Appendix E Buildout Methodology

Appendices

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2014

Buildout Methodology

FINAL DRAFT

This document describes the steps taken to generate the Buildout for the Department of Regional Planning's 2014 Antelope Valley Plan

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Table of Contents

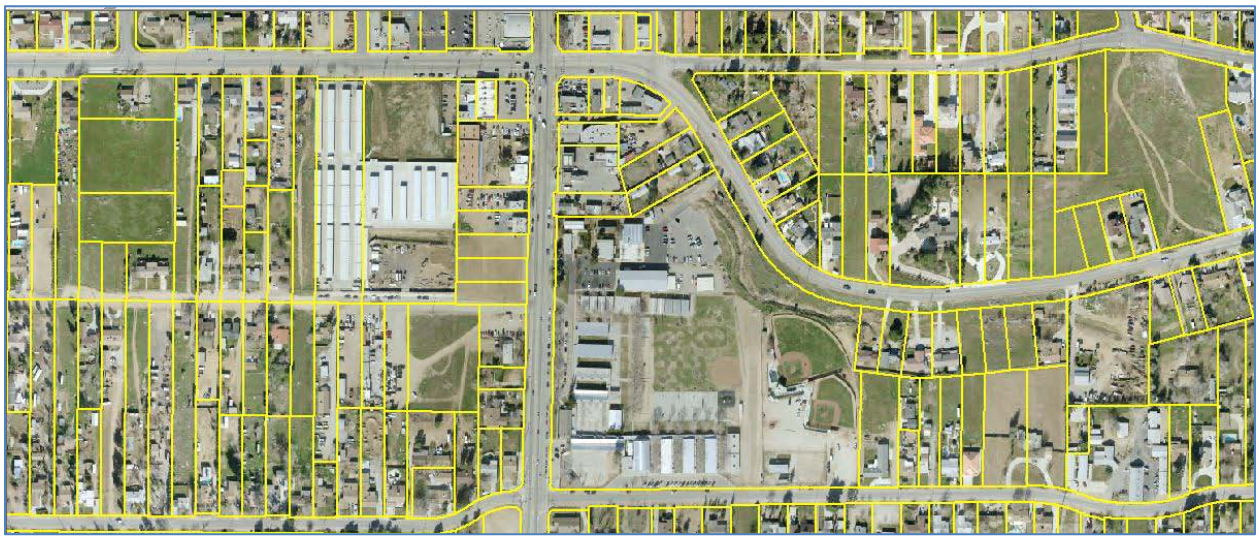
Overview of Buildout Models

The buildout for the Los Angeles County Antelope Valley Areawide General Plan Update ("Proposed AV Plan") was established by Placeworks and put into a GIS format by the Department of Regional Planning. Three basic datasets were derived that show existing conditions, current conditions (adopted AV Plan), and proposed conditions (Proposed AV Plan). The following is a generalized description of the buildout and the basic steps and formulas used to arrive at the final projected numbers.

1. Existing Conditions

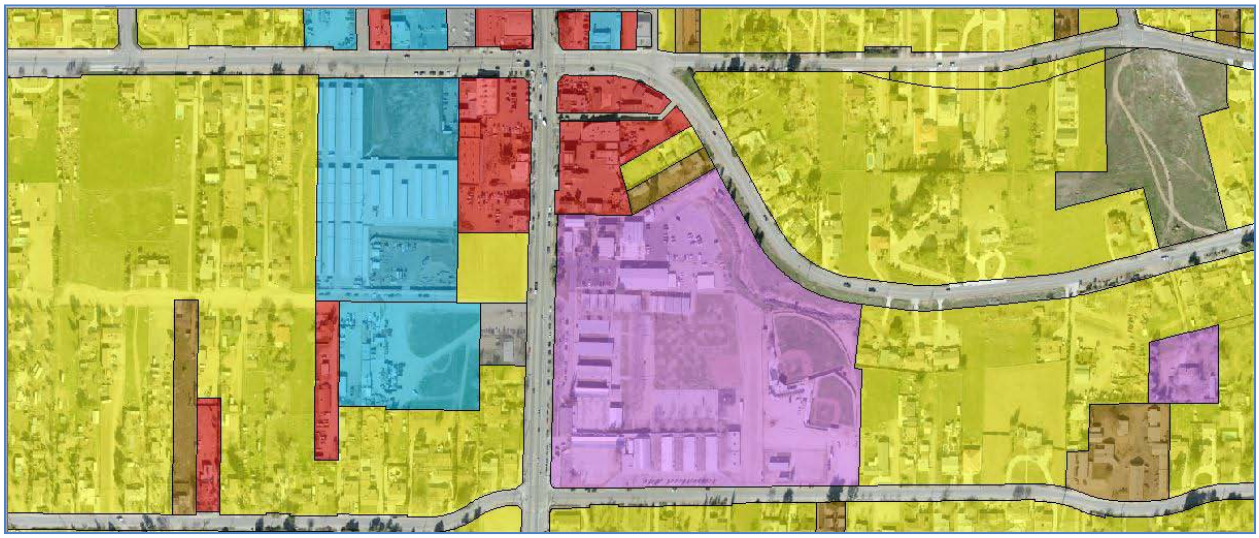
Existing Conditions are based on data from the Los Angeles County Assessor for the unincorporated areas only. The parcels were taken from the April, 2011 version of the Assessor Database. Figure 1.A shows a sample of parcels in the Quartz Hill Community.

Figure 1.A



Within the Assessor Parcel data is a 'Use Code' with categories that were established by the Assessor. The parcels were aggregated by Assessor Use Code and in Figure 1.B below, the different colors represent the different Residential, Commercial, and Industrial categories (among others) in this area. Red is commercial, yellow is single-family residential, brown is multi-family residential, pink is public facilities, and blue is industrial.

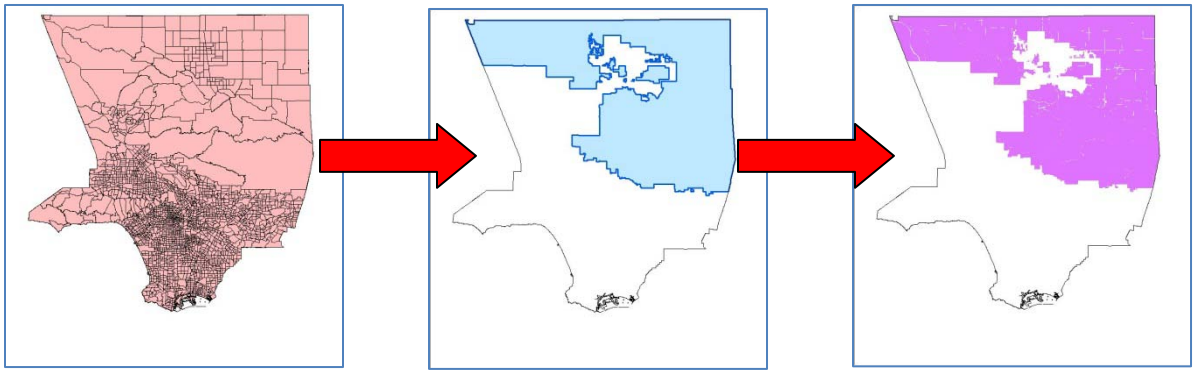
Figure 1.B



This aggregated parcel layer was then combined with the 2008 Traffic Analysis Zones (TAZ) from the Southern California Association of Governments (SCAG) and the Plan Areas used by the Department of Regional Planning (DRP).

