STATEWIDE POTENTIAL CROP YIELD LOSSES FROM OZONE EXPOSURE

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Abstract

Numerous controlled studies over the past four decades demonstrated that high concentrations of ambient ozone significantly reduced yields of many important crops grown in California. Past efforts to model crop losses on a regional scale used plant response models from these studies and aggregated ozone exposure indices to estimate yield losses at the county level. The work reported herein not only employs this traditional approach (important for long-term trend analysis), but also expands the methodological basis of the Crop Loss Assessment Program by using GIS technology to estimate the yield loss based on interpolated ($1/d^2$) ozone exposure indices. Analytical procedures used 7-hour and 12-hour seasonal mean models, and SUM06 Wiebull functions for estimating the yield losses in several crops. Interpolated yield loss contours are graphically represented and enhanced by color-coded altitudinal ramping.

Ozone concentrations on a monthly basis were interpolated within the state air basins using ARB air quality statistics and an imposed 2000-ft altitudinal barrier to transport. Monthly 7-hour means, a widely used exposure index for plant response functions, were used for the statewide interpolations. Ozone concentrations were highest during the summer months when 7-hour means in the southern San Joaquin Valley were comparable to those observed in parts of the South Coast Air Basin.

The severity of potential yield loss was determined using ARB 1993 air quality data and published yield response functions. Statewide crop by county estimated yield reductions ranged from less than 1% in fresh market tomato to a high of over 30% for cantaloupe in 1993. Countywide estimated yield losses for 15 out of 20 crops in 1993 were higher than in the previous two years (1991 and 1992). The increase in estimated yield reductions between 1991 and 1993 ranged from a 2% increased loss in lemon to 56% in processing tomato.

For selected major crops, results were graphically displayed to illustrate the variability that occurred within individual counties and production zones. Yield loss projections were confined to areas delimited by the location and extent of irrigated farmlands within an agricultural region. Using interpolated ozone exposure indices, for example, potential yield losses for cotton grown in Kern County ranged from less than 15 % in the Buttonwillow area to more than 30% near Arvin. In contrast, the aggregated county wide yield loss for cotton was estimated at 25%. The latter technique, although useful, lacks the resolution to describe locally relevant variations in ozone effects.

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Disclaimer

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Recommendations

It is important that pertinent databases are stored in a standardized format to maximize accessibility and clarity of analyses. Recent ARB supported research efforts to establish geographical information system (GIS) databases describing crop response to ozone and farmland soil textures for PM10 inquiries demonstrates the agency's recognition of the importance of this criteria. The continued development of a GIS data management system would strengthen the ability of administrators and researchers to access, visualize, and critically analyze air quality information. New technology for assessing crop losses does not depend on costly experimental programs, but utilizes available data to provide localized estimates of yield reductions relative to ozone variability

Specific recommendations are:

1. Expand and refine the GIS based approach for interpolating seasonal ozone concentration contours, estimating the crop yield losses, and mapping the regional variability of the impact of air quality on agriculture;
2. Develop a geographically referenced database of where major crops are grown;
3. Increase the density of air quality monitoring stations in agricultural production zones, particularly the west of the San Joaquin Valley;
4. Actively disseminate the crop loss information to public and private concerns in an understandable and meaningful context.

GLOSSARY OF TERMS AND ABBREVIATIONS

ARB	Air Resources Board
ARC/INFO	Geographic Information System Software by Environmental Systems Research Institute, Redlands, CA
CARB	California Air Resources Board
CDFA	California Department of Food and Agriculture
DEM	Digital Elevation Model
ft	foot or feet
GIS	Geographic Information System
hr	Hour
km	Kilometer
NASA	National Aeronautics Space Administration
NCLAN	National Crop Loss Assessment Network
PDT	Pacific Daylight Time
ppb	Parts-per-billion
pphm	Parts-per-hundred-million
SCAB	South Coast Air Basin
SJV	San Joaquin Valley
TSD	Technical Support Division
UCD	University of California, Davis
UCCE	University of California Cooperative Extension
USDA	United States Department of Agriculture
VIP	Selection of best possible set of mesh points that describe topology
UTM	Universal Transverse Mercator

INTRODUCTION

A number of intensively organized programs have assessed crop losses from ozone. These include the National Crop Loss Assessment Network (NCLAN) and the California Air Resources Board sponsored programs. These programs all contributed important innovations to methodology and substantial information to the crop loss database. They did not, however, extend crop loss estimates to a regional basis. Integration of agriculturally relevant digital databases and air quality statistics within a GIS environment allows for the regional analysis and graphical presentation of potential yield responses to ambient ozone in the major agricultural production zones of the state.

The NCLAN program funded by the U.S. Environmental Protection Agency (EPA) focused on standardized experimental research using open-top field chambers to develop yield loss equations. NCLAN researchers developed useful yield loss predictive equations for 10 crops from experiments conducted at multiple locations across the country. Data for five crops (alfalfa, cotton, barley, lettuce, and tomato) were obtained at California sites (Heck et al., 1984b). Ozone exposure regimes consisted of charcoal-filtered air, ambient air, and ambient air with added ozone. Seven and 12-hour seasonal means calculated from field measurements, as compared to those gleaned from controlled experiments, represented exposure indices best suited for describing observed plant response. Little is known about the actual magnitude of the ozone effect under field conditions because these studies did not validate their crop loss models against field survey data to determine the interaction of agronomic factors with ambient ozone on injury symptoms. Estimates of yield loss from exposure to ambient ozone based upon NCLAN response functions, however, do provide a viable means to identify areas where sensitive crops may be at risk within and between years. Estimated losses may vary considerably from actual losses because location specific agronomic variables are not an intrinsic part of the response functions.

The ARB funded crop loss assessment program focused on estimating yield losses in California on a crop-by-county basis for a number of crops. Exposure statistics used in published crop response models were computed using data from 1 to 5 monitoring stations judged to best represent the ozone exposure levels present during a crop specific growing season in each county. Although that approach used the best available techniques, it suffers from a lack of geographic resolution required to evaluate localized impacts of poor air quality.

Vast areas of production, as well as numerous specialty crop niches exist within the state that are not monitored for ozone. The airflow patterns, proximity to point sources of ozone precursors and scavengers may result in excessively high (or unexpectedly low) levels of ozone in localized areas. Assigning exposure statistics derived from ozone data gathered at a minimal number of monitoring stations may not adequately reflect the concentrations of ozone experienced by crop plants grown in unmonitored areas or within counties with concentration gradients. Interpolated ozone statistics that consider barriers to airflow provide better estimates of ozone exposure levels that occur in such an area. Contour maps based on interpolated ozone levels and existing yield response algorithms graphically illustrate the regional variability in potential yield losses. Using this technique, Mutters and Soret (1995) demonstrated that

estimated yield losses in tomato in 1991 varied considerably across the San Joaquin Valley. Growers in the area immediately adjacent to Bakersfield experienced greater potential yield reductions due to ozone exposure compared to those in the northwestern portion of the county. These differences would not be apparent using county aggregated statistics, but it is expected from observed air quality gradients in the valley.

ARB sponsored work estimating yield losses associated with ambient levels of ozone for important crops in California remains an important means of evaluating one aspect of the economic costs of poor air quality. Statewide projected yield losses associated with ozone, aggregated by county, are available up through 1992 (Mutters and Soret, 1995). Yield loss estimates for 1990 in the San Joaquin Valley showed that cotton yields were reduced by 22% on average in the San Joaquin Valley, with the greatest reduction occurring in Kern county (26%) (Mutters and Guzy, 1993). Statewide yield loss for all grapes was estimated to be 23%. Losses in table grapes were the greatest within this group (27%), because Thompson seedless is very sensitive to ozone. Among the largest bean producing counties, losses were the greatest in Fresno (26%) followed by Tulare, Stanislaus, and San Joaquin, 25, 16 and 11%, respectively. Moderate yield reductions (6-15%) were estimated for alfalfa, sweet corn, lemon, onion, orange, potato, strawberry, tomato, and wheat. Losses in lettuce, nectarine, rice, and sorghum were minimal (0-5%). Regional variability, however, in yield losses of crops may be considerable and not apparent in the analysis of aggregated statistics.

A disaggregated approach based on Public Land Survey sections (approximately 1 square mile) units rather than county units was used in a study of cotton yield losses within the San Joaquin Valley portion of Kern county (Mutters and Guzy, 1993). Interpolation techniques were used to estimate ozone exposure indices. Yield loss contour maps of the region were constructed by inputting the acreage and interpolated exposure statistics into the available cotton yield loss equations. Results based on section data indicated that using the county aggregated statistics might underestimate or overestimate the actual crop loss due to ozone depending on the location in the county. Losses ranged from 12% in northwestern Kern County to 22% in the southeast area near Arvin. This difference was not apparent when using aggregated county statistics. It follows that the economic consequences of ozone induced yield reductions would be better served if calculated using the actual acreage planted of a particular crop across ozone gradients within a single county. Including areas of a county where a crop is not grown into predictive economic models may introduce substantial errors leading to erroneous conclusions.

Although potentially useful, even this enhanced approach suffers from the lack of data describing the agronomic factors. These factors can significantly influence yield variation and the susceptibility of a plant to ozone injury. Grower surveys requesting this type of information have proven to be only minimally successful (Mutters and Guzy, 1993). Predictive functions applied on a grid-wise basis at the section level would provide data needed to model the geographic occurrence of yield loss under present and future ozone concentration scenarios.

The air flow patterns, proximity to point sources of ozone precursors and scavengers may result in excessively high or unexpectedly low levels of ozone in localized areas; some of which may be microclimates suitable for the production of specialized, yet valuable crops. Assigning exposure statistics derived from monitoring data gathered at far removed

locations or with a minimal number of stations may not adequately reflect the actual ozone concentrations in the nonmonitored areas of the state. Furthermore, interpolated ozone exposure indices that consider altitudinal barriers to atmospheric transport would provide better estimates of that occurring in a given area than the simpler approach used in previous yield loss estimates.

Statement of the Problem

Areas in California experience some of the most severe air pollution in the United States, particularly in the South Coast Air Basin. However, high levels of air pollution (i.e., ozone) are present in the state's multi-billion dollar agricultural production area, such as the San Joaquin and Sacramento Valleys. Historical evaluations of the impact of air pollution on vegetation in California, ranged from field surveys to sophisticated open-top chamber, greenhouse, and laboratory studies. Many of these studies involved controlled experimental treatments imposing ozone exposure regimes not representative of the field conditions in agronomically important areas. Specialized results of controlled experiments are of less value to state policy makers, agriculturists, and concerned citizens than are regional tabulations of crop yield losses - aggregated and disaggregated - over areas with variable levels of pollution stress. The work reported herein, supported by the California Air Resources Board, synthesizes and applies research generated crop response models on a regional basis to provide a measure of the ongoing impact of air pollution on the agricultural productivity.

PROJECT OBJECTIVES

1) Refine methodologies to estimate ozone concentration contours from available air monitoring data that includes altitudinal barriers to horizontal and vertical airflow into the interpolation routine.

2) Continue the development of a GIS based approach to estimate potential regional yield losses in major crops due to ozone exposure across the principal agricultural production zones in California using interpolated ozone exposure indices.

3) Revise and update statewide crop by county yield loss projections based on exposure indices calculated from air quality and production statistics aggregated at the county level.

MATERIALS AND METHODS

The 1993 hourly ozone concentration data from stations in the ARB network were obtained from the Air Resources Board - Technical Support Division (CARB, 1993). Data were assumed to be quality assured.

Statewide Crop-by-County Aggregated Yield Loss Assessments. Estimated yield losses for 20 different crops statewide were calculated using aggregated countywide statistics. Estimated potential yield losses accruing due to ozone injury were estimated for 1993 using hourly ozone data obtained from the ARB-TSD and published models describing crop response to ozone. Crop production data were obtained from the Statistics Division of the California Department of Food and Agriculture. Seven-hour, 10-hr, and 12-hr mean exposure statistics used in the yield loss models were calculated using data from air quality monitoring stations in or nearby the crop production zones. Exposure statistics were based on the data from the months encompassing the growing season of each crop. Ozone data from 0900 to 1600 PST, and 0800 to 2000 PST were used for the 7-hr and 12-hr means, respectively.

Background Ozone Concentrations. The estimated yield losses were calculated using background concentrations (no yield loss) of 2.72 and 2.50 pphm ozone in the 7- and 12-hr means, respectively. The 12-hr base concentration was used by NCLAN researchers (e.g., Heck et al., 1984a; 1984b), and it represents relatively clean air. The 7-hr base concentration was calculated with the following equation: 7-hr = (12-hr - 0.004143) x 0.919 (Thompson et al., 1976). Seven-hour average concentrations of ozone in the San Joaquin Valley may typically range from 4.5 to 5.5 pphm. A base ozone concentration of 2.59 pphm was used in 10-hr yield loss models. The value was calculated by linear interpolation between 2.50 and 2.72. The 0.22 pphm difference between the two background concentrations was shown to have less effect on yield loss than other factors, such as the geographic resolution used in the analysis (Heck et al., 1984a). Noteworthy, background concentrations represent ozone levels found in pristine environments, and are probably not attainable in any crop production zone in California. The reported yield losses were, therefore, overestimated. They were retained to provide consistency with past crop loss estimates for comparative purposes.

Yield Loss Equations. Crop response models based on 7-hr, 10-hr, 12-hr and SUM06 exposure indices were used to estimate yield reductions at ambient levels of ozone. Eight SUM06 models (Table 1) were chosen from among 54 SUM06 models provided (Appendix, Table A) courtesy of Dr. H. Lee, ManTech, Corvallis, Oregon. SUM06 models are Weibull functions with the following form:

$$Y = A \exp(-X / B)^C$$

Where: Y = yield;
A = maximum yield per unit area at zero ozone;
X = seasonal ozone concentration (pphm-hr);
B = ozone concentration (pphm-hr) where A is reduced by 63 %;
C = dimensionless shape parameter.

Table 1. Exposure-response curves using 24-hr SUM06 values (pphm) for selected NCLAN cases.*

CROP	Cultivar	A	B	C	R2
Corn	Pioneer	7317	92.6	2.82	0.93
Corn	Pag	8155	94.4	4.32	0.80
Cotton	Acala	9808	71.2	2.00	0.96
Cotton	Acala	7859	78.0	1.31	0.85
Dry bean	Cal Lt Red	2488	27.4	3.89	0.72
Dry bean	Cal Lt Red	2489	44.2	2.69	0.71
Wheat	Abe	5150	53.9	3.08	0.90
Wheat	Arthur	4456	60.9	2.18	0.92

* After Lee et al., (1988).

SUM06 is the sum of hourly ozone values at and above 6 pphm summed over hours and days for each month. Missing hourly data adjustments for SUM06 were performed as follows:

SUM06 = (Full # of hours X SUM06)/(0bserved # of hours).

Where "full # of hours" means the total possible hours for the month and "observed # of hours" means the number of hours with reported ozone values. The "SUM06" to the right of the equal sign corresponds to the accumulated sum from the ozone data file; the "SUM06" to the left of the equal sign is the SUM06 adjusted for missing data.

Percent Yield Loss Calculations. An explanation of the terms and % yield loss calculations is presented in Table 2. A maximum of eight models per commodity were used for estimating 1993 yield losses. Results from all models employed are presented in Table C of the Appendix.

Table 2. Description of the terms and procedures used to estimate statewide yield loss due to ozone on a county basis.

Yield Loss Equation (Linear Example) Yield = a + b x ozone exposure Where yield = that observed at a given level of ozone exposure; ozone exposure = 7- or 12- hr mean ozone concentration (pphm).
Yield Loss Index Equation (I) $I = (a + bX)/(a + bX^1) = 1$ Where: I = loss index as a fraction of 1.00 = no loss. X = ozone exposure and X^1 = background ozone index, e.g., 2.72 and 2.50 for 7- and 12- hr mean concentrations, respectively.
Percent Yield Loss Equation Percent loss = (1.00 - I) x 100
Potential yield = Actual yield / I Where: Actual yield = the aggregated county production statistics provided by the CDFA.
Statewide Potential Yield Loss Equation Statewide potential yield = (actual yields)/(potential yields) Where: (actual yield) = sum of all reported yield from all counties for a particular crop.
Statewide Percent Yield Loss Equation Statewide percent loss = (1.00 - statewide potential yield) x 100

Base 7 equals 7-hr mean for background ozone, 2.72 pphm.
Base 12 equals 12-hr mean for background ozone, 2.50 pphm.

Alfalfa Hay

1. I = [32.67 - (1.3902 x 12-hr)]/[32.67 - (1.3902 x base 12)]

   Olszyk et al. (1986).

2. I = [100-(9.258×10^{-3} (10 pphm)] x 0.01

   McCool et al. (1986).

   Where 10 pphm = [max observed hourly ozone - 10]; the sum of hourly values > 1-pphm over the entire season.

3. I = [118.96 - (4.088 x 12-hr)]/[118.96 - (4.088 x base 12)]
   Brewer (1982).

4. I = [3160 - base year - (109.63 x 12-hr)]/[3160 - base year - (109.63 x base 12)]

Equation adapted from Temple et al. (1988) who considered ozone, water stress, and year. The loss estimates assumed that all alfalfa was grown under well-watered conditions, thereby omitting the water stress term.

Alfalfa Seed

Alfalfa hay predictive equations were used.

Beans - Dry

1. I = [100 - (0.024 x 10 pphm)] x 0.01

   McCool et al. (1986).

2. I = [2878 x e-(7-hr / 12.0)$^{1.171}$]/2878 x e-(base 7 / 12.0)$^{1.171}$]

   Heck et al. (1984a).

Equations 3 through 5 were four different cultivars of dry bean, which were exposed to three concentrations of ozone at UC Riverside, 1987 (personal communication; P. Temple, UC Riverside).

3. I = [163.6 - (9.787 x 12-hr)]/[163.6 - (9.787 x base 12)]

   Ozone response equation for bean cultivar 'Sal Small White'.

4. $I = [165.8 - (13.57 \times 12\text{-hr})]/[165.8 - (13.57 \times \text{base } 12)]$

Ozone response equation for bean cultivar 'Sutter Pink'.

5. $I = [167.6 - (13.98 \times 12\text{-hr})]/[167.6 - (13.98 \times \text{base } 12)]$

Ozone response equation for bean cultivar 'Yolano Pink'.

Models 6 and 7 are SUM06 Wiebull crop response functions provided by H. Lee, ManTech, Corvallis, Oregon (Table 2).

6. $Y = 2488 \exp(-X/27.4)^{3.89}$

7. $Y = 2489 \exp(-X/44.2)^{2.69}$

Cantaloupes

1. $I = [35.8 - (2.808 \times 7\text{-hr}]/[35.8 - (2.808 \times \text{base } 7)]$

The equation was calculated from data shown in Snyder et al. (1988). Data were for muskmelon and not specifically for cantaloupes. The equation, however, was used for cantaloupe, as it is the only one available. Ozone concentrations were calculated for 0900-1600 CST from figures in the paper and yield data came from the text. Ozone concentrations and yields during the study, respectively in 1986, were 1.35 pphm and 31.3 kg/chamber for charcoal-filtered air; and 3.65 pphm and 24.9 kg for nonfiltered air. Ozone concentrations and yields, respectively in 1987, were 3.2 pphm and 28.9 kg for charcoal-filtered air; and 4.4 pphm and 22.6 kg for nonfiltered air. A linear regression equation was calculated from these for ozone concentration (x) and yield (y) data points.

Corn - Field

1. $I = [11618.5 \times e\text{-}(7\text{-hr} / 16.0)^{3.709}]/[11618.5 \times e\text{-}(\text{base } 7 / 16.0)^{3.709}]$

Kress and Miller (1985a).

Models 2 and 3 are SUM06 Wiebull crop response functions provided by H. Lee, ManTech, Corvallis, Oregon (Table 2).

2. $Y = 7317 \exp(-X/92.6)^{2.82}$

3. $Y = 8155 \exp(-X/94.4)^{4.32}$

Corn-Sweet

1. $I = [315.02 - (12\text{-hr} \times 8.2988)]/[315.02 - (\text{base } 12 \times 8.2988)]$

Thompson et al. (1976).

Cotton

1. $I = [367 \times e\text{-}(7\text{-hr} / 11.1)^{2.71}]/[367 \times e\text{-}(\text{base } 7 / 11.1)^{2.71}]$

   Heagle et al. (1986).

2. $I = [.8462 + (.049 \times \text{base } 7)]/[.8462 + (.049 \times 7\text{-hr})]$

   Brewer (1982).

3. $I = [2059 - (82 \times 7\text{-hr})]/[2059 - (82 \times \text{base } 7)]$
   Temple et al. (1985b).

4. $I = [1988 - (1545.32 \times (7\text{-hr})^2)]/[1988 - (1545.32 \times (\text{base } 7)^2)]$

   Temple et al. (1985b).

5. $I = [32.3 - (2.025 \times 12\text{-hr})]/[32.3 - (2.025 \times \text{base } 12)]$

   Ozone response equation for cotton variety 'C1'.

   Temple (1990b).

6. $I = [38.6 - (2.663 \times 12\text{-hr})]/[38.6 - (2.663 \times \text{base } 12)]$

   Ozone response equation for cotton variety 'GC 510'.

   Temple (1990b).

Models 7 and 8 are SUM06 Wiebull crop response functions provided by H. Lee, ManTech, Corvallis, Oregon (Table 2).

7. $Y = 9808 \exp(-X/71.2)^{2.00}$

8. $Y = 7859 \exp(-X/78.0)^{1.31}$

Grapes

1. $I = [9315 - (647 \times 12\text{-hr})]/[9315 - (647 \times \text{base } 12)]$

   Thompson and Kats (1970).

2. $I = [1.121 - (0.0663 \times 12\text{-hr})]/[1.121 - (0.0663 \times \text{base } 12)]$

Brewer (1983).

Lemons

1. $I = (-[0.5004 + (0.6224 \times 12\text{-hr})]/[0.5004 + (0.6224 \times \text{base } 12)] + 1] \times -.5) + 1$

After Thompson and Taylor (1969) assuming that lemon trees cycled between "on" and "off" years comparable to oranges. Ozone was assumed to have no effect on lemons during "off" years. The ozone data were for two years before the harvest year.

Lettuce

1. $I = [100 - (5.19 \times 10^{-2} \times 10 \text{ pphm})] \times 0.01$

McCool et al. (1986).

2. $I = [3187 \times e\text{-}(7\text{-hr} / 12.2)^{8.837}]/[3187 \times e\text{-}(\text{base } 7 / 12.2)^{8.837}]$

Temple et al. (1986).

Onions

1. $I = [11.1 - (0.881 \times 12\text{-hr})]/[11.1 - (0.881 \times \text{base } 12)]$

McCool et al. (1986).

2. $I = [5034 - (109.41 \times 12\text{-hr})]/[5034 - (109.41 \times \text{base } 12)]$

Temple et al. (1990).

Oranges

1. $I = [53.7 - (12\text{-hr} \times 2.611)]/[53.7 - (\text{base } 12 \times 2.611)]$

Olszyk (1989).

2. $I = (-[53.7 - (12\text{-hr} \times 2.611)]/[53.7 - (\text{base } 12 \times 2.611)] + 1] \text{ X } -.05) + 1$

Olszyk et al., (1990). Ozone exposure was based upon the air quality data from the two years preceding the harvest.

Rice

1. $I = [1.0851 \times e\text{-}(7\text{-hr} \times 0.0275)]/[1.0851 \times e\text{-}(\text{base } 7 \times 0.0275)]$
Kats et al. (1985).

2. $I = [1.0687 - (0.024 \times 7\text{-hour})]/[1.0687 - (0.024 \times \text{base } 7)]$

Linear regression fitted to original data from Kats et al. (1985).

3. $I = [e\text{-}(7\text{-hr}/20.16)^{2.474}]/[e\text{-}(\text{base } 7 / 20.16)^{2.474}]$

Wiebull function fitted to original data from Kats et al. (1985).

Tomato - Fresh Market

1. $I = [100 - (2.32 \times 10^{-2} \times 10 \text{ pphm})] \times 0.01$

McCool et al. (1986).

Tomato - Processing

1. $I = [100 - 2.28 \times 10^{-2} \times 10 \text{ pphm})] \times 0.01$

McCool et al. (1986).

2. $I = [32.9 \times e\text{-}(7\text{-hr} / 14.2)^{3.807}]/[32.9 \times e\text{-}(\text{Base } 7 / 14.2)^{3.807}]$

Heck et al. (1984b).

3. $I = [9055 - (323.67 \times 12\text{-hr})]/[9055 - (323.67 \times \text{base } 12)]$

Ozone response equation for tomato variety 'FM785'.

Temple (1990a).

4. $I = [6315 - (210.7 \times 12\text{-hr})]/[6315 - (210.7 \times \text{base } 12)]$

Ozone response equation for variety 'UC204C'.

Temple (1990a).

5. $I = [8590 - (412.8 \times 12\text{-hr})]/[8590 - (412.8 \times \text{base } 12)]$

Ozone response equation for variety 'E6203'.

Temple (1990a).

Wheat

1. $I = [5295 \times e\text{-}(7\text{-hr} / 14.5)^{3.326}]/[5295 \times e\text{-}(\text{base } 7 / 14.5)^{3.326}]$

   Kress and Miller (1985b).

2. $I = [7857 \times e\text{-}(7\text{-hr} / 5.3)^{1.000}]/[7857 \times e\text{-}(\text{base } 7 / 5.3)^{1.000}]$

   Heck et al. (1984b).

Models 3 and 4 are SUM06 Wiebull crop response functions provided by H. Lee, ManTech, Corvallis, Oregon (Table 2).

3. $Y = 5150 \exp(-X/53.9)^{3.08}$

4. $Y = 4456 \exp(-X/60.9)^{2.18}$

Calculation of Ozone Exposure Crop Loss Percentages. Where possible, crops restricted to particular regions within counties were matched with ozone statistics from stations in those same regions. For example, crops grown in the Coachella Valley of Riverside County were matched to nearby stations and not to stations located in the Riverside metropolitan area. Additionally, the closest monitoring stations were not always located in the same county where the crops were grown. For example, vegetable production in Santa Barbara County is primarily in the area of Santa Maria. Monitoring stations closest to that city were located in southern San Luis Obispo County. One ozone value for an entire county was used in most cases, which may represent the average concentration over several sites where the crop was grown.

Interpolation of Ozone Statistics. The 7-hr ozone concentration statistic presented in the interpolated analysis was used because it is biologically relevant, and it is used in most available crop loss equations, especially those from National Crop Loss Assessment Network. Additionally unlike accumulative indices such as the SUM06, 7-hr seasonal means are comparable even if the growing seasons or data set are of unequal lengths (Lee et al., 1988).

The boundaries for the air basins were constructed within the GIS based on 1:250000 Digital Elevation Model (DEM) maps compiled and distributed by the United States Geological Survey. Fifty-seven DEM maps are required to cover the state. DEM maps are 1 degree on a side and consist of elevation values spaced every 3 degree seconds. The elevation spacing is approximately 75 and 90 meters, along the east-west and north-south axes, respectively. For this project, a statewide elevation map was used that had been constructed by individually projecting the DEM maps to Lambert Conformal Projection, and then resampled to a 250 meter grid resolution. The Lambert Conformal Projection had the following parameters: latitude of origin = 20.00°, first parallel = 33.00°, second standard parallel = 45.00°, longitude of origin = -120.00°, false easting = 2,000,000 meters, and false

northing = 0.00 meters. The resultant grids were then merged into a single statewide coverage and used for all subsequent work.

The air basin boundaries were constructed by resampling the 250 meter grid to a resolution of 5 km using the VIP procedure (ESRI, 1995) to eliminate points in the grid not necessary for describing surface characteristics. The resultant polygon coverage was further simplified, to avoid prohibitively intense computational requirements, by the repeated application of a majority filter in ARC/INFO to smooth the convoluted interface between the areas above and below 2000 ft. Consequently, the lower resolution air basin did not precisely follow the topology of the actual 2000 ft elevation line. These associated errors in placement of the air basin boundaries, however, do not compromise the intent of the statewide series of maps. The basin coverage was processed so that grid cells with altitudinal values were range-coded into two groups, above and below 2000 ft. The coverage was projected from Lambert to UTM zone 11 to be consistent with the coordinate system of the ARB supplied ozone data. Small high altitude "islands" within the air basin were eliminated.

Interpolations. Interpolations were performed within air basins delimited by a 2000-ft altitudinal barrier. The 2000-ft level outlined geographic regions, which approximated the administrative boundaries of legal air basins, and are generally below the inversion layer. The areas corresponding to the inversion layer base and above were excluded, because some evidence exists that ozone concentrations at the base of the inversion layer exceed that observed at ground level (Miller et al., 1972). Ozone concentrations in the area above 2000-ft and in the mountainous regions of the state were not included in the interpolations.

The 7-hr mean ozone concentration surface for the monthly statewide representation of ozone concentration was interpolated using an 'Inverse Distant Weight' procedure in the ARC/INFO GRID module (ESRI, 1995). The data consisted of 7-hr mean concentrations derived from ozone statistics provided by the ARB. The procedure created a gridded coverage of a geographic region space divided into grid cells 1.6 km on a side (approximately 1 mi.). The ozone concentration in a grid cell not containing a monitoring station was computed as the inverse distance squared weighted average of all cells containing stations within a radius of 50 km. A minimum of three known values was required to compute the average. Thus, the 50 km radius was adjusted upward when needed to meet the minimal requirements of the computation procedure. The integrity of the ozone value was preserved in the grid cells containing a monitoring station. Cells outside the 2000-ft delimited area were deleted using a GIS map overlay and intersect procedure using the air basin coverages. For points excluded from the interpolation, especially those in the mountainous or remote areas, a circular buffer of radius 10 km was centered at the sites. The buffered zone was assigned the concentration of the site contained therein.

Yield Loss Using Interpolated 7-hr Seasonal Means. Yield losses were estimated for four major crops, cotton, grape, rice, and tomato. These crops were chosen because of their economic importance and the considerable acreage planted. Agricultural production statistics provided by the California Department of Food and Agriculture were used to identify the counties where these crops are grown. The principal production zones for the

analysis were the San Joaquin Valley and Sacramento Valley. Four digital libraries of statewide coverages (archived at UCCE, Butte County) were used: the Digital Elevation Model, Irrigated Farmlands (Teale Data Center, Sacramento, CA and the Office of Land Conservation, Sacramento, CA), interpolated ozone concentration contours and county lines.

Farmlands Database. Digital representation of Sutter and Placer Counties was not available for analysis, and is presented as missing data in the interpolated crop loss maps. The farmland database compiles digital maps captured from 1:24000 aerial photo interpretation supplemented with field verification or high-altitude color-infrared NASA photographs. The are categorized according to eight mapping criteria with a minimum mapping unit size of 10 acres, and projected in UTM, zones 10 and 11. Because the vast majority of important crops are grown under irrigated conditions, categories describing different classes of irrigated lands were combined using dissolve procedures in ARC/INFO.

Yield Response Model Application Procedures. In order to apply interpolated ozone statistics to yield loss models, it was necessary to first select an appropriate model from the library of available models and to assign the model as an attribute describing the contour polygons in the ozone contour coverage. First of all, the most conservative model (i.e., smallest estimated yield loss) was chosen for cotton, grape, rice, and tomato. Secondly, the polygon attribute tables were modified by creating an additional descriptive variable containing an injury index value comparatively calculated as in the crop loss assessment described above. The yield reduction contour and irrigated farmland coverages were intersected within geographic limits defined by major agricultural valleys in the state. Thus the results provided estimated yield losses within the irrigated farmlands based upon interpolated ozone statistics.

