	Percentage Split of New Building area
Population	162,871	215,765	52,894		
Housing	44,639	61,128	16,489 DUs	26,712,000 sq. ft.	44.55%
Single-Family	26,395	36,026	9,631		
Multifamily	18,244	25,102	6,858		
Employment	114,339	151,279	36,940 Jobs	36,940,000 sq. ft.	55.45%
Agricultural	796	866	70		
Industrial	39,335	50,611	11,276		
Retail	34,529	42,602	8,073		
Non-Retail	39,679	57,200	17,521		





- Development of the Screening Tables
 - How the Points were Derived:

Step Three:

Determine Fair Share allocation of GHG Reductions

Category	Residential	Commercial/ Industrial	All
BMP-1	1,649 DUs	3,694,000 sq. ft.	
PS-1 (Screening Tables)	17,717 MT CO2e	22,052 MT CO2e	39,769 MT CO2e
Residential DUs	14,840 DUs		
Fair Share per DU	1.19 MT CO2e/DU		
Commercial/industrial sq. ft.		33,246,000	
Fair Share per 1,000 sq. ft. of Commercial/Industrial		0.66 MT CO2e/1000 sq. ft.	



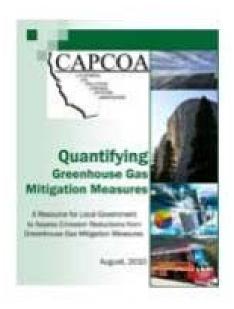


- Development of the Screening Tables
 - How the Points were Derived:

Step Four:

Determine Point Allocation

Residential = 0.012 MT CO2e per point (based on Regional Plan average of all cities)



Use CAPCOA's "Quantifying GHG Mitigation Measures to determine points per option in menu





Example: Energy Star Electric Appliance for Residential uses

GHG reductions =

(Electricity use_{baseline} X EF) – (Electricity use_{energy star} X EF)

Utility Provider: SCE EF (3.2-4 MT CO2e/kWh)

Climate Zone: 10 (energy reduction potential Table BE4-1)

 $(1,811 \text{ kWH X } 3.2^{-4} = 0.58 \text{ MT CO2e}) - (1,450 \text{ kWH X } 3.2^{-4} = 0.46 \text{ MT CO2e}) = 0.12 \text{ MT CO2e}$

Residential = 0.12 MT CO2e per Point

Energy Star Appliances = 1 point in the Screening Tables







How They Work





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Screening Tables

How They Work

Feature	Description	Assigned Point Values	Project Points
Reduction I	Measure R2 E5: Energy Efficiency for Commercial Developm	ent	
Building En	velope		
Insulation	Title 24 standard (required) Modestly Enhanced Insulation (5% > Title 24) Enhanced Insulation (15% > Title 24) Greatly Enhanced Insulation (20% > Title 24)	0 points 3 points 7 points 11 points	
Windows	Title 24 standard (required) Modestly Enhanced Window Insulation (5% > Title 24) Enhanced Window Insulation (15%> Title 24) Greatly Enhanced Window Insulation (20%> Title 24)	0 points 3 points 7 points 11 points	
Doors	Title 24 standard (required) Modestly Enhanced Insulation (5% > Title 24) Enhanced Insulation (15%> Title 24) Greatly Enhanced Insulation (20%> Title 24)	0 points 3 points 7 points 11 points	
Air Infiltration	Minimizing leaks in the building envelope is as important as the insulation properties of the building. Insulation does not work effectively if there is excess air leakage.		
	Title 24 standard (required) Modest Building Envelope Leakage (5% > Title 24) Reduced Building Envelope Leakage (15% > Title 24) Minimum Building Envelope Leakage (20% > Title 24)	0 points 3 points 7 points 11 points	





Sample Project Application









Discussion









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APPENDIX B. I

Climate Action Plan Screening Table Points Tracking Tool Users Guide

Instructions/Notes:

On the General Notes Tab of the Tracker Tool you will find these instructions. You can refer to them any time you are in the tool.

- 1) When you open the Climate Action Plan Screening Table Points Tracking Tool, be sure to save it as a different file name. As an example, you can save a copy by adding the date to the end of the file name. This way you will always have the original file to use should mistakes be made.
- 2) For residential development projects, go to the Residential Measures tab in the Tracking Tool. For commercial/industrial development projects go to the Commercial Measures tab. Mixed use project require entries in both tabs. You will need to make a manual entry of the following within these tabs: Project Name, Date, and your Comments in the designated fields below.
- 3) In the Residential Measures and/or Commercial Measures tabs, select applicable reduction measures and strategies from the menus for the project. Select from the menu by inserting an "x" in the brown colored column (Column D) next to the menu option you wish to select.
- 4) Select the desired Point System. If "Default Points" is selected, the maximum recommended point for the measure would be assigned. Some measures require further analysis and need to be reviewed in order to assign points. These measures are noted with "TBD".
- 5) Details of the project measures and total points can be viewed at the top of the "Residential Measures" and "Commercial Measures" tabs.
- 5) View "Residential Screening Table Ref." & "Commercial Screening Table Ref." sheets as reference/guidance for determining maximum points possible for each measure consistent with the CAP.

Note: This tool is designed to be used for individual projects. Minor modifications could be made to track points for all development projects in the City.

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APPENDIX C. I

TRANSIT PRIORITY PROJECT CHECKLIST

The following checklist will assist in determining if your Project qualifies as a Transit Priority Project (TPP) and a Sustainable Community Project (SCP) as defined in PRC 21155(a), (b), and PRC 21152.

Yes	No	Is the F	Project:
		1.	Located within ½ mile from a Metrolink Station, future Metrolink Station, or the San Bernardino Transit Center?
		2.	At least 50% residential use based upon total square footage, and non-residential uses within the Project between 26% to 50% of total square footage with FAR of not less than 0.75?
		3.	At or above a minimum net density of at least 20 dwelling units per acre?
		4.	Is your project consistent with the general land use designations in the SCP (if you answered yes to questions 1 thru 3, then answer yes to this one)?
-		-	uestions 1 through 4 then your Project is a Transit Priority Project (TPP) as defined by PRC ue with the next list of environmental questions:
Yes	No	Does tl	ne Project:
		5.	Contain sites on the Cortese List?
		6.	Site contain any hazardous substances, contaminated soil or hazardous material?
		7.	Site include historical resources?
		8.	Have an unusually high risk of fire or explosion from material stored or used at properties within ¼ mile of the Project site?
		9.	Site currently developed as Open Space (parks, habitat, etc.)?
Contir	nue with th	ne next li	st of land use questions below:
Yes	No		
		10.	Does the Project design have all the buildings at least 15% more efficient than Title 24 energy standards and uses 25% or less water than average households?
		11.	Is the Project site eight acres or less in size?
		12.	Does the Project not include any single level of a building exceeding 75TSF?
		13.	Project does not conflict with nearby industrial uses?
		14.	The Project will sell at least 20% of housing to families of moderate income, or 10% of housing will be rented to families of low income, or at least 5% of housing rented to families of very low income, or the Project provides open space equal or greater than 5 acres per 1,000 residents, or the developer will pay in-lieu fees sufficient to result in the development of affordable housing meeting one of the criteria described above?

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