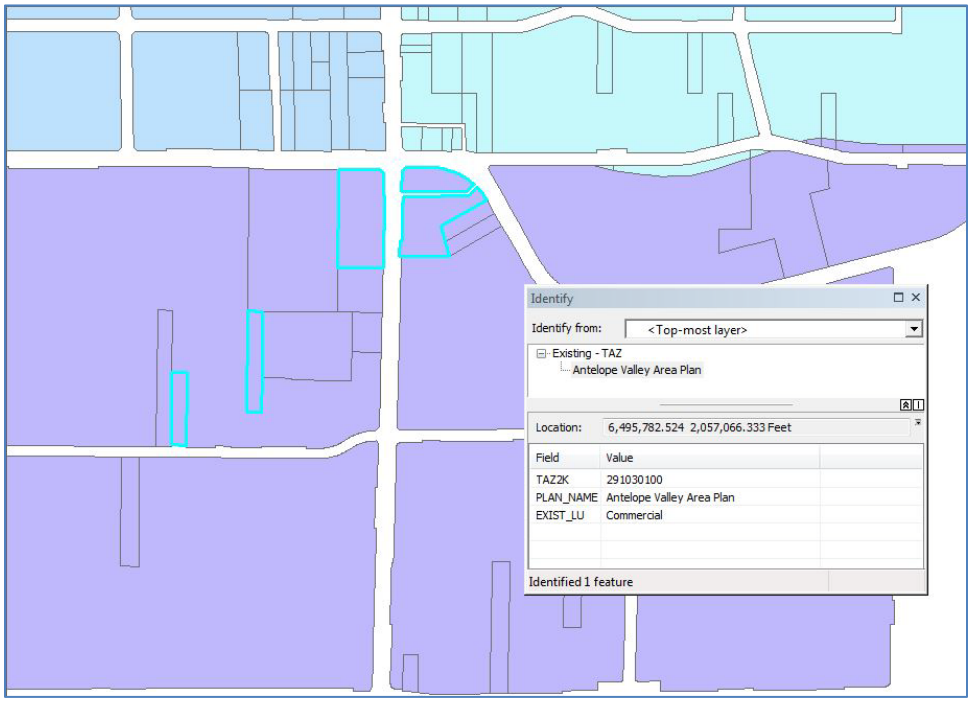
Figure 1.C

TAZ *DRP Plan Areas* *Aggregated Parcel layer*



The result of this combination is that each of the Aggregated land use categories have a SCAG TAZ ID and a DRP Planning Area coded into it. In Figure 1.D below the Assessor Land Use layer is colored based on the TAZ IDs. The blue outline is a selected aggregated polygon along with a pop-up window of the fields in the GIS data.

Figure 1.D



With this GIS layer now prepared, factors were established for each of the Assessor Land Use Categories in order to begin the calculations for the buildout.

Factors

Existing use, building square footage, and number of dwelling units were provided by the Assessor parcel data. Population estimates were made by applying single-family and multifamily development person per household assumptions (established by the County) to the number of units in each parcel. Employment estimates were made by applying employee per square foot assumptions to nonresidential square footage recorded by the Assessor. The employee assumptions are from the Natelson Company Employment Density Study, with the exception of public/quasi-public uses, schools, and farms. Employment for public/quasi-public uses were calculated individually due to the range of uses within this category. Schools are estimated to employ 90 persons on average; based on a survey of LAUSD employment. This may vary by school type. Square feet per employee for farmworkers was determined by dividing the number of Los Angeles County farmworkers, as reported in the 2006 American Community Survey, by the building square footage for existing farms. See Figure 1.E below.

Figure 1.E

Assessor Land Use	Persons per Household	Square Foot / Emp	Notes
Commercial		511	
Commercial Reg		2,437	
Farm		90	
Industrial		1,306	
Miscellaneous Government		1,306	
Multifamily	2.79		
Office		302	
Parking		0	
Public/Quasi-Public			Calculated individually.
ROW			
School			Calculated individually.
Single-Family	3.85		
Utilities		1,306	
Vacant			
Warehouse		1,306	
Water		1,306	Employment generation factor provided in the event that a utility structure is included, but none are in the water category (according to this data set)

Once the factors are calculated for the various land uses, the following formulas can be applied to arrive at the final numbers:

1. Units - Single-Family and Multi-Family Units were taken directly from Assessor data. When the previously described data aggregation occurred the total units were summarized per land use category per TAZ.

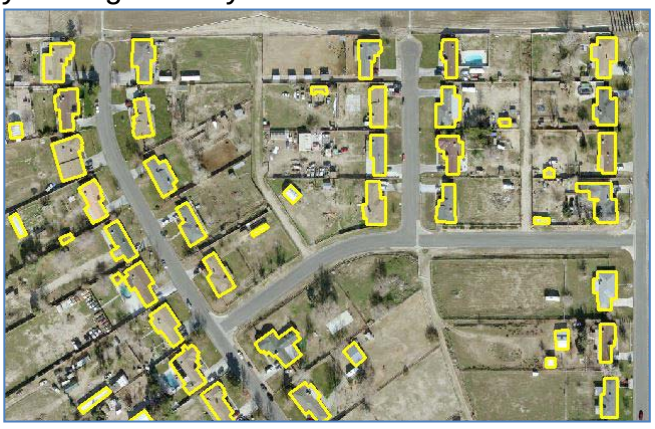
2. Population - Units were multiplied by the Persons per Household factor shown in Figure 1.E above, based on multi-family or single-family:

   Formula:

   (Units) x (pph) = Population

3. Employment[1] - Employment is calculated in one of two ways:

   a) Employment was generated by determining the Building Square Footage for each employment-



[1] For more about Employment, please see section 5 on page 18.

generating use. Using a 'Building Outline' layer that was derived from 2008 aerial imagery (see aerial shot on bottom of Page 5), the total building square footage was calculated...taking also into account the total number of floors. For those parcels that did not have a building polygon, building square footage from the Assessor was used.[2]

Formula:

(Building Square Footage) / (Square Foot per Emp) = Employment

b) Some areas have specific employment factors. A field was added in the GIS layer to indicate whether a factor was applied to a general use, or whether a specific number of employees was determined by either contacting the factility, or getting the information through a Census site, or other online resource. The table below (Figure 1.F) breaks down these uses:

