

APPENDIX Q
SOLID WASTE GENERATION CALCULATIONS

Appendix Q Solid Waste Generation Calculations

1. Residential Solid Waste Generation

Step 1 – Determine Population Size of Proposed Specific Plan

Multiply the average household size of the City of Yucaipa with the total dwelling units (DU) of the proposed project:

(Average Household Size) X (Total DU of Proposed Specific Plan) = Total Pop. of the Specific Plan site

$$2.82^1 \quad \times \quad 1,547 \text{ (DU)} \quad = \quad \underline{\underline{4,363}}$$

Step 2 - Find out Solid Waste Generation Rate

Multiply the total population of the Specific Plan site with the County of San Bernardino Solid Waste Management Division's (SWMD) resident yearly disposal average:

(Total pop. of the Specific Plan Site) X (SWMD's Resident Yearly Disposal Average)

$$4,363 \quad \times \quad 1500 \text{ (pounds per resident/year)} = \underline{\underline{6,543,810 \text{ (lbs/year)}}}$$

Convert pounds/year to pounds/day by dividing 6,196,500 by 365 days:

$$6,543,810 \text{ (lbs/year)} / 365 \text{ days/year} = \underline{\underline{17,928 \text{ (lbs/day)}}}$$

The proposed Specific Plan would produce 17,928 lbs/day of solid waste.

If you want tons/day instead of lbs/day, do the following conversion:

$$(17,928 \text{ lbs/day}) \times (.0005 \text{ tons/lb}) = \underline{\underline{8.96 \text{ tons/day}}}$$

The residential uses of the proposed Specific Plan would produce 8.96 tons/day of solid waste.

¹ State of California, Department of Finance. *E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2007, with 2000 Benchmark*. May 2007.

<http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Estimates/E5/E5-06/E-5text2.asp>

2. Commercial Solid Waste Generation

Step 1 – Find out Solid Waste Generation Rate

Multiply the numbers of employees generated by the proposed Specific Plan with County of San Bernardino SWMD's employee yearly disposal average:

(Employees Generated by proposed Specific Plan) X (SWMD's Employee's Daily Disposal Average)

$$3,691^2 \quad X \quad 3650 \text{ (pounds per employee/year)} = \underline{\underline{13,472,150 \text{ (lbs/year)}}}$$

The number of employees produced by the proposed Specific Plan would produce 13,472,150 lbs/year of solid waste.

Convert pounds/year to pounds/day by dividing 13,472,150 by 365 days:

$$13,472,150 \text{ (lbs/year)} / 365 \text{ days/year} = \underline{\underline{36,910 \text{ (lbs/day)}}}$$

The number of employees generated by the proposed Specific Plan would produce 36,910 lbs/day of solid waste.

If you want tons/day instead of lbs/day, do the following conversion:

$$(36,910 \text{ lbs/day}) X (.0005 \text{ tons/lb}) = \underline{\underline{18.5 \text{ tons/day}}}$$

The number of employees generated by the proposed Specific Plan would produce 18.5 tons/day of solid waste.

Overall total solid waste generated by the proposed Specific Plan:

$$\underline{\underline{18.5 \text{ (commercial waste, tons/day)}}} + \underline{\underline{8.96 \text{ (residential waste, tons/day)}}} = \underline{\underline{27.42 \text{ (tons/day)}}}$$

² Refer to Appendix P of this EIR to see how number of employees generated by the proposed Specific Plan was derived.