Topographic Presentation of Interpolated Yield Loss Estimates. The topographic relief was simulated using the complex operation of color ramping to highlight elevation. The HSV (HUE, SATURATION, and VALUE) method of the GRIDCOMPOSITE command was used to create a hillshaded display of a lattice, which was shaded by elevation range. The lattice (previously obtained from a California DEM) was converted into three new lattices, each supplying one component of the HSV color model. The elevation range determines the HUE; the SATURATION is assigned according to broad elevation ranges and to fit particular hues; and the VALUE is determined by illumination intensity and angle of the sun.

Each cell in the lattice was converted into a hue value. Using the elevation values in each cell to obtain its corresponding value within a desired hue range allows the effective color ramping of the surface. Each elevation range was "standardized" to degrees by dividing the elevation range "length" by the desired hue range. A constant saturation value of 30% with a value range for shadowing of 50 to 100% illumination originating from the northwest at a solar angle of 20 degrees was used for all maps. The intersected yield loss contours/irrigated farmlands coverage was then 'draped' over the hillshaded DEM. Refer to Mutters and Soret (1995) for a detailed description and examples of the procedures employed.

RESULTS AND DISCUSSION

Statewide Yield Loss Estimates. Yield in tons represents the actual harvested yield (Table 3). Potential yield can be calculated by adjusting the actual yield by the % loss. Losses for each commodity by county are presented in expanded form in Tables C in the Appendix. Monthly ozone exposure indices for all reporting monitoring stations in 1993 are listed in Table B of the Appendix. Values in Table 3 were derived from models based on 7-hr and 12-hr exposure indices. Results from SUM06 projections are presented separately in Table 4 because of the apparent lack of agreement with results from models based on the more traditional exposure indices.

Average statewide yield losses for all crops considered were 13.9%. Estimated yield losses averaged across counties in 1993 ranged from less than 1% for fresh market tomato and lettuce to near 30% for table grape and cantaloupe. The negligible yield response to ambient ozone in tomato was attributable to its intrinsic tolerance to ozone stress, and lettuce is grown during the time of year when ozone levels are at a minimum. Out of the 17 crops considered, eight exhibited a steady increase in estimated yield losses across the same 4-year period, and six displayed increased loss due to ozone exposure for two out of the past 3-years using 1990 as the base year for comparison.

In 1993, model projected average yield losses for alfalfa ranged from 0.6% to 14.5% for models 2 and 1, respectively. The average yield reduction of 9.5% was higher than the previous 3 years (Mutters and Soret, 1995; Mutters and Guzy, 1993). The potential losses were 6%, 8.5%, and 8.6% for the years 1990, 1991, and 1992, respectively. The moderate level of projected yield loss is notable considering that alfalfa is periodically harvested during the growing season. Therefore the foliage is exposed to ambient ozone for relatively short periods of time during the vegetative stage of development. The highest losses were estimated to occur in Kern (21%), Kings (19%) and Tulare (19%) Counties using results from the same model for the comparison (Table B, Appendix). Alfalfa grown for seed experienced a slightly higher average yield loss (10%) with the greatest reduction occurring in Kings County (19%).

Projected statewide average losses in dry beans ranged from 1.4% (Model 1) to 32.2% (Model 5, Table 3). Beans grown in Kern, Kings, and Tulare Counties suffered the greatest estimated yield loss with 34%, 32%, and 32%, respectively. It is interesting to note that in previous years Orange County experienced the greatest losses (Mutters and Soret, 1995). The trend for estimated losses to be the highest in the counties of the southern San Joaquin Valley was apparent for several crops (e.g., grape, cotton, lettuce, and tomato). This was expected as evidenced by the high levels of ozone present during the summer growing season (Figure 3).

Cantaloupe yield was reduced by 32% statewide; and the highest losses were expected to occur in Kern County (39%). Notable, the predictive model used for cantaloupe was derived from data describing the response of muskmelon to ozone, and should be viewed as only an indicator of potential loss.

Average yield loss in cotton was 23% statewide in 1993 (Table 3), with a range from 16 to 32% for models 2 and 5, respectively. Yields in the Coachella Valley in Riverside County (10% loss) were the least affected by ozone. In contrast, yields were reduced by as much as 19% in Kern and 17% in Merced Counties, using model 2 for

comparison. These are predicted losses based on aggregated countywide statistics and the losses are not necessarily distributed uniformly across the individual counties.

Overall, grape yields were reduced by 25% statewide. In counties with substantial acreage, potential losses in Riverside County (23%, Model 2) were the highest, whereas the grape yields in Lake and Monterey counties were essentially unaffected (Appendix Table C). Among the different types of grapes, table grape showed the highest projected reductions (30%). The difference between raisin grape (26%) and table grape apparently reflects the different ambient ozone concentrations in a particular growing region since Thompson seedless as a variety dominates both categories. The same predictive equations were used for all types of grapes.

Yields in lemon were reduced by 8%, a reduction level comparable to previous years. Orange yields may have been reduced by 14% statewide, also comparable to 1991 and 1992.

Rice yields were relatively unaffected (3.9% on average), a function of the relatively good air quality in the northern portion of the Sacramento Valley and intrinsic tolerance to ozone stress. Indications of the relative tolerance of a particular crop to ozone stress is evidenced by a consistency in predicted yield losses across production zones (1.5% to 4.5%) with different degrees of air pollution present during the growing season. Relatively minor losses were observed in fresh and processing tomatoes, and wheat with average losses of 0.6, 6.8, and 6.7%, respectively. These model projections for the three crops did, however, represent the fourth year in a row of increasing losses in relation to the previous years (Mutters and Guzy, 1993; Mutters and Soret, 1995).

SUM06 models consistently predicted yield losses that were substantially higher than the results from models based on 7-hr and 12-hr exposure indices (Table 4). Average projected losses were 95%, 5%, 58% and 34% for bean, corn, cotton, and wheat, respectively. The reason for the two to five times larger projections, although unknown, may be attributable to the significantly higher ambient ozone in California production areas, as compared to regions of the country where the crop response studies were conducted to generate the Wiebull functions. This, of course, is speculation. The actual reason for the disparity between predictive models is unknown. However, it does appear that at this juncture the SUM06 crop models are of limited value for use in the ARB sponsored crop loss program.

TABLE 3. - Statewide predicted yield losses associated with ambient ozone averaged across counties, 1993. **7-hr and 12-hr models, only**. Results from individual counties are presented in the Appendix, Table C.

Crop	Yield (tons)	Predictive Model (% loss)						
		1	2	3	4	5	6	Mean
Alfalfa	6877121	14.5	0.6	11.4	11.5			9.5
Alfalfa - seed	10059	16.1	0.8	12.7	12.9			10.7
Bean - dry	88774	1.4	22.6	20.9	31.4	32.2		17.5
Cantaloupe	616155	32.8						32.8
Corn - grain	835789	1.2						1.2
Cotton	772232	21.1	16.6	17.8	28.1	31.6	24.6	23.3
Grape - all	5887650	27.5	22.5					25.0
Grape - raisin	1884772	28.7	23.7					26.2
Grape - table	876566	32.7	27.0					29.9
Grape - wine	3082575	25.1	20.5					22.8
Lemon	706638	8.4						8.4
Lettuce	3156382	1.0	0					0.5
Onion	1099007	17.3	3.9					10.6
Orange	2472509	18.7	9.3					14.0
Rice	1876464	5.1	4.6	1.9				3.9
Tomato - fresh	616410	0.6						0.6
Tomato - proc	9787324	1.0	2.3	9.3	8.6	13.0		6.8
Wheat	1451554	0.5	12.8					6.7

TABLE 4. - Statewide predicted yield losses associated with ambient ozone averaged across counties, 1993. **SUM06 models, only**. Results from individual counties are presented in the Appendix, Table C.

Crop	Yield (tons)	Predictive Model (% loss)		
		1	2	Mean
Bean - dry	88774	98.0	92.2	95.1
Corn - grain	835789	7.3	2.8	5.1
Cotton	772232	60.0	55.5	57.8
Wheat	1451554	22.8	45.8	34.3

Statewide Interpolations, 1993. The extreme seasonal variability in air quality within and between the major air basins of California in 1993 was evident in the interpolated statewide 7-hr mean ozone concentrations (Figures 1 through 4). The months chosen for graphic display of the interpolations were representative of the four seasons. During January (Figure 1) the mean ozone concentrations of all interpolatable regions were between 0 and 4 pphm, except for Lake Gregory (northeast of San Bernardino) which is presumably near the inversion layer. Similar air quality patterns were observed in 1991 and 1992 (Mutters and Soret, 1995). The limits of the interpolation are apparent on the eastern edge of the Imperial and Coachella Valleys (Figure 1).

Ozone concentrations around most metropolitan areas were greater in April (Figure 2) than in January. The transport of air pollution from the floor of the San Gabriel Valley to the mountains surrounding the SCAB was apparent during April when the stations in the San Bernardino mountains reported mean ozone values of 6 to 8 pphm. The area around Alpine, west of San Diego, continued to report some of the highest ozone concentrations in the state during the same period.

A substantial increase in ozone concentrations during August as compared to previous months (Figure 3) coincided with the occurrence of higher temperatures and the presence of an inversion layer over valleys in the southern portion of the state. Mean ozone concentrations jumped from around 4 pphm to greater than 8 pphm in the eastern SCAB. The influence of the Bakersfield metropolitan area was apparent on regional air quality in the southern SJV. On the eastern side of the San Joaquin Valley from south of Bakersfield to north to Fresno, the 7-hr means were at levels known to significantly reduce the yield in some crops under experimental conditions (Heck et al., 1984b).

Air quality in the communities adjacent to and in the mountains surrounding the SCAB was at its worst during August 1993, with the 7-hr mean ozone concentration exceeding 8 pphm over a large area of the basin (Figure 3). Ozone levels in the Alpine area

remained high, while in the coastal areas from Point Conception north to Point Reyes the ozone concentrations were relatively constant during the first eight months of the year.

The decrease in daytime temperatures and the breakup of the inversion layer over the major air basins in California resulted in an improvement of air quality at all reporting stations during November (Figure 4). Mean ozone concentrations across the state during October, November (Figure 4) and December were comparable to those reported in March, February, and January, respectively, of the same year. Data for February, March, October, and December not shown. Data for all reporting air monitoring stations and months is presented in the Appendix, Table B.

The higher altitude sites in forested areas near the base of the inversion layer frequently experienced higher ozone exposure when compared to neighboring sites at lower elevations. For example, distinct differences in ozone levels were observed when Lake Gregory versus San Bernardino Fourth Street, Alpine-Victoria versus El Cajon, and Los Padres National Forest versus Santa Barbara were compared. The importance of chronic ozone exposure on the long-term productivity and species composition on California forests remains unresolved.

Figure 1. Statewide 7-hr Ozone Concentration for January 1993.

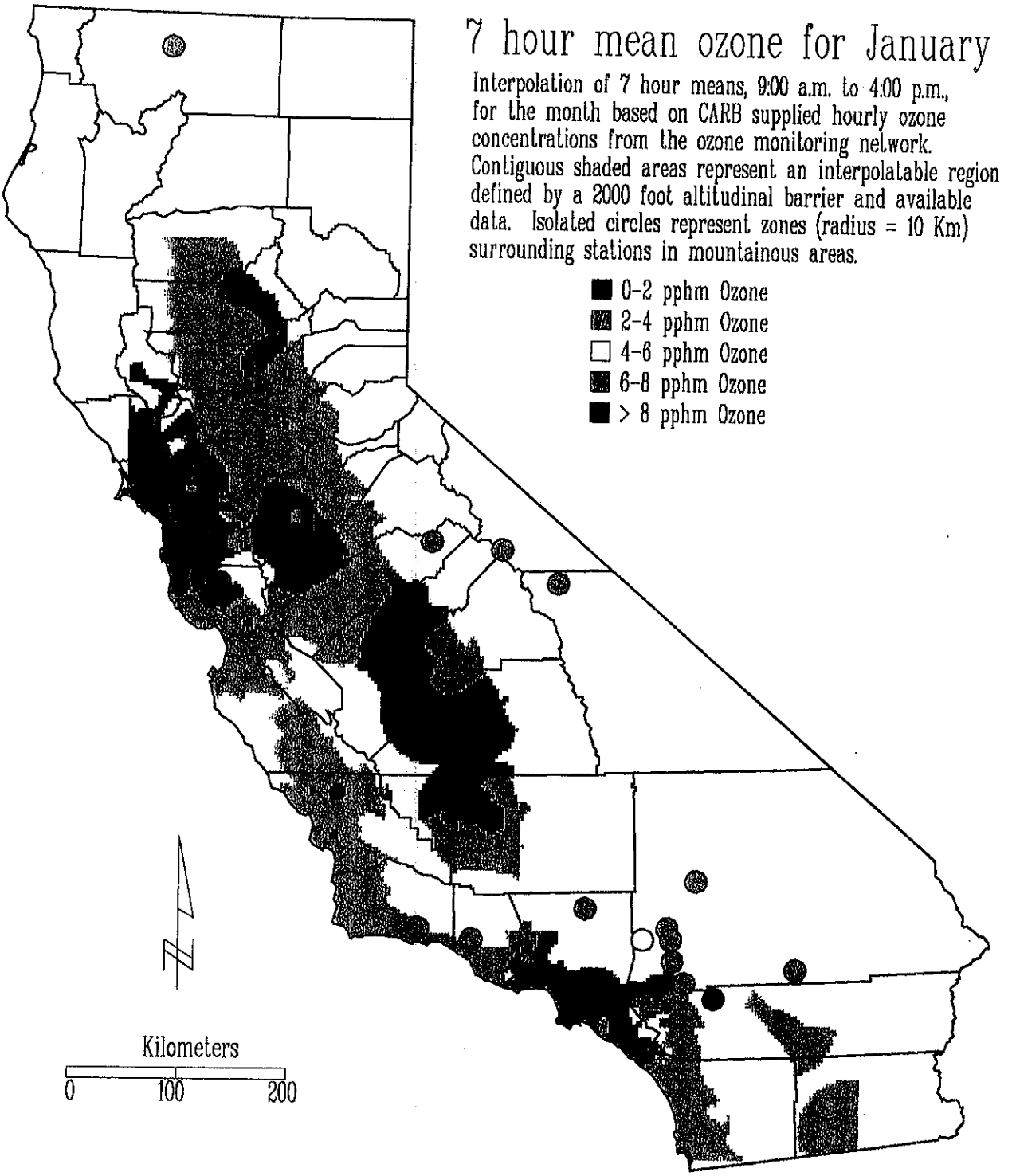


Figure 2. Statewide 7-hr Ozone Concentration for April 1993.

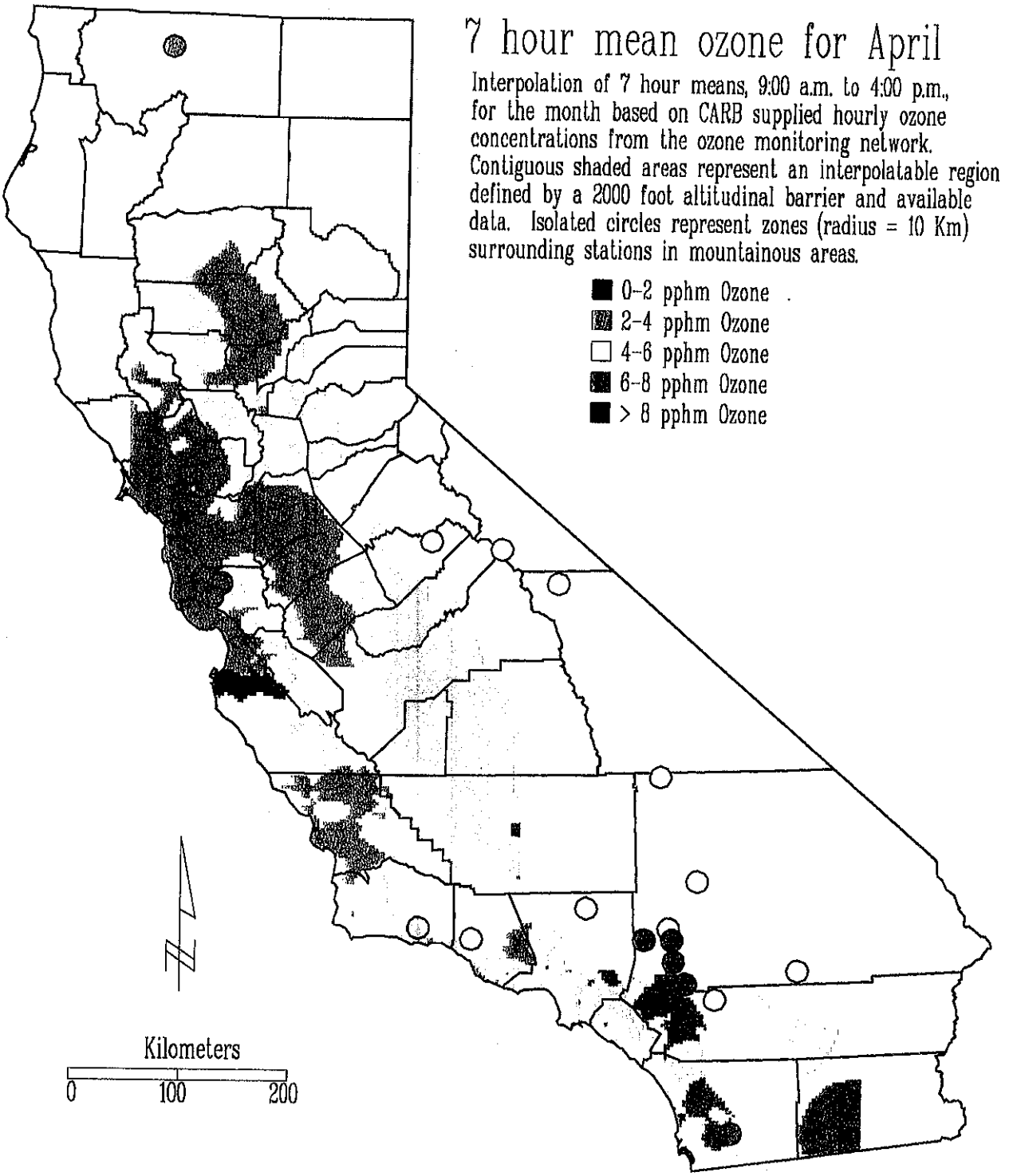


Figure 3. Statewide 7-hr Ozone Concentration for August 1993.

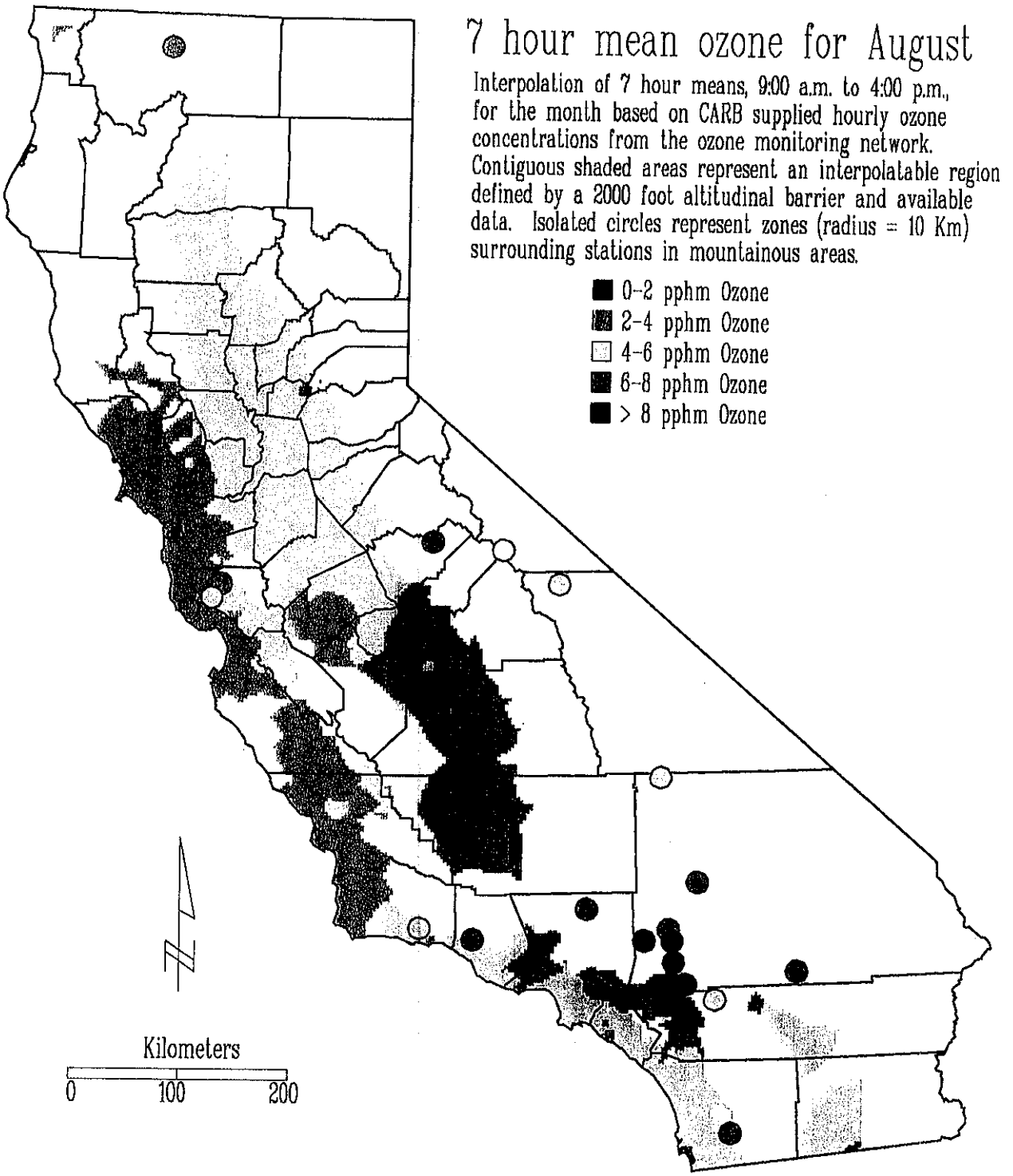
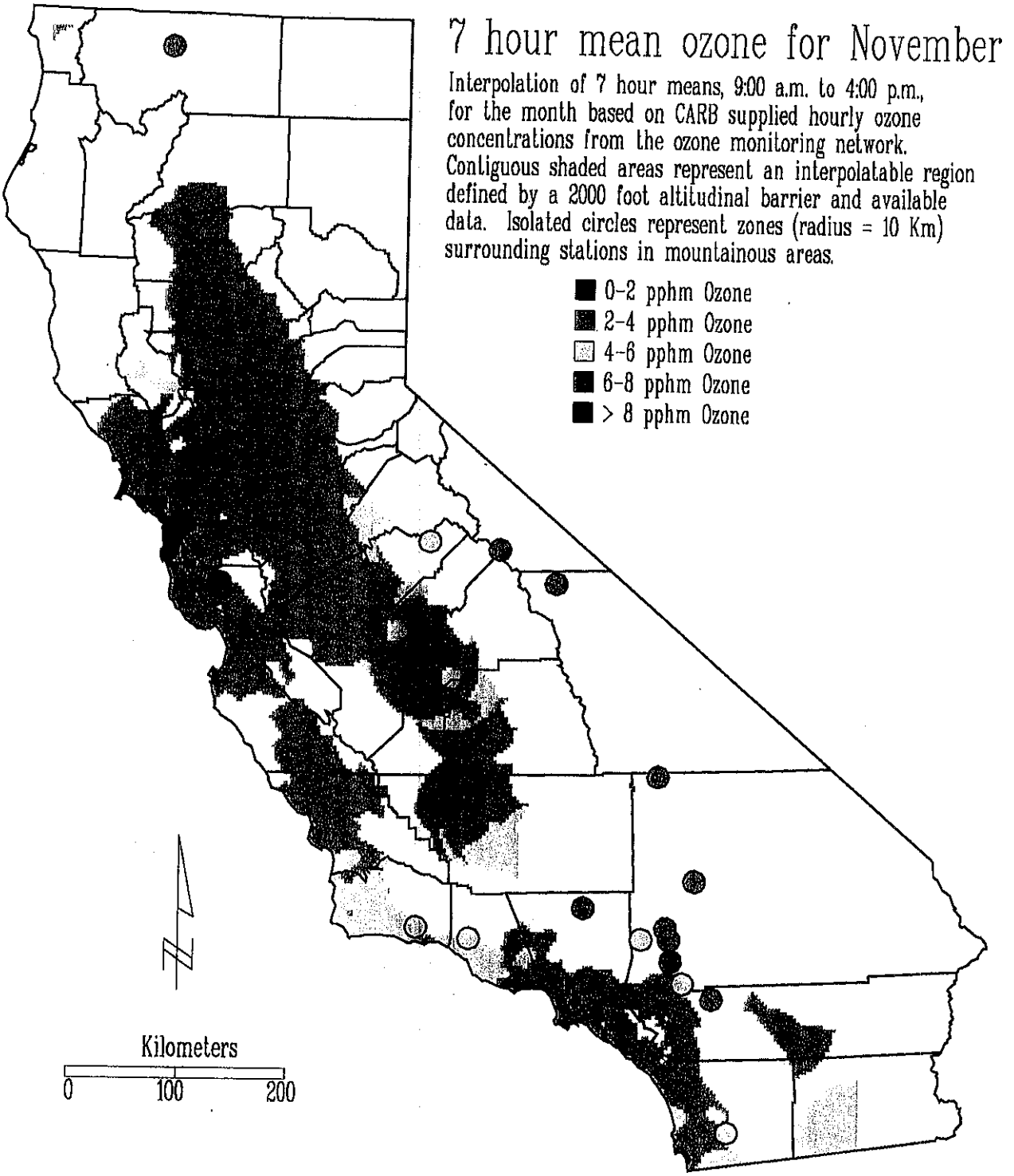


Figure 4. Statewide 7-hr Ozone Concentration for November 1993.



Yield Loss Estimates Using Interpolated Ozone Statistics, 1993. When interpreting the interpolated yield loss maps, it is important to remember that the individual crops were not grown across the entire geographic extent of the irrigated farmlands illustrated. Information on the exact location and acreage of the major commodities was not readily attainable. Although the crops discussed were assuredly grown under irrigated conditions, some knowledge of where specific crops were actually grown is needed to properly interpret the figures below.

Regional variability in estimated yield losses modeled using interpolated ozone statistics within the irrigated farmlands was evident in the state's central valleys (Figures 5 through 8). Ozone associated yield loss in rice, a relatively ozone tolerant crop, ranged from 4% to 6% across the Sacramento Valley (Figure 5). Estimated reductions in the major rice producing counties of Colusa, Butte, and Yuba were also in the 4% to 6% range.

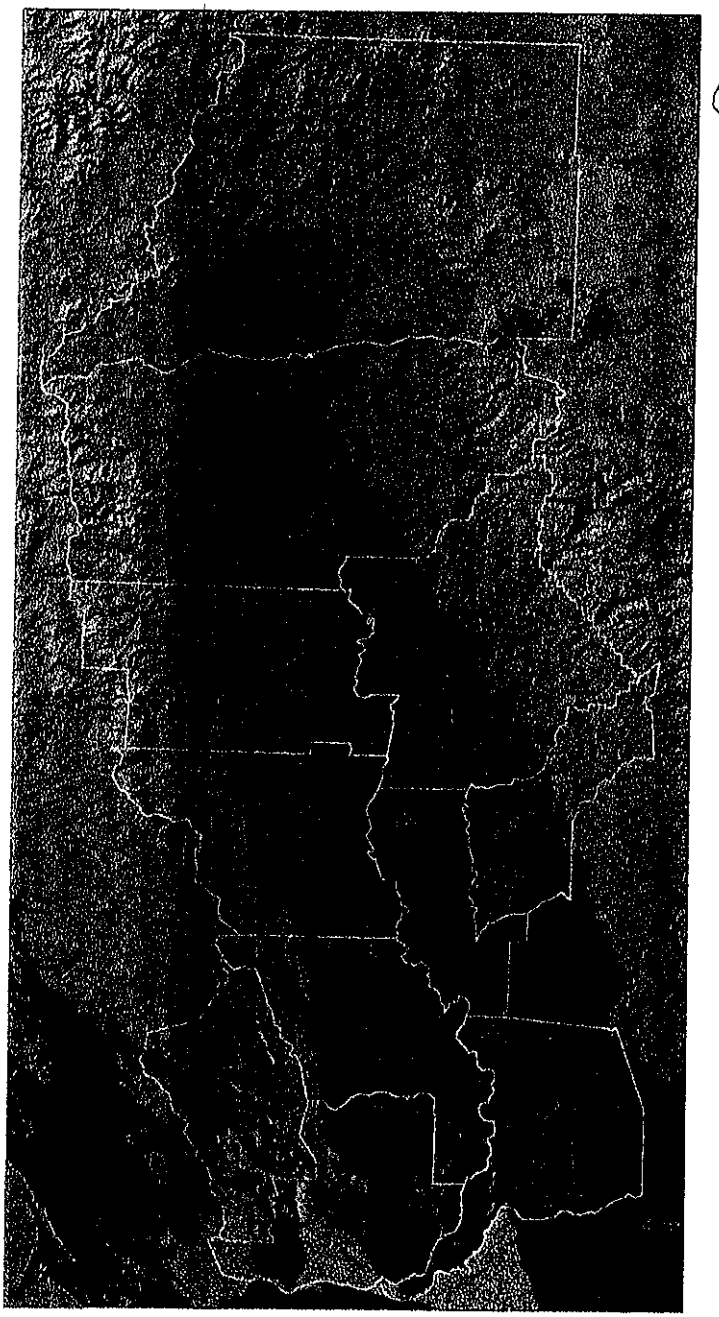
Estimated yield reductions due to ozone exposure in processing tomato ranged from less than 1% in the Delta area of the Sacramento Valley to 2% in portions of Sacramento and Yolo Counties (Figure 6). The low expected losses for both crops in the counties bordering the delta area was attributed to the influence of the on-shore air flow. The "puddling" of the air mass in northern portion of the valley was apparent because of the higher potential losses at that end of the valley. Aggregated countywide yield losses in the Sacramento Valley ranged from 4.6% in Butte and Yuba Counties to 7.4% in Placer County (interpolated losses in Placer County not presented, Figure 5; Appendix, Table C). Processing tomato was not grown in Butte or Shasta Counties, although the interpolation indicates losses in excess of 3% were expected.

Estimated yield reductions in table grape yields ranged from less than 10% in the northern San Joaquin Valley to more than 30% in the southern valley near Arvin (Figure 7). The effects of the Fresno urban area on air quality was evidenced by estimated losses of 25 - 30% in eastern Fresno County. Lack of air quality data excluded interpolation of ozone concentrations in western Fresno County. Projected yield reductions for cotton based on interpolated ozone statistics followed a north-south gradient with greater losses anticipated in the Bakersfield area (30%) and the least in Merced County (5%). In contrast, aggregated countywide cotton yield losses ranged from 15% in Merced County to 26% in Kern County (Model 1, Table C, Appendix). The localized variability in ozone concentrations is preserved with the interpolation techniques, whereas it is masked when data from several monitoring stations are averaged to provide a single value for an entire county. Thus, the yield losses based on these arithmetic means fall within the range of interpolated loss estimates, but the impact of locally variable ozone levels remains indiscernible.