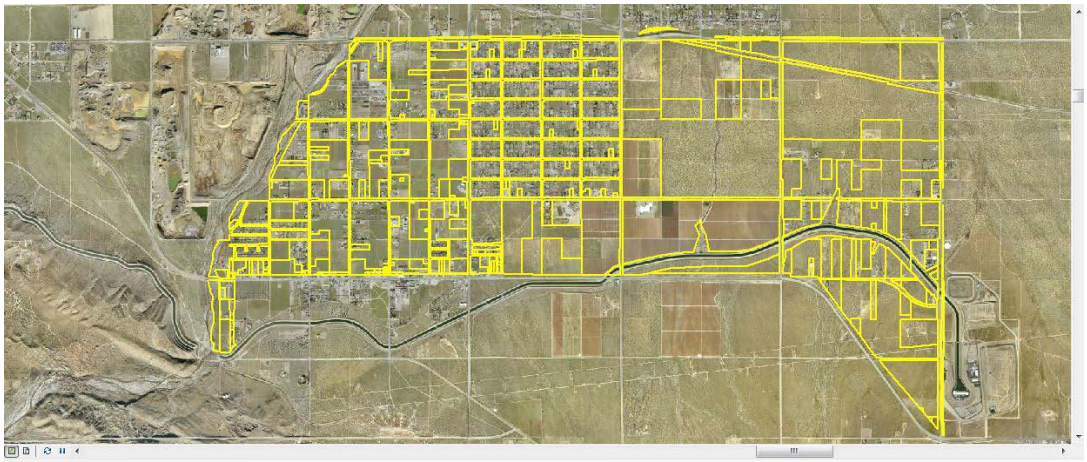
Figure 1.F

Land Use Type	Factor / Specific number	EMP
Airport	Specific Number	Found # of employees for each site
Amusement Parks	Specific Number	Found # of employees for each site
Cemeteries	Factor	100
City Hall	Specific Number	Found # of employees for each site
Colleges & Universities	Specific Number	Found # of employees for each site
Golf Courses	Factor	50
Hospitals & Medical Centers	Specific Number	Found # of employees for each site
Military Facilities	Specific Number	Found # of employees for each site
Preschools	Factor	90
Private and Charter Schools	Factor	100
Public Elementary Schools	Factor	100
Public High Schools	Factor	250
Public Middle Schools	Factor	100
Regional Parks & Gardens	Factor (small park)	25
Regional Parks & Gardens	Factor (large park)	50

After all of the Units, Population and Employment is determined, then all of the TAZs have a summary of Planning Area, Land Use, total units, population and employment. In Figure 1.G below, the GIS layer represents a sample TAZ and all of the data displayed in the table below it.

[2] Using this 'Building Outline' GIS layer was favorable as it represented a more accurate depiction of building square footage than what the Assessor had.

Figure 1.G



Table

BUILDOUT_EXISTING_USE

TAZ2K	EXIST_LU	UNITS_SF	UNITS_MF	UNITS_TTL	PPH	POP_SF	POP_MF	POP_TTL	SQFT_EMP	EMP	SOURCE	ACRES
291000001	Miscellaneous - Other	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	1306	4.576119	Used Assessor data and Factors from Planning Center	111.310346
291000001	Miscellaneous Government	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	1306	23.050338	Used Assessor data and Factors from Planning Center	169.517248
291000001	Multifamily	0	105.773785	105.773785	2.79	0	295.10886	295.108861	<Null>	<Null>	Used Assessor data and Factors from Planning Center	63.884997
291000001	Office	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	302	123.93176	Used Assessor data and Factors from Planning Center	6.072765
291000001	Parking	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	3.189312
291000001	Public Middle Schools	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	100	Based on factor from Planning Center	19.094893
291000001	Regional Parks & Gardens	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	25	Based on factor from Planning Center	5.830693
291000001	Single-Family	1101.23813	0	1101.238133	3.85	4239.766813	0	4239.766813	<Null>	<Null>	Used Assessor data and Factors from Planning Center	1731.186956
291000001	Vacant	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	1148.86611

2. Current Conditions (Adopted Antelope Valley Plan)

For current conditions, the Land Use Policy from the 1986 Antelope Valley Plan was used.

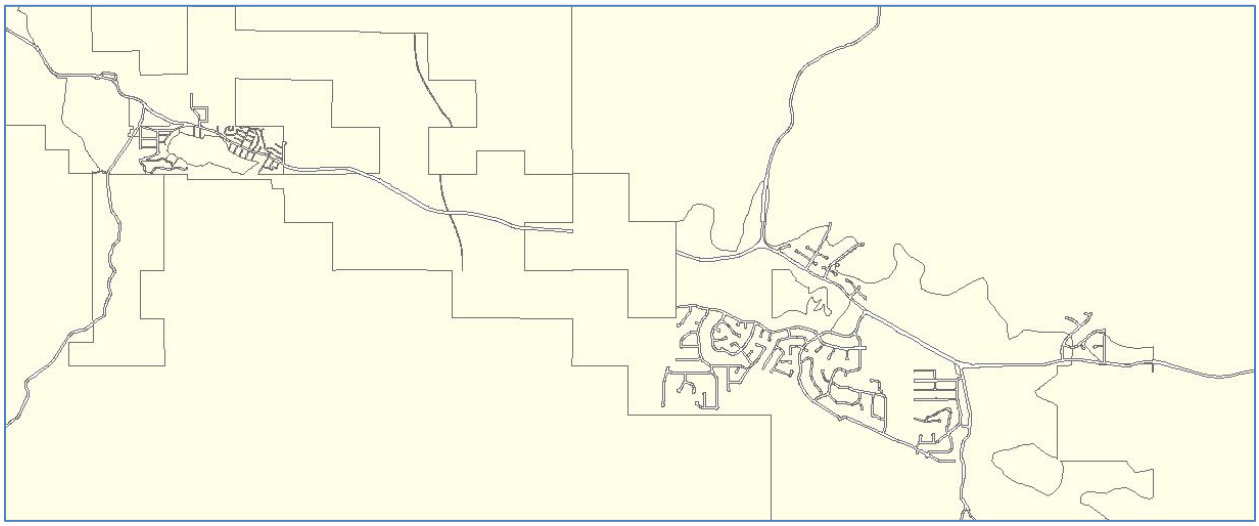
GIS Analysis

Similar to how the Assessor Land Use was generated, the Adopted Land Use Policy was incorporated into the parcel layer. The parcels were then aggregated based on Land Use category, and then combined with the 2008 TAZ layer from SCAG and the DRP Plan Areas using the same procedure outlined above in the Existing Conditions section (illustrated by Figures 1-A through 1-C). One additional layer was added for Hillside Management, which shows slope areas 25-50% and greater than 50%. The target densities are reduced depending on their range of slope. Additionally, any open space or National Forest areas were not considered for the Hillside Management reduction[3]. See Figure 2.A below for an example in the Lake Hughes / Lake Elizabeth communities.

