

## **Appendix F: Population Estimate Calculations and Methodologies**



## **Alternative Methodology to Estimate 2015 Retail Service Area Population**

Monte Vista Water District (MVWD) is using the California Department of Water Resources (DWR) online population tool to determine historical population and gallons per capita per day (GPCD) estimates for the purposes of establishing SBX7-7 baselines. The results are attached.

The population tool uses the same methodology for calculating historical MVWD retail service area population to project MVWD's 2015 population as 54,198, which equates to a retail service area population growth of 1.7% since 2010 based on U.S. Census data ( $54198 - 53284 = 914 / 53284 = 0.017$ ).

However, this rate of growth is inconsistent with the following local knowledge about population growth in the MVWD retail service area:

- At least three multi-family residential complexes with 552 additional residential units have been developed in MVWD's retail service area between 2010 and 2015. Multiplying added multi-family residential units since 2010 (all in Montclair) by the average persons per household and occupancy rate for Montclair in 2015 (California Department of Finance estimates) results in the following calculation:  $552 \times 3.89 = 2147 \times 94.8\% = 2036$ . Added to the 2010 Census service area population provides a 2015 estimated population of 55,320, which equates to a service area population growth of 3.8%.
- The Department of Finance estimates that the population of the City of Montclair, which is served entirely by MVWD and comprises two-thirds of MVWD's retail service area, grew by 4.5% between 2010 and 2015.
- The City of Chino has provided detailed estimates of population growth in the portion of the city served by MVWD, which equates to a 3.3% growth in population.

While the population tool is useful in estimating population between Census years, it appears to have underestimated the growth that has occurred within MVWD's service area since 2010.

MVWD has developed an alternative methodology to calculate its 2015 service area population by using the data from the cities of Montclair and Chino cited above, and applying a melded growth rate since 2010 of 3.9% to the balance of the service area (unincorporated county), resulting in an estimated 2015 population of 55,581 (see attached calculation).

On June 21, 2016, DWR approved the use of the above methodology for estimating MVWD's 2015 retail service area population. MVWD will use the same methodology for estimating population for all other state reporting purposes to maintain consistency of data.

## MVWD 2015 Population Calculation

Area	2010	2011	2012	2013	2014	2015
City of Montclair*	36,664	36,909	37,086	37,172	37,332	38,332
City of Chino**	4,099	4,099	4,099	4,099	4,167	4,235
Unincorporated***	12,521	12,563	12,593	12,608	12,739	13,014
<b>Service Area Total****</b>	<b>53,284</b>	<b>53,571</b>	<b>53,778</b>	<b>53,879</b>	<b>54,238</b>	<b>55,581</b>

Montclair annual growth rates:	0.7%	0.5%	0.2%	0.4%	2.7%
Chino annual growth rates:	0.0%	0.0%	0.0%	1.7%	1.6%
Montclair/Chino melded growth rate:	0.3%	0.2%	0.1%	1.0%	2.2%
Montclair growth since 2010:	0.7%	1.2%	1.4%	1.8%	4.5%
Chino growth since 2010:	0.0%	0.0%	0.0%	1.7%	3.3%
Montclair/Chino melded growth rate since 2010:	0.3%	0.6%	0.7%	1.7%	3.9%
Retail service area growth since 2010:	0.5%	0.9%	1.1%	1.8%	4.3%

\* [Department of Finance data.](#)

\*\* City of Chino 2010-15 estimate, increased by Montclair annual growth rate.☐

\*\*\* 2010 difference between total and Montclair and Chino population estimates, increased by melded Montclair/Chino annual growth rate.

\*\*\*\* 2010 total based on 2010 Census data using DWR Population Tool

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Confirmation Information			
Generated By	Water Supplier Name	Confirmation #	Generated On
Justin Scott-Coe	Monte Vista Water District	6097760856	5/24/2016 10:13:08 AM

Boundary Information		
Census Year	Boundary Filename	Internal Boundary ID
1990	BoundaryLine.kml	409
2000	BoundaryLine.kml	409
2010	BoundaryLine.kml	409

Baseline Period Ranges	
<b>10 to 15-year baseline period</b>	
Number of years in baseline period:	<input type="text" value="10"/>
Year beginning baseline period range:	<input type="text" value="1996"/>
Year ending baseline period range <sup>1</sup> :	2005
<b>5-year baseline period</b>	
Year beginning baseline period range:	<input type="text" value="2003"/>
Year ending baseline period range <sup>2</sup> :	2007
<small><sup>1</sup> The ending year must be between December 31, 2004 and December 31, 2010.</small>	
<small><sup>2</sup> The ending year must be between December 31, 2007 and December 31, 2010.</small>	

Persons per Connection			
Year	Census Block Level	Number of Connections *	Persons per Connection
	Total Population		
1990	43,021	<input type="text" value="9678"/>	4.45
1991	-	-	4.51
1992	-	-	4.58
1993	-	-	4.64
1994	-	-	4.70
1995	-	-	4.77
1996	-	-	4.83
1997	-	-	4.89
1998	-	-	4.95
1999	-	-	5.02
2000	48,996	<input type="text" value="9636"/>	5.08
2001	-	-	5.09
2002	-	-	5.10
2003	-	-	5.11
2004	-	-	5.12
2005	-	-	5.14
2006	-	-	5.15
2007	-	-	5.16
2008	-	-	5.17
2009	-	-	5.18
2010	53,284	<input type="text" value="10260"/>	5.19
2015	-	-	5.25 **

Population Using Persons-Per-Connection				
Year		Number of Connections *	Persons per Connection	Total Population
<b>10 to 15 Year Baseline Population Calculations</b>				
Year 1	1996	9739	4.83	47,020
Year 2	1997	9564	4.89	46,778
Year 3	1998	9388	4.95	46,508
Year 4	1999	9577	5.02	48,048
Year 5	2000	9636	5.08	48,996
Year 6	2001	9715	5.09	49,459
Year 7	2002	9731	5.10	49,648
Year 8	2003	9816	5.11	50,189
Year 9	2004	9911	5.12	50,784
Year 10	2005	9924	5.14	50,960
<b>5 Year Baseline Population Calculations</b>				
Year 1	2003	9816	5.11	50,189
Year 2	2004	9911	5.12	50,784
Year 3	2005	9924	5.14	50,960
Year 4	2006	10023	5.15	51,578
Year 5	2007	10164	5.16	52,416
<b>2015 Compliance Year Population Calculations</b>				
	2015	10320	5.25 **	54,198

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