The variability of potential yield loss, within a county, reveals the limitations of basing policy decisions on loss estimates aggregated at a county level of resolution. The potential economic burden of poor air quality on agriculture is not shouldered uniformly by growers within a production region. If the continued urbanization of the San Joaquin Valley leads to a further deterioration of air quality, areas of "non-production" for sensitive crops may develop. In that, ozone sensitive crops, such as PIMA cotton and Thompson seedless grapes, may become unprofitable. Consequently, California's productive farmlands in the southern San Joaquin Valley will not only be directly pressured by urban expansion, but also indirectly by atmospheric products of that expansion even in areas physically removed from the development.

Figure 5.

1993 Ozone Associated Yield Loss for Rice in the Irrigated Farmlands of the Sacramento Valley



Percent Loss

- < 2%
- 2% - 4%
- 4% - 6%
- 6% - 8%
- > 8%

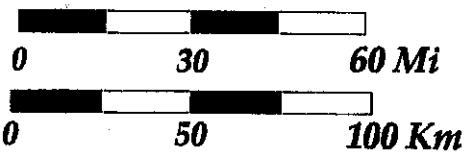


Figure 6.

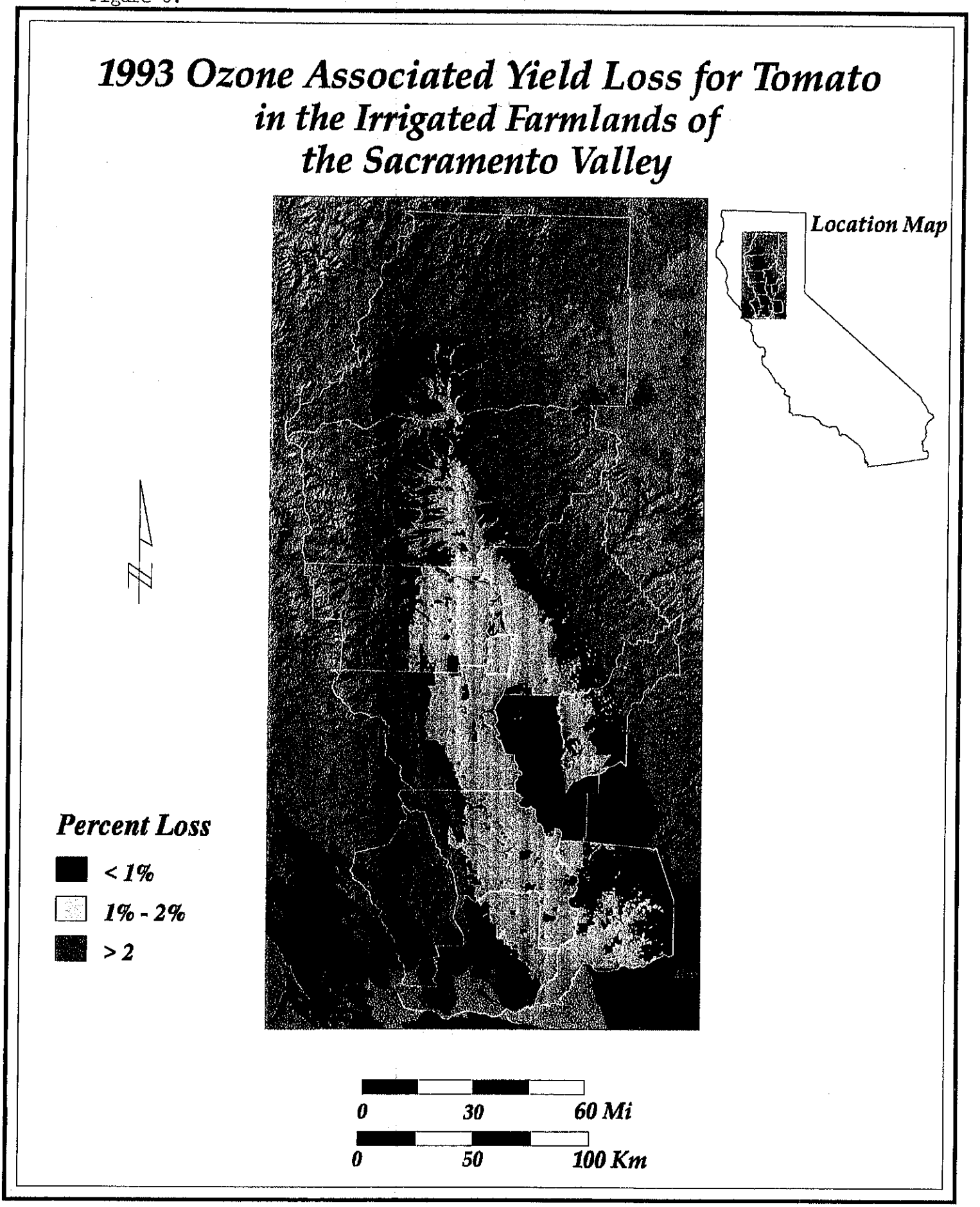
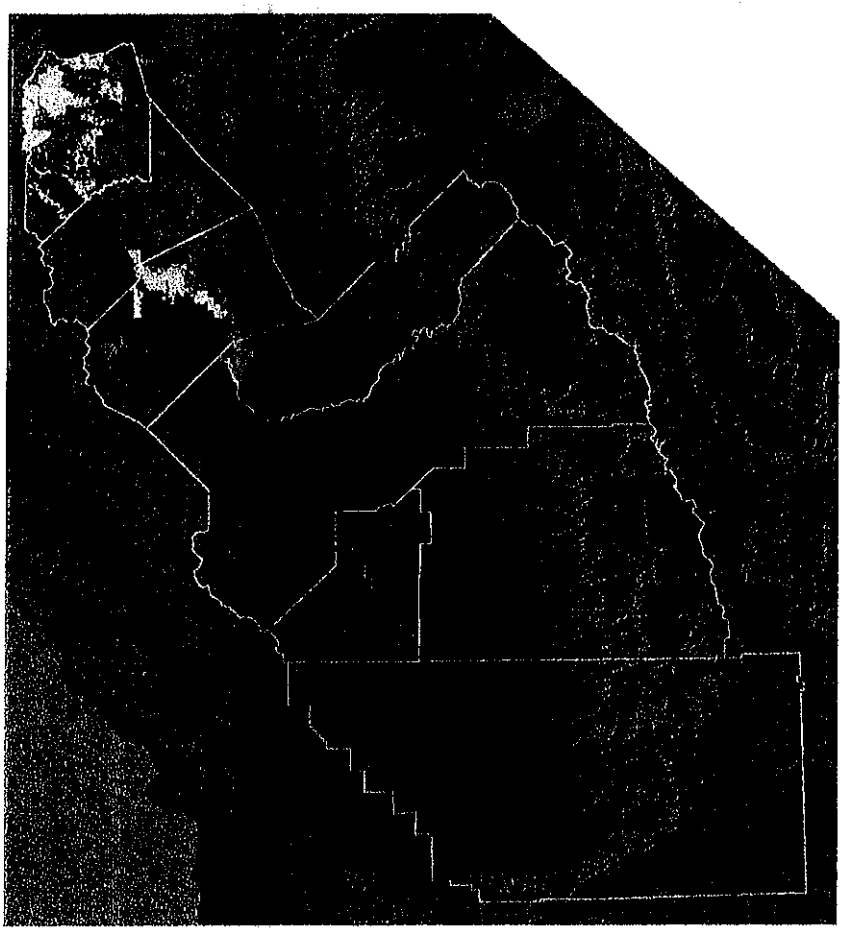

1993 Ozone Associated Yield Loss for Tomato
in the Irrigated Farmlands of
the Sacramento Valley
Location Map
N
Percent Loss
< 1%
1% - 2%
> 2
0
30
60 Mi
0
50
100 Km

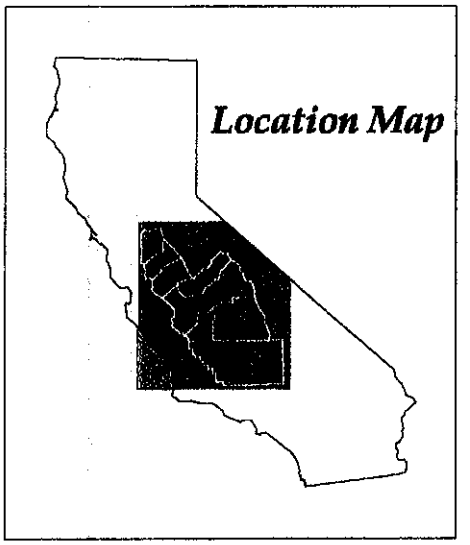
Figure 7.

1993 Ozone Associated Yield Loss for Grape in the Irrigated Farmlands of the San Joaquin Valley



Percent Loss

- *< 5%*
- *5% - 10%*
- *10% - 15%*
- *%15 - 20%*
- *20% - 25%*
- *25% - 30%*
- *> 30%*



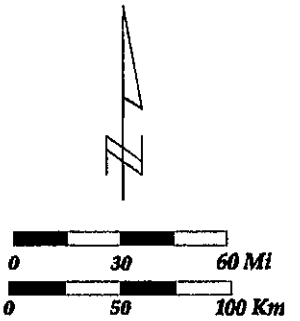
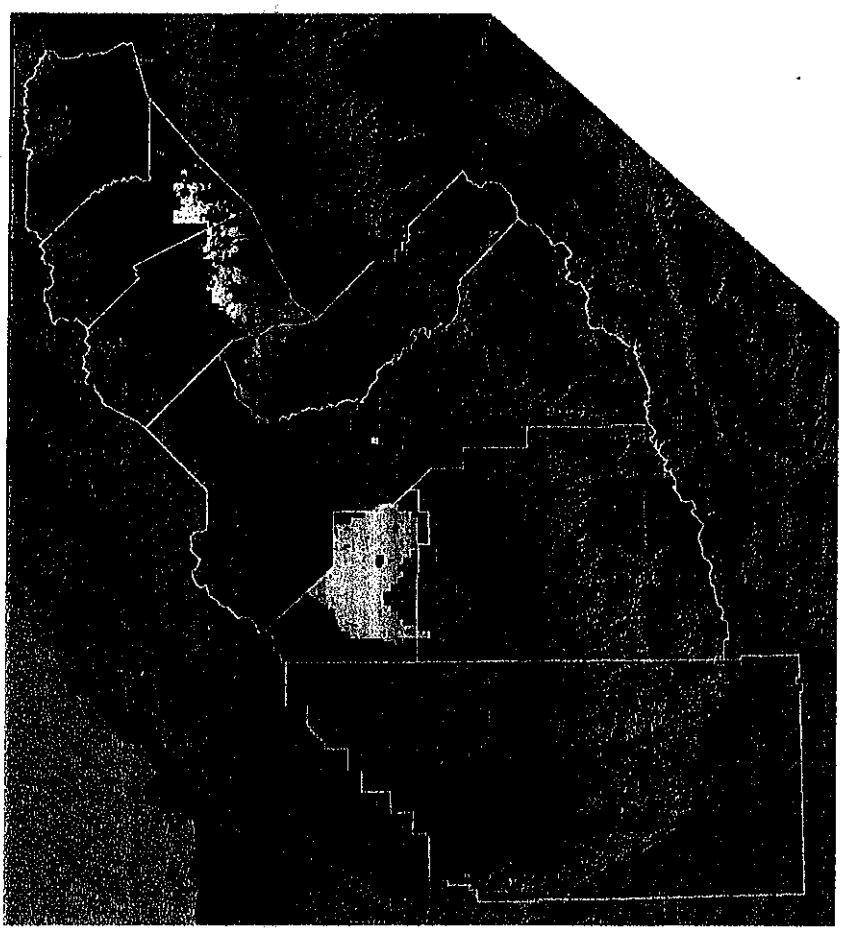


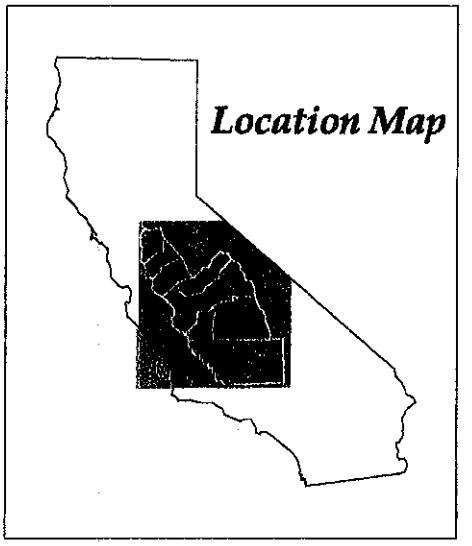
Figure 8.

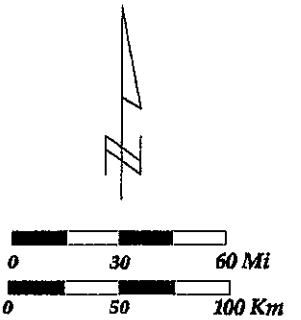
1993 Ozone Associated Yield Loss for Cotton in the Irrigated Farmlands of the San Joaquin Valley



Percent Loss

- *< 5%*
- *5% - 10%*
- *10% - 15%*
- *%15 - 20%*
- *20% - 25%*
- *25% - 30%*
- *> 30%*





CONCLUSION

The ARB sponsored Crop Loss Program provides information to evaluate the long-term trends in yield losses associated with exposure to ambient ozone. The estimated losses should be, however, evaluated in the context of the inherent uncertainties associated with these procedures. Major sources of uncertainty include the effects of agronomic factors, the interaction of associated pollutants, and exposure dynamics on crop response to ozone. Nevertheless, the ARB Crop Loss Program is the only source of information available that describes the potential impact of poor air quality on the largest industry in the state, agriculture. Furthermore, economic models, such as the California Agriculture and Resource Model (Howitt, 1993), rely heavily on the results of this program to quantify the economic costs and effects on farm profitability, food-processing operations, and the numerous secondary industries associated with agriculture. In the future, results from this type of analyses could provide evidence of the benefits gained from the ARB's continued efforts to improve the air quality throughout California.

REFERENCES

Brewer, R.F. 1982. The Effects of Ozone and Sulfur Dioxide on Cotton Growth and Quality. Final Report, California Air Resources Board Contract No. A3-047-33.

Brewer, R. F. 1983. The Effects of Ambient Air Pollution on Thompson Seedless Grapes. Final Report, California Air Resources Board, Contract No. A1-132-33.

California Air Resources Board. 1993. California Air Quality Data, Technical Support Division, Sacramento, CA.

Environmental Systems Research Institute. (ESRI) 1995. ARC/INFO Geographical Information System, Redlands, CA.

Heagle, A. S., W. W. Heck, V. M. Lesser, J. O. Rawlings, and F. L. Mowry. 1986. Injury and yield response of cotton to chronic doses of ozone and sulfur dioxide. J. Environ. Qual. 15:375-382.

Heck, W. W., W. W. Cure, J. O. Rawlings, L. J. Zaragosa, A. S. Heagle, H. E. Heggestad, R. J. Kohut, L. W. Kress, and P. J. Temple. 1984a. Assessing impacts of ozone on agricultural crops. J. Air Pollut. Control Assoc. 34:729-735.

Heck, W. W., W. W. Cure, J. O. Rawlings L. J. Zaragosa, A. S. Heagle, H. E. Heggestad, R. J. Kohut, L. W. Kress, and P. J. Temple. 1984b. Assessing impacts of ozone on agricultural crops: II. Crop yield functions and alternative exposure statistics. J. Air Pollut. Control Assoc. 34:810-817.

Howitt, R. 1993. Economic Assessment of Acid Deposition and Ozone Damage on the San Valley Agriculture. Final Report, California Air Resources Board. Contract No. A132-151.

Kats, G., P. J. Dawson, A. Bytnerowicz, J. W. Wolf, C. R. Thompson, and D. M. Olszyk. 1985. Effects of ozone or sulfur dioxide on growth and yield of rice. Agric., Ecosys. & Environ. 14:103-117.

Kress, L. W. and J. E. Miller. 1985a. Impact of ozone on field-corn yield. Can. J. Bot. 63:2408-2415.

Kress, L. W. and J. E. Miller. 1985b. Impact of ozone on winter wheat yield. Environ. Exp. Botany. 25:211-228.

Lee, E.H., D.T. Tingey, and W.E. Hogsett. 1988. Evaluation of ozone exposure indices in exposure-response modeling. Environ. Pollut. 53:43-62.

McCool, P. M., R. C. Musselman, R. R. Teso, and R. J. Oshima. 1986. Determining crop yield losses from air pollutants. Calif. Ag. 40(7-8):9-10.

Miller, P. R., M. H. McCutchan, and B. C. Ryan. 1972. Influence of climate and topography on oxidant air pollution concentrations that damage conifer forests in southern California. In: Fume Damage to Forests. Forestry Commission Research and Development, Paper 82, October, 1971.

Mutters, R.G. and M.R. Guzy. 1993. Crop Losses from Air Pollutants. Final Report, California Air Resources Board. Contract No. A033-174.

Mutters, R.G. and S. Soret. 1995. Crop Losses from Air Pollutants: A GIS Regional Analysis. Final Report, California Air Resources Board. Contract No. A133-185.

Olszyk, D.M. 1989. Mechanistic Basis of the Growth and Yield Effects of Ambient Ozone on Valencia Oranges. Final Report, California Air Resources Board, Contract No. A733-088.

Olszyk, D. M., A. Bytnerowicz, G. Kats, P. J. Dawson, J. Wolf, and C. R. Thompson. 1986. Crop effects from air pollutants in air exclusion systems vs. field chambers. J. Environ. Qual. 15:417-422.

Olszyk, D. M., G. Kats, C. L. Morrison, P. J. Dawson, I. Gocka, J. Wolf, and C. R. Thompson. 1990. Valencia orange fruit yield with ambient oxidant on sulfur dioxide exposures. J. Am. Soc. Hortic. Science 115:878-883.

Snyder, R. G., J. E. Simon, R. A. Reinert, M. Simini, and W. W. Heck. 1988. Effects of air quality on foliar injury, growth, yield, and quality of muskmelon. Environ. Pollut. 53:187-196.

Temple, P. J., O. C. Taylor, and L. F. Benoit. 1985b. Cotton yield responses to ozone as mediated by soil moisture and evapotranspiration. J. Environ. Quality 14:55-60.

Temple, P. J., O. C. Taylor, and L. F. Benoit. 1986. Yield response of head lettuce (*Lactuca sativa* L.) to ozone. Environ. Exp. Bot. 26:53-58.

Temple, P. J., L. F. Benoit, R. W. Lennox, C. A. Reagan, and O. C. Taylor. 1988. Combined effects of ozone and water stress on alfalfa growth and yield. J. Environ. Qual. 17:108-113.

Temple, P. J. 1990a. Growth and yield responses of processing tomato (*Lycopersicon esculentum* Mill.) cultivars to ozone. Environ. Exp. Bot. 30:283-291.

Temple, P. J. 1990b. Growth form and yield responses of four cotton cultivars to ozone. Agron. J. 82:1045-1050.

Temple, P. J., T. E. Jones, and R. W. Lennox. 1990. Yield loss assessments for cultivars of broccoli, lettuce, and onion exposed to ozone. Environ. Pollut. 66:289-300.

Thompson, C. R. and G. Kats. 1970. Ambient oxidants reduce grape yield reductions from photochemical smog. Calif. Ag. 24:12-13.

Thompson, C. R., G. Kats, and J. W. Cameron. 1976. Effects of ambient photochemical air pollutants on growth, yield, and ear characters of two sweet corn hybrids. J. Environ. Qual. 5:410-412.

Thompson, C.R. and O.C. Taylor. 1969. Effects of air pollutants on growth, leaf drop, fruit drop, and yield of citrus trees. Environ. Sci. Technol. 3:934-940.

Appendices

TABLES

A. Comparison of Weibull exposure-response curves calculated using the 24th SUM06 values for 54 NCLAN cases. (Provided in a personal communication from the author, Dr. H. Lee, ManTech Inc., Corvallis, OR).

B. Monthly ozone exposure indices for air monitoring stations in California, 1993

C. Estimated crop loss from ozone exposure by county and commodity, 1993.

Appendix: Table A

Comparison of Weibull Exposure - Response Models Calculated Using the 24-hr SUM06 Value for 54 NCLAN Cases.

(cf. Dr. H. Lee, ManTech, Inc. Corvallis, OR, personal communication)

Definitions

A: Maximum yield at zero ozone

B: Ozone concentration where A is reduced by 63%

C: Dimensionless shape parameter

SUM06: The sum of the hourly ozone values at and above 6 pphm summed over monthly periods. SUM06 models are Weibull functions with the following form:

$$Y = A \exp(-X/B)^C$$

where X = seasonal ozone concentration.

Table A. Comparison of Weibull exposure-response curvers calculated using the 24-h SUM06 values for 54 NCLAN cases. (Provided in a personal communication from the author, Dr. H. Lee, ManTech Inc., Corvallis, OR)

Crop*	Cultivar	Moist	A	B	C	RMSE**	R^2***	SUM06**** values for losses of 10%	30%
Corn	Pioneer		7316.9	92.61	2.82	517	0.93	41.7	64.3
Corn	PAG		8154.9	94.36	4.32	949	0.81	56.0	74.3
Cotton (L)	Acala	dry	6465.0	92.59	2.36	1097	0.45	35.7	59.8
Cotton (L)	Acala	wet	9606.0	71.17	2.00	521	0.96	23.1	42.5
Cotton (L)	Acala	dry	7009.8	83.78	1.85	949	0.80	24.8	48.0
Cotton (L)	Acala	wet	7858.8	78.01	1.31	937	0.85	14.0	35.5
Cotton	McNair	dry	3698.8	165.8	2.78	342	0.48	73.5	114.4
Cotton	McNair	wet	4811.0	117.0	1.53	366	0.89	27.0	59.7
Kidney bean	CA Lt red		2488.2	27.41	3.89	333	0.72	15.4	21.0
Kidney bean (L)	CA Lt red		2484.3	44.24	2.69	397	0.71	19.2	30.2
Lettuce(T)	Empire		7196.6	54.87	5.51	613	0.74	36.5	45.5
Peanut (L)	NC-6		6402.5	100.1	2.23	351	0.97	36.4	63.0
Potato	Norchip		5900.7	93.84	1.00	742	0.63	9.9	33.5
Potato	Norchip		5755.6	79.26	1.85	675	0.49	20.3	42.5
Sorghum	Dekalb		8046.2	178.1	2.34	441	0.48	68.0	114.6
Soybean	Corsoy		2652.6	57.1	1.73	166	0.91	15.5	31.4
Soybean	Corsoy		1891.7	65.21	5.16	282	0.63	42.2	53.4
Soybean	Amsoy		1907.2	75.91	2.74	390	0.41	33.4	52.1
Soybean	Pella		2619.9	174.1	1.00	311	0.51	18.3	62.1
Soybean	Williams		2368.4	146.7	1.00	527	0.27	15.4	52.2
Soybean	Corsoy	dry	2229.8	92.0	9.59	193	0.16	72.8	82.6
Soybean	Corsoy	wet	2913.8	311.0	1.53	330	0.38	71.3	158.4
Soybean	Corsoy	dry	3528.1	103.8	15.7	400	0.55	90.0	97.2
Soybean	Corsoy	wet	4905.0	117.98	3.59	401	0.80	63.0	88.5
Soybean	Corsoy	dry	5676.1	97.46	1.00	508	0.81	10.3	34.8
Soybean	Corsoy	wet	5873.9	65.73	1.32	512	0.89	11.9	30.1
Soybean	Williams	dry	6305.2	99.18	1.46	389	0.87	21.1	48.8
Soybean	Williams	wet	7338.4	78.71	1.34	377	0.94	14.8	36.5
Soybean	Hodgson		2052.4	79.97	1.00	361	0.78	8.4	28.5
Soybean	Davis		3929.7	131.6	1.00	524	0.64	13.9	46.9
Soybean	Davis		4815.5	85.71	1.73	346	0.87	23.4	47.3
Soybean	Davis	dry	2007.1	542.4	1.00	556	0.04	57.1	193.4
Soybean	Davis	wet	4568.0	158.6	1.54	495	0.61	36.8	81.2

Table A, continued.

Crop*	Cultivar	Moist	A	B	C	RMSE**	R^2***	SUM06**** values for losses of 10%	30%
Soybean	Davis	dry	5775.6	90.18	3.35	920	0.55	46.0	66.3
Soybean	Davis	wet	8082.7	113.9	1.44	927	0.71	23.9	55.7
Soybean	Young	dry	5978.8	183.6	1.46	244	0.93	38.8	90.1
Soybean	Young	wet	7045.0	145.6	1.28	424	0.93	25.0	65.0
Tobacco (L)	McNair		5177.4	172.6	1.19	306	0.81	25.9	72.3
Turnip (T)	Just Right		12.7	25.68	1.81	0.81	0.96	7.4	14.5
Turnip (T)	Purple top		5.7	29.26	1.44	0.59	0.92	6.1	14.3
Turnip (T)	Shogun		4.4	29.18	1.55	0.66	0.81	6.8	15.0
Turnip (T)	Tokyo cross		11.7	27.83	2.14	3.25	0.78	9.7	17.2
Wheat	Abe		5149.8	52.89	3.08	399	0.90	25.5	37.8
Wheat	Arhtur		4455.8	60.87	2.18	264	0.92	21.6	37.9
Wheat	Roland		5028.9	52.32	1.17	405	0.91	7.7	21.7
Wheat	Abe		5043.1	47.39	7.71	226	0.74	35.4	41.5
Wheat	Arthur		5446.9	72.34	2.46	349	0.57	29.0	47.6
Wheat	Vona		5384.0	27.74	1.00	608	0.88	2.9	9.9
Wheat	Vona		4451.0	33.50	1.82	65.4	0.64	9.7	19.0

* The yield is expressed in in kg/ha for all crops except turnip (g/plant) and lettuce (g/m). In cases where the estimated C parameter is exactly 1.00 the shape parameter has been bounded from below to obtain convergence in the nonlinear model fitting routine. For those studies where the crop name is followed by (L) a log transformation was used to stabilize the variance. For those those crops followed by(T) the is expressed in either g/plant or g/m.

** The root mean square error based on individual plot means.

*** R^2 or mulitple correlation coeffecient measures the proportion of total variation about the mean response explained by the regression on individual plot means.

**** The 24-h SUM06 value (ppm-h) that was predicted to a 10 or 30 % yield loss (compared to zero SUM06).

Appendix: Table B

Monthly ozone exposure indices for air monitoring stations in California, 1993.

Definitions

County:	**County in the state of California**
Site:	**Air Resources Board Site Number**
pphm:	**part per hundred million**
S>10:	**Number of hours when ozone concentration exceeded 10pphm**
7 hr:	**Daytime 7hr mean ozone concentration (0900 to 1600PST)**
12 hr:	**Daytime 12hr mean ozone concentration (0800 to 2000PST)**
N:	**Number of sampling days**
-1:	**Missing data**

1993 POLLUTANT: OZONE COUNTY: Amador SITE: 614

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	15	0	51	182	603	739	1835	1412	1566	667	268	0	7338	3986	7004
N	2	0	8	29	95	113	255	207	222	100	41	0	1072	575	1021
S>10	0	0	0	0	0	0	2	0	2	1	0	0	5	2	5
N	0	0	0	0	0	0	2	0	2	1	0	0	5	2	5
7 HR	3.03	3.40	3.89	4.36	4.87	4.89	6.22	5.73	6.37	4.87	3.93	2.19	4.50	5.63	5.34
N	211	164	209	207	210	201	215	215	210	217	207	216	2482	631	1475
10 HR	2.85	3.20	3.73	4.36	4.91	5.03	6.57	5.89	6.20	4.30	3.17	1.77	4.35	5.85	5.33
N	304	243	304	298	304	290	308	309	300	310	297	309	3576	907	2119
12HR 8-8	2.67	2.98	3.53	4.16	4.70	4.81	6.25	5.62	5.88	4.00	2.93	1.63	4.11	5.58	5.06
N	366	293	364	357	365	350	370	370	360	372	357	371	4295	1090	2544

1993 POLLUTANT: OZONE COUNTY: Butte SITE: 628

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	25	100	318	447	791	979	818	163	0	0	3641	2217	3616
N	0	0	4	16	48	69	118	147	125	22	0	0	549	334	545
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.88	2.65	3.18	3.75	4.24	4.10	4.86	5.07	5.23	3.11	2.39	1.83	3.55	4.69	4.34
N	207	171	212	203	204	202	212	212	202	209	180	202	2416	626	1444
10 HR	1.73	2.44	3.06	3.74	4.24	4.17	4.88	5.06	4.70	2.70	1.92	1.68	3.38	4.71	4.22
N	301	262	308	293	298	295	306	305	295	299	271	299	3532	906	2091
12HR 8-8	1.61	2.27	2.81	3.55	4.04	4.01	4.67	4.77	4.42	2.48	1.77	1.57	3.18	4.49	3.99
N	360	307	367	350	358	346	366	364	346	357	326	354	4201	1076	2487

1993 POLLUTANT: OZONE COUNTY: Colusa SITE: 643

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	50	67	241	339	686	940	978	386	0	0	3687	1965	3637
N	0	0	8	11	37	51	101	141	146	58	0	0	553	293	545
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.60	2.86	3.38	4.01	4.17	4.29	4.73	5.05	5.46	3.96	3.03	1.93	3.80	4.69	4.54
N	210	190	216	152	214	208	216	214	206	214	208	208	2456	638	1424
10 HR	2.57	2.81	3.46	4.03	4.08	4.40	5.05	5.17	5.22	3.63	2.66	1.79	3.75	4.88	4.53
N	299	275	309	223	307	298	309	309	296	308	298	298	3529	916	2050
12HR 8-8	2.46	2.66	3.18	3.81	3.91	4.15	4.70	4.81	4.87	3.34	2.51	1.66	3.51	4.56	4.24
N	361	330	371	266	369	357	371	368	354	369	358	360	4234	1096	2454

1993 POLLUTANT: OZONE COUNTY: Contra Costa SITE: 430

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	108	80	222	530	542	500	649	189	57	0	2877	1572	2712
N	0	0	17	13	35	79	84	70	89	29	9	0	425	233	399
S>10	0	0	0	0	0	4	0	0	0	0	0	0	4	4	4
N	0	0	0	0	0	2	0	0	0	0	0	0	2	2	2
7 HR	2.07	3.24	3.50	4.25	4.31	4.68	4.64	4.36	4.96	3.62	2.83	1.49	3.67	4.56	4.40
N	211	180	216	209	217	210	216	211	208	217	206	215	2516	637	1488
10 HR	1.94	3.01	3.25	3.97	4.10	4.57	4.53	4.24	4.66	3.21	2.32	1.20	3.42	4.45	4.18
N	305	264	310	299	310	300	309	304	298	310	297	309	3615	913	2130
12HR 8-8	1.87	2.88	3.07	3.87	3.97	4.33	4.25	3.97	4.35	3.02	2.19	1.12	3.24	4.18	3.96
N	364	313	369	359	372	360	370	366	358	372	355	369	4327	1096	2557

1993 POLLUTANT: OZONE COUNTY: Contra Costa SITE: 433

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	81	0	24	151	54	134	79	133	43	0	699	339	575
N	0	0	13	0	4	22	6	20	12	20	6	0	103	48	84
S>10	0	0	0	0	0	0	2	0	0	0	0	0	2	2	2
N	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1
7 HR	1.66	2.37	2.72	3.41	3.57	3.75	3.13	3.22	3.33	3.17	2.91	2.07	2.94	3.36	3.36
N	213	193	214	209	207	210	215	214	208	217	203	215	2518	639	1480
10 HR	1.56	2.24	2.61	3.29	3.46	3.52	2.94	2.96	3.10	2.92	2.57	1.84	2.75	3.14	3.17
N	306	279	309	299	303	300	307	308	300	310	294	309	3624	915	2127
12HR 8-8	1.51	2.14	2.49	3.22	3.35	3.41	2.81	2.83	2.95	2.74	2.42	1.75	2.64	3.02	3.04
N	366	331	368	358	360	358	366	368	356	370	350	367	4318	1092	2536