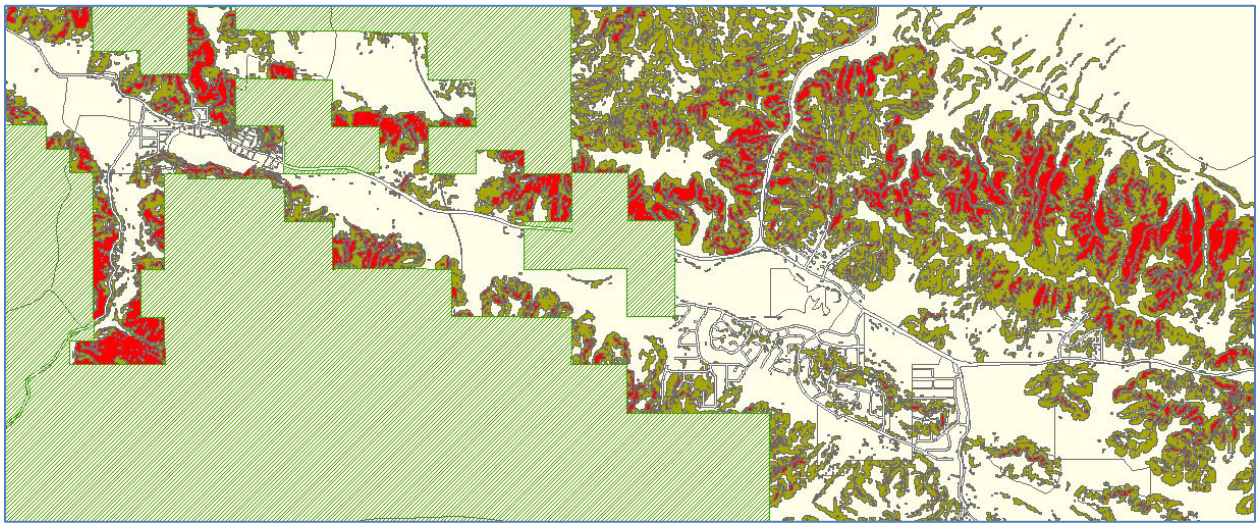
[3] The main reason for this is that adding thousands of small Hillside Management polygons to the GIS layer created a very large file. Since no Residential units are considered in Open Space categories, it was decided to take those Hillside Management areas out as is seen in the Altadena screenshot. Doing this made the data layers easier to process.

Figure 2.A

Land Use Policy - aggregated parcels

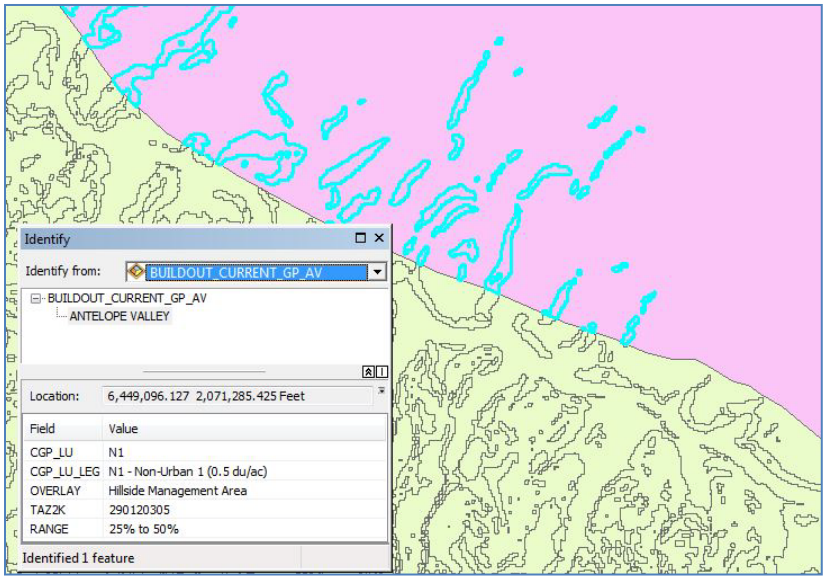


Incorporated Hillside Management and Slopes (note Open Space / National Forest clipped out)



Similar to how the GIS layer is set up for the Existing Conditions (Figure 1.D), the figure below shows the GIS layer for the Current Conditions. Land Use is aggregated per TAZ (representing the different colors in Figure 2.B). The blue outline below is a selected aggregated polygon along with a pop-up window of the fields in the GIS data. Please also note, that unlike the Existing Conditions, this has additional information as to whether this is a 'Hillside Management' area, and what type of slope it is.

Figure 2.B



With this GIS layer now prepared, factors were established for each of the Land Use Categories in order to begin the calculations for the buildout.

Factors

Assumptions for density and floor area ratio were developed in response to development standards in the Antelope Valley Area Plan. Housing projections assume that most areas will develop at 80 percent of the maximum density, with exceptions for designations of no more than one unit per acre, which are expected to buildout at the maximum density. Population projections were established by applying County-determined person per household assumptions for single-family and multifamily housing types. Wherever possible, employment assumptions (using square feet per employee) were provided by the Natelson Company Employment Density Study. Employment estimates for public uses, such as Public Facilities, Public/Quasi-Public, and Institutions, were determined individually to reflect existing uses.

Residential development on county land was builtout based on 80 percent of the maximum residential density, with an exception for densities of no more than 1 unit per acre which may build out at the maximum. See Appendix A for a list of all of the factors per Land Use category.

Once the factors are calculated for the various land uses, the following formulas can be applied to arrive at the final numbers:

1. Units - Single-Family and Multi-Family Units were calculated using the factors in the 'Target Density' and 'MF vs. SF' fields in Appendix A.

a) The factors in the 'Target Density' field were multiplied by the total Acres for each aggregated land use polygon. The 'MF vs. SF' field is used to determine which Density factor to use.

b) There are certain higher density residential land use categories that should have both single-family and multi-family factors considered. For example, some categories show a "split 50/50" value in the 'MF vs. SF' field (Appendix A), so for those aggregated land use polygons, acreage is multiplied by the single-family density then divided by two; same for the multi-family density.

c) For land use designations with an Urban or a rural mixed use category, a further reduction will need to be done to account for a split between residential and commercial. Usually, this is a 50% split between the two, and 50% is used in the 'Formulas' example below.

d) Add Single-Family and Multi-Family Units together for Total Units

Formulas:

(Acres) x (Density SF) = Single-Family Units

(Acres) x (Density MF) = Multi-Family Units

(Acres) x (Density SF / 2; Density MF / 2) = Single / Multi-Family splits

[for Mixed Use categories – 50/50 split in example below]

(Acres / 2) x (Density SF; Density MF) = Single / Multi-Family residential / commercial reductions

(Single-Family Units) + (Multi-Family Units) = Total Units

2. Population - Single-Family and Multi-Family Population figures were derived by multiplying the Single-Family and Multi-Family Units by the 'Persons per Household' (PPH) figures that are in Appendix A.

a) Consult the 'MF vs. SF' field to see whether the Single-Family or Multi-Family populations should be calculated.

b) For land use designations with target densities that could accommodate both Single-Family and Multi-Family housing, a PPH factor of 3.60 was used. This PPH factor is an average of 3.85 and 3.34 PPH, reflecting both an assumption of 50/50 SF and MF mix in that designation, and the assumption that household sizes are bigger in lower density multifamily projects than the 2.79 PPH factor for higher density Multi-Family projects.

