

STEP-BY-STEP CALCULATION OF PRELIMINARY 1996 CALIFORNIA POSTCONSUMER PAPER UTILIZATION RATE USING U.S. NEW SUPPLY OF PAPER & PAPERBOARD IN CALCULATING 1996 POSTCONSUMER PAPER GENERATION

1996 CALIFORNIA POSTCONSUMER PAPER RECOVERED (Numerator)

Preconsumer Scrap Factoring

(1)	U.S. New Supply Paper/Paperboard	94,384,000
(2)	Preconsumer Scrap as % of New Supply	X <u>9.405%</u>
(3)	Tons Preconsumer Scrap Generated	8,876,815
(4)	% of Preconsumer Scrap Recovered	X <u>94.22%</u>
(5)	Tons Preconsumer Scrap Recovered	8,363,735
(6)	Total U.S. Recovered Paper	÷ <u>42,747,000</u>
(7)	Preconsumer Scrap Recovered as % of Total Paper Recovered	= 19.57%

Mill Consumption

(8)	1996 Mountain & Pacific (M&P) States Mill Total Paper Consumption	5,838,100
(9)	Preconsumer Scrap as Percentage of M&P States Mill Total Paper Consumption ¹	X <u>19.57%</u>
(10)	1996 Preconsumer Scrap Consumed at M&P States Mills	1,142,263
(11)	1996 M&P States Mill Postconsumer Paper Consumption: [(8) - (10)] =	4,695,837
(12)	M&P State Paper Mill Postconsumer Paper Consumption Originating from California, (based on population only): (11) X $\frac{31,878,234}{56,732,739}$ (Calif. Population) =	2,638,600
(13)	M&P State Paper Mill Postconsumer Paper Consumption Originating from California, (based on both population & recycling infrastructure): [(12)] X $[\frac{.5 (CC_{CA}/CC_{MP})}{(P_{CA}/P_{MP})} + \frac{.5 (MC_{CA}/MC_{MP})}{(P_{CA}/P_{MP})}] =$	

where: $MPMC_{CA}$ = CA recovered paper consumed at Mountain & Pacific State mills (estimate, based on population)

CC_{CA} = CA population served by curbside recycling

CC_{MP} = Mountain & Pacific States population served by curbside recycling

P_{CA} = CA population

P_{MP} = Mountain & Pacific States population (less AK & HI)

MC_{CA} = California mill consumption of postconsumer paper

MC_{MP} = Mountain & Pacific States mill consumption of postconsumer paper

¹ This step assumes the same percentage as identified in **68** Step 7, above.

$$2,638,600 \times \left[.5 \frac{(20,882,000/31,316,000)}{(31,878,234/56,732,739)} + .5 \frac{(1,925,462/4,703,757)}{(31,878,234/56,732,739)} \right] =$$

$$2,638,600 \times [.5 (.667/.562) + .5 (.409/.562)] =$$

$$2,638,600 \times [(.5 \times 1.187) + (.5 \times .728)] = 2,638,600 \times (.594 + .364)$$

$$2,638,600 \times .958 = 2,527,779$$

Alternative Products

(14) 1996 California Postconsumer Recovered Paper Utilized in Alternative Products =

$$AP_{US} \times P_{CA}/P_{US} =$$

where: AP_{US} = U.S. consumption of paper in alternative products

P_{CA} = California population

P_{US} = U.S. population

$$1,030,000 \times 31,878,234/265,283,783 = 1,030,000 \times .12 = 123,772$$

Exports

(15) 1996 Total California Recovered Paper Exports 2,235,600

(16) Percentage of California Paper Exports Originating Outside of California² X 15%

(17) Recovered Paper Exports Originating outside of California 335,340

(18) Recovered Paper Exports Originating within California: [(15) - (17)] = 1,900,260

(19) Preconsumer Scrap as % of Recovered Paper Exports Originating in California³ X 19.57%

(20) Preconsumer Paper Exports Originating Within California 371,86

(21) Postconsumer Paper Exports Originating Within California: [(18) - (20)] = 1,528,379

1996 California Postconsumer Paper Recovered

(22) 1996 California Postconsumer Paper Recovery = [(13)+(14)+(21)] = 4,179,930

² As estimated by Board staff, based on informal survey of seven major paper exporters in state.

³ Assumes the same percentage calculated in Step 7

1996 CALIFORNIA POSTCONSUMER PAPER GENERATED (Denominator)

(23) 1990 CA Postconsumer Paper Generation = 12,992,330
(see Attachment 1, Step 28 under "1990 California Postconsumer Paper Generated")

(24) 1996 CA Total Paper Generation (extrapolated from 1990 figure):

$$1996 \text{ Generation} = (23) \times (\%E_{96/90} + \%RS_{96/90}/\%CPI_{96/90} + \%P_{96/90} + \%PP_{96/90})/4 =$$

where:

E_{96}	=	1996 California Civilian Employment
E_{90}	=	1990 California Civilian Employment
RS_{96}	=	1996 California Retail Taxable Sales
RS_{90}	=	1990 California Retail Taxable Sales
CPI_{96}	=	1996 U.S. Consumer Price Index
CPI_{90}	=	1990 U.S. Consumer Price Index
P_{96}	=	1996 California Population
P_{90}	=	1990 California Population
PP_{96}	=	1996 U.S. Paper & Paperboard New Supply
PP_{90}	=	1990 U.S. Paper & Paperboard New Supply

$$12,992,330 \times \left\{ \left[\frac{14,469,900}{14,319,000} \right] + \left[\frac{205,712,248,000}{181,655,000,000} + \frac{152.0}{130.7} \right] + \left[\frac{31,878,234}{29,904,000} + \frac{94,384,000}{86,796,000} \right] \right\} / 4 =$$

$$12,992,330 \times [1.0105 + (1.13 + 1.163) + 1.066 + 1.087] / 4 =$$

$$12,992,330 \times (1.0105 + .972 + 1.066 + 1.087) / 4 =$$

$$12,992,330 \times (4.1355/4) = 12,992,330 \times 1.034 =$$

13,432,445

PRELIMINARY 1996 CALIFORNIA POSTCONSUMER PAPER UTILIZATION RATE

(25) Preliminary California Postconsumer Paper Utilization Rate:

$$[(22)/(24)] = 4,179,930 / 13,432,445 =$$

31.12%