1993 POLLUTANT: OZONE COUNTY: Contra Costa SITE: 440

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	58	86	211	470	578	482	586	157	39	0	2667	1530	2570
N	0	0	9	14	34	69	89	66	84	25	6	0	396	224	381
S>10	0	0	0	0	0	9	0	6	0	0	0	0	15	15	15
N	0	0	0	0	0	5	0	3	0	0	0	0	8	8	8
7 HR	1.44	2.43	3.14	4.11	4.15	4.56	4.45	4.23	4.59	3.45	2.70	1.85	3.43	4.42	4.22
N	216	193	206	204	216	209	217	214	206	217	205	216	2519	640	1483
10 HR	1.31	2.28	2.87	3.89	3.93	4.39	4.24	3.97	4.29	3.06	2.27	1.73	3.19	4.20	3.96
N	309	277	297	295	309	298	310	308	297	310	293	306	3609	916	2127
12HR 8-8	1.20	2.12	2.67	3.74	3.77	4.14	3.94	3.70	3.94	2.84	2.11	1.63	2.99	3.92	3.72
N	371	333	355	354	371	358	372	369	356	372	352	366	4329	1099	2552

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Contra Costa SITE: 442

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	104	44	239	644	564	567	706	208	73	0	3149	1775	2972
N	0	0	15	7	38	95	88	80	101	31	11	0	466	263	440
S>10	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1
N	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1
7 HR	2.14	2.76	3.35	3.85	4.34	4.85	4.64	4.51	4.97	3.64	2.89	1.58	3.65	4.66	4.40
N	205	183	202	201	213	200	211	215	207	214	196	201	2448	626	1461
10 HR	2.09	2.72	3.27	3.71	4.19	4.85	4.60	4.47	4.86	3.45	2.42	1.35	3.51	4.64	4.30
N	303	271	303	296	309	293	308	310	300	310	291	297	3591	911	2126
12HR 8-8	1.98	2.55	3.06	3.59	4.04	4.63	4.31	4.20	4.56	3.22	2.24	1.28	3.31	4.38	4.08
N	360	322	356	347	362	344	362	363	350	364	345	355	4230	1069	2492

1993 POLLUTANT: OZONE COUNTY: Del Norte SITE: 653

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.60	3.13	2.74	3.44	2.99	2.60	2.16	2.18	2.48	2.05	2.65	2.31	2.61	2.30	2.57
N	161	189	208	209	209	200	216	215	207	167	209	193	2383	631	1423
10 HR	2.70	3.29	2.98	3.55	3.09	2.67	2.29	2.30	2.67	2.31	2.78	2.33	2.75	2.41	2.71
N	227	275	302	300	298	288	309	306	297	239	300	277	3418	903	2037
12HR 8-8	2.66	3.22	2.84	3.43	2.97	2.55	2.14	2.16	2.47	2.15	2.70	2.31	2.64	2.28	2.56
N	272	328	361	359	359	344	370	366	357	285	359	333	4093	1080	2440

1993 POLLUTANT: OZONE COUNTY: Del Norte SITE: 654

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	-1	-1	-1	31	6	0	0	0	7	44	37	37
N	0	0	0	0	0	0	5	1	0	0	0	1	7	6	6
S>10	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2.99	2.63	3.07	2.39	2.73	2.24	2.68	2.81	2.77
N	0	0	0	0	0	0	210	209	205	205	198	204	1231	419	829
10 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2.94	2.66	2.97	2.16	2.44	1.94	2.52	2.80	2.68
N	0	0	0	0	0	0	305	302	299	296	287	297	1786	607	1202
12HR 8-8	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2.86	2.55	2.82	2.01	2.39	1.91	2.43	2.70	2.56
N	0	0	0	0	0	0	362	358	354	353	336	350	2113	720	1427

1993 POLLUTANT: OZONE COUNTY: El Dorado SITE: 690

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	-1	207	267	884	1117	2251	2156	2821	1070	425	0	11198	5524	10566
N	0	0	34	44	134	168	325	314	404	159	68	0	1650	807	1548
S>10	0	-1	0	0	0	0	3	0	10	0	0	0	13	3	13
N	0	0	0	0	0	0	3	0	8	0	0	0	11	3	11
7 HR	3.12	-1.00	4.18	4.70	4.90	5.11	6.10	5.82	6.62	5.01	4.03	2.68	4.75	5.68	5.47
N	213	0	213	204	214	207	214	207	207	213	208	209	2309	628	1466
10 HR	2.91	-1.00	4.23	4.75	5.06	5.24	6.30	6.15	6.81	4.99	3.90	2.42	4.79	5.90	5.61
N	306	0	308	296	309	297	308	301	297	306	298	303	3329	906	2114
12HR 8-8	2.92	-1.00	4.06	4.59	4.87	5.05	6.07	5.91	6.50	4.73	3.78	2.44	4.62	5.68	5.39
N	367	0	367	352	369	357	369	362	356	368	358	364	3989	1088	2533

1993 POLLUTANT: OZONE COUNTY: El Dorado SITE: 691

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	22	6	6	168	354	209	822	486	633	39	0	0	2745	1517	2711
N	3	1	1	27	58	35	133	78	102	6	0	0	444	246	439
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	3.61	3.60	3.60	4.51	4.51	4.29	4.67	4.50	4.73	3.59	3.61	2.99	4.02	4.48	4.40
N	183	193	212	204	213	206	205	208	208	213	200	212	2457	619	1457
10 HR	3.34	3.34	3.37	4.41	4.54	4.34	4.86	4.61	4.63	3.26	3.17	2.60	3.88	4.60	4.38
N	265	277	305	296	306	296	298	302	298	307	286	303	3539	896	2103
12HR 8-8	3.26	3.28	3.29	4.40	4.49	4.28	4.82	4.56	4.52	3.14	3.09	2.52	3.81	4.55	4.31
N	317	333	367	354	368	356	358	362	358	368	344	365	4250	1076	2524

1993 POLLUTANT: OZONE COUNTY: Fresno SITE: 230

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	38	438	905	1115	1792	2160	1748	1908	989	437	0	11530	5700	10617
N	0	6	68	133	164	226	272	226	230	132	61	0	1518	724	1383
S>10	0	0	0	3	1	27	21	32	47	11	0	0	142	80	142
N	0	0	0	2	1	18	18	15	22	8	0	0	84	51	84
7 HR	2.74	3.88	4.38	5.37	5.54	6.84	7.40	6.92	7.44	5.60	4.14	1.79	5.17	7.05	6.45
N	213	191	208	204	192	208	215	214	204	217	197	217	2480	637	1454
10 HR	2.66	3.86	4.47	5.52	5.52	6.82	7.35	6.59	7.00	4.87	3.48	1.54	4.97	6.92	6.24
N	307	278	301	294	286	298	308	308	295	310	284	310	3579	914	2099
12HR 8-8	2.52	3.60	4.13	5.18	5.23	6.41	6.82	6.11	6.49	4.50	3.20	1.39	4.63	6.45	5.82
N	368	331	361	353	339	357	370	369	353	372	342	372	4287	1096	2513

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Fresno SITE: 244

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	209	495	694	1283	1704	1211	1593	677	258	0	8124	4198	7657
N	0	0	32	77	106	171	239	171	203	88	39	0	1126	581	1055
S>10	0	0	0	0	0	7	0	7	36	19	0	0	69	14	69
N	0	0	0	0	0	7	0	6	15	9	0	0	37	13	37
7 HR	1.85	2.93	3.79	4.66	4.78	5.82	6.07	5.68	6.79	4.77	3.22	1.13	4.29	5.86	5.51
N	211	188	210	204	209	201	214	205	206	202	204	212	2466	620	1441
10 HR	1.68	2.64	3.66	4.77	4.84	5.92	6.37	5.58	6.31	4.10	2.44	.83	4.10	5.96	5.42
N	304	276	303	291	305	287	308	299	296	289	294	301	3553	894	2075
12HR 8-8	1.58	2.47	3.35	4.45	4.54	5.50	5.88	5.14	5.79	3.72	2.22	.75	3.79	5.51	5.01
N	366	327	364	348	362	347	368	359	356	346	352	361	4256	1074	2486

1993 POLLUTANT: OZONE COUNTY: Fresno SITE: 245

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	293	584	787	1455	1869	1401	1873	1127	487	0	9876	4725	9096
N	0	0	44	91	121	189	250	194	233	147	68	0	1337	633	1225
S>10	0	0	0	0	0	14	1	10	49	27	0	0	101	25	101
N	0	0	0	0	0	10	1	5	25	12	0	0	53	16	53
7 HR	1.71	3.05	3.91	4.79	5.05	6.33	6.57	6.15	7.18	5.63	3.92	1.56	4.67	6.36	5.95
N	196	188	204	201	206	192	207	198	205	216	199	203	2415	597	1425
10 HR	1.62	3.04	4.09	5.00	5.09	6.24	6.71	6.01	6.99	5.38	3.61	1.36	4.62	6.32	5.91
N	284	271	302	292	303	289	306	292	296	310	289	295	3529	887	2088
12HR 8-8	1.49	2.78	3.72	4.68	4.84	5.94	6.33	5.70	6.48	4.91	3.22	1.23	4.29	6.00	5.55
N	340	325	359	348	354	341	359	343	351	367	349	353	4189	1043	2463

1993 POLLUTANT: OZONE COUNTY: Fresno SITE: 246

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	245	600	1090	1934	2596	2088	2370	1069	309	0	12301	6618	11747
N	0	0	35	92	162	247	325	270	274	146	42	0	1593	842	1516
S>10	0	0	0	0	0	31	11	34	97	2	0	0	175	76	175
N	0	0	0	0	0	16	10	14	45	2	0	0	87	40	87
7 HR	1.38	2.64	3.76	4.94	5.58	6.92	7.65	7.22	8.47	5.77	3.54	1.65	4.97	7.27	6.65
N	201	195	216	210	205	210	212	212	200	206	197	213	2477	634	1455
10 HR	1.11	2.25	3.51	5.00	5.50	6.86	7.76	6.92	7.76	4.82	2.67	1.30	4.64	7.18	6.38
N	298	279	310	300	301	300	307	307	292	298	289	308	3589	914	2105
12HR 8-8	1.03	2.06	3.24	4.69	5.22	6.51	7.32	6.56	7.31	4.48	2.46	1.23	4.36	6.80	6.02
N	346	333	365	358	356	358	365	363	345	350	343	365	4247	1086	2495

1993 POLLUTANT: OZONE COUNTY: Fresno SITE: 247

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	155	384	1459	2552	4193	3909	2865	1086	438	13	17054	10654	16448
N	0	0	25	62	233	361	564	540	413	161	71	2	2432	1465	2334
S>10	0	0	0	0	0	0	12	20	10	0	0	0	42	32	42
N	0	0	0	0	0	0	12	14	6	0	0	0	32	26	32
7 HR	3.76	4.13	4.09	4.68	5.17	6.11	7.44	7.13	6.57	5.22	4.66	3.93	5.25	6.89	6.04
N	182	176	211	205	210	206	206	193	205	193	198	214	2399	605	1418
10 HR	3.76	4.06	4.03	4.58	5.24	6.37	7.78	7.38	6.62	5.18	4.57	3.84	5.30	7.18	6.16
N	263	254	305	295	303	296	296	281	295	279	289	307	3463	873	2045
12HR 8-8	3.77	4.07	4.04	4.59	5.18	6.20	7.54	7.18	6.44	5.03	4.49	3.86	5.21	6.97	6.02
N	316	307	366	355	365	356	357	335	355	332	346	369	4159	1048	2455

1993 POLLUTANT: OZONE COUNTY: Fresno SITE: 248

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	26	450	821	817	1449	2084	1473	1954	982	332	0	10388	5006	9580
N	0	4	67	124	121	195	276	201	239	126	48	0	1401	672	1282
S>10	0	0	0	0	0	16	12	16	49	29	0	0	122	44	122
N	0	0	0	0	0	9	6	10	31	13	0	0	69	25	69
7 HR	2.59	3.72	4.58	5.26	5.15	6.15	6.98	6.42	7.66	5.59	3.68	1.54	4.95	6.53	6.18
N	207	184	210	204	207	201	213	208	208	215	200	215	2472	622	1456
10 HR	2.33	3.36	4.39	5.35	5.15	6.06	6.90	6.03	6.92	4.70	2.78	1.14	4.60	6.33	5.87
N	300	265	304	296	301	293	308	303	298	308	290	309	3575	904	2107
12HR 8-8	2.21	3.16	4.11	5.08	4.87	5.75	6.53	5.68	6.50	4.35	2.54	1.04	4.33	5.99	5.53
N	358	318	365	353	362	351	368	361	357	370	350	370	4283	1080	2522

1993 POLLUTANT: OZONE COUNTY: Glenn SITE: 673

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	44	78	391	398	759	946	938	328	13	0	3895	2103	3838
N	0	0	7	13	59	61	112	147	140	49	2	0	590	320	581
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.24	2.96	3.26	4.10	4.48	4.43	4.94	4.98	5.44	3.97	3.07	2.02	3.83	4.79	4.62
N	217	193	214	209	211	202	215	212	207	213	199	206	2498	629	1469
10 HR	2.00	2.68	3.18	3.98	4.45	4.48	5.12	5.16	5.06	3.37	2.42	1.71	3.64	4.93	4.52
N	310	275	308	299	303	288	308	305	297	306	290	300	3589	901	2106
12HR 8-8	1.87	2.53	2.93	3.80	4.25	4.26	4.80	4.77	4.71	3.14	2.34	1.63	3.42	4.62	4.25
N	372	330	369	359	365	347	369	367	357	368	349	360	4312	1083	2532

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Imperial SITE: 694

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	76	701	1909	1778	2330	1238	1294	1287	640	273	46	11572	4862	10476
N	0	13	104	277	253	330	191	192	191	91	40	5	1687	713	1525
S>10	0	0	0	2	1	12	1	0	10	3	1	4	34	13	29
N	0	0	0	2	1	8	1	0	4	3	1	1	21	9	19
7 HR	2.86	3.97	5.06	6.42	6.35	6.77	5.53	5.44	5.90	5.00	4.42	3.70	5.12	5.90	5.91
N	208	194	217	206	215	210	217	217	210	217	207	217	2535	644	1492
10 HR	2.65	3.79	4.90	6.22	6.23	6.62	5.42	5.42	5.60	4.62	3.84	3.23	4.89	5.81	5.73
N	296	279	310	297	309	300	310	310	300	310	296	310	3627	920	2136
12HR 8-8	2.47	3.56	4.62	5.98	6.00	6.41	5.21	5.22	5.34	4.36	3.58	3.00	4.66	5.60	5.50
N	352	330	367	355	369	360	372	372	360	372	356	372	4337	1104	2560

1993 POLLUTANT: OZONE COUNTY: Imperial SITE: 695

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	86	485	1590	2090	1670	2931	1718	2105	1119	816	590	345	15545	6754	12449
N	12	75	229	291	235	398	253	295	173	117	78	49	2205	946	1762
S>10	1	0	10	24	13	31	1	12	0	28	15	6	141	44	109
N	1	0	7	12	6	16	1	7	0	5	6	4	65	24	47
7 HR	3.24	4.91	6.28	6.90	6.33	7.35	6.32	6.48	6.03	5.28	5.41	4.78	5.78	6.81	6.42
N	169	182	217	210	217	210	126	154	60	217	210	208	2180	490	1194
10 HR	3.06	4.94	6.12	6.68	6.20	7.11	6.08	6.35	5.11	4.81	4.86	4.31	5.50	6.60	6.14
N	244	259	309	300	310	300	180	220	88	310	300	295	3115	700	1708
12HR 8-8	2.82	4.62	5.77	6.43	6.00	7.00	5.91	6.23	5.04	4.59	4.59	4.05	5.27	6.48	5.96
N	292	311	371	360	372	360	216	264	105	372	360	355	3738	840	2049

1993 POLLUTANT: OZONE COUNTY: Inyo SITE: 723

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	-1	0	316	691	566	980	873	532	172	13	0	4143	2419	4130
N	0	0	0	53	114	94	157	136	86	27	2	0	669	387	667
S>10	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	3.36	-1.00	4.84	5.00	4.97	5.05	5.10	5.09	5.00	4.08	3.83	3.22	4.42	5.08	4.89
N	173	0	25	25	202	192	203	136	197	181	197	195	1726	531	1136
10 HR	3.00	-1.00	4.60	4.86	4.91	5.03	5.08	5.05	4.78	3.85	3.48	2.76	4.23	5.05	4.78
N	255	0	35	36	292	280	294	199	286	263	286	278	2504	773	1650
12HR 8-8	2.89	-1.00	4.51	4.83	4.86	4.94	4.99	4.93	4.67	3.72	3.35	2.64	4.13	4.96	4.69
N	306	0	41	42	352	338	356	240	345	319	340	334	3013	934	1992

1993 POLLUTANT: OZONE COUNTY: Kern SITE: 203

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	228	820	1410	1674	2411	2155	2282	1098	335	0	12413	6240	11850
N	0	0	37	125	202	222	301	268	264	143	50	0	1612	791	1525
S>10	0	0	0	0	1	9	45	24	71	14	0	0	164	78	164
N	0	0	0	0	1	8	22	17	46	9	0	0	103	47	103
7 HR	1.66	2.81	3.78	4.98	6.09	6.43	7.66	7.63	8.50	6.02	4.22	1.81	5.12	7.27	6.80
N	209	189	194	168	207	178	210	184	202	210	204	204	2359	572	1359
10 HR	1.39	2.42	3.55	4.94	5.85	6.25	7.55	7.22	7.58	5.13	3.45	1.50	4.71	7.04	6.38
N	303	276	285	246	302	256	301	266	294	305	295	299	3428	823	1970
12HR 8-8	1.30	2.25	3.24	4.63	5.58	5.98	7.17	6.85	7.15	4.73	3.23	1.40	4.42	6.70	6.03
N	363	329	343	294	361	304	359	315	347	363	352	358	4088	978	2343

1993 POLLUTANT: OZONE COUNTY: Kern SITE: 242

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	53	751	1108	1957	1891	3136	3214	3176	4135	2371	631	19	22442	9526	19880
N	8	120	166	281	271	413	396	398	493	303	94	3	2946	1207	2555
S>10	0	0	0	3	3	47	76	81	148	62	0	0	420	204	420
N	0	0	0	3	3	29	41	43	72	26	0	0	217	113	217
7 HR	3.70	4.98	5.57	6.37	6.34	7.78	8.51	8.54	9.48	7.07	4.57	2.63	6.29	8.30	7.72
N	211	182	212	205	208	185	205	215	204	214	207	210	2458	605	1436
10 HR	3.39	4.73	5.39	6.39	6.23	7.61	8.28	7.98	8.74	6.61	4.09	2.30	5.97	7.97	7.40
N	306	266	306	295	303	266	298	310	298	308	297	303	3556	874	2078
12HR 8-8	3.33	4.57	5.15	6.10	6.00	7.32	7.93	7.67	8.38	6.27	3.88	2.23	5.72	7.65	7.09
N	366	320	367	352	361	318	356	367	351	367	357	363	4245	1041	2472

1993 POLLUTANT: OZONE COUNTY: Kern SITE: 243

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	9	200	540	844	1700	2012	2206	2278	1019	208	0	11016	5918	10599
N	0	1	32	86	129	233	287	302	298	139	32	0	1539	822	1474
S>10	0	0	0	0	0	7	2	3	12	5	0	0	29	12	29
N	0	0	0	0	0	7	2	3	11	5	0	0	28	12	28
7 HR	1.71	3.16	3.89	4.60	5.09	6.29	6.41	6.83	7.56	5.33	2.98	1.70	4.61	6.52	5.97
N	215	177	200	208	216	173	210	200	187	212	199	196	2393	583	1406
10 HR	1.67	3.19	4.04	4.87	5.25	6.40	6.62	6.90	7.53	5.42	2.88	1.59	4.70	6.65	6.12
N	275	227	262	268	278	229	275	261	253	277	258	254	3117	765	1841
12HR 8-8	1.52	2.98	3.73	4.49	4.92	6.11	6.23	6.48	7.01	4.94	2.61	1.44	4.36	6.28	5.71
N	337	278	317	328	340	275	332	314	302	334	313	308	3778	921	2225

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Kern SITE: 246

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	632	936	1622	2912	3622	2848	3667	16239	9382	15607
N	0	0	99	150	257	416	477	405	495	2299	1298	2200
S>10	0	0	0	0	0	3	10	2	2	17	15	17
N	0	0	0	0	0	3	8	2	2	15	13	15
7 HR	2.64	3.58	4.89	5.25	5.51	6.61	7.92	6.88	7.34	5.49	7.11	6.48
N	211	193	213	209	212	203	183	206	105	1735	592	1118
10 HR	2.56	3.45	4.82	5.28	5.51	6.61	7.92	6.78	7.27	5.45	7.08	6.46
N	305	279	309	300	307	296	266	289	150	2501	851	1608
12HR 8-8	2.48	3.36	4.62	5.11	5.38	6.42	7.68	6.58	6.98	5.28	6.87	6.27
N	366	333	368	357	365	352	317	349	180	2987	1018	1920

1993 POLLUTANT: OZONE COUNTY: Kern SITE: 247

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	6	0	757	1231	1636	2579	3159	3298	3199	1998	715	0	18578	9036	17100
N	1	0	113	181	231	320	380	405	394	270	104	0	2399	1105	2181
S>10	0	0	0	1	1	62	73	53	38	8	0	0	236	188	236
N	0	0	0	1	1	35	43	36	28	7	0	0	151	114	151
7 HR	2.71	3.70	4.91	5.53	6.14	7.52	8.36	8.25	8.06	6.37	4.54	2.25	5.69	8.04	7.14
N	207	185	213	205	215	207	214	175	200	216	206	205	2448	596	1432
10 HR	2.62	3.62	5.00	5.64	6.14	7.53	8.29	8.29	8.35	6.49	4.42	2.18	5.69	8.02	7.21
N	301	268	308	297	308	298	307	252	287	309	298	300	3533	857	2058
12HR 8-8	2.47	3.42	4.67	5.36	5.82	7.19	7.86	7.89	7.85	6.07	4.12	2.01	5.37	7.64	6.83
N	362	324	368	354	369	353	369	299	346	367	356	354	4221	1021	2457

1993 POLLUTANT: OZONE COUNTY: Kern SITE: 248

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	278	332	388	1148	1870	1681	1892	1093	374	0	9056	4699	8404
N	0	0	45	53	61	159	257	233	246	148	52	0	1254	649	1157
S>10	0	0	0	0	0	2	0	0	9	0	0	0	11	2	11
N	0	0	0	0	0	2	0	0	9	0	0	0	11	2	11
7 HR	1.90	2.97	4.04	4.56	4.63	5.70	6.60	6.50	7.23	5.85	3.98	1.66	4.65	6.27	5.93
N	216	187	205	208	143	206	215	206	209	208	204	209	2416	627	1395
10 HR	1.80	2.86	3.99	4.66	4.51	5.73	6.65	6.29	6.79	5.10	3.12	1.40	4.41	6.23	5.73
N	310	271	297	294	207	298	308	301	300	302	297	301	3486	907	2010
12HR 8-8	1.62	2.61	3.61	4.37	4.34	5.50	6.33	5.95	6.37	4.66	2.80	1.22	4.12	5.93	5.41
N	370	326	358	353	247	354	369	357	357	360	353	360	4164	1080	2397

1993 POLLUTANT: OZONE COUNTY: Kern SITE: 252

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	-1	-1	-1	-1	-1	2907	1174	336	16	4433	0	4081
N	0	0	0	0	0	0	0	0	395	174	51	3	623	0	569
S>10	-1	-1	-1	-1	-1	-1	-1	-1	17	2	0	0	19	0	19
N	0	0	0	0	0	0	0	0	13	1	0	0	14	0	14
7 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6.18	5.13	4.47	3.71	4.92	.00	5.64
N	0	0	0	0	0	0	0	0	205	217	182	184	788	0	422
10 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6.60	4.98	4.12	3.11	4.73	.00	5.76
N	0	0	0	0	0	0	0	0	294	310	275	281	1160	0	604
12HR 8-8	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	6.42	4.88	4.04	3.03	4.65	.00	5.63
N	0	0	0	0	0	0	0	0	354	371	323	320	1368	0	725

1993 POLLUTANT: OZONE COUNTY: Kings SITE: 701

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	65	265	468	1156	1399	3353	2555	3288
N	0	0	10	42	75	161	202	490	363	480
S>10	0	0	0	0	0	1	0	1	1	1
N	0	0	0	0	0	1	0	1	1	1
7 HR	1.55	2.61	3.19	4.05	4.44	5.42	5.47	3.84	5.44	4.84
N	209	191	184	207	209	207	206	1413	413	829
10 HR	1.37	2.40	3.06	4.28	4.57	5.72	5.82	3.91	5.77	5.10
N	302	276	271	297	303	297	296	2042	593	1193
12HR 8-8	1.27	2.18	2.75	3.95	4.31	5.32	5.39	3.62	5.36	4.74
N	364	331	327	357	364	357	356	2456	713	1434

1993 POLLUTANT: OZONE COUNTY: Lake SITE: 713

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	32	0	76	0	38	0	235	246	6	0	633	38	595
N	0	0	5	0	12	0	6	0	36	38	1	0	98	6	92
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.00	2.33	2.47	3.03	3.22	2.42	3.03	2.98	3.72	4.17	4.02	3.17	3.05	2.82	3.23
N	206	185	211	204	208	200	204	213	203	207	196	208	2445	617	1439
10 HR	1.95	2.23	2.47	3.11	3.14	2.44	2.88	2.85	3.57	3.86	3.62	2.90	2.92	2.73	3.13
N	293	268	304	294	299	289	297	306	294	301	287	305	3537	892	2080
12HR 8-8	1.80	2.11	2.28	3.00	3.05	2.35	2.79	2.73	3.41	3.66	3.44	2.77	2.79	2.62	3.00
N	354	321	366	352	361	349	357	368	353	361	345	363	4250	1074	2501

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Madera SITE: 3

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	130	531	958	1600	2189	1622	1873	942	385	0	10230	5411	9715
N	0	0	20	83	145	210	290	227	234	128	55	0	1392	727	1317
S>10	0	0	0	0	0	13	3	7	43	15	0	0	81	23	81
N	0	0	0	0	0	11	3	4	20	9	0	0	47	18	47
7 HR	1.49	2.55	3.21	4.73	5.39	6.40	6.79	6.18	7.32	5.53	4.12	2.04	4.71	6.46	6.06
N	171	189	207	195	208	205	213	211	204	214	206	214	2437	629	1450
10 HR	1.36	2.42	3.26	4.85	5.34	6.49	7.15	6.17	6.90	4.78	3.26	1.63	4.53	6.60	5.96
N	247	273	302	281	306	297	305	305	296	308	295	308	3523	907	2098
12HR 8-8	1.27	2.19	2.93	4.54	5.09	6.14	6.65	5.77	6.42	4.42	3.04	1.53	4.22	6.19	5.58
N	298	329	362	335	361	355	367	366	354	368	355	369	4219	1088	2506

1993 POLLUTANT: OZONE COUNTY: Marin SITE: 451

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	19	0	45	46	25	114	131	55	18	0	453	185	416
N	0	0	3	0	7	7	4	17	20	9	3	0	70	28	64
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	.99	1.73	2.18	2.89	2.91	2.77	2.53	2.72	2.97	2.37	1.80	1.03	2.24	2.67	2.73
N	214	190	199	207	215	210	217	212	186	208	204	212	2474	639	1455
10 HR	.89	1.59	1.98	2.73	2.76	2.60	2.37	2.47	2.63	2.09	1.46	.87	2.03	2.48	2.52
N	309	274	290	297	309	300	309	306	271	302	296	305	3568	915	2094
12HR 8-8	.84	1.44	1.84	2.65	2.71	2.48	2.27	2.32	2.43	1.87	1.29	.77	1.91	2.36	2.39
N	369	330	348	356	369	359	369	366	325	363	354	367	4275	1094	2507

1993 POLLUTANT: OZONE COUNTY: Mariposa SITE: 742

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	25	6	374	488	1506	1021	1313	220	52	0	5005	3015	4928
N	0	0	4	1	61	78	235	162	201	34	9	0	785	475	772
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.17	3.04	3.54	4.43	4.51	4.62	5.49	5.19	5.29	3.57	2.61	1.10	3.73	5.10	4.73
N	208	155	216	208	202	206	211	207	207	214	201	209	2444	624	1455
10 HR	1.10	2.66	3.27	4.24	4.62	4.70	5.81	5.41	5.53	3.44	2.30	.86	3.68	5.31	4.82
N	296	222	309	299	296	297	304	300	297	308	292	304	3524	901	2101
12HR 8-8	1.08	2.58	3.12	4.21	4.52	4.54	5.50	5.09	5.10	3.07	2.09	.87	3.50	5.05	4.57
N	356	265	371	356	355	356	365	362	357	366	350	364	4223	1083	2517

1993 POLLUTANT: OZONE COUNTY: Mariposa SITE: 743

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	244	785	883	1817	1451	1535	188	150	0	7053	4151	6903
N	0	0	0	41	125	133	261	217	218	31	23	0	1049	611	1026
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.58	3.87	3.65	4.94	5.14	5.26	6.44	6.10	6.30	3.94	3.60	1.95	4.48	6.07	5.51
N	210	167	94	88	209	105	217	215	140	181	192	174	1992	537	1155
10 HR	2.28	3.51	3.38	4.86	5.04	5.13	6.33	5.86	6.11	3.35	3.01	1.53	4.18	5.90	5.29
N	299	227	107	111	302	150	309	308	200	259	284	259	2815	767	1639
12HR 8-8	2.18	3.33	3.01	4.54	4.94	4.99	6.14	5.64	5.76	3.05	2.82	1.46	3.99	5.72	5.07
N	355	275	163	157	362	180	371	367	240	309	328	311	3418	918	1986

1993 POLLUTANT: OZONE COUNTY: Mariposa SITE: 746

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	64	152	432	1460	1283	5241	4347	1990	1037	0	16006	7984	14905
N	0	0	11	25	70	230	201	647	604	296	161	0	2245	1078	2073
S>10	0	0	0	0	0	0	0	21	1	0	0	0	22	21	22
N	0	0	0	0	0	0	0	20	1	0	0	0	21	20	21
7 HR	3.43	3.82	3.70	4.37	4.40	5.25	5.00	8.00	7.14	5.63	4.98	3.52	4.93	6.50	5.73
N	159	187	207	210	217	184	50	202	184	185	178	203	2166	436	1232
10 HR	3.38	3.85	3.75	4.46	4.56	5.53	5.27	8.17	7.51	6.03	5.10	3.47	5.12	6.72	5.99
N	218	241	267	280	310	269	71	295	262	262	256	288	3019	635	1749
12HR 8-8	3.41	3.85	3.72	4.43	4.49	5.40	5.23	8.07	7.29	5.82	5.00	3.50	5.03	6.61	5.87
N	264	295	327	340	372	324	86	351	314	315	304	346	3638	761	2102