Formulas:

(Units SF) * (PPH_SF) = Single-Family Population - *includes those with '50/50 split'*

(Units MF) * (PPH_MF) = Multi-Family Population - ***includes those with '50/50 split***

(Single-Family Population) + (Multi-Family Population) = Total Population

3. Building Square Footage - Target Floor Area Ratio (FAR) factors were used to determine Building Square Footage, which will then determine Employment. The 'Target FAR' field shown in the table in Appendix A has these factors for the non-residential land use categories, and these are simply multiplied by the total square footage of the aggregated land use polygons. For Mixed Use categories, these figures need to be reduced based on a split between Residential and Commercial (usually 50 / 50)

Formula:

(Area) x (FAR) = Building Square Footage

[for Mixed Use categories – 50/50 split in example below]

(Area / 2) x (FAR) = Building Square Footage

4. Employment[4] – Employment is calculated in one of two ways:

   a) Employment was generated one way by using the Building Square Footage calculations from the previous step.

   Formula:

   (Building Square Footage) / (Square Foot per Emp) = Employment

   b) Some areas have specific employment factors. A field was added in the GIS layer to indicate whether a factor was applied to a general use, or whether a specific number of employees was determined by either contacting the factility, or getting the information through a Census site, or other online resource. Below are the different employment categories and their factors. For the 'Specific Employment Factors', please refer to the table in the 'Existing Conditions' section (Figure 1.F) for these uses.

[4] For more about Employment, please see section 5 on page 18

Figure 2.D

Employment Category	**Employment Factory**
Commercial - General, Neighborhood, Rural	TPC factor - 511
Commercial - Major, Regional	TPC factor - 2437
Commercial - Office, Business Park	TPC factor - 302
Industrial	TPC factor - 1306
Specific Employment Number	Specific Employment Number

3. Proposed Conditions (Proposed AV Plan)

For the Proposed Conditions, the Land Use Policy from the Proposed AV Plan was used to generate the units, population, and employment figures using the same method described in Steps 1-4 in the 'Current Conditions (Adopted Antelope Valley Plan)' section. Since those steps are already written out, they will not be repeated here (to see the factors used for the Proposed AV Plan, please refer to Appendix B).

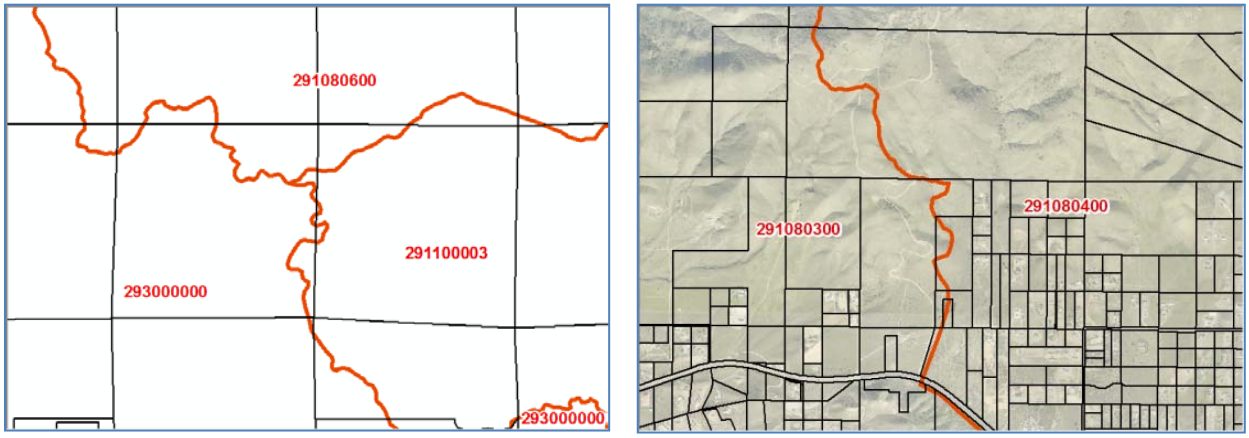
4. Accuracy of TAZ Layer vs. Parcels Layer

The TAZ layer from SCAG's 2008 "Regional Transportation Plan" was used for the duration of the Buildout iterations. At one point it was discussed to possibly use the 2010 or 2012 TAZ layers as they became available, but for purposes of consistancy, it was decided to keep the 2008 layer throughout. It should be noted that the 2008 GIS layer didn't line up with parcels in most areas. The TAZ data layer wasn't meant to line up with parcels, since the RTP covered a large, 6-county area, and it meant to follow 2000 Census geographies. Below in Figure 4.A are some screenshots that show how the lines cut through the parcels, and also a line showing where the line probably meant to go. Ideally it would have been best to update the TAZ linework to better follow parcels, however it would have been a very time consuming process requiring a lot of hours of manual updating.

Figure 4.A

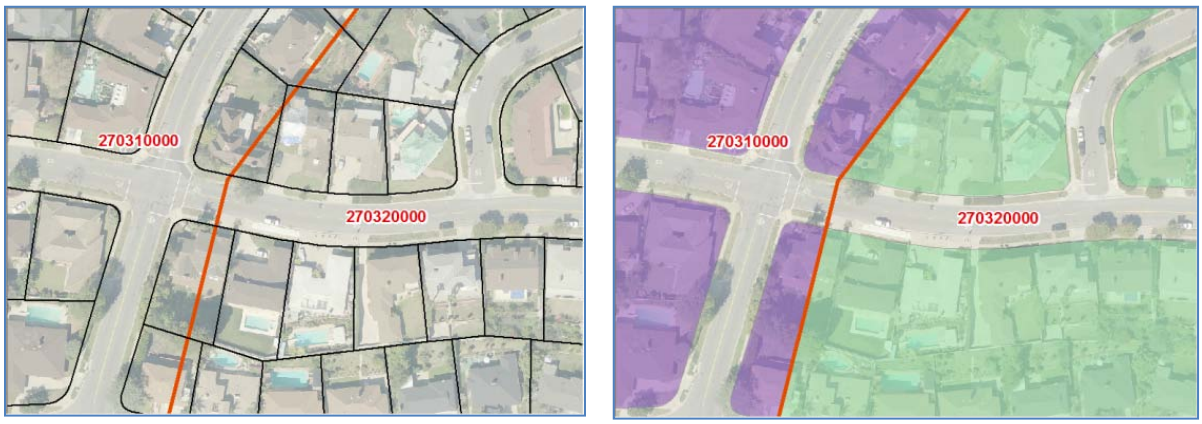
Additionally, there are many areas where TAZ boundaries are not meant to follow parcels at all. Mainly these occur in the National Forest, rural areas, or other areas of large, undeveloped land.