1993 POLLUTANT: OZONE COUNTY: Mendocino SITE: 769

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	78	47	12	30	30	121	0	0	0	318	72	318
N	0	0	0	13	7	2	5	5	19	0	0	0	51	12	51
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	.00	.00	2.30	3.48	3.23	2.82	2.76	3.23	3.60	2.43	2.44	1.45	2.32	2.94	3.08
N	215	196	217	209	216	202	217	217	210	212	209	216	2536	636	1483
10 HR	.00	.00	2.41	3.58	3.24	2.82	2.72	3.18	3.49	2.16	2.14	1.31	2.27	2.91	3.03
N	308	280	310	299	309	294	310	310	300	302	299	309	3630	914	2124
12HR 8-8	.00	.00	2.22	3.39	3.12	2.71	2.59	3.00	3.23	1.94	1.93	1.20	2.12	2.77	2.85
N	370	336	371	359	371	350	372	372	360	362	359	371	4353	1094	2546

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Mendocino SITE: 770

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	-1	-1	-1	6	6	0	28	0	0	40	12	40
N	0	0	0	0	0	0	1	1	0	5	0	0	7	2	7
S>10	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2.22	2.50	2.19	2.49	2.57	1.70	2.28	2.36	2.35
N	0	0	0	0	0	0	217	210	194	199	205	208	1233	427	820
10 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2.30	2.49	2.21	2.41	2.40	1.56	2.23	2.39	2.36
N	0	0	0	0	0	0	310	300	277	286	295	298	1766	610	1173
12HR 8-8	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2.24	2.38	2.00	2.23	2.20	1.46	2.08	2.30	2.21
N	0	0	0	0	0	0	372	360	335	344	355	358	2124	732	1411

1993 POLLUTANT: OZONE COUNTY: Merced SITE: 528

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	136	326	743	1472	2210	1735	1999	876	293	0	9790	5417	9361
N	0	0	22	53	115	203	290	245	265	123	41	0	1357	738	1294
S>10	0	0	0	0	0	0	14	2	4	0	0	0	20	16	20
N	0	0	0	0	0	0	10	1	4	0	0	0	15	11	15
7 HR	2.10	3.03	3.74	4.51	4.93	5.70	6.51	5.83	6.76	5.13	3.90	2.19	4.56	6.02	5.62
N	183	180	205	202	208	209	208	199	206	215	205	214	2434	616	1447
10 HR	2.02	2.80	3.61	4.62	5.02	6.09	7.08	6.39	6.97	4.92	3.28	1.90	4.60	6.52	5.87
N	260	265	300	293	305	299	302	292	297	308	294	307	3522	893	2096
12HR 8-8	1.85	2.60	3.33	4.34	4.76	5.72	6.57	5.90	6.40	4.52	3.03	1.78	4.27	6.06	5.45
N	314	320	360	351	363	359	361	353	356	370	354	369	4230	1073	2513

1993 POLLUTANT: OZONE COUNTY: Mono SITE: 785

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	27	231	178	937	1568	1074	1769	1784	1111	142	0	0	8821	4627	8385
N	4	38	29	155	252	166	270	277	176	24	0	0	1391	713	1320
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	3.93	4.79	4.51	5.07	5.12	5.11	4.78	5.14	4.95	4.01	3.68	3.36	4.55	5.01	4.89
N	198	184	217	197	209	201	209	202	197	202	195	177	2388	612	1417
10 HR	3.58	4.33	4.12	4.86	5.21	5.21	5.35	5.48	5.02	3.87	3.29	3.01	4.46	5.34	5.00
N	293	269	310	287	303	292	302	290	288	298	287	262	3481	884	2060
12HR 8-8	3.55	4.32	4.14	4.92	5.19	5.18	5.20	5.39	5.00	3.85	3.27	2.95	4.43	5.26	4.96
N	353	323	372	347	359	349	363	347	345	355	345	314	4172	1059	2465

1993 POLLUTANT: OZONE COUNTY: Monterey SITE: 544

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	7	0	0	0	0	31	72	27	25	99	0	0	261	130	254
N	1	0	0	0	0	5	11	4	4	17	0	0	42	20	41
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.25	2.66	2.92	3.24	3.12	2.95	2.74	2.35	3.10	3.49	2.55	1.93	2.77	2.68	3.00
N	208	192	214	195	205	204	189	205	201	202	201	209	2425	598	1401
10 HR	2.09	2.58	2.96	3.21	3.02	2.87	2.70	2.30	3.02	3.18	2.14	1.66	2.64	2.62	2.90
N	275	259	294	282	294	291	281	294	288	293	287	298	3436	866	2023
12HR 8-8	2.01	2.47	2.78	3.07	2.98	2.77	2.60	2.20	2.87	2.99	2.04	1.56	2.53	2.52	2.78
N	334	315	356	340	355	350	335	356	347	353	347	360	4148	1041	2436

1993 POLLUTANT: OZONE COUNTY: Monterey SITE: 550

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	18	56	343	83	300	511	588	112	0	2011	726	1899
N	0	0	0	3	9	49	11	46	80	89	17	0	304	106	287
S>10	0	0	0	0	0	2	0	0	0	0	0	0	2	2	2
N	0	0	0	0	0	2	0	0	0	0	0	0	2	2	2
7 HR	2.70	3.32	3.67	4.14	3.86	4.11	3.30	3.78	4.30	4.58	3.87	2.95	3.71	3.72	4.00
N	212	196	213	202	209	202	216	214	207	212	206	209	2498	632	1462
10 HR	2.55	3.24	3.54	3.95	3.73	3.88	3.29	3.46	4.19	4.38	3.49	2.62	3.53	3.54	3.84
N	304	280	306	292	303	293	309	309	297	306	298	302	3599	911	2109
12HR 8-8	2.40	3.07	3.35	3.84	3.67	3.81	3.11	3.40	4.02	4.15	3.35	2.48	3.39	3.43	3.71
N	366	336	368	352	364	350	371	368	357	367	355	361	4315	1089	2529

1993 POLLUTANT: OZONE COUNTY: Monterey SITE: 551

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	30	0	131	107	253	126	71	144	325	8	0	1195	450	1157
N	0	4	0	22	17	39	20	11	23	52	1	0	189	70	184
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.40	2.34	2.89	4.18	3.94	4.10	3.50	3.42	4.04	4.18	3.26	2.64	3.41	3.69	3.92
N	207	182	197	205	217	203	175	176	188	191	162	200	2303	554	1355
10 HR	2.36	2.33	2.86	4.00	3.72	3.87	3.27	3.16	3.92	3.99	2.97	2.47	3.25	3.46	3.72
N	299	264	284	297	310	294	249	259	272	273	237	293	3331	802	1954
12HR 8-8	2.18	2.12	2.63	3.84	3.63	3.71	3.09	3.06	3.65	3.70	2.76	2.26	3.06	3.31	3.54
N	361	316	342	355	372	353	302	309	328	330	283	351	4002	964	2349

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Monterey SITE: 552

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	6	56	181	136	55	68	268	44	0	814	372	770
N	0	0	0	1	9	26	19	8	11	42	7	0	123	53	116
S>10	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1
N	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1
7 HR	2.46	2.92	2.78	3.88	3.62	3.46	3.22	3.02	3.52	3.72	3.41	2.50	3.21	3.23	3.50
N	209	196	216	199	210	204	152	215	208	213	206	212	2440	571	1401
10 HR	2.10	2.75	2.74	3.79	3.55	3.32	3.26	2.86	3.45	3.37	2.67	1.95	2.97	3.13	3.37
N	302	280	309	289	306	296	219	309	298	307	296	306	3517	824	2024
12HR 8-8	1.96	2.65	2.59	3.69	3.50	3.25	3.15	2.80	3.27	3.18	2.54	1.78	2.85	3.05	3.26
N	358	336	370	344	365	353	260	369	356	367	351	364	4193	982	2414

1993 POLLUTANT: OZONE COUNTY: Napa SITE: 783

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	64	14	100	227	155	347	338	85	8	0	1338	729	1266
N	0	0	10	2	16	33	21	49	50	14	1	0	196	103	185
S>10	0	0	0	0	0	0	3	0	0	0	0	0	3	3	3
N	0	0	0	0	0	0	2	0	0	0	0	0	2	2	2
7 HR	1.75	2.86	2.86	3.80	3.91	4.17	3.91	4.13	4.22	2.87	2.64	1.28	3.22	4.07	3.84
N	216	192	207	176	211	204	212	201	157	209	158	155	2298	617	1370
10 HR	1.70	2.78	2.78	3.55	3.70	3.91	3.68	3.79	3.87	2.49	2.20	1.14	3.00	3.79	3.56
N	305	277	298	259	305	294	305	295	227	302	227	222	3316	894	1987
12HR 8-8	1.61	2.58	2.57	3.40	3.60	3.72	3.46	3.58	3.59	2.25	2.00	1.01	2.81	3.59	3.36
N	365	329	356	308	366	354	367	354	275	363	273	268	3978	1075	2387

1993 POLLUTANT: OZONE COUNTY: Nevada SITE: 794

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	0	36	237	-1	225	151	303	80	6	0	1038	376	1032
N	0	0	0	6	38	0	37	25	50	12	1	0	169	62	168
S>10	-1	-1	0	0	0	-1	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	-1.00	-1.00	3.39	3.93	4.41	-1.00	4.18	3.73	4.14	3.34	3.15	1.71	3.76	3.96	3.95
N	0	0	49	209	133	0	217	212	205	169	204	35	1433	429	1145
10 HR	-1.00	-1.00	3.30	4.00	4.52	-1.00	4.40	3.95	4.31	3.27	2.90	1.36	3.81	4.18	4.07
N	0	0	70	300	190	0	310	305	295	249	294	50	2063	615	1649
12HR 8-8	-1.00	-1.00	3.08	3.82	4.31	-1.00	4.11	3.65	3.92	3.04	2.73	1.30	3.56	3.88	3.80
N	0	0	84	359	228	0	372	367	355	298	354	61	2478	739	1979

1993 POLLUTANT: OZONE COUNTY: Nevada SITE: 797

MON	JAN	FEB	MAR	APR	MAY	JUN	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	-1	-1	116	116	116	116
N	0	0	0	0	0	19	19	19	19
S>10	-1	-1	-1	-1	-1	0	0	0	0
N	0	0	0	0	0	0	0	0	0
7 HR	-1.00	-1.00	-1.00	-1.00	-1.00	4.11	4.11	4.11	4.11
N	0	0	0	0	0	112	112	112	112
10 HR	-1.00	-1.00	-1.00	-1.00	-1.00	4.07	4.07	4.07	4.07
N	0	0	0	0	0	160	160	160	160
12HR 8-8	-1.00	-1.00	-1.00	-1.00	-1.00	3.97	3.97	3.97	3.97
N	0	0	0	0	0	192	192	192	192

1993 POLLUTANT: OZONE COUNTY: Nevada SITE: 800

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	-1	-1	-1	-1	-1	-1	884	481	0	1365	0	884
N	0	0	0	0	0	0	0	0	0	137	79	0	216	0	137
S>10	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4.40	3.90	2.95	3.75	.00	4.40
N	0	0	0	0	0	0	0	0	0	214	207	214	635	0	214
10 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4.55	3.87	2.86	3.76	.00	4.55
N	0	0	0	0	0	0	0	0	0	307	298	308	913	0	307
12HR 8-8	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4.37	3.80	2.85	3.67	.00	4.37
N	0	0	0	0	0	0	0	0	0	369	356	368	1093	0	369

1993 POLLUTANT: OZONE COUNTY: Orange SITE: 176

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	13	380	657	369	459	451	740	918	229	48	0	4264	1650	3823
N	0	2	56	91	54	62	66	101	109	33	7	0	581	229	516
S>10	0	0	0	1	0	2	2	13	37	0	0	0	55	17	55
N	0	0	0	1	0	2	1	7	14	0	0	0	25	10	25
7 HR	1.06	1.90	4.03	5.10	4.09	4.52	4.64	5.28	5.53	3.41	2.53	1.67	3.65	4.82	4.65
N	217	195	217	210	210	210	211	217	210	217	210	216	2540	638	1485
10 HR	.83	1.48	3.59	4.50	3.44	3.89	4.11	4.48	4.68	2.78	1.95	1.23	3.08	4.16	3.98
N	310	279	310	300	300	300	301	310	300	310	300	309	3629	911	2121
12HR 8-8	.76	1.33	3.25	4.22	3.30	3.63	3.84	4.17	4.20	2.53	1.77	1.11	2.85	3.88	3.69
N	371	335	372	360	360	360	361	372	360	372	360	371	4354	1093	2545

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Orange SITE: 177

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	302	935	652	1229	936	1019	1144	356	105	0	6678	3184	6271
N	0	0	45	129	90	147	124	131	131	47	16	0	860	402	799
S>10	0	0	0	7	10	66	18	27	64	1	0	0	193	111	193
N	0	0	0	6	5	30	7	11	30	1	0	0	90	48	90
7 HR	1.25	1.79	3.83	5.62	5.02	6.51	5.76	5.94	6.18	3.91	2.81	1.72	4.20	6.06	5.55
N	214	193	204	208	216	203	217	214	206	214	210	217	2516	634	1478
10 HR	.93	1.43	3.35	5.10	4.42	5.76	5.20	5.19	5.41	3.18	2.12	1.26	3.62	5.38	4.89
N	307	277	291	298	309	295	310	307	297	309	300	310	3610	912	2125
12HR 8-8	.85	1.31	3.06	4.74	4.19	5.35	4.82	4.75	4.88	2.86	1.92	1.10	3.32	4.97	4.51
N	369	333	348	358	371	353	372	369	355	369	360	372	4329	1094	2547

1993 POLLUTANT: OZONE COUNTY: Orange SITE: 186

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	33	409	870	667	755	526	608	1092	315	100	0	5375	1889	4833
N	0	5	63	126	99	98	76	87	135	48	16	0	753	261	669
S>10	0	0	0	0	0	17	2	4	46	0	0	0	69	23	69
N	0	0	0	0	0	9	2	2	16	0	0	0	29	13	29
7 HR	1.44	2.73	4.11	5.35	4.72	5.32	4.77	5.08	5.85	4.04	3.11	2.44	4.08	5.05	5.01
N	214	196	215	210	217	210	217	217	208	216	209	217	2546	644	1495
10 HR	1.26	2.25	3.78	4.96	4.43	5.02	4.49	4.69	5.33	3.50	2.47	1.85	3.67	4.73	4.63
N	308	280	309	300	310	300	310	310	299	309	299	310	3644	920	2138
12HR 8-8	1.13	2.13	3.53	4.69	4.22	4.69	4.27	4.36	4.87	3.29	2.35	1.73	3.44	4.44	4.34
N	369	336	368	360	372	360	372	372	358	371	359	372	4369	1104	2565

1993 POLLUTANT: OZONE COUNTY: Orange SITE: 190

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	19	25	718	1046	654	694	401	647	1042	431	125	0	5802	1742	4915
N	3	4	102	151	100	98	63	90	131	65	20	0	827	251	698
S>10	0	0	0	1	0	4	0	7	37	0	0	0	49	11	49
N	0	0	0	1	0	4	0	6	13	0	0	0	24	10	24
7 HR	1.83	2.77	4.66	5.62	4.71	5.33	4.69	5.16	5.68	4.12	3.18	2.10	4.15	5.06	5.04
N	217	196	217	207	214	208	217	217	210	217	210	217	2547	642	1490
10 HR	1.55	2.43	4.46	5.30	4.31	4.96	4.43	4.65	5.27	3.74	2.60	1.69	3.78	4.68	4.66
N	310	279	310	298	303	298	310	310	300	310	300	310	3638	918	2129
12HR 8-8	1.41	2.21	4.10	4.98	4.16	4.76	4.28	4.41	4.89	3.45	2.37	1.50	3.55	4.48	4.41
N	372	335	372	357	365	357	372	372	360	372	360	372	4366	1101	2555

1993 POLLUTANT: OZONE COUNTY: Orange SITE: 195

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	19	19	413	718	501	454	197	0	969	232	0	0	3522	651	3071
N	3	3	65	106	78	68	31	0	130	37	0	0	521	99	450
S>10	0	0	0	0	0	0	0	0	8	0	0	0	8	0	8
N	0	0	0	0	0	0	0	0	4	0	0	0	4	0	4
7 HR	2.01	2.98	3.99	5.14	4.32	4.59	4.36	2.55	5.27	3.76	1.40	1.98	3.53	3.82	4.27
N	214	193	214	210	217	209	216	217	209	215	207	217	2538	642	1493
10 HR	1.72	2.73	3.93	4.86	4.05	4.36	4.21	2.34	4.88	3.45	1.19	1.63	3.28	3.63	4.01
N	308	278	308	300	309	300	310	310	300	307	297	310	3637	920	2136
12HR 8-8	1.57	2.50	3.60	4.66	3.96	4.23	4.06	2.27	4.53	3.17	1.08	1.42	3.09	3.51	3.83
N	368	332	368	360	371	358	371	372	359	369	357	372	4357	1101	2560

1993 POLLUTANT: OZONE COUNTY: Placer SITE: 813

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	20	108	123	615	928	1862	1856	1852	576	202	6	8148	4646	7812
N	0	3	18	20	95	133	258	257	260	84	32	1	1161	648	1107
S>10	0	0	0	0	0	3	15	12	8	0	0	0	38	30	38
N	0	0	0	0	0	2	12	10	6	0	0	0	30	24	30
7 HR	2.33	3.08	3.50	4.23	4.73	5.22	6.01	6.17	6.61	4.38	3.92	2.65	4.43	5.81	5.34
N	192	181	206	202	215	207	204	215	209	213	210	214	2468	626	1465
10 HR	2.16	3.04	3.49	4.35	4.88	5.41	6.23	6.44	6.39	4.13	3.46	2.34	4.39	6.03	5.40
N	271	267	295	295	308	296	294	308	299	307	298	305	3543	898	2107
12HR 8-8	2.10	2.92	3.31	4.16	4.67	5.17	5.98	6.09	6.11	3.92	3.31	2.25	4.19	5.75	5.16
N	325	320	355	352	370	356	354	370	359	368	358	367	4254	1080	2529

1993 POLLUTANT: OZONE COUNTY: Placer SITE: 818

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	6	0	115	292	764	804	1387	1252	1454	496	195	0	6765	3443	6449
N	1	0	19	48	119	121	191	180	212	76	30	0	997	492	947
S>10	0	0	0	0	1	0	1	5	3	0	0	0	10	6	10
N	0	0	0	0	1	0	1	4	3	0	0	0	9	5	9
7 HR	2.72	3.24	3.86	4.64	4.93	5.03	5.89	5.46	6.30	4.48	3.96	2.72	4.44	5.46	5.24
N	217	186	210	205	211	196	200	215	207	212	208	206	2473	611	1446
10 HR	2.42	3.01	3.80	4.60	5.00	5.00	5.88	5.60	5.98	3.97	3.40	2.33	4.25	5.50	5.14
N	310	270	303	295	305	287	295	308	297	305	298	296	3569	890	2092
12HR 8-8	2.35	2.90	3.60	4.43	4.82	4.82	5.65	5.33	5.68	3.77	3.24	2.22	4.07	5.27	4.93
N	372	326	365	355	366	344	355	370	357	367	358	356	4291	1069	2514

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Placer SITE: 820

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	7	19	234	169	491	632	1150	1196	1151	338	32	0	5419	2978	5127
N	1	3	37	28	73	88	156	162	158	48	5	0	759	406	713
S>10	0	0	0	0	0	0	23	11	16	0	0	0	50	34	50
N	0	0	0	0	0	0	9	6	10	0	0	0	25	15	25
7 HR	2.43	3.31	4.08	4.34	4.63	4.74	5.55	5.60	6.04	3.87	2.87	1.48	4.11	5.31	4.97
N	188	181	201	198	207	199	203	214	204	213	203	199	2410	616	1438
10 HR	2.13	3.05	3.76	4.10	4.50	4.67	5.55	5.53	5.36	3.15	2.05	1.18	3.78	5.26	4.69
N	273	264	297	293	304	292	296	308	297	309	295	282	3510	896	2099
12HR 8-8	2.01	2.87	3.54	3.91	4.30	4.45	5.27	5.18	5.05	2.95	1.93	1.09	3.57	4.97	4.44
N	328	319	354	346	358	346	347	367	352	365	353	340	4175	1060	2481

1993 POLLUTANT: OZONE COUNTY: Placer SITE: 822

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	81	96	383	521	942	897	936	258	44	0	4158	2360	4033
N	0	0	14	16	57	71	127	120	132	36	7	0	580	318	559
S>10	-1	-1	0	0	0	1	22	18	11	1	0	0	53	41	53
N	0	0	0	0	0	1	10	9	6	1	0	0	27	20	27
7 HR	-1.00	-1.00	3.39	3.84	4.31	4.61	5.30	5.19	5.57	3.67	2.69	1.34	4.00	5.03	4.64
N	0	0	164	203	213	208	215	216	208	214	207	217	2065	639	1477
10 HR	-1.00	-1.00	3.02	3.56	4.17	4.41	5.26	5.04	4.81	2.93	1.96	1.02	3.63	4.91	4.31
N	0	0	247	295	308	298	309	309	299	309	299	310	2983	916	2127
12HR 8-8	-1.00	-1.00	2.85	3.39	3.97	4.21	4.91	4.68	4.51	2.70	1.82	.95	3.41	4.60	4.06
N	0	0	296	349	367	356	367	368	356	367	353	370	3549	1091	2530

1993 POLLUTANT: OZONE COUNTY: Plumas SITE: 821

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	YR TOT	JUN-AUG	APR-OCT
SUM06	299	160	313	421	572	437	1090	690	840	304	5126	2217	4354
N	47	26	50	70	91	71	171	111	134	51	822	353	699
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	4.32	4.19	4.26	4.79	4.88	4.78	5.20	4.92	5.20	4.71	4.76	4.96	4.97
N	47	191	213	111	210	197	192	212	202	28	1603	601	1152
10 HR	4.06	4.03	4.26	5.00	5.09	4.96	5.39	5.14	5.22	4.50	4.85	5.16	5.13
N	69	276	305	159	303	284	277	305	292	36	2306	866	1656
12HR 8-8	3.80	3.84	3.95	4.65	4.80	4.72	5.15	4.83	4.85	4.07	4.56	4.89	4.83
N	81	331	367	191	365	343	330	367	352	44	2771	1040	1992

1993 POLLUTANT: OZONE COUNTY: Riverside SITE: 137

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	13	746	2141	2156	3091	4463	3031	2075	592	65	6	18379	10585	17549
N	0	2	115	299	309	382	544	394	285	88	10	1	2429	1320	2301
S>10	0	0	0	12	3	91	106	50	23	0	0	0	285	247	285
N	0	0	0	8	1	47	63	26	12	0	0	0	157	136	157
7 HR	2.53	3.60	4.79	5.94	5.92	6.01	7.74	6.24	5.77	4.46	3.64	3.35	5.00	6.68	6.01
N	217	196	217	210	215	201	217	216	210	217	210	217	2543	634	1486
10 HR	2.08	3.14	4.73	6.30	6.31	7.01	8.55	6.97	5.94	4.17	2.93	2.62	5.06	7.52	6.46
N	310	280	310	300	308	287	310	309	300	310	300	310	3634	906	2124
12HR 8-8	1.96	2.96	4.49	6.07	6.06	6.73	8.21	6.63	5.74	3.99	2.83	2.54	4.85	7.20	6.20
N	372	336	372	359	370	342	372	371	360	372	360	372	4358	1085	2546

1993 POLLUTANT: OZONE COUNTY: Riverside SITE: 141

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	26	0	245	1415	1616	2199	1811	1907	1892	955	226	27	12319	5917	11795
N	4	0	40	201	229	285	241	252	253	134	32	4	1675	778	1595
S>10	0	0	0	2	11	28	11	31	25	3	0	0	111	70	111
N	0	0	0	2	5	15	6	13	15	2	0	0	58	34	58
7 HR	2.66	2.61	4.05	6.11	6.20	7.14	6.85	7.15	6.71	5.30	4.27	3.34	5.21	7.05	6.50
N	213	195	217	209	217	210	217	216	210	213	210	216	2543	643	1492
10 HR	2.35	2.46	3.78	5.97	6.09	6.84	6.49	6.67	6.58	5.03	3.83	2.97	4.93	6.66	6.24
N	307	279	310	299	310	300	310	309	300	306	300	310	3640	919	2134
12HR 8-8	2.20	2.31	3.53	5.73	5.83	6.72	6.21	6.48	6.31	4.73	3.56	2.73	4.71	6.47	6.00
N	368	335	372	359	372	360	372	371	360	368	360	370	4367	1103	2562

1993 POLLUTANT: OZONE COUNTY: Riverside SITE: 144

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	584	1723	1783	2582	2690	2962	2524	1114	236	7	16205	8234	15378
N	0	0	83	209	218	251	281	295	237	131	32	1	1738	827	1622
S>10	0	0	0	66	62	286	244	343	437	63	1	0	1502	873	1501
N	0	0	0	23	28	79	93	115	96	20	1	0	455	287	454
7 HR	1.95	2.60	4.25	6.75	6.99	9.41	8.93	9.87	8.97	5.75	3.64	2.56	5.91	9.41	8.04
N	217	196	216	210	216	159	209	217	210	215	210	215	2490	585	1436
10 HR	1.74	2.33	4.33	6.83	6.77	8.90	8.82	9.36	8.88	5.37	3.23	2.21	5.67	9.04	7.80
N	310	280	309	300	309	229	299	310	300	308	300	308	3562	838	2055
12HR 8-8	1.57	2.10	3.85	6.21	6.24	8.22	7.95	8.46	7.93	4.80	2.89	1.99	5.13	8.21	7.07
N	372	336	371	360	371	274	359	372	360	370	360	370	4275	1005	2466

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Riverside SITE: 149

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	6	63	1023	1869	1955	2981	3334	3418	2273	770	184	13	17889	9733	16600
N	1	10	135	238	254	304	342	328	250	100	26	2	1990	974	1816
S>10	0	0	11	35	38	393	369	492	180	17	0	0	1535	1254	1524
N	0	0	9	22	18	108	129	132	63	9	0	0	490	369	481
7 HR	2.88	3.70	5.46	6.94	6.82	9.10	9.39	10.40	7.92	4.57	2.65	2.58	6.05	9.64	7.89
N	217	195	216	209	208	210	217	215	210	215	210	214	2536	642	1484
10 HR	2.55	3.34	5.37	6.90	6.76	8.92	9.71	9.96	7.73	4.20	2.36	2.15	5.84	9.54	7.75
N	310	280	309	299	299	300	310	309	300	308	300	307	3631	919	2125
12HR 8-8	2.40	3.14	4.93	6.53	6.44	8.55	8.98	9.31	7.24	3.85	2.01	1.90	5.45	8.95	7.27
N	372	334	371	359	358	360	372	370	360	370	360	369	4355	1102	2549

1993 POLLUTANT: OZONE COUNTY: Riverside SITE: 150

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	87	544	494	1700	1598	1541	1298	228	0	0	7490	4839	7403
N	0	0	14	83	76	215	225	201	177	34	0	0	1025	641	1011
S>10	0	0	0	0	2	41	14	34	12	0	0	0	103	89	103
N	0	0	0	0	1	25	5	14	7	0	0	0	52	44	52
7 HR	1.88	2.39	3.15	4.22	4.18	4.85	5.41	5.51	4.77	2.91	2.13	1.08	3.54	5.26	4.57
N	217	195	217	210	189	210	217	216	210	208	210	217	2516	643	1460
10 HR	1.64	2.14	3.00	4.41	4.33	5.61	5.95	5.79	5.28	3.04	2.05	.95	3.68	5.78	4.93
N	310	279	310	300	267	300	310	310	300	301	300	310	3597	920	2088
12HR 8-8	1.59	2.10	2.87	4.23	4.11	5.35	5.60	5.51	5.02	2.93	2.04	.97	3.52	5.49	4.69
N	372	335	372	360	321	360	371	370	360	363	360	372	4316	1101	2505

1993 POLLUTANT: OZONE COUNTY: Riverside SITE: 155

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	25	823	1455	1097	1792	1619	1787	1454	714	143	21	10930	5198	9918
N	0	4	115	191	146	201	199	220	167	95	21	3	1362	620	1219
S>10	0	0	4	29	21	128	44	41	81	3	0	0	351	213	347
N	0	0	3	17	8	52	23	30	36	2	0	0	171	105	168
7 HR	2.19	2.96	4.82	6.26	5.81	7.44	6.84	7.03	6.02	4.46	3.23	2.56	4.97	7.10	6.27
N	217	196	211	204	203	210	217	217	210	216	210	217	2528	644	1477
10 HR	1.97	2.87	5.02	6.28	5.54	7.09	6.58	6.79	6.15	4.43	3.02	2.34	4.84	6.82	6.12
N	310	280	304	295	296	300	310	310	300	310	300	310	3625	920	2121
12HR 8-8	1.80	2.59	4.49	5.73	5.18	6.52	5.97	6.12	5.42	3.95	2.80	2.19	4.40	6.20	5.55
N	372	336	365	354	354	360	372	372	360	371	360	372	4348	1104	2543

1993 POLLUTANT: OZONE COUNTY: Riverside SITE: 157

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	13	475	1787	1462	2058	2850	1457	961	222	74	13	11372	6365	10797
N	0	2	76	258	220	283	392	209	133	36	11	2	1622	884	1531
S>10	0	0	0	5	0	12	6	4	24	0	0	0	51	22	51
N	0	0	0	4	0	9	3	3	10	0	0	0	29	15	29
7 HR	2.27	3.55	4.63	5.88	5.57	5.71	6.35	4.97	5.07	3.85	3.51	2.94	4.52	5.72	5.35
N	216	191	216	210	215	208	216	181	210	212	210	217	2502	605	1452
10 HR	1.81	3.04	4.24	5.78	5.49	5.67	6.35	4.87	4.56	3.35	2.94	2.39	4.20	5.67	5.16
N	309	275	310	300	309	298	309	264	300	306	300	310	3590	871	2086
12HR 8-8	1.65	2.81	4.01	5.59	5.32	5.55	6.17	4.74	4.43	3.23	2.73	2.21	4.03	5.53	5.01
N	371	331	370	360	369	358	371	314	360	367	360	372	4303	1043	2499

1993 POLLUTANT: OZONE COUNTY: Riverside SITE: 158

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	YR TOT	JUN-AUG	APR-OCT
SUM06	0	132	770	2075	2837	2554	2319	2505	1751	14943	7378	14041
N	0	22	126	313	420	359	325	340	270	2175	1024	2027
S>10	0	0	0	1	0	7	0	15	1	24	22	24
N	0	0	0	1	0	5	0	7	1	14	12	14
7 HR	3.83	4.56	5.00	5.89	6.33	6.34	5.63	5.99	5.57	5.33	6.11	6.00
N	208	180	153	160	120	146	27	162	146	1302	335	761
10 HR	3.70	4.53	5.06	6.12	6.60	6.69	6.50	6.47	5.70	5.54	6.57	6.32
N	284	243	196	230	176	212	42	236	202	1821	490	1098
12HR 8-8	3.67	4.45	4.98	6.01	6.49	6.54	6.27	6.33	5.62	5.43	6.42	6.20
N	343	299	246	276	212	257	49	281	245	2208	587	1320