Figure 4.B



The best approach to take with this when aggregating the parcels by TAZ was to simply incorporate the split in the parcels into the data. So, if a parcel is 20% in one TAZ, and 80% in another, the parcel was simply split and aggregated based on those percentages (ie. 80% of the population / units / employment go in one TAZ, and 20% go into the other). In Figure 4.C below, the parcels are split by two TAZ's, then aggregated based on that split. This was discussed between Placeworks and DRP and it was decided that it was okay to do this, given the fact that there wasn't enough time or resources to fix the source TAZ layer, and that this was not meant to be a parcel level analysis...rather, a TAZ-level analysis.

Figure 4.C



5. Employment

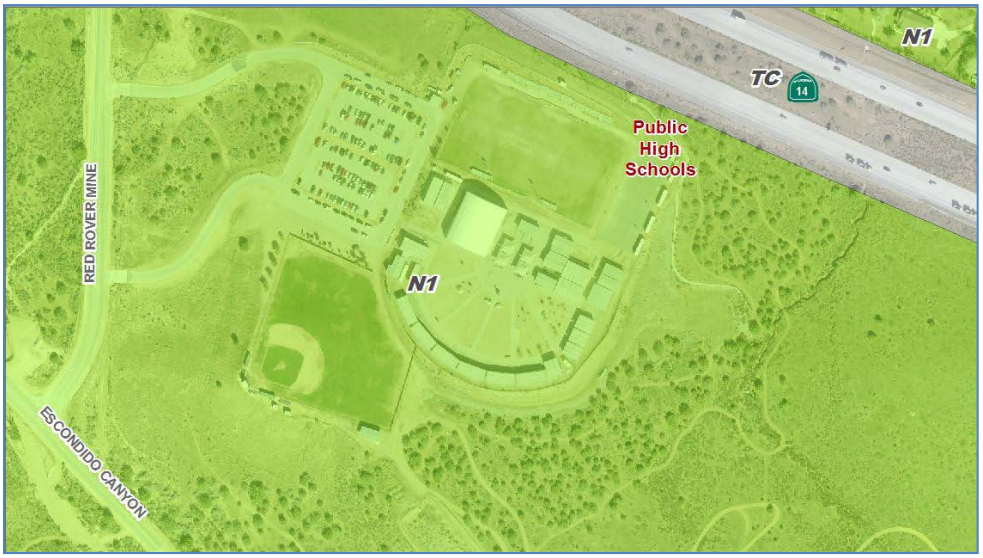
As was mentioned previously, there are Employment factors that are determined by dividing the 'Building Square Footage' by 'Square Footage per Employee', and there are also those that are determined by a specific factor depending on type of employment generator (please see Figure 1.F). In most cases these 'specific factors' correspond with a 'Public', 'Open Space', 'Commercial', or other similar category. However, it is possible that there are some residential land use categories that have some of these employment generating uses as well. A 'Land Types' GIS layer was used to determine all of the 'Use Types' in Figure 1.F, and was integrated into all of the Buildout layers (Existing, Current, and Proposed).

1. Current Conditions - Since Current Conditions are based on Adopted Land Use, there are several residential areas that have an employment generating use. The reason for this was that the older plans like the 1986 Antelope Valley Plan allowed for certain "public uses" within residential land use categories. The following excerpt is from the 1980 General Plan land use element:

   "Within the generalized residential areas mapped, a variety of use types and intensities presently exist. Such uses typically include local commercial and industrial services, schools, churches, local parks and other community-serving public facilities."

So, it's not abnormal to see examples like what is shown in Figure 5.A where a school shows up in a rural residential land use category.

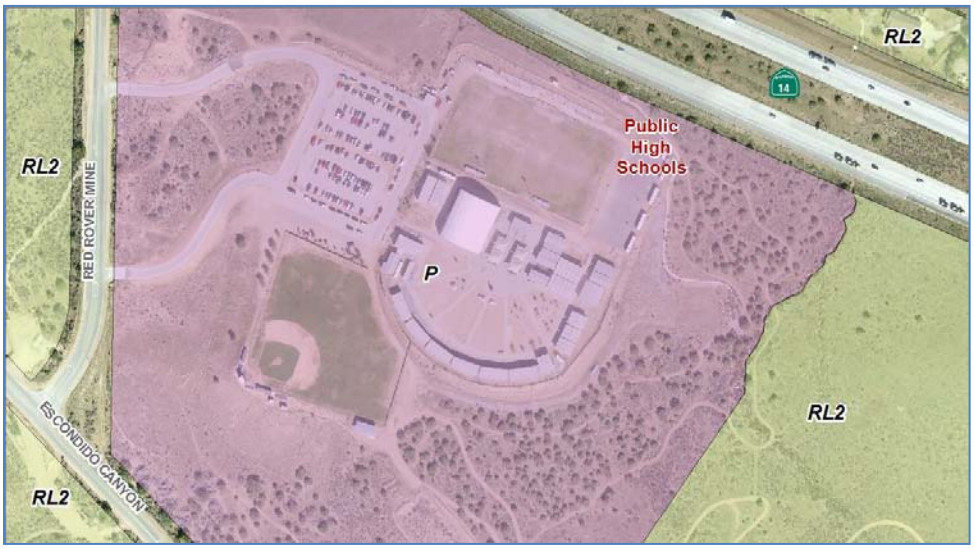
Figure 5.A



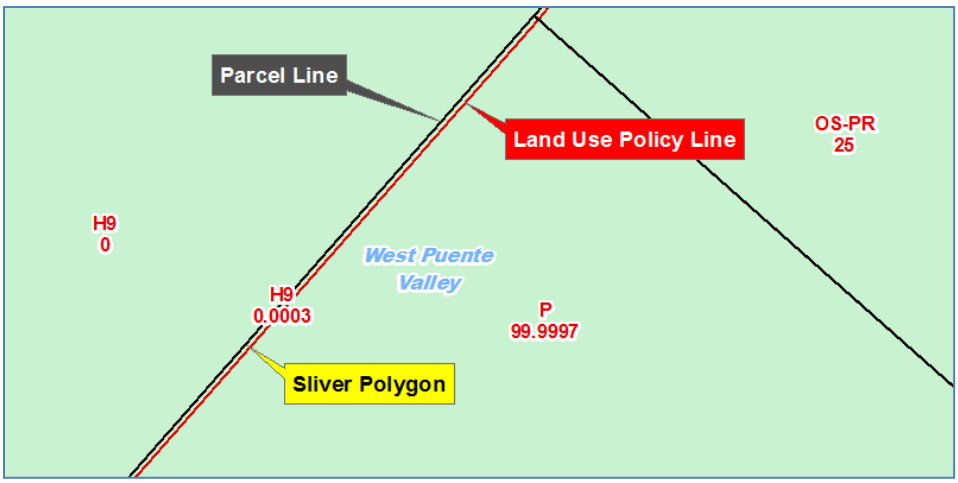
2. Proposed Conditions - Since the proposed land use for the Proposed AV Plan is parcel based, all the publically-owned land that have employment generating

uses should be coded as either "Public / Semi-Public" or "Open Space". So, in the case of Figure 5.A above, that school now has a 'P' category and is no longer rural residential. Most of the cases in which an employment figure shows up in a proposed residential land use category are those of Private and Charter Schools. Since these are not considered a "Public" use, they have a residential category and therefore, have an employment number.

Figure 5.B



3. <u>Sliver Polygons</u> - The other instance where there may be an employment number in a residential category is when the Land Use Policy layer doesn't quite line up with the parcels (where the 'Land Types' GIS layer was derived from). This creates "sliver polygons", and is a common issue whenever doing any overlay analysis with parcels. Given the volume of these sliver polygons and the time constraints, these slivers were left in the buildout.



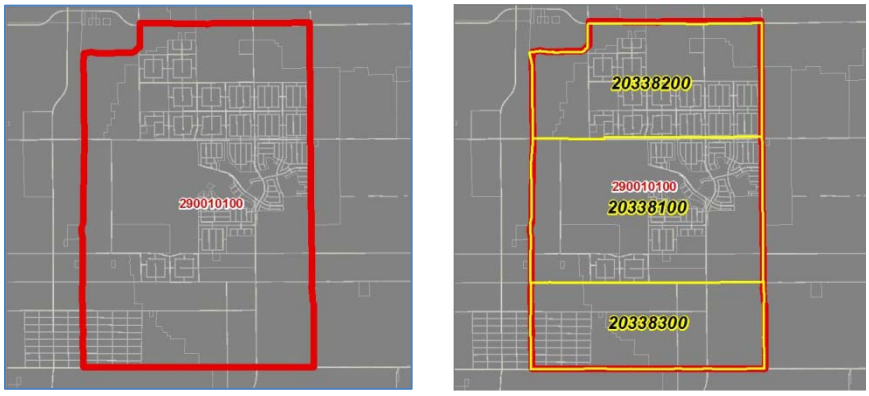
6. TAZ Update and export of GIS layers

Once the GIS analysis was done, the data was then re-allocated based on the needs of the consultants or sub-consultants, and most were then organized into spreadsheets. The spreadsheets were helpful so that consultants who did not have GIS software could work with the data. All three datasets (existing, current general plan, and proposed general plan) were allocated and exported in the following ways:

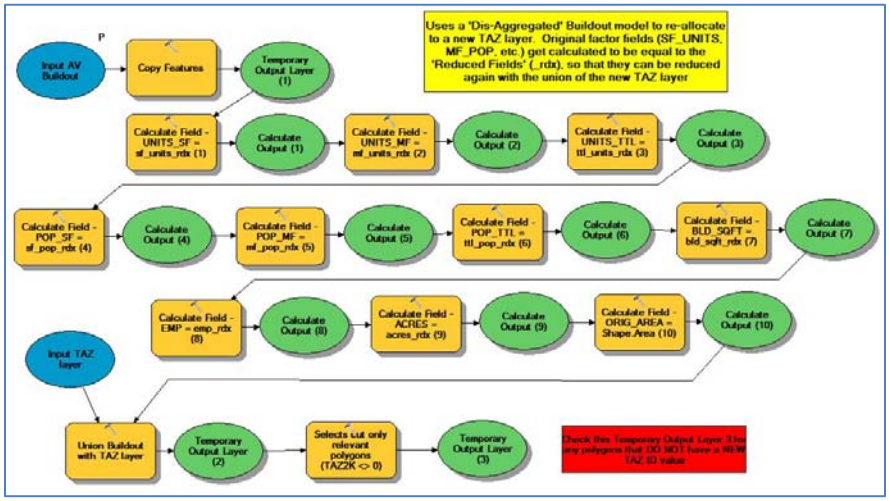
1. **TAZ Update.** When the Antelope Valley buildout was originally produced along with the General Plan buildout beginning in 2011, the only TAZ data available was SCAG's 2008 layer. In 2012 they updated their TAZ layer to be more accurate and have a higher level of detail. The screenshot below compares the 2008 version vs. the 2012 version. A GIS model was created to update the buildout datasets to use the 2012 TAZ geographies.

Figure 6.A

2008 TAZ layer *2012 TAZ layer*

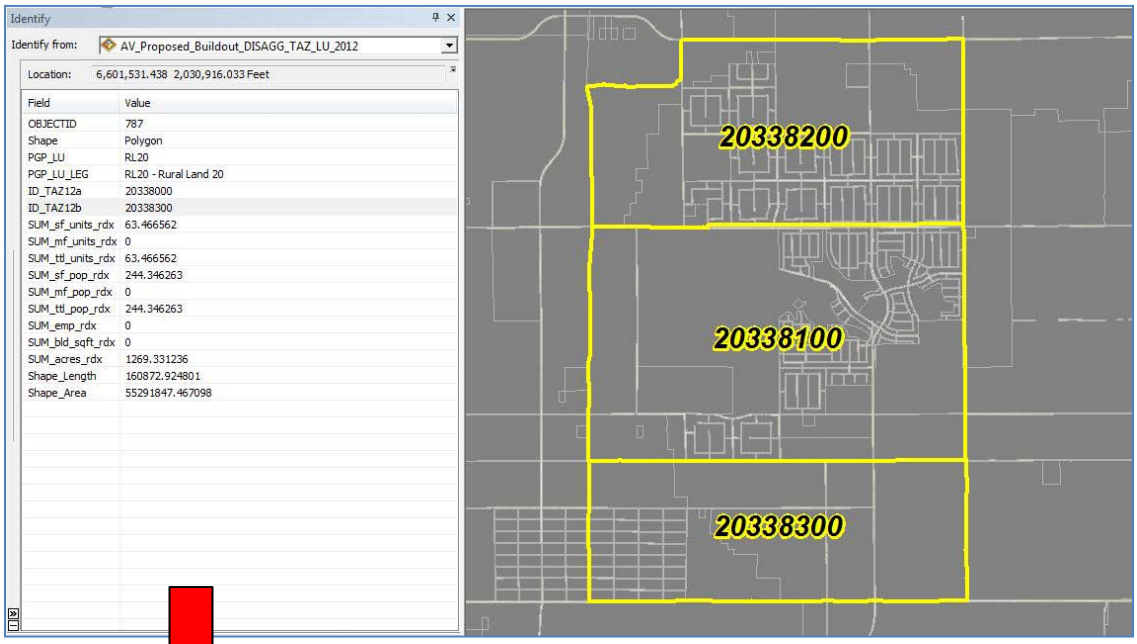


GIS model that updated the buildout to updated 2012 TAZ layer



2. **TAZ / Land Use level.** Following the TAZ geography update, datasets were exported at the level of TAZ and land use. In Figure 6.B below, a few sample TAZ polygons from the GIS layer are shown along with a view of the data, and the extracted spreadsheet. Please note that in the screenshot of the spreadsheet, that the selected rows represent one TAZ; the multiple rows within each TAZ represents different land use categories.