1993 POLLUTANT: OZONE COUNTY: Riverside SITE: 159

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	25	65	759	1477	1190	2006	1981	2228	2062	772	172	49	12786	6215	11716
N	4	10	106	205	167	234	238	263	245	103	25	6	1606	735	1455
S>10	0	0	2	2	11	109	89	115	91	2	0	0	421	313	419
N	0	0	2	2	7	41	36	46	35	2	0	0	171	123	169
7 HR	2.23	3.15	4.75	6.04	5.61	7.10	6.69	7.60	7.04	4.78	3.50	3.25	5.16	7.13	6.41
N	213	196	194	210	217	202	216	215	210	207	198	215	2493	633	1477
10 HR	2.10	3.02	4.82	6.17	5.61	7.02	7.07	7.46	7.19	4.71	3.35	2.81	5.13	7.19	6.46
N	307	280	280	300	310	290	310	309	300	300	289	307	3582	909	2119
12HR 8-8	1.89	2.75	4.36	5.79	5.33	6.77	6.65	7.01	6.75	4.30	3.06	2.52	4.78	6.81	6.08
N	368	336	338	360	372	347	370	370	360	362	348	369	4300	1087	2541

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Riverside SITE: 160

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	31	391	1280	577	1215	914	1090	1306	524	136	19	7483	3219	6906
N	0	5	63	195	89	176	140	168	171	76	22	3	1108	484	1015
S>10	0	0	0	0	0	0	5	0	11	0	0	0	16	5	16
N	0	0	0	0	0	0	2	0	9	0	0	0	11	2	11
7 HR	2.39	3.26	4.44	5.79	4.95	5.88	5.35	5.72	6.05	4.53	3.66	2.68	4.56	5.65	5.46
N	217	194	217	210	208	210	211	217	210	217	210	214	2535	638	1483
10 HR	2.25	3.05	4.23	5.64	4.68	5.47	5.16	5.40	5.73	4.16	3.15	2.23	4.26	5.34	5.17
N	310	278	310	300	300	300	305	310	300	310	300	307	3630	915	2125
12HR 8-8	2.06	2.81	3.94	5.37	4.52	5.33	4.93	5.15	5.41	3.83	2.91	1.99	4.02	5.14	4.93
N	372	334	372	360	357	360	366	372	360	372	360	369	4354	1098	2547

1993 POLLUTANT: OZONE COUNTY: Sacramento SITE: 286

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	13	121	49	405	325	700	675	635	99	0	0	3022	1700	2888
N	0	2	20	8	62	48	108	99	95	15	0	0	457	255	435
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.46	3.12	3.66	4.18	4.71	4.40	4.86	4.86	4.90	3.21	2.08	1.48	3.66	4.71	4.48
N	215	194	184	177	215	201	216	213	208	179	202	215	2419	630	1409
10 HR	2.35	3.00	3.65	4.07	4.58	4.42	4.89	4.80	4.69	2.79	1.89	1.39	3.55	4.71	4.36
N	308	278	269	252	308	289	309	306	298	265	294	308	3484	904	2027
12HR 8-8	2.22	2.84	3.41	3.88	4.39	4.19	4.55	4.46	4.32	2.54	1.75	1.33	3.33	4.40	4.08
N	370	334	325	308	370	345	371	368	358	319	352	370	4190	1084	2439

1993 POLLUTANT: OZONE COUNTY: Sacramento SITE: 287

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	218	315	503	708	1382	1282	1441	349	131	0	6329	3372	5980
N	0	0	34	50	74	100	187	175	188	46	21	0	875	462	820
S>10	0	0	0	0	0	1	25	16	19	0	0	0	61	42	61
N	0	0	0	0	0	1	11	7	8	0	0	0	27	19	27
7 HR	2.27	2.51	3.85	4.48	4.63	5.09	5.98	5.60	6.35	3.66	3.20	1.71	4.16	5.59	5.18
N	182	187	203	192	207	168	204	216	180	129	189	180	2237	588	1296
10 HR	2.06	2.36	3.72	4.42	4.64	5.07	6.08	5.71	5.91	3.31	2.48	1.39	3.98	5.65	5.11
N	268	274	300	285	303	260	299	310	258	186	275	267	3285	869	1901
12HR 8-8	1.91	2.17	3.45	4.16	4.40	4.83	5.66	5.29	5.47	3.03	2.30	1.28	3.71	5.29	4.78
N	321	326	356	341	360	302	357	370	307	224	327	316	3907	1029	2261

1993 POLLUTANT: OZONE COUNTY: Sacramento SITE: 293

MON	JAN	FEB	MAR	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	162	162	0	0
N	0	0	27	27	0	0
S>10	0	0	0	0	0	0
N	0	0	0	0	0	0
7 HR	1.77	2.84	3.58	2.58	.00	.00
N	194	178	111	483	0	0
10 HR	1.54	2.58	3.26	2.32	.00	.00
N	287	264	162	713	0	0
12HR 8-8	1.41	2.42	3.02	2.15	.00	.00
N	342	317	196	855	0	0

1993 POLLUTANT: OZONE COUNTY: Sacramento SITE: 294

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	20	-1	109	125	399	441	521	455	776	364	0	0	3210	1417	3081
N	3	0	17	20	59	64	73	66	118	52	0	0	472	203	452
S>10	0	-1	0	0	0	1	1	1	1	0	0	0	4	3	4
N	0	0	0	0	0	1	1	1	1	0	0	0	4	3	4
7 HR	1.91	-1.00	3.32	4.00	4.45	4.57	4.60	4.20	5.12	3.41	2.53	1.59	3.64	4.45	4.36
N	203	0	141	208	213	194	210	214	185	158	148	207	2081	618	1382
10 HR	1.94	-1.00	3.30	3.87	4.40	4.58	4.69	4.17	4.69	3.01	2.14	1.23	3.50	4.48	4.24
N	297	0	205	300	307	294	305	310	278	228	217	302	3043	909	2022
12HR 8-8	1.82	-1.00	3.03	3.64	4.15	4.38	4.33	3.84	4.37	2.75	1.99	1.14	3.26	4.18	3.96
N	356	0	245	357	367	333	365	367	327	272	260	362	3611	1065	2388

1993 POLLUTANT: OZONE COUNTY: Sacramento SITE: 295

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	175	215	472	637	1143	667	820	374	70	0	4573	2447	4328
N	0	0	26	35	69	91	163	91	120	55	12	0	662	345	624
S>10	0	0	0	0	0	3	8	16	0	0	0	0	27	27	27
N	0	0	0	0	0	3	5	6	0	0	0	0	14	14	14
7 HR	2.09	2.87	3.63	4.36	4.74	5.11	5.73	4.88	5.29	3.93	2.91	1.32	4.06	5.24	4.86
N	57	159	213	202	210	208	207	208	198	208	197	198	2265	623	1441
10 HR	1.79	2.58	3.43	4.11	4.55	4.77	5.38	4.66	4.69	3.16	2.27	.97	3.67	4.93	4.47
N	90	236	307	295	305	298	303	303	288	302	288	292	3307	904	2094
12HR 8-8	1.69	2.40	3.14	3.89	4.35	4.56	5.10	4.32	4.31	2.91	2.09	.90	3.43	4.66	4.20
N	105	282	368	351	364	358	358	362	348	361	345	352	3954	1078	2502

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Sacramento SITE: 305

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	-1	204	87	181	414	768	585	642	193	13	0	3087	1767	2870
N	0	0	29	14	27	60	115	82	96	29	2	0	454	257	423
S>10	0	-1	0	0	0	0	0	7	0	0	0	0	7	7	7
N	0	0	0	0	0	0	0	3	0	0	0	0	3	3	3
7 HR	1.85	-1.00	3.73	4.23	3.86	4.59	4.96	4.60	4.79	3.28	2.14	1.09	3.55	4.72	4.34
N	212	0	201	195	200	194	215	216	210	207	199	209	2258	625	1437
10 HR	1.63	-1.00	3.56	3.97	3.64	4.55	4.89	4.37	4.31	2.68	1.64	.81	3.27	4.61	4.06
N	306	0	296	287	292	282	309	310	300	304	292	303	3281	901	2084
12HR 8-8	1.53	-1.00	3.27	3.80	3.44	4.27	4.50	4.02	3.90	2.45	1.49	.73	3.03	4.26	3.77
N	367	0	351	335	346	336	369	369	360	359	348	362	3902	1074	2474

1993 POLLUTANT: OZONE COUNTY: Sacramento SITE: 307

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	221	112	285	479	798	697	1015	394	136	0	4137	1974	3780
N	0	0	34	19	44	72	121	108	149	60	22	0	629	301	573
S>10	0	0	0	0	0	4	0	0	0	0	0	0	4	4	4
N	0	0	0	0	0	2	0	0	0	0	0	0	2	2	2
7 HR	2.66	3.28	3.59	4.11	4.39	4.69	5.06	4.55	5.53	4.00	3.44	2.30	3.97	4.77	4.60
N	213	129	207	203	206	176	180	189	197	217	152	201	2270	545	1368
10 HR	2.60	3.39	3.68	4.10	4.36	4.80	5.16	4.70	5.32	3.81	3.20	2.12	3.94	4.89	4.59
N	306	187	300	294	301	259	263	274	290	310	222	295	3301	796	1991
12HR 8-8	2.46	3.14	3.37	3.85	4.12	4.50	4.79	4.31	4.91	3.47	3.00	2.01	3.66	4.53	4.26
N	368	232	362	353	361	311	314	329	346	371	267	354	3968	954	2385

1993 POLLUTANT: OZONE COUNTY: Sacramento SITE: 310

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	0	152	0	143	404	593	553	800	258	65	0	2968	1550	2751
N	0	0	24	0	23	59	91	80	117	39	11	0	444	230	409
S>10	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	-1.00	2.51	3.18	3.28	3.88	4.35	4.50	4.33	4.87	3.52	2.45	.87	3.46	4.40	4.12
N	0	189	193	185	208	194	215	215	208	200	198	197	2202	624	1425
10 HR	-1.00	2.35	3.11	3.09	3.74	4.32	4.44	4.24	4.62	3.10	2.14	.72	3.28	4.33	3.95
N	0	274	287	275	303	285	308	308	299	290	287	291	3207	901	2068
12HR 8-8	-1.00	2.15	2.81	2.92	3.53	4.02	4.04	3.86	4.16	2.75	1.89	.66	3.00	3.97	3.62
N	0	328	347	326	362	343	370	370	356	350	347	352	3851	1083	2477

1993 POLLUTANT: OZONE COUNTY: San Benito SITE: 823

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	6	152	127	570	124	393	665	475	95	0	2607	1087	2506
N	0	0	1	25	21	86	18	57	96	73	14	0	391	161	376
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.91	3.44	3.53	4.12	4.09	4.68	3.87	4.24	4.94	4.30	3.64	2.55	3.86	4.26	4.32
N	209	196	216	208	215	210	212	211	209	210	204	212	2512	633	1475
10 HR	2.81	3.36	3.46	3.98	3.93	4.59	3.75	3.95	4.76	4.17	3.34	2.31	3.70	4.09	4.16
N	302	280	308	298	308	299	306	305	299	305	295	306	3611	910	2120
12HR 8-8	2.70	3.24	3.27	3.82	3.82	4.36	3.60	3.77	4.49	3.89	3.18	2.19	3.53	3.91	3.96
N	364	336	370	358	370	359	366	366	359	365	354	367	4334	1091	2543

1993 POLLUTANT: OZONE COUNTY: San Benito SITE: 824

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	39	371	567	1366	1044	1045	1449	1133	375	0	7389	3455	6975
N	0	0	7	58	88	196	163	159	213	167	56	0	1107	518	1044
S>10	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
N	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
7 HR	3.21	3.68	4.00	4.66	4.80	5.52	5.14	4.78	5.38	5.32	4.69	3.64	4.56	5.16	5.09
N	206	185	203	193	210	198	185	183	192	200	195	199	2349	566	1361
10 HR	3.07	3.59	4.00	4.75	4.82	5.76	5.39	5.07	5.79	5.38	4.51	3.45	4.62	5.42	5.28
N	301	271	293	281	307	287	259	272	274	291	288	294	3418	818	1971
12HR 8-8	2.89	3.40	3.76	4.60	4.69	5.55	5.12	4.88	5.50	5.07	4.28	3.19	4.40	5.19	5.06
N	360	324	353	337	361	344	315	323	333	350	344	354	4098	982	2363

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 155

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	297	790	1314	1799	3321	2617	1418	587	43	0	12186	7737	11846
N	0	0	43	124	198	251	446	354	210	89	7	0	1722	1051	1672
S>10	0	0	0	0	2	3	13	6	0	0	0	0	24	22	24
N	0	0	0	0	2	2	7	6	0	0	0	0	17	15	17
7 HR	2.35	3.37	4.31	5.21	5.51	5.93	7.16	6.67	5.76	4.39	3.27	2.38	4.71	6.58	5.77
N	158	195	212	203	215	188	181	215	210	217	199	216	2409	584	1429
10 HR	2.10	3.09	4.06	5.11	5.62	6.21	7.29	6.98	5.46	3.98	2.67	1.93	4.56	6.83	5.78
N	232	279	306	296	309	270	268	310	300	310	287	309	3476	848	2063
12HR 8-8	1.96	2.92	3.81	4.98	5.44	5.89	7.13	6.71	5.16	3.75	2.50	1.74	4.35	6.58	5.55
N	274	335	367	351	369	322	319	369	359	372	343	371	4151	1010	2461

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 175

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	6	517	1002	1016	2256	2171	2265	1747	650	93	0	11723	6692	11107
N	0	1	66	128	128	210	234	226	173	76	13	0	1255	670	1175
S>10	0	0	17	32	19	398	179	284	230	52	0	0	1211	861	1194
N	0	0	9	14	12	89	68	81	64	12	0	0	349	238	340
7 HR	1.87	2.25	4.15	5.40	5.35	8.64	7.77	8.47	7.28	4.40	2.55	1.70	5.00	8.29	6.76
N	216	194	216	208	217	209	217	217	208	215	209	217	2543	643	1491
10 HR	1.65	2.06	4.00	5.31	5.12	8.24	7.73	8.03	6.91	4.10	2.13	1.44	4.74	8.00	6.49
N	309	279	309	299	310	300	310	310	298	309	299	310	3642	920	2136
12HR 8-8	1.58	1.95	3.61	4.84	4.66	7.42	6.91	7.14	6.22	3.69	1.96	1.35	4.29	7.16	5.84
N	371	333	370	357	372	358	372	372	358	370	359	372	4364	1102	2559

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 181

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	44	1364	3133	3156	3609	5768	5313	2863	1221	2134	0	28605	14690	25063
N	0	7	179	389	398	374	582	518	330	168	318	0	3263	1474	2759
S>10	0	0	35	108	102	518	659	755	188	11	8	0	2384	1932	2341
N	0	0	12	50	48	121	212	200	62	7	6	0	718	533	700
7 HR	3.69	4.22	5.87	7.36	7.34	9.06	9.37	10.13	7.73	5.39	6.24	3.08	6.64	9.53	8.07
N	212	196	212	210	216	207	217	216	208	205	210	217	2526	640	1479
10 HR	3.28	3.81	5.69	7.66	7.69	9.66	10.89	11.46	7.90	4.89	5.31	2.61	6.76	10.68	8.61
N	306	280	305	300	310	298	310	310	298	302	300	306	3625	918	2128
12HR 8-8	3.26	3.80	5.50	7.39	7.28	9.06	10.12	10.61	7.45	4.75	5.32	2.57	6.45	9.94	8.11
N	366	336	367	360	371	356	372	368	357	358	360	368	4339	1096	2542

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 188

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	9	99	476	642	631	2613	2005	882	128	318	13	7816	5249	7377
N	0	1	16	77	101	104	398	309	139	20	53	2	1220	811	1148
S>10	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	-1.00	3.09	3.60	4.76	4.90	4.52	5.96	5.63	5.00	3.41	3.23	1.73	4.19	5.36	4.88
N	0	147	197	187	210	199	205	180	201	202	177	205	2110	584	1384
10 HR	-1.00	3.10	3.70	4.82	5.03	4.62	5.98	5.77	4.88	3.46	3.04	1.67	4.21	5.46	4.93
N	0	220	290	271	298	288	301	264	290	292	268	296	3078	853	2004
12HR 8-8	-1.00	3.02	3.50	4.68	4.89	4.51	5.93	5.64	4.73	3.28	2.93	1.50	4.08	5.36	4.80
N	0	253	351	326	360	344	357	315	350	352	307	354	3669	1016	2404

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 191

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	YR TOT	JUN-AUG	APR-OCT
SUM06	0	96	470	1806	2626	3679	3747	5208	17632	12634	17066
N	0	16	78	277	402	508	528	744	2553	1780	2459
S>10	0	0	0	0	0	12	3	0	15	15	15
N	0	0	0	0	0	10	2	0	12	12	12
7 HR	3.36	4.21	5.14	5.87	6.15	6.86	6.68	7.00	5.57	6.77	6.40
N	215	123	109	199	207	205	214	7	1279	426	832
10 HR	3.04	3.95	4.79	5.79	6.24	7.00	6.76	7.20	5.51	6.88	6.46
N	309	177	162	293	303	299	310	10	1863	619	1215
12HR 8-8	2.98	3.79	4.76	5.76	6.17	6.94	6.81	7.17	5.45	6.88	6.43
N	370	214	192	345	358	351	368	12	2210	731	1434

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 197

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	555	1242	1502	2354	2296	2593	1966	772	92	0	13372	7243	12725
N	0	0	73	159	179	222	241	256	202	93	13	0	1438	719	1352
S>10	0	0	10	46	59	373	181	313	233	56	0	0	1271	867	1261
N	0	0	6	18	28	97	78	98	67	14	0	0	406	273	400
7 HR	1.71	2.25	4.26	5.85	6.48	8.68	7.80	8.71	7.38	4.71	2.85	2.06	5.24	8.40	7.09
N	217	195	217	206	217	209	217	217	210	217	210	217	2549	643	1493
10 HR	1.40	1.93	4.09	5.77	6.26	8.49	8.06	8.70	7.38	4.37	2.43	1.66	5.06	8.42	7.00
N	310	279	310	297	310	299	310	310	300	310	300	310	3645	919	2136
12HR 8-8	1.32	1.80	3.73	5.25	5.72	7.64	7.15	7.73	6.63	3.92	2.23	1.56	4.57	7.51	6.29
N	372	335	372	355	372	359	372	372	360	372	360	372	4373	1103	2562

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 201

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	805	1778	2654	3272	4500	4525	2582	1013	183	0	21312	12297	20324
N	0	0	112	239	352	389	517	510	339	146	29	0	2633	1416	2492
S>10	0	0	11	26	55	183	249	185	33	0	0	0	742	617	731
N	0	0	3	18	35	80	107	80	16	0	0	0	339	267	336
7 HR	3.02	3.85	5.09	6.30	6.71	7.51	8.00	8.16	6.67	4.96	3.92	3.22	5.59	7.87	6.87
N	191	193	212	200	210	207	215	160	186	204	201	213	2392	582	1382
10 HR	2.59	3.38	4.92	6.46	7.23	8.17	9.15	9.31	6.93	4.66	3.23	2.52	5.66	8.84	7.37
N	287	277	305	291	304	299	308	229	273	299	292	306	3470	836	2003
12HR 8-8	2.52	3.35	4.73	6.21	6.88	7.81	8.72	8.80	6.69	4.49	3.22	2.44	5.44	8.41	7.04
N	343	333	367	349	365	357	370	275	324	359	351	368	4161	1002	2399

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 203

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	638	1469	1472	2634	2606	2849	2183	1016	192	0	15059	8089	14229
N	0	0	86	189	191	252	266	280	231	123	28	0	1646	798	1532
S>10	0	0	6	27	25	410	243	340	229	70	0	0	1350	993	1344
N	0	0	6	14	17	105	95	109	74	19	0	0	439	309	433
7 HR	1.92	2.59	4.62	6.25	6.21	9.01	8.41	9.34	7.74	5.64	3.70	2.88	5.70	8.92	7.51
N	217	196	215	210	216	209	215	217	205	217	210	217	2544	641	1489
10 HR	1.50	2.18	4.47	6.22	6.06	8.99	8.73	9.18	7.77	5.10	3.06	2.29	5.47	8.97	7.43
N	310	280	307	300	310	298	308	310	296	310	300	310	3639	916	2132
12HR 8-8	1.35	2.03	4.03	5.73	5.60	8.18	7.75	8.27	7.07	4.65	2.83	2.10	4.97	8.06	6.74
N	372	335	369	360	371	358	370	372	352	372	360	372	4363	1100	2555

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 204

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	35	0	974	2001	2154	3519	3453	3805	2841	1053	979	13	20827	10777	18826
N	4	0	127	242	264	328	330	345	292	124	130	2	2188	1003	1925
S>10	0	0	22	87	68	620	470	658	363	66	30	0	2384	1748	2332
N	0	0	12	35	38	142	151	166	88	20	12	0	664	459	640
7 HR	2.82	3.61	5.47	7.15	7.11	10.12	9.82	11.20	8.52	5.91	5.97	3.12	6.75	10.38	8.56
N	214	196	217	210	217	210	217	215	209	208	210	217	2540	642	1486
10 HR	2.19	3.13	5.28	7.25	7.23	10.42	10.38	11.05	8.83	5.29	4.74	2.37	6.53	10.62	8.64
N	307	280	310	300	310	300	310	308	299	303	300	310	3637	918	2130
12HR 8-8	2.13	3.04	4.92	6.79	6.73	9.67	9.38	10.20	8.17	4.93	4.50	2.27	6.07	9.75	7.99
N	369	336	372	360	372	360	372	369	359	362	360	372	4363	1101	2554

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 207

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	95	1282	2901	3514	4003	6088	5314	3123	1215	431	6	27972	15405	26158
N	0	16	183	426	485	502	663	630	433	180	67	1	3586	1795	3319
S>10	0	0	11	13	69	181	470	236	28	0	0	0	1008	887	997
N	0	0	6	9	32	67	184	101	14	0	0	0	413	352	407
7 HR	4.18	4.79	5.72	6.48	6.88	7.69	9.44	8.65	6.77	5.16	4.86	4.14	6.34	8.61	7.38
N	147	192	152	203	217	206	217	217	194	173	201	217	2336	640	1427
10 HR	3.81	4.48	5.59	6.60	7.38	8.28	10.53	9.31	6.91	5.08	4.38	3.76	6.47	9.39	7.81
N	217	276	231	295	310	296	310	310	284	254	287	310	3380	916	2059
12HR 8-8	3.82	4.50	5.48	6.46	7.10	7.97	9.96	8.94	6.77	5.01	4.43	3.79	6.30	8.97	7.55
N	257	332	274	351	372	356	372	372	337	300	347	372	4042	1100	2460

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 209

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	431	1092	1578	2539	3530	3102	1672	447	101	0	14492	9171	13960
N	0	0	64	158	223	315	449	388	234	69	16	0	1916	1152	1836
S>10	0	0	4	0	1	93	38	50	11	0	0	0	197	181	193
N	0	0	3	0	1	38	29	35	9	0	0	0	115	102	112
7 HR	2.20	3.21	4.26	5.11	5.64	6.75	7.10	6.65	5.86	4.01	3.31	2.31	4.72	6.83	5.89
N	206	177	207	180	211	209	210	217	206	211	203	215	2452	636	1444
10 HR	1.99	2.89	4.15	5.29	5.94	7.20	7.59	7.46	5.83	3.80	2.75	1.88	4.76	7.42	6.18
N	296	257	304	262	305	300	305	310	296	306	293	309	3543	915	2084
12HR 8-8	1.88	2.77	3.94	5.11	5.68	6.89	7.31	7.04	5.52	3.58	2.63	1.73	4.53	7.08	5.89
N	355	305	358	315	365	359	363	372	355	366	351	369	4233	1094	2495

1993 POLLUTANT: OZONE COUNTY: San Bernardino SITE: 210

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	206	785	1648	2122	4553	2936	1674	416	20	0	14360	9611	14134
N	0	0	33	128	262	312	618	429	253	65	3	0	2103	1359	2067
S>10	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	-1.00	-1.00	4.07	5.20	5.74	6.06	7.68	6.71	5.91	4.24	3.43	2.45	5.02	6.64	5.81
N	0	0	174	167	176	180	87	182	176	174	169	184	1669	449	1142
10 HR	-1.00	-1.00	4.18	5.15	5.67	5.99	7.29	6.37	5.64	4.21	3.22	2.35	4.88	6.40	5.64
N	0	0	269	253	270	270	132	276	267	272	259	277	2545	678	1740
12HR 8-8	-1.00	-1.00	3.97	5.05	5.58	5.92	7.32	6.36	5.52	4.07	3.10	2.19	4.78	6.37	5.57
N	0	0	327	310	330	330	162	337	326	328	319	339	3108	829	2123

1993 POLLUTANT: OZONE COUNTY: San Joaquin SITE: 252

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	139	38	368	527	769	602	548	177	40	0	3208	1898	3029
N	0	0	21	6	56	76	115	88	80	27	6	0	475	279	448
S>10	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1
N	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1
7 HR	1.41	2.43	3.53	3.90	4.35	4.29	4.80	4.35	4.59	3.52	2.21	1.37	3.40	4.48	4.26
N	189	195	210	199	201	208	216	207	193	213	210	212	2453	631	1437
10 HR	1.17	2.24	3.35	3.82	4.26	4.43	4.79	4.34	4.37	3.01	1.86	1.10	3.24	4.52	4.14
N	274	279	304	289	288	298	309	303	284	306	300	305	3539	910	2077
12HR 8-8	1.07	2.05	3.08	3.60	4.07	4.10	4.41	3.96	3.95	2.74	1.69	1.02	2.99	4.16	3.83
N	328	335	364	349	345	358	371	361	340	368	360	367	4246	1090	2492

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: San Joaquin SITE: 267

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	154	38	355	724	1088	1021	1035	398	101	0	4914	2833	4659
N	0	0	23	6	54	103	153	144	148	59	16	0	706	400	667
S>10	0	0	0	0	1	5	0	6	3	0	0	0	15	11	15
N	0	0	0	0	1	3	0	4	3	0	0	0	11	7	11
7 HR	2.14	2.94	3.65	3.92	4.36	4.87	5.38	5.21	5.46	4.16	2.94	1.84	3.91	5.16	4.77
N	215	195	217	205	207	209	212	216	208	217	209	217	2527	637	1474
10 HR	2.00	2.81	3.52	3.85	4.31	4.98	5.47	5.22	5.23	3.66	2.41	1.52	3.75	5.23	4.68
N	308	279	310	295	301	299	305	310	298	310	299	310	3624	914	2118
12HR 8-8	1.85	2.58	3.24	3.64	4.09	4.65	5.01	4.80	4.74	3.35	2.18	1.42	3.46	4.82	4.33
N	370	335	372	355	359	358	367	371	358	372	359	372	4348	1096	2540

1993 POLLUTANT: OZONE COUNTY: San Luis Obispo SITE: 833

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	0	62	59	0	0	121	311	145	0	698	59	553
N	0	0	0	0	9	9	0	0	20	50	24	0	112	9	88
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.94	3.52	3.57	4.01	3.58	3.50	2.96	2.87	3.77	4.05	3.91	3.03	3.47	3.10	3.53
N	215	196	217	205	217	210	214	217	210	217	207	217	2542	641	1490
10 HR	2.82	3.48	3.54	4.01	3.56	3.46	3.04	2.93	3.78	3.75	3.30	2.68	3.36	3.14	3.50
N	309	280	310	297	310	300	306	310	300	310	298	310	3640	916	2133
12HR 8-8	2.69	3.33	3.38	3.88	3.50	3.40	2.94	2.82	3.66	3.61	3.22	2.54	3.24	3.05	3.40
N	365	334	371	352	372	360	367	372	360	372	357	371	4353	1099	2555

1993 POLLUTANT: OZONE COUNTY: San Luis Obispo SITE: 834

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	14	35	77	63	172	21	0	195	474	437	0	1488	193	1002
N	0	2	6	13	10	27	3	0	30	74	64	0	229	30	157
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.73	3.27	3.34	3.87	3.88	4.12	3.48	3.16	4.07	4.18	4.28	2.77	3.60	3.57	3.82
N	187	178	194	166	216	194	203	211	208	217	206	215	2395	608	1415
10 HR	2.55	3.12	3.18	3.67	3.66	3.86	3.35	3.00	3.85	3.74	3.58	2.35	3.32	3.39	3.58
N	269	258	278	241	309	280	290	307	299	310	297	308	3446	877	2036
12HR 8-8	2.40	2.93	3.02	3.60	3.59	3.78	3.22	2.85	3.64	3.54	3.39	2.18	3.18	3.27	3.45
N	322	307	332	288	370	333	348	365	357	370	356	370	4118	1046	2431

1993 POLLUTANT: OZONE COUNTY: San Luis Obispo SITE: 835

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	0	44	126	0	38	94	325	118	6	751	164	627
N	0	0	0	0	7	21	0	6	16	49	19	1	119	27	99
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.80	2.58	2.70	3.26	2.97	3.70	2.82	3.10	3.66	3.79	3.55	2.60	3.04	3.20	3.32
N	217	196	217	201	217	210	216	217	210	217	198	217	2533	643	1488
10 HR	1.68	2.46	2.63	3.22	2.95	3.47	2.81	3.02	3.52	3.58	3.16	2.35	2.90	3.09	3.22
N	310	280	310	288	310	300	309	310	300	310	288	310	3625	919	2127
12HR 8-8	1.56	2.30	2.46	3.15	2.89	3.42	2.69	2.86	3.33	3.37	2.97	2.20	2.76	2.98	3.10
N	372	336	371	344	371	360	370	372	359	370	344	371	4340	1102	2546

1993 POLLUTANT: OZONE COUNTY: San Luis Obispo SITE: 844

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	0	52	25	0	0	38	120	75	0	310	25	235
N	0	0	0	0	8	4	0	0	6	19	13	0	50	4	37
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.58	3.06	3.20	3.75	3.37	3.29	2.79	2.72	3.59	3.71	3.57	2.74	3.19	2.93	3.32
N	214	193	211	201	215	200	214	208	208	211	208	214	2497	622	1457
10 HR	2.49	3.05	3.26	3.72	3.33	3.25	2.87	2.75	3.64	3.51	3.13	2.43	3.12	2.95	3.29
N	307	277	304	292	308	291	309	302	298	304	298	307	3597	902	2104
12HR 8-8	2.31	2.86	3.06	3.61	3.26	3.17	2.80	2.66	3.44	3.27	2.96	2.23	2.97	2.87	3.17
N	369	333	366	350	370	350	368	362	358	364	358	368	4316	1080	2522

1993 POLLUTANT: OZONE COUNTY: San Luis Obispo SITE: 847

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	121	316	808	215	466	710	614	240	0	3490	1489	3250
N	0	0	0	20	50	124	34	72	104	90	37	0	531	230	494
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.56	3.21	3.67	4.47	4.40	5.22	4.31	4.47	5.39	4.79	3.78	2.45	4.06	4.66	4.72
N	215	195	217	205	209	208	213	217	210	217	209	216	2531	638	1479
10 HR	2.40	3.09	3.60	4.33	4.15	4.98	4.15	4.12	4.77	4.29	3.23	2.31	3.78	4.41	4.40
N	308	280	310	294	303	299	306	310	300	310	300	310	3630	915	2122
12HR 8-8	2.23	2.89	3.37	4.15	4.07	4.85	4.02	3.99	4.51	3.98	2.97	2.06	3.59	4.28	4.22
N	370	334	372	354	362	357	365	371	360	372	357	370	4344	1093	2541

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: San Luis Obispo SITE: 849

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	114	51	249	99	0	0	77	405	266	19	1280	99	881
N	0	0	18	8	36	15	0	0	13	64	42	3	199	15	136
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	3.33	3.88	3.88	4.28	3.96	3.75	3.21	3.15	4.00	4.20	4.10	3.04	3.75	3.37	3.79
N	70	89	208	205	216	208	212	214	206	214	209	213	2264	634	1475
10 HR	3.31	3.90	3.89	4.16	3.85	3.65	3.22	3.10	3.98	4.13	4.03	3.00	3.69	3.32	3.73
N	106	134	299	297	309	298	306	309	297	309	299	306	3269	913	2125
12HR 8-8	3.14	3.72	3.66	4.07	3.80	3.59	3.11	2.99	3.78	3.86	3.74	2.74	3.53	3.23	3.60
N	123	156	358	354	371	357	367	366	356	369	357	367	3901	1090	2540

1993 POLLUTANT: OZONE COUNTY: San Luis Obispo SITE: 850

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	78	0	202	651	146	295	534	483	246	0	2635	1092	2311
N	0	0	13	0	32	104	23	47	83	74	39	0	415	174	363
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.81	2.60	3.22	3.62	4.06	4.87	3.95	3.91	4.68	4.17	3.44	2.22	3.51	4.20	4.17
N	217	196	215	201	157	172	214	216	206	214	207	216	2431	602	1380
10 HR	1.85	2.67	3.40	3.73	3.93	4.83	3.86	3.73	4.54	4.05	3.25	2.20	3.48	4.10	4.09
N	310	280	305	288	230	254	308	309	300	310	297	309	3500	871	1999
12HR 8-8	1.69	2.49	3.16	3.51	3.85	4.62	3.70	3.54	4.24	3.74	2.96	1.93	3.25	3.91	3.87
N	372	336	365	346	272	302	368	371	356	369	357	371	4185	1041	2384

1993 POLLUTANT: OZONE COUNTY: San Mateo SITE: 541

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	24	0	31	0	67	93	12	14	0	0	241	160	217
N	0	0	4	0	5	0	9	14	2	2	0	0	36	23	32
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.23	1.96	2.25	2.90	2.75	2.34	2.20	2.47	2.18	2.01	1.89	1.08	2.11	2.34	2.41
N	213	193	217	210	217	210	217	211	210	205	204	213	2520	638	1480
10 HR	1.21	1.92	2.12	2.86	2.70	2.24	2.19	2.32	2.00	1.80	1.72	1.07	2.01	2.25	2.30
N	307	277	310	300	310	300	310	305	300	291	295	306	3611	915	2116
12HR 8-8	1.10	1.77	2.00	2.75	2.59	2.13	2.02	2.16	1.88	1.68	1.67	.97	1.89	2.10	2.18
N	367	332	371	360	372	360	372	366	360	351	353	367	4331	1098	2541

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 363

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	YR TOT	JUN-AUG	APR-OCT
SUM06	21	19	311	508	236	560	256	531	518	630	627	4217	1347	3239
N	4	3	51	80	34	87	41	81	81	94	87	643	209	498
S>10	0	0	0	0	1	0	0	0	0	1	0	2	0	2
N	0	0	0	0	1	0	0	0	0	1	0	2	0	2
7 HR	2.79	3.58	4.40	4.98	4.57	5.19	4.65	5.04	5.19	4.98	5.11	4.58	4.96	4.94
N	197	185	205	203	211	197	202	208	196	193	136	2133	607	1410
10 HR	2.46	3.37	4.05	4.83	4.30	4.87	4.44	4.71	4.72	4.44	4.38	4.25	4.67	4.61
N	274	267	298	295	306	288	299	302	290	289	202	3110	889	2069
12HR 8-8	2.30	3.19	3.83	4.59	4.18	4.70	4.31	4.51	4.51	4.21	4.15	4.06	4.50	4.43
N	329	323	359	352	364	346	357	363	346	346	240	3725	1066	2474

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 369

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	58	88	132	385	654	223	384	421	682	429	0	3456	1261	2881
N	0	10	15	22	59	97	36	61	66	102	65	0	533	194	443
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	3.30	3.83	3.94	4.54	4.64	5.03	4.50	4.48	4.66	4.49	4.45	3.02	4.27	4.67	4.62
N	142	192	213	208	215	207	215	210	195	207	203	199	2406	632	1457
10 HR	3.33	3.92	4.04	4.45	4.52	4.81	4.25	4.21	4.54	4.53	4.40	3.09	4.21	4.42	4.47
N	206	276	306	299	308	298	308	304	276	300	294	275	3450	910	2093
12HR 8-8	3.16	3.70	3.76	4.25	4.38	4.65	4.05	3.98	4.27	4.19	4.09	2.81	3.97	4.22	4.25
N	247	332	368	358	369	357	370	365	330	362	353	333	4144	1092	2511

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 370

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	13	40	185	318	141	400	20	296	298	520	532	20	2783	716	1993
N	2	7	31	50	19	61	3	47	46	81	73	3	423	111	307
S>10	0	0	0	0	1	0	0	0	0	0	1	0	2	0	1
N	0	0	0	0	1	0	0	0	0	0	1	0	2	0	1
7 HR	3.27	3.61	4.10	4.45	4.02	4.65	3.90	4.30	4.70	4.68	4.78	3.49	4.16	4.28	4.38
N	198	188	203	188	208	204	200	208	186	198	206	199	2386	612	1392
10 HR	2.94	3.33	3.85	4.31	3.83	4.49	3.72	4.00	4.33	4.23	4.20	3.05	3.86	4.07	4.13
N	293	272	291	275	302	295	297	301	280	290	297	294	3487	893	2040
12HR 8-8	2.81	3.25	3.67	4.12	3.75	4.32	3.68	3.87	4.19	4.07	4.10	2.91	3.73	3.96	4.00
N	351	327	351	331	363	353	352	363	335	350	354	354	4184	1068	2447

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 381

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	38	26	6	91	116	0	0	60	205	224	0	766	116	478
N	0	6	4	1	14	18	0	0	10	30	36	0	119	18	73
S>10	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
N	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
7 HR	2.78	3.43	3.50	3.86	3.63	3.79	2.88	2.97	3.57	3.68	3.68	2.38	3.34	3.19	3.47
N	203	189	201	202	210	182	205	207	193	183	200	200	2375	594	1382
10 HR	2.61	3.36	3.53	3.85	3.55	3.64	2.91	2.95	3.63	3.55	3.33	2.19	3.25	3.15	3.43
N	292	272	295	292	303	271	298	301	283	271	292	295	3465	870	2019
12HR 8-8	2.46	3.14	3.31	3.75	3.48	3.56	2.82	2.83	3.43	3.31	3.03	1.96	3.08	3.05	3.31
N	352	328	355	352	365	325	360	362	343	325	350	355	4172	1047	2432

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 387

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	0	50	0	0	0	0	40	13	0	103	0	90
N	0	0	0	0	8	0	0	0	0	7	2	0	17	0	15
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.85	2.36	2.53	3.09	2.69	2.99	2.48	2.38	2.96	3.06	2.79	1.93	2.59	2.61	2.80
N	217	196	207	210	214	194	211	213	208	209	207	202	2488	618	1459
10 HR	1.74	2.26	2.45	2.92	2.58	2.76	2.44	2.28	2.87	2.72	2.31	1.56	2.41	2.49	2.65
N	310	280	301	300	309	276	307	308	299	305	296	291	3582	891	2104
12HR 8-8	1.63	2.10	2.27	2.85	2.51	2.71	2.33	2.14	2.68	2.54	2.17	1.45	2.28	2.38	2.53
N	372	336	359	360	369	331	366	368	358	363	356	349	4287	1065	2515

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 388

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	51	50	101	121	19	101	90	189	183	0	905	241	671
N	0	0	8	7	14	20	3	17	15	31	28	0	143	40	107
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.46	2.33	3.40	3.60	3.59	4.06	3.27	3.53	3.73	3.71	3.25	2.02	3.17	3.62	3.64
N	212	195	214	208	213	209	203	213	207	205	200	209	2488	625	1458
10 HR	1.28	2.02	3.07	3.34	3.20	3.80	2.98	3.20	3.31	3.04	2.54	1.51	2.78	3.33	3.27
N	305	279	308	299	310	299	295	308	298	300	294	302	3597	902	2109
12HR 8-8	1.13	1.89	2.89	3.17	3.14	3.69	2.92	3.06	3.16	2.88	2.35	1.36	2.64	3.22	3.15
N	367	334	368	358	363	357	354	366	357	357	349	363	4293	1077	2512

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 389

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	32	154	122	268	233	392	25	89	331	539	341	0	2526	506	1877
N	5	25	20	44	34	60	4	15	54	83	54	0	398	79	294
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	4.08	4.69	3.86	4.79	4.65	4.85	4.05	3.98	4.60	4.71	4.63	3.52	4.36	4.27	4.51
N	210	177	204	203	207	190	210	211	203	194	199	194	2402	611	1418
10 HR	3.87	4.62	3.75	4.58	4.45	4.52	3.94	3.76	4.42	4.43	4.11	3.21	4.13	4.06	4.29
N	303	255	299	296	302	285	307	307	298	277	292	274	3495	899	2072
12HR 8-8	3.73	4.44	3.54	4.52	4.37	4.45	3.83	3.61	4.20	4.23	3.95	3.09	3.99	3.95	4.17
N	365	307	359	353	358	337	365	361	352	329	349	332	4167	1063	2455

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 390

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	YR TOT	JUN-AUG	APR-OCT
SUM06	0	58	59	19	7	146	0	32	316	1068	989	2694	178	1588
N	0	10	9	3	1	24	0	5	47	158	150	407	29	238
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	3.75	4.14	3.97	4.28	3.61	3.87	2.91	3.14	4.11	4.63	4.97	3.95	3.30	3.80
N	208	187	212	205	197	194	196	209	204	209	200	2221	599	1414
10 HR	3.74	4.18	4.09	4.29	3.54	3.74	2.91	3.12	4.23	4.70	4.96	3.95	3.25	3.79
N	301	272	305	297	283	284	292	304	296	306	289	3229	880	2062
12HR 8-8	3.69	4.12	3.95	4.23	3.53	3.70	2.87	3.04	4.11	4.56	4.84	3.88	3.20	3.72
N	363	327	367	355	338	343	350	364	354	364	347	3872	1057	2468

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 391

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	YR TOT	JUN-AUG	APR-OCT
SUM06	95	326	146	214	240	135	0	235	1245	2088	2047	6771	370	4157
N	16	53	24	36	34	22	0	38	197	309	308	1037	60	636
S>10	0	0	0	0	1	0	0	0	0	0	0	1	0	1
N	0	0	0	0	1	0	0	0	0	0	0	1	0	1
7 HR	4.50	4.80	4.03	4.67	4.39	4.01	3.16	3.60	5.36	5.63	5.92	4.56	3.58	4.42
N	206	188	206	205	210	184	195	206	205	207	197	2209	585	1412
10 HR	4.44	4.87	4.14	4.72	4.34	3.93	3.11	3.57	5.43	5.74	5.91	4.57	3.53	4.42
N	300	271	300	298	301	275	289	304	299	303	288	3228	868	2069
12HR 8-8	4.38	4.79	4.01	4.63	4.29	3.89	3.08	3.52	5.33	5.59	5.80	4.48	3.49	4.34
N	361	327	360	355	362	328	344	361	354	361	347	3860	1033	2465

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 392

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	19	99	197	783	343	134	13	72	518	664	573	0	3415	219	2527
N	3	16	33	128	53	22	2	12	79	106	87	0	541	36	402
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	3.75	4.53	4.52	5.19	4.43	4.02	2.96	3.18	4.34	4.42	4.74	3.67	4.14	3.38	4.07
N	216	193	214	208	214	204	215	212	210	208	203	215	2512	631	1471
10 HR	3.76	4.56	4.61	5.22	4.39	4.02	2.92	3.15	4.47	4.36	4.63	3.59	4.13	3.36	4.07
N	308	272	303	297	309	295	304	305	293	301	298	310	3595	904	2104
12HR 8-8	3.67	4.43	4.46	5.12	4.35	3.95	2.90	3.08	4.32	4.24	4.53	3.48	4.04	3.31	3.99
N	369	326	365	357	368	354	364	366	353	360	353	370	4305	1084	2522

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 393

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	50	57	57	161	135	15	72	335	455	758	0	2095	222	1230
N	0	8	10	9	21	22	2	12	50	71	116	0	321	36	187
S>10	0	0	0	0	3	0	0	0	0	0	0	0	3	0	3
N	0	0	0	0	3	0	0	0	0	0	0	0	3	0	3
7 HR	3.43	3.99	3.92	4.26	3.77	4.00	3.16	3.33	4.17	4.32	4.80	3.66	3.90	3.49	3.85
N	197	194	212	206	213	205	215	214	210	210	198	210	2484	634	1473
10 HR	3.37	3.96	3.97	4.35	3.76	3.98	3.10	3.22	4.28	4.31	4.70	3.59	3.88	3.43	3.85
N	281	276	301	296	303	294	307	305	296	305	291	303	3558	906	2106
12HR 8-8	3.30	3.89	3.84	4.27	3.70	3.94	3.08	3.18	4.17	4.18	4.58	3.50	3.80	3.40	3.78
N	337	332	363	356	362	354	369	366	356	364	348	363	4270	1089	2527

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 394

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	39	32	142	264	622	19	173	543	1289	1025	0	4148	814	3052
N	0	7	5	23	40	94	3	29	82	185	158	0	626	126	456
S>10	0	0	0	0	0	0	0	0	0	7	0	0	7	0	7
N	0	0	0	0	0	0	0	0	0	5	0	0	5	0	5
7 HR	3.36	3.83	3.90	4.49	4.27	4.74	3.77	3.89	4.61	5.06	5.01	3.81	4.22	4.13	4.40
N	211	185	211	206	200	203	212	209	205	212	196	210	2460	624	1447
10 HR	3.37	3.91	3.92	4.39	4.13	4.45	3.65	3.70	4.51	5.00	5.02	3.88	4.16	3.93	4.26
N	304	267	306	295	295	296	309	306	298	306	289	303	3574	911	2105
12HR 8-8	3.29	3.78	3.74	4.28	4.05	4.41	3.56	3.57	4.34	4.76	4.88	3.78	4.03	3.84	4.14
N	365	320	365	349	353	352	365	361	354	366	346	365	4261	1078	2500

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 395

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	76	128	541	1006	1505	835	1122	1525	1265	747	0	8750	3462	7799
N	0	13	21	87	150	216	132	170	224	185	110	0	1308	518	1164
S>10	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
N	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
7 HR	3.47	4.12	4.13	4.89	5.18	5.87	5.23	5.39	5.76	5.39	4.87	3.86	4.85	5.49	5.38
N	209	192	212	209	216	208	212	215	209	213	200	214	2509	635	1482
10 HR	3.54	4.19	4.33	4.95	5.19	5.85	5.17	5.39	5.89	5.53	5.06	3.92	4.92	5.47	5.42
N	301	277	302	297	306	298	306	307	299	308	289	305	3595	911	2121
12HR 8-8	3.39	4.01	4.07	4.71	4.97	5.62	4.92	5.08	5.58	5.19	4.79	3.73	4.67	5.20	5.15
N	361	332	364	356	367	356	367	367	358	368	347	367	4310	1090	2539

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 396

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	123	415	795	1680	583	578	84	266	498	845	1076	0	6943	928	4534
N	20	68	129	269	87	92	12	41	76	133	159	0	1086	145	710
S>10	0	0	0	0	5	0	0	0	0	0	0	0	5	0	5
N	0	0	0	0	4	0	0	0	0	0	0	0	4	0	4
7 HR	3.88	4.73	4.87	5.55	4.70	4.87	4.00	4.26	4.76	4.67	4.81	3.52	4.54	4.38	4.69
N	211	178	183	204	211	205	204	211	201	212	202	212	2434	620	1448
10 HR	3.92	4.82	4.99	5.62	4.61	4.64	3.90	3.93	4.71	4.73	4.87	3.66	4.52	4.16	4.59
N	304	259	275	295	304	299	301	307	294	306	293	305	3542	907	2106
12HR 8-8	3.84	4.73	4.78	5.47	4.51	4.53	3.83	3.79	4.49	4.49	4.70	3.53	4.38	4.05	4.44
N	365	313	329	352	364	353	356	365	351	366	352	367	4233	1074	2507

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 397

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	126	238	733	1572	1048	1114	403	591	1342	1832	1735	44	10778	2108	7902
N	20	38	117	253	159	176	63	91	208	278	248	7	1658	330	1228
S>10	0	0	0	0	6	0	1	2	1	0	1	0	11	3	10
N	0	0	0	0	5	0	1	2	1	0	1	0	10	3	9
7 HR	3.61	4.66	4.90	5.53	5.14	5.35	4.86	5.14	5.57	5.56	5.47	3.93	4.97	5.11	5.30
N	210	188	208	203	205	202	212	212	204	210	204	208	2466	626	1448
10 HR	3.64	4.74	5.05	5.61	5.09	5.20	4.79	4.85	5.53	5.61	5.56	4.10	4.98	4.95	5.24
N	305	273	301	295	301	294	307	309	296	307	296	301	3585	910	2109
12HR 8-8	3.57	4.64	4.82	5.46	5.01	5.07	4.72	4.74	5.32	5.38	5.41	3.97	4.84	4.84	5.10
N	365	328	363	352	359	351	367	364	353	365	353	362	4282	1082	2511

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 398

MON	JAN	FEB	MAR	APR	YR TOT	JUN-AUG	APR-OCT
SUM06	31	76	230	260	597	0	260
N	5	13	38	42	98	0	42
S>10	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
7 HR	3.54	4.06	4.45	4.81	4.21	.00	4.81
N	213	189	206	207	815	0	207
10 HR	3.33	3.89	4.29	4.77	4.07	.00	4.77
N	307	274	302	298	1181	0	298
12HR 8-8	3.22	3.78	4.14	4.62	3.94	.00	4.62
N	368	329	361	357	1415	0	357

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 399

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	YR TOT	JUN-AUG	APR-OCT
SUM06	0	73	97	31	291	397	60	345	699	900	488	3381	802	2723
N	0	12	16	5	43	62	9	54	106	132	73	512	125	411
S>10	0	0	0	0	0	0	0	0	0	10	0	10	0	10
N	0	0	0	0	0	0	0	0	0	5	0	5	0	5
7 HR	2.98	3.64	3.81	4.13	4.12	4.45	3.83	4.12	4.83	4.69	4.45	4.11	4.13	4.31
N	199	188	211	209	213	207	216	216	210	216	207	2292	639	1487
10 HR	3.08	3.64	3.78	4.08	3.95	4.25	3.68	3.94	4.67	4.58	4.42	4.01	3.95	4.16
N	290	273	307	299	309	299	310	310	300	310	298	3305	919	2137
12HR 8-8	2.96	3.47	3.58	3.93	3.83	4.11	3.54	3.73	4.43	4.34	4.24	3.84	3.79	3.99
N	346	327	366	356	366	357	369	369	357	369	355	3937	1095	2543

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 400

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	YR TOT	JUN-AUG	APR-OCT
SUM06	73	144	365	965	643	1054	126	376	673	1160	1224	6803	1556	4997
N	12	23	59	155	96	163	20	58	105	180	177	1048	241	777
S>10	0	0	0	0	10	0	0	0	0	0	1	11	0	10
N	0	0	0	0	6	0	0	0	0	0	1	7	0	6
7 HR	3.79	4.28	4.65	5.30	4.81	5.38	4.35	4.69	5.11	5.08	5.21	4.79	4.80	4.95
N	214	191	213	207	215	209	216	217	209	210	207	2308	642	1483
10 HR	3.79	4.33	4.66	5.35	4.72	5.22	4.21	4.33	4.89	5.10	5.18	4.70	4.58	4.82
N	308	277	307	299	310	299	310	310	300	300	300	3320	919	2128
12HR 8-8	3.70	4.23	4.48	5.18	4.63	5.07	4.15	4.21	4.74	4.89	5.04	4.57	4.47	4.69
N	369	331	368	355	367	356	370	370	357	358	356	3957	1096	2533

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 401

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	YR TOT	JUN-AUG	APR-OCT
SUM06	27	25	293	383	221	480	90	313	364	609	583	3388	883	2460
N	4	4	49	61	29	75	15	48	58	94	81	518	138	380
S>10	0	0	0	0	6	0	0	0	0	0	0	6	0	6
N	0	0	0	0	5	0	0	0	0	0	0	5	0	5
7 HR	3.36	3.79	4.46	4.88	4.47	4.99	4.22	4.38	4.79	4.82	4.86	4.46	4.53	4.65
N	211	189	210	206	214	207	204	212	207	213	203	2276	623	1463
10 HR	3.16	3.74	4.38	4.86	4.35	4.86	4.04	4.16	4.61	4.70	4.37	4.29	4.35	4.51
N	306	275	306	298	309	299	299	307	299	308	295	3301	905	2119
12HR 8-8	2.94	3.55	4.18	4.66	4.25	4.75	3.99	4.06	4.47	4.45	4.11	4.13	4.26	4.37
N	366	329	364	355	366	355	356	366	355	366	352	3930	1077	2519

1993 POLLUTANT: OZONE COUNTY: Santa Barbara SITE: 402

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	YR TOT	JUN-AUG	APR-OCT
SUM06	33	33	713	731	571	831	371	657	719	851	500	6010	1859	4731
N	5	5	112	113	86	120	58	99	106	127	71	902	277	709
S>10	0	0	0	0	3	1	0	0	0	0	0	4	1	4
N	0	0	0	0	2	1	0	0	0	0	0	3	1	3
7 HR	3.62	3.96	4.97	5.40	4.84	5.54	4.77	5.07	5.41	5.30	4.89	4.89	5.13	5.19
N	212	192	189	202	214	207	206	215	205	215	202	2259	628	1464
10 HR	3.39	3.69	4.82	5.07	4.52	5.20	4.52	4.88	5.02	5.01	4.44	4.60	4.87	4.89
N	301	274	265	289	306	298	295	304	297	309	294	3232	897	2098
12HR 8-8	3.31	3.62	4.55	4.87	4.35	4.97	4.38	4.61	4.83	4.82	4.32	4.42	4.65	4.69
N	361	329	319	345	367	356	351	366	351	367	351	3863	1073	2503

1993 POLLUTANT: OZONE COUNTY: Santa Clara SITE: 380

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	8	30	0	70	427	299	492	306	36	42	0	1710	1218	1630
N	0	1	4	0	11	55	43	65	47	6	7	0	239	163	227
S>10	0	0	0	0	0	14	2	3	0	0	0	0	19	19	19
N	0	0	0	0	0	6	2	2	0	0	0	0	10	10	10
7 HR	1.63	2.37	2.73	3.22	3.24	4.19	3.90	4.15	4.07	2.69	2.34	1.34	2.99	4.08	3.63
N	216	153	215	206	215	204	205	217	210	217	210	215	2483	626	1474
10 HR	1.37	2.05	2.39	2.91	3.06	3.83	3.54	3.66	3.56	2.15	1.78	1.06	2.62	3.68	3.24
N	309	219	308	296	308	294	298	310	300	310	300	308	3560	902	2116
12HR 8-8	1.27	1.97	2.24	2.81	2.98	3.56	3.28	3.40	3.28	2.02	1.67	.95	2.46	3.41	3.04
N	371	263	370	356	370	353	360	372	360	372	360	370	4277	1085	2543

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Santa Clara SITE: 382

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	29	31	96	233	247	295	160	20	21	0	1132	775	1082
N	0	0	4	5	15	33	35	43	23	3	3	0	164	111	157
S>10	0	0	0	0	0	2	0	0	0	0	0	0	2	2	2
N	0	0	0	0	0	2	0	0	0	0	0	0	2	2	2
7 HR	1.50	2.18	2.51	3.32	3.31	3.67	3.61	3.41	3.22	2.11	1.60	1.06	2.66	3.56	3.25
N	204	187	207	202	200	203	202	213	207	189	190	172	2376	618	1416
10 HR	1.26	1.86	2.31	3.09	3.13	3.39	3.34	3.15	2.93	1.80	1.25	.86	2.40	3.29	2.99
N	299	271	306	296	292	297	299	309	300	274	277	256	3476	905	2067
12HR 8-8	1.17	1.72	2.10	2.92	3.03	3.20	3.13	2.93	2.68	1.62	1.11	.75	2.22	3.08	2.80
N	358	325	362	347	345	346	347	363	352	323	335	310	4113	1056	2423

1993 POLLUTANT: OZONE COUNTY: Santa Clara SITE: 387

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	56	0	50	231	121	220	87	47	18	0	830	572	756
N	0	0	9	0	8	34	18	32	13	7	3	0	124	84	112
S>10	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1
N	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1
7 HR	1.36	1.99	2.60	3.20	3.15	3.44	3.05	3.17	2.99	2.47	2.16	1.16	2.56	3.22	3.07
N	215	196	215	210	215	210	217	217	210	210	207	216	2538	644	1489
10 HR	1.35	1.86	2.44	3.14	3.02	3.29	2.98	2.93	2.77	2.20	1.76	.99	2.40	3.06	2.90
N	308	280	309	300	308	300	310	310	300	297	297	310	3629	920	2125
12HR 8-8	1.26	1.72	2.31	3.01	2.91	3.09	2.75	2.70	2.54	2.02	1.62	.87	2.23	2.84	2.72
N	370	336	370	360	370	360	372	372	360	356	357	370	4353	1104	2550

1993 POLLUTANT: OZONE COUNTY: Santa Clara SITE: 389

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	12	167	189	639	257	452	651	203	40	0	2610	1348	2558
N	0	0	2	27	30	95	36	65	90	31	6	0	382	196	374
S>10	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
N	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
7 HR	1.96	2.82	3.27	4.11	3.96	4.79	4.09	4.28	4.80	3.55	2.59	1.52	3.47	4.38	4.22
N	217	196	214	209	215	206	216	217	205	213	203	217	2528	639	1481
10 HR	1.84	2.67	3.18	4.04	3.88	4.62	3.92	3.99	4.65	3.27	2.22	1.35	3.30	4.17	4.05
N	310	280	307	299	309	293	309	310	295	307	293	310	3622	912	2122
12HR 8-8	1.68	2.47	2.95	3.79	3.72	4.30	3.67	3.71	4.26	2.99	1.99	1.19	3.06	3.88	3.77
N	372	336	369	359	370	351	371	372	355	367	353	372	4347	1094	2545

1993 POLLUTANT: OZONE COUNTY: Santa Clara SITE: 390

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	66	12	84	309	293	380	256	49	0	0	1449	982	1383
N	0	0	10	2	13	43	41	53	37	8	0	0	207	137	197
S>10	0	0	0	0	0	6	0	0	0	0	0	0	6	6	6
N	0	0	0	0	0	3	0	0	0	0	0	0	3	3	3
7 HR	1.63	2.56	3.17	3.52	3.44	3.78	3.87	3.83	3.71	2.58	1.61	1.27	2.99	3.83	3.53
N	149	189	210	207	214	202	216	216	209	216	204	161	2393	634	1480
10 HR	1.52	2.29	2.95	3.29	3.23	3.49	3.59	3.51	3.48	2.24	1.28	1.09	2.73	3.53	3.26
N	217	277	306	300	308	295	310	310	300	310	293	236	3462	915	2133
12HR 8-8	1.43	2.16	2.76	3.14	3.13	3.28	3.36	3.26	3.20	2.02	1.12	.97	2.55	3.30	3.05
N	256	329	365	356	369	351	369	370	358	370	352	279	4124	1090	2543

1993 POLLUTANT: OZONE COUNTY: Santa Clara SITE: 392

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	20	24	119	317	443	415	197	48	32	0	1615	1175	1563
N	0	0	3	4	18	45	64	59	27	8	5	0	233	168	225
S>10	0	0	0	0	0	1	2	1	0	0	0	0	4	4	4
N	0	0	0	0	0	1	2	1	0	0	0	0	4	4	4
7 HR	1.75	2.47	2.83	3.48	3.81	4.09	4.11	3.85	3.61	2.67	2.16	1.36	3.01	4.02	3.66
N	217	195	213	210	217	203	216	217	193	215	207	217	2520	636	1471
10 HR	1.61	2.24	2.67	3.30	3.58	3.81	3.86	3.57	3.30	2.35	1.95	1.13	2.78	3.74	3.39
N	310	278	298	299	310	288	307	310	277	309	296	310	3592	905	2100
12HR 8-8	1.50	2.13	2.48	3.13	3.46	3.60	3.56	3.30	3.03	2.19	1.79	1.05	2.60	3.48	3.18
N	372	334	359	359	372	348	369	372	332	370	356	370	4313	1089	2522

1993 POLLUTANT: OZONE COUNTY: Santa Cruz SITE: 850

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	6	18	7	69	123	33	88	201	244	33	0	822	244	765
N	0	1	3	1	11	17	5	13	32	38	5	0	126	35	117
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.13	2.77	3.20	3.51	3.44	3.83	3.25	3.24	4.02	3.75	3.08	2.02	3.19	3.43	3.57
N	175	196	212	186	205	190	216	210	198	212	208	210	2418	616	1417
10 HR	1.94	2.56	3.01	3.41	3.30	3.60	3.14	3.10	3.88	3.32	2.59	1.67	2.97	3.27	3.39
N	250	280	304	271	295	278	309	302	286	305	298	303	3481	889	2046
12HR 8-8	1.80	2.38	2.80	3.24	3.21	3.42	3.01	2.95	3.60	3.08	2.41	1.51	2.79	3.12	3.21
N	300	336	366	325	355	334	371	364	345	367	358	365	4186	1069	2461

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Santa Cruz SITE: 851

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	44	0	0	83	33	13	-1	0	170	0	0	343	46	299
N	0	7	0	0	14	5	2	0	0	27	0	0	55	7	48
S>10	0	0	0	0	0	0	0	-1	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	3.16	3.60	3.36	3.74	3.52	2.95	2.70	-1.00	3.25	3.44	3.31	2.79	3.25	2.82	3.26
N	172	183	208	193	203	205	209	0	201	208	203	209	2194	414	1219
10 HR	3.12	3.57	3.13	3.49	3.39	2.67	2.65	-1.00	3.09	3.17	3.06	2.62	3.08	2.66	3.07
N	258	265	301	280	294	295	301	0	291	301	293	295	3174	596	1762
12HR 8-8	3.04	3.46	3.04	3.42	3.35	2.67	2.60	-1.00	2.97	3.04	2.99	2.51	3.00	2.64	3.00
N	309	321	363	338	353	355	363	0	351	363	353	357	3826	718	2123

1993 POLLUTANT: OZONE COUNTY: Santa Cruz SITE: 852

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	6	24	0	30	209	42	108	164	435	61	0	1079	359	988
N	0	1	4	0	5	29	5	14	24	66	9	0	157	48	143
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.45	3.17	3.30	3.81	3.70	3.97	3.26	3.29	3.90	4.06	3.45	2.11	3.37	3.50	3.71
N	212	193	217	202	210	204	212	206	202	212	191	210	2471	622	1448
10 HR	2.32	3.03	3.26	3.68	3.56	3.70	3.15	3.07	3.77	3.79	2.97	1.78	3.17	3.30	3.53
N	307	277	307	288	303	294	301	300	293	305	276	303	3554	895	2084
12HR 8-8	2.18	2.85	3.05	3.50	3.46	3.52	3.02	2.92	3.52	3.51	2.76	1.62	2.99	3.15	3.35
N	366	333	369	346	365	353	363	361	352	367	330	365	4270	1077	2507