Figure 6.B



	A	B	C	D	E	F	G	H	I	J	K	L
1	Proposed Land Use	TAZ 2012 - Tier 1	TAZ 2012 - Tier 2	Dwelling Units (Single-Family)	Dwelling Units (Multi-Family)	Dwelling Units (Total)	Population (Single-Family)	Population (Multi-Family)	Population (Total)	Jobs	Building Floor Area (sq ft)	Acres
425	RL10 - Rural Land 10	20338000	20338200	4	0	4	17	0	17	0	0	44
426	RL2 - Rural Land 2	20338000	20338200	727	0	727	2,800	0	2,800	0	0	1,455
427	RL20 - Rural Land 20	20338000	20338200	56	0	56	216	0	216	0	0	1,125
428	RL5 - Rural Land 5	20338000	20338200	0	0	0	0	0	0	0	0	0
429	RL10 - Rural Land 10	20338000	20338300	251	0	251	968	0	968	0	0	2,514
430	RL20 - Rural Land 20	20338000	20338300	63	0	63	244	0	244	0	0	1,269
431	ML - Military Land	20339000	20339100	0	0	0	0	0	0	0	0	19,567
432	OS-BLM - Bureau of Land Management	20339000	20339100	0	0	0	0	0	0	0	0	5
433	RL20 - Rural Land 20	20339000	20339100	65	0	65	252	0	252	0	0	1,308
434	CR - Rural Commercial	20340000	20340100	0	0	0	0	0	0	53	26,922	2
435	OS-BLM - Bureau of Land Management	20340000	20340100	0	0	0	0	0	0	0	0	280
436	OS-C - Conservation	20340000	20340100	0	0	0	0	0	0	0	0	22
437	OS-PR - Parks and Recreation	20340000	20340100	0	0	0	0	0	0	50	0	3,113
438	RL10 - Rural Land 10	20340000	20340100	77	0	77	297	0	297	0	0	771
439	RL2 - Rural Land 2	20340000	20340100	202	0	202	776	0	776	0	0	403

3. After all the GIS layers were prepared, and all of the relevant spreadsheets were exported, they were all put on the Department of Regional Planning's FTP site to be downloaded by EIR consultants and other parties that were helping with this project.

Appendix A

Land Use Plan Category	Target Density	Target FAR[1]	MF vs SF	PPH	SF/Emp[2, 3]	NOTES:
Antelope Valley Area Plan						
C - Commercial	n/a	0.5			511	
M - Industry	n/a	0.5			1306	
N1 - Non-Urban 1 (max 0.5 du/gross ac)	0.5	n/a	SF	3.85		
N2 - Non-Urban 2 (max 1.0 du/gross ac)	1.0	n/a	SF	3.85		
O - Open Space	n/a	n/a				
O-NF - National Forest	n/a	n/a				
O-W - Water Body	n/a	n/a				
P - Public Service Facilities	n/a	0.5				individually estimated; assumed 0.5 for public/institutional categories.
Airport	n/a	n/a				individually estimated (under Public Facilities in "Resources" spreadsheet); Designation applies to Palmdale Airport property.
U1 - Urban 1 (0 to 3.3 du/gross ac)	2.6	n/a	SF	3.85		
U1.5 - Urban 1.5 (0 to 2.0 du/gross ac)	1.6	n/a	SF	3.85		
U2 - Urban 2 (0 to 6.6 du/gross ac)	5.3	n/a	SF	3.85		
U2-D (0 to 4 du/gross ac)	3.2	n/a	SF	3.85		
Urban 3 (0 to 15.0 du/gross ac)	12.0	n/a	split 50/50	3.6		
U3-D (0 to 10 du/gross ac)	8.0	n/a	split 50/50	3.6		
Urban 4 (15.1 du/gross acre and greater)	15.1	n/a	split 50/50	3.6		
Additional assumptions (HMAs)						
Hillside Management Areas (HMAs): 25% to 50% slope (Max 1 du/ 2 acres)	0.5	n/a	SF	3.85		
Hillside Management Areas (HMAs): Greater than 50% slope (Max 1 du / 20 acres)	0.05	n/a	SF	3.85		

[1] For non-residential designations, FAR is assumed to be the larger of either: the highest FAR value of the range of existing conditions OR the GP assumption, when applicable. Some non-residential uses have specific assumptions as provided by a specific plan or the County.

[2] For residential designations density is generally assumed to be 80% of the maximum density unless the maximum density less than one unit per acre, in which case the maximum density it used.

[3] Yellow highlighted background indicates that the Community Plan does not specify density/intensity so General Plan assumptions were used. It may also indicate an assumption provided directly from County staff.

Appendix B

Land Use Plan Category	Target Density	Target FAR	MF vs SF	PPH	SF/Emp	NOTES:
Proposed Antelope Valley Plan						
Rural						
Rural Land 1	1.0	n/a	SF	3.85	n/a	While there is an allowance of FAR 0.5 to account for agricultural and other non-residential uses permitted in the RL categories, the buildout model uses the target densities for buildout.
Rural Land 2	0.5	n/a	SF	3.85	n/a	
Rural Land 5	0.2	n/a	SF	3.85	n/a	
Rural Land 10	0.1	n/a	SF	3.85	n/a	
Rural Land 20	0.1	n/a	SF	3.85	n/a	
Rural Land 40	0.03	n/a	SF	3.85	n/a	
Residential						
Residential 2	1.6	n/a	SF	3.85	n/a	
Residential 5	4.0	n/a	SF	3.85	n/a	
Residential 9	7.20	n/a	SF	3.6	n/a	
Residential 18	14.4	n/a	split 50/50	3.6	n/a	
Residential 30	24.0	n/a	MF	2.79	n/a	
Residential 50	40.0	n/a	MF	2.79	n/a	
Residential 100	80.0	n/a	MF	2.79	n/a	
Residential 150	120.0	n/a	MF	2.79	n/a	
Commercial						
Rural Commercial	n/a	0.25	n/a	n/a	511	
General Commercial	n/a	0.5	n/a	n/a	511	residential densities in CG and CM; however, for the purposes of the buildout model, we used the FAR, under the assumption that the general intended use of these land use designations are commercial uses.
Major Commercial	n/a	1.5	n/a	n/a	2437	
Industrial						
Light Industrial	n/a	0.5	n/a	n/a	1306	
Heavy Industrial	n/a	0.5	n/a	n/a	1306	
Office and Professional	n/a	1.0	n/a	n/a	302	
Mixed Use						
Rural Mixed Use	4.0	0.25	split 25/75	3.85	511	
Mixed Use	120.0	1.5	MF	2.79	511	
Public						
Public and Semi-Public Facilities	n/a	1.5			indiv	individually estimated
Open Space						
Open Space Conservation	n/a	0.0	n/a	n/a	n/a	
Open Space Parks and Recreation	n/a	0.0	n/a	n/a	n/a	
Open Space National Forest	n/a	0.0	n/a	n/a	n/a	
Bureau of Land Management	n/a	0.0	n/a	n/a	n/a	
Water	n/a	0.0	n/a	n/a	n/a	
Mineral Resources	n/a	0.0	n/a	n/a	n/a	
Military	n/a	0.0	n/a	n/a	n/a	