1993 POLLUTANT: OZONE COUNTY: Santa Cruz SITE: 853

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	6	31	195	251	426	127	419	669	406	76	0	2606	972	2493
N	0	1	5	31	38	63	17	61	92	61	11	0	380	141	363
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.54	3.30	3.58	4.52	4.17	4.48	3.71	4.17	4.77	4.07	3.57	2.30	3.76	4.10	4.26
N	211	192	208	203	214	191	214	212	199	212	205	209	2470	617	1445
10 HR	2.43	3.18	3.55	4.44	4.08	4.39	3.69	3.97	4.69	3.82	3.30	2.16	3.63	4.00	4.14
N	303	276	298	293	307	267	308	303	289	306	295	303	3548	878	2073
12HR 8-8	2.29	2.95	3.26	4.25	3.95	4.13	3.45	3.70	4.23	3.50	3.01	1.95	3.38	3.74	3.88
N	365	332	359	353	369	323	369	363	349	365	355	364	4266	1055	2491

1993 POLLUTANT: OZONE COUNTY: Shasta SITE: 555

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	-1	-1	-1	-1	678	629	176	1483	678	1483
N	0	0	0	0	0	0	0	106	94	25	225	106	225
S>10	-1	-1	-1	-1	-1	-1	-1	0	3	0	3	0	3
N	0	0	0	0	0	0	0	0	3	0	3	0	3
7 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4.77	4.64	3.60	4.33	4.77	4.33
N	0	0	0	0	0	0	0	217	210	217	644	217	644
10 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4.74	4.47	3.07	4.09	4.74	4.09
N	0	0	0	0	0	0	0	306	300	310	916	306	916
12HR 8-8	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4.46	4.15	2.90	3.83	4.46	3.83
N	0	0	0	0	0	0	0	368	360	372	1100	368	1100

1993 POLLUTANT: OZONE COUNTY: Shasta SITE: 566

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	52	273	257	350	498	563	97	7	0	2097	1105	2090
N	0	0	0	9	42	42	56	81	92	15	1	0	338	179	337
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	3.52	3.97	3.56	3.94	4.02	4.24	4.36	4.50	5.04	3.77	4.05	3.70	4.05	4.38	4.25
N	161	166	213	202	211	159	203	214	168	190	196	206	2289	576	1347
10 HR	3.49	3.97	3.57	3.97	4.06	4.30	4.35	4.59	4.88	3.43	3.89	3.66	4.01	4.42	4.21
N	244	243	308	294	306	237	294	308	259	289	289	297	3368	839	1987
12HR 8-8	3.48	3.96	3.55	3.94	4.02	4.23	4.30	4.47	4.81	3.38	3.85	3.63	3.96	4.34	4.15
N	289	289	364	349	362	284	352	367	301	343	344	355	3999	1003	2358

1993 POLLUTANT: OZONE COUNTY: Shasta SITE: 567

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	-1	-1	307	527	823	836	108	2601	1657	2601
N	0	0	0	0	0	46	79	124	126	15	390	249	390
S>10	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	-1.00	-1.00	-1.00	-1.00	-1.00	4.19	4.72	5.18	5.33	3.06	4.49	4.70	4.49
N	0	0	0	0	0	208	217	211	207	215	1058	636	1058
10 HR	-1.00	-1.00	-1.00	-1.00	-1.00	4.12	4.74	5.02	4.72	2.40	4.20	4.63	4.20
N	0	0	0	0	0	299	310	307	299	309	1524	916	1524
12HR 8-8	-1.00	-1.00	-1.00	-1.00	-1.00	3.95	4.52	4.73	4.39	2.19	3.95	4.41	3.95
N	0	0	0	0	0	358	372	365	356	370	1821	1095	1821

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Siskiyou SITE: 861

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	0	97	0	60	31	113	0	0	0	301	91	301
N	0	0	0	0	15	0	10	5	19	0	0	0	49	15	49
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.35	2.87	2.76	3.64	3.75	3.27	3.73	3.78	4.18	2.99	2.61	1.59	3.12	3.58	3.61
N	217	161	133	210	217	210	157	216	192	210	208	217	2348	583	1412
10 HR	2.13	2.81	2.81	3.57	3.63	3.19	3.73	3.62	3.83	2.61	2.28	1.37	2.95	3.49	3.44
N	310	227	190	300	310	300	223	309	268	300	295	310	3342	832	2010
12HR 8-8	1.93	2.49	2.55	3.45	3.53	3.10	3.59	3.48	3.63	2.40	2.05	1.22	2.77	3.37	3.30
N	371	273	228	360	372	360	268	371	324	360	353	372	4012	999	2415

1993 POLLUTANT: OZONE COUNTY: Solano SITE: 875

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	88	18	114	289	181	360	411	142	12	0	1615	830	1515
N	0	0	14	3	18	42	27	52	58	23	2	0	239	121	223
S>10	0	0	0	0	0	0	0	6	0	0	0	0	6	6	6
N	0	0	0	0	0	0	0	3	0	0	0	0	3	3	3
7 HR	1.85	2.71	3.18	3.73	3.90	4.18	3.90	4.00	4.41	3.28	2.65	1.43	3.28	4.02	3.91
N	214	195	214	207	214	207	215	208	209	213	204	198	2498	630	1473
10 HR	1.63	2.50	2.89	3.43	3.59	3.88	3.66	3.73	4.05	2.83	2.16	1.19	2.97	3.76	3.59
N	307	279	308	299	308	300	310	305	300	310	296	286	3608	915	2132
12HR 8-8	1.52	2.30	2.69	3.35	3.51	3.70	3.42	3.50	3.76	2.61	1.95	1.08	2.79	3.54	3.40
N	369	335	369	356	368	357	370	359	359	368	353	342	4305	1086	2537

1993 POLLUTANT: OZONE COUNTY: Solano SITE: 879

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	102	24	106	193	122	240	307	62	12	0	1168	555	1054
N	0	0	16	4	17	27	18	33	45	10	2	0	172	78	154
S>10	0	0	0	0	0	2	0	0	0	0	0	0	2	2	2
N	0	0	0	0	0	2	0	0	0	0	0	0	2	2	2
7 HR	2.09	3.00	3.55	4.06	3.93	3.89	3.47	3.61	3.85	2.87	2.36	1.33	3.18	3.65	3.67
N	211	190	214	209	210	210	205	213	204	211	195	200	2472	628	1462
10 HR	1.92	2.92	3.41	3.94	3.77	3.72	3.31	3.39	3.74	2.69	2.08	1.20	3.01	3.47	3.50
N	304	274	307	299	306	300	299	307	296	306	287	298	3583	906	2113
12HR 8-8	1.81	2.73	3.22	3.82	3.65	3.53	3.12	3.20	3.48	2.48	1.92	1.12	2.84	3.28	3.32
N	366	329	368	358	361	357	355	365	351	362	342	352	4266	1077	2509

1993 POLLUTANT: OZONE COUNTY: Sonoma SITE: 887

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	0	0	13	39	30	98	141	6	0	0	327	167	327
N	0	0	0	0	2	6	5	16	22	1	0	0	52	27	52
S>10	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	-1.00	-1.00	2.16	2.17	2.60	2.81	2.67	2.83	3.27	2.45	2.05	1.27	2.44	2.77	2.69
N	0	0	154	209	215	210	217	217	209	217	202	215	2065	644	1494
10 HR	-1.00	-1.00	2.25	2.22	2.55	2.76	2.52	2.73	3.30	2.53	2.08	1.15	2.41	2.67	2.66
N	0	0	220	299	308	300	310	310	299	310	292	310	2958	920	2136
12HR 8-8	-1.00	-1.00	2.13	2.16	2.51	2.67	2.40	2.57	3.06	2.31	1.89	1.05	2.28	2.54	2.53
N	0	0	264	359	370	360	371	372	359	372	352	370	3549	1103	2563

1993 POLLUTANT: OZONE COUNTY: Sonoma SITE: 893

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	12	0	37	31	30	76	164	90	12	0	452	137	428
N	0	0	2	0	6	5	5	12	24	14	2	0	70	22	66
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.28	1.98	2.58	3.37	3.49	3.43	3.08	2.76	3.29	2.47	2.08	1.11	2.58	3.09	3.13
N	213	190	211	206	214	206	213	210	207	201	208	214	2493	629	1457
10 HR	1.15	1.91	2.42	3.18	3.27	3.16	2.89	2.58	3.09	2.20	1.82	.97	2.39	2.88	2.91
N	306	276	305	296	307	296	307	305	298	293	298	309	3596	908	2102
12HR 8-8	1.04	1.71	2.21	3.03	3.20	3.03	2.73	2.40	2.76	1.97	1.58	.86	2.21	2.72	2.73
N	368	329	365	356	369	356	368	364	357	346	355	366	4299	1088	2516

1993 POLLUTANT: OZONE COUNTY: Sonoma SITE: 899

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	71	12	60	144	30	175	480	213	64	0	1249	349	1114
N	0	0	11	2	9	24	5	28	72	33	10	0	194	57	173
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.31	2.91	3.27	3.82	3.73	3.84	3.59	3.87	3.96	3.58	3.31	1.98	3.35	3.76	3.77
N	217	194	217	210	217	210	217	217	210	217	210	217	2553	644	1498
10 HR	2.34	3.01	3.36	3.91	3.72	3.85	3.64	3.84	3.98	3.60	3.29	1.91	3.37	3.77	3.79
N	310	277	310	300	310	300	310	310	300	310	300	310	3647	920	2140
12HR 8-8	2.19	2.78	3.12	3.72	3.59	3.68	3.42	3.62	3.63	3.28	3.03	1.81	3.16	3.57	3.56
N	372	333	372	360	372	360	372	372	360	372	360	372	4377	1104	2568

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Stanislaus SITE: 568

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	151	27	459	797	1286	1045	911	261	43	0	4980	3128	4786
N	0	0	24	4	72	111	172	143	129	41	7	0	703	426	672
S>10	0	0	0	0	0	3	1	5	0	0	0	0	9	9	9
N	0	0	0	0	0	3	1	4	0	0	0	0	8	8	8
7 HR	1.28	2.20	3.33	3.73	4.36	4.86	5.28	5.00	5.11	3.50	2.44	1.03	3.53	5.05	4.55
N	208	187	209	198	207	208	217	210	210	217	194	215	2480	635	1467
10 HR	1.11	2.00	3.16	3.80	4.45	5.14	5.81	5.25	4.98	3.01	1.82	.76	3.46	5.41	4.64
N	302	274	304	285	302	299	310	302	300	310	279	308	3575	911	2108
12HR 8-8	1.01	1.84	2.91	3.56	4.22	4.80	5.30	4.80	4.56	2.75	1.65	.69	3.19	4.97	4.29
N	362	326	363	343	359	356	372	361	360	370	333	368	4273	1089	2521

1993 POLLUTANT: OZONE COUNTY: Stanislaus SITE: 573

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	-1	202	539	958	1606	1268	1162	303	94	0	6132	3832	6038
N	0	0	0	33	82	131	216	172	161	48	14	0	857	519	843
S>10	0	0	-1	0	0	12	4	12	1	0	0	0	29	28	29
N	0	0	0	0	0	5	4	7	1	0	0	0	17	16	17
7 HR	1.95	2.91	-1.00	4.37	4.69	5.20	5.79	5.39	5.63	3.74	2.90	1.81	4.05	5.46	4.99
N	204	190	0	195	198	205	212	213	204	196	198	207	2222	630	1423
10 HR	1.83	2.73	-1.00	4.37	4.75	5.48	6.31	5.71	5.58	3.34	2.30	1.47	4.01	5.84	5.10
N	295	273	0	286	295	296	305	306	296	280	287	300	3219	907	2064
12HR 8-8	1.68	2.52	-1.00	4.13	4.48	5.08	5.74	5.22	5.12	3.01	2.08	1.36	3.70	5.35	4.71
N	353	327	0	344	351	355	367	367	354	336	341	362	3857	1089	2474

1993 POLLUTANT: OZONE COUNTY: Sutter SITE: 897

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	124	89	346	441	722	637	885	339	63	0	3646	1800	3459
N	0	0	20	15	51	63	108	93	132	52	11	0	545	264	514
S>10	0	0	0	0	0	11	0	7	1	0	0	0	19	18	19
N	0	0	0	0	0	5	0	3	1	0	0	0	9	8	9
7 HR	2.39	2.86	3.25	3.91	4.48	4.61	4.95	4.86	5.19	3.89	2.99	1.76	3.77	4.81	4.56
N	199	181	211	201	213	206	207	212	206	209	205	215	2465	625	1454
10 HR	2.33	2.84	3.31	3.83	4.47	4.72	4.97	4.67	4.92	3.47	2.61	1.47	3.64	4.78	4.43
N	292	267	305	295	308	299	301	306	299	305	296	309	3582	906	2113
12HR 8-8	2.19	2.63	3.01	3.62	4.25	4.43	4.60	4.34	4.54	3.15	2.38	1.37	3.38	4.46	4.14
N	349	320	366	347	366	355	361	365	355	363	355	370	4272	1081	2512

1993 POLLUTANT: OZONE COUNTY: Sutter SITE: 898

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	76	113	250	575	768	868	703	199	0	0	3552	2211	3476
N	0	0	13	18	39	83	111	129	103	28	0	0	524	323	511
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.80	2.45	3.23	3.89	4.12	4.57	4.78	4.84	4.99	3.12	2.09	1.26	3.44	4.73	4.33
N	215	196	213	200	215	204	190	217	210	214	210	192	2476	611	1450
10 HR	1.64	2.28	3.13	3.84	4.13	4.65	5.04	4.90	4.66	2.63	1.63	1.07	3.30	4.86	4.26
N	308	280	306	290	308	295	276	310	300	305	300	286	3564	881	2084
12HR 8-8	1.54	2.10	2.87	3.60	3.88	4.39	4.66	4.50	4.30	2.37	1.48	.99	3.06	4.51	3.95
N	369	336	367	346	369	352	329	372	359	364	360	339	4262	1053	2491

1993 POLLUTANT: OZONE COUNTY: Sutter SITE: 899

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	-1	-1	-1	1795	1956	3448	1596	8795	3751	8795
N	0	0	0	0	0	0	263	286	486	236	1271	549	1271
S>10	-1	-1	-1	-1	-1	-1	1	3	5	1	10	4	10
N	0	0	0	0	0	0	1	2	5	1	9	3	9
7 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4.76	5.07	6.43	4.79	5.25	4.91	5.25
N	0	0	0	0	0	0	217	215	202	200	834	432	834
10 HR	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5.34	5.61	6.71	5.04	5.67	5.47	5.67
N	0	0	0	0	0	0	310	309	293	293	1205	619	1205
12HR 8-8	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	5.10	5.33	6.49	4.90	5.45	5.21	5.45
N	0	0	0	0	0	0	372	369	352	355	1448	741	1448

1993 POLLUTANT: OZONE COUNTY: Tehama SITE: 909

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	67	49	304	440	781	984	1090	215	0	0	3930	2205	3863
N	0	0	11	8	45	69	112	148	158	30	0	0	581	329	570
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.56	3.05	3.41	4.08	4.50	4.60	5.04	5.33	5.76	3.60	3.05	1.91	3.92	5.00	4.71
N	201	194	204	201	216	204	215	215	206	209	201	215	2481	634	1466
10 HR	2.44	2.94	3.44	4.03	4.52	4.65	5.19	5.39	5.65	3.39	2.86	1.70	3.86	5.08	4.70
N	291	278	286	293	309	295	309	308	296	298	291	308	3562	912	2108
12HR 8-8	2.30	2.81	3.15	3.83	4.33	4.47	4.94	5.04	5.28	3.15	2.71	1.59	3.65	4.82	4.44
N	349	334	344	349	371	353	369	370	354	355	349	370	4267	1092	2521

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Tulare SITE: 568

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	292	514	1179	1899	2409	2018	2212	1163	363	0	12049	6326	11394
N	0	0	47	76	172	238	301	254	258	150	50	0	1546	793	1449
S>10	0	0	0	0	0	20	12	36	74	19	0	0	161	68	161
N	0	0	0	0	0	17	11	21	35	11	0	0	95	49	95
7 HR	1.26	2.63	3.71	4.66	5.60	6.81	7.48	7.05	7.76	6.05	3.99	1.88	4.93	7.11	6.48
N	212	155	196	203	203	205	196	210	201	208	200	214	2403	611	1426
10 HR	1.04	2.36	3.57	4.75	5.64	7.05	7.76	7.11	7.68	5.28	3.15	1.55	4.78	7.30	6.46
N	306	220	290	296	300	297	290	307	293	303	291	308	3501	894	2086
12HR 8-8	.94	2.12	3.27	4.39	5.29	6.55	7.18	6.62	7.05	4.91	2.91	1.46	4.42	6.78	5.99
N	367	266	344	352	358	355	348	365	349	362	350	368	4184	1068	2489

1993 POLLUTANT: OZONE COUNTY: Tulare SITE: 570

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	38	0	964	2736	4622	3818	3904	1680	709	0	18471	11176	17724
N	0	0	6	0	148	375	609	519	522	244	105	0	2528	1503	2417
S>10	0	0	0	0	0	2	11	6	38	0	0	0	57	19	57
N	0	0	0	0	0	2	11	6	25	0	0	0	44	19	44
7 HR	2.58	2.84	2.94	3.19	4.98	6.58	7.88	7.29	7.58	5.76	4.52	2.82	4.92	7.25	6.18
N	206	191	213	204	211	204	204	210	204	209	208	206	2470	618	1446
10 HR	2.47	2.75	2.94	3.17	5.13	6.78	8.26	7.58	7.92	5.87	4.48	2.67	5.00	7.54	6.38
N	300	276	307	294	308	297	295	303	291	301	300	299	3571	895	2089
12HR 8-8	2.38	2.67	2.80	3.03	4.93	6.55	8.00	7.32	7.59	5.52	4.26	2.55	4.80	7.29	6.13
N	358	330	367	354	364	352	352	365	351	362	356	358	4269	1069	2500

1993 POLLUTANT: OZONE COUNTY: Tulare SITE: 571

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	396	476	1603	3209	4896	4573	3947	1230	595	6	20931	12678	19934
N	0	0	65	74	247	434	606	596	539	181	95	1	2838	1636	2677
S>10	0	0	0	0	0	7	34	20	25	0	0	0	86	61	86
N	0	0	0	0	0	7	30	17	15	0	0	0	69	54	69
7 HR	3.55	4.11	4.42	4.81	5.55	6.60	8.11	7.68	7.30	5.35	4.90	3.75	5.52	7.48	6.47
N	196	187	205	207	209	197	207	210	196	214	195	214	2437	614	1440
10 HR	3.45	4.00	4.17	4.57	5.68	7.01	8.63	8.01	7.57	5.36	4.67	3.55	5.57	7.90	6.68
N	287	271	300	298	301	285	301	305	288	307	288	307	3538	891	2085
12HR 8-8	3.41	3.98	4.16	4.59	5.58	6.80	8.37	7.80	7.32	5.12	4.59	3.54	5.45	7.67	6.51
N	345	327	360	356	361	343	362	365	345	369	344	369	4246	1070	2501

1993 POLLUTANT: OZONE COUNTY: Tuolumne SITE: 929

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	6	32	454	848	2320	1620	2001	606	158	0	8045	4788	7881
N	0	0	1	5	74	135	349	253	306	92	26	0	1241	737	1214
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	2.94	3.53	3.58	4.26	4.65	4.94	6.13	5.60	5.90	4.63	3.90	3.06	4.44	5.58	5.17
N	199	180	215	202	202	187	208	209	201	201	193	189	2386	604	1410
10 HR	2.78	3.35	3.38	4.15	4.64	5.12	6.33	5.73	6.12	4.42	3.66	2.75	4.38	5.74	5.22
N	293	262	308	296	297	283	303	306	293	301	284	292	3518	892	2079
12HR 8-8	2.78	3.30	3.31	4.09	4.58	4.98	6.21	5.62	5.90	4.26	3.56	2.71	4.29	5.62	5.10
N	348	315	370	350	351	332	362	364	350	352	339	338	4171	1058	2461

1993 POLLUTANT: OZONE COUNTY: Tuolumne SITE: 930

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	6	0	38	148	511	1209	2421	1717	2023	663	370	0	9106	5347	8692
N	1	0	6	24	81	183	347	257	292	96	54	0	1341	787	1280
S>10	0	0	0	0	0	0	0	0	2	0	0	0	2	0	2
N	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
7 HR	2.86	3.56	3.70	4.29	4.72	5.32	6.53	5.98	6.61	5.00	4.22	2.35	4.59	5.95	5.50
N	215	195	217	203	217	207	217	198	209	204	208	217	2507	622	1455
10 HR	2.69	3.44	3.64	4.44	4.78	5.49	6.76	6.04	6.49	4.46	3.65	2.07	4.49	6.11	5.50
N	308	279	310	296	310	297	310	291	298	294	299	310	3602	898	2096
12HR 8-8	2.55	3.27	3.44	4.27	4.63	5.28	6.58	5.89	6.24	4.17	3.38	1.92	4.30	5.92	5.30
N	370	335	372	353	372	357	372	349	358	354	358	372	4322	1078	2515

1993 POLLUTANT: OZONE COUNTY: Ventura SITE: 427

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	13	0	33	118	92	284	450	557	176	13	1736	494	1534
N	0	0	2	0	5	19	15	45	67	80	26	2	261	79	231
S>10	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
N	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
7 HR	2.04	2.32	3.14	3.22	3.12	3.97	3.87	4.38	4.48	4.54	3.86	3.13	3.52	4.07	3.94
N	206	196	214	210	217	210	216	217	207	217	210	215	2535	643	1494
10 HR	1.91	2.13	2.95	2.99	2.91	3.82	3.64	4.07	4.05	4.09	3.47	2.79	3.25	3.84	3.65
N	294	280	309	300	310	300	310	310	298	310	300	308	3629	920	2138
12HR 8-8	1.83	2.01	2.76	2.90	2.81	3.61	3.44	3.75	3.80	3.83	3.29	2.67	3.07	3.60	3.45
N	353	336	369	360	372	360	370	372	356	372	360	370	4350	1102	2562

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Ventura SITE: 429

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	25	8	816	864	555	1243	343	614	1351	1303	1057	77	8256	2200	6273
N	4	1	128	134	82	185	55	95	197	197	155	13	1246	335	945
S>10	0	0	0	0	4	0	0	0	4	0	0	0	8	0	8
N	0	0	0	0	3	0	0	0	2	0	0	0	5	0	5
7 HR	3.22	3.78	4.78	5.16	4.56	5.47	4.53	4.79	5.44	5.07	4.98	3.77	4.64	4.92	4.99
N	208	150	209	194	214	199	213	214	203	214	202	209	2429	626	1451
10 HR	3.25	3.80	4.95	5.23	4.49	5.40	4.38	4.77	5.40	5.25	5.08	3.81	4.66	4.84	4.98
N	302	218	303	279	309	289	306	308	294	307	290	300	3505	903	2092
12HR 8-8	3.17	3.68	4.71	4.99	4.26	5.10	4.22	4.46	5.11	5.01	4.92	3.71	4.45	4.58	4.73
N	361	260	361	334	369	346	365	369	351	368	347	359	4190	1080	2502

1993 POLLUTANT: OZONE COUNTY: Ventura SITE: 430

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	13	6	630	1180	1145	1737	1113	1815	1603	1124	441	48	10855	4665	9717
N	2	1	100	182	169	239	169	252	219	158	62	7	1560	660	1388
S>10	0	0	0	0	14	5	0	0	7	3	0	0	29	5	29
N	0	0	0	0	7	3	0	0	6	3	0	0	19	3	19
7 HR	2.91	3.44	4.74	5.71	5.45	6.60	5.76	6.88	6.70	5.73	4.58	3.40	5.17	6.41	6.12
N	213	196	208	210	217	208	217	215	210	207	206	213	2520	640	1484
10 HR	2.66	3.31	4.63	5.53	5.32	6.39	5.52	6.49	6.24	5.38	4.13	3.00	4.89	6.13	5.84
N	308	280	303	300	310	299	310	307	300	298	297	306	3618	916	2124
12HR 8-8	2.48	3.09	4.35	5.31	5.13	6.13	5.32	6.16	6.00	5.04	3.86	2.73	4.64	5.87	5.59
N	366	334	361	360	372	358	370	369	360	356	356	368	4330	1097	2545

1993 POLLUTANT: OZONE COUNTY: Ventura SITE: 433

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	47	25	696	470	370	626	330	534	747	686	497	19	5047	1490	3763
N	7	4	107	73	53	95	54	83	113	102	71	3	765	232	573
S>10	0	0	0	0	15	0	0	0	5	0	0	0	20	0	20
N	0	0	0	0	5	0	0	0	3	0	0	0	8	0	8
7 HR	2.96	3.56	4.62	4.98	4.67	5.07	4.68	4.65	5.23	4.86	4.29	3.11	4.41	4.80	4.87
N	174	195	191	209	217	206	217	217	195	215	201	212	2449	640	1476
10 HR	2.73	3.56	4.72	4.89	4.55	4.94	4.57	4.54	5.08	4.76	3.90	2.61	4.26	4.68	4.76
N	255	279	276	295	310	298	310	310	285	309	293	305	3525	918	2117
12HR 8-8	2.55	3.28	4.32	4.64	4.38	4.78	4.45	4.36	4.83	4.41	3.59	2.38	4.02	4.53	4.54
N	301	334	330	354	372	356	372	372	338	366	348	366	4209	1100	2530

1993 POLLUTANT: OZONE COUNTY: Ventura SITE: 434

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	99	14	61	423	374	2200	2040	1144	417	99	6871	2997	6256
N	0	0	17	2	10	67	49	270	240	149	59	15	878	386	787
S>10	0	0	0	0	0	0	4	49	99	16	0	0	168	53	168
N	0	0	0	0	0	0	4	29	46	10	0	0	89	33	89
7 HR	2.10	2.52	3.47	3.80	3.62	4.61	4.65	7.94	7.82	5.86	4.55	3.51	4.57	5.75	5.48
N	216	195	165	209	214	210	208	214	210	217	198	216	2472	632	1482
10 HR	1.86	2.24	3.21	3.49	3.35	4.36	4.25	7.29	7.11	5.15	3.96	2.96	4.13	5.31	5.00
N	310	279	237	299	308	300	301	306	300	310	283	309	3542	907	2124
12HR 8-8	1.76	2.15	3.04	3.39	3.27	4.19	4.10	6.89	6.71	4.80	3.74	2.77	3.93	5.08	4.77
N	370	335	285	359	368	360	362	368	360	372	339	371	4249	1090	2549

1993 POLLUTANT: OZONE COUNTY: Ventura SITE: 435

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	YR TOT	JUN-AUG	APR-OCT
SUM06	13	20	851	1066	841	1474	1277	1454	1481	901	359	9737	4205	8494
N	2	3	128	157	125	198	190	207	192	127	52	1381	595	1196
S>10	0	0	0	0	6	6	0	5	27	1	0	45	11	45
N	0	0	0	0	3	6	0	2	17	1	0	29	8	29
7 HR	2.56	3.52	5.01	5.78	5.21	6.47	5.91	6.25	6.70	5.22	4.34	5.19	6.20	5.93
N	215	192	209	210	214	204	217	217	209	216	207	2310	638	1487
10 HR	2.30	3.28	4.91	5.48	4.94	6.22	5.66	6.06	6.19	4.68	3.81	4.88	5.97	5.60
N	304	274	302	300	307	297	310	310	299	309	296	3308	917	2132
12HR 8-8	2.17	3.05	4.55	5.21	4.72	5.91	5.48	5.67	5.81	4.32	3.59	4.60	5.68	5.30
N	366	329	363	360	369	354	372	372	359	371	356	3971	1098	2557

1993 POLLUTANT: OZONE COUNTY: Ventura SITE: 436

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	45	90	808	969	807	1365	1222	1117	1036	680	316	87	8542	3704	7196
N	7	15	126	149	123	197	187	170	153	100	44	14	1285	554	1079
S>10	0	0	0	1	9	0	0	1	3	0	0	0	14	1	14
N	0	0	0	1	4	0	0	1	2	0	0	0	8	1	8
7 HR	3.82	4.18	5.22	5.77	5.38	6.22	5.82	5.71	5.78	3.44	3.05	3.37	4.81	5.92	5.44
N	217	194	210	210	217	210	213	203	210	217	210	214	2525	626	1480
10 HR	3.53	3.97	4.98	5.40	5.08	5.90	5.58	5.46	5.59	3.99	3.29	2.82	4.63	5.65	5.28
N	310	278	304	300	310	300	305	294	300	310	300	305	3616	899	2119
12HR 8-8	3.38	3.77	4.70	5.21	4.97	5.71	5.44	5.22	5.25	3.33	2.75	2.65	4.36	5.46	5.01
N	372	334	364	360	372	360	367	352	360	372	360	367	4340	1079	2543

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Yolo SITE: 577

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	-1	174	76	238	491	830	677	824	374	13	0	3697	1998	3510
N	0	0	26	13	36	73	123	100	123	58	2	0	554	296	526
S>10	0	-1	0	0	0	0	0	5	0	0	0	0	5	5	5
N	0	0	0	0	0	0	0	3	0	0	0	0	3	3	3
7 HR	2.56	-1.00	3.70	4.21	4.42	4.66	5.09	4.90	5.29	4.06	3.12	1.70	3.98	4.89	4.66
N	214	0	206	204	215	206	217	215	207	213	203	212	2312	638	1477
10 HR	2.39	-1.00	3.49	4.10	4.26	4.70	4.98	4.69	4.84	3.62	2.64	1.42	3.74	4.79	4.46
N	307	0	297	294	308	297	310	308	299	304	286	305	3315	915	2120
12HR 8-8	2.29	-1.00	3.25	3.95	4.11	4.47	4.65	4.39	4.52	3.37	2.52	1.32	3.53	4.50	4.21
N	369	0	355	354	369	355	370	369	357	361	344	367	3970	1094	2535

1993 POLLUTANT: OZONE COUNTY: Yolo SITE: 579

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	131	31	261	324	470	487	556	204	6	0	2470	1281	2333
N	0	0	20	5	40	48	71	72	86	31	1	0	374	191	353
S>10	0	0	0	0	0	0	0	5	0	0	0	0	5	5	5
N	0	0	0	0	0	0	0	4	0	0	0	0	4	4	4
7 HR	1.80	2.49	3.14	3.74	4.19	4.09	4.23	4.21	4.60	3.38	2.62	1.42	3.33	4.18	4.06
N	207	189	214	201	214	205	206	215	195	207	202	201	2456	626	1443
10 HR	1.70	2.40	3.14	3.77	4.20	4.27	4.56	4.26	4.31	2.90	2.12	1.18	3.24	4.36	4.04
N	301	273	307	293	307	296	296	305	283	299	291	290	3541	897	2079
12HR 8-8	1.59	2.21	2.87	3.59	4.00	4.00	4.15	3.87	3.96	2.64	2.01	1.08	3.00	4.00	3.74
N	361	329	369	350	369	355	356	367	340	359	351	348	4254	1078	2496

1993 POLLUTANT: OZONE COUNTY: Alameda SITE: 336

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	59	13	114	353	390	388	226	30	27	0	1600	1131	1514
N	0	0	9	2	18	47	56	53	33	5	5	0	228	156	214
S>10	0	0	0	0	0	2	8	6	0	0	0	0	16	16	16
N	0	0	0	0	0	2	5	4	0	0	0	0	11	11	11
7 HR	1.78	2.40	3.02	3.73	3.85	4.30	4.30	4.17	4.02	2.93	2.73	2.01	3.28	4.26	3.89
N	209	185	207	201	214	187	213	207	204	210	172	200	2409	607	1436
10 HR	1.67	2.15	2.80	3.47	3.62	3.82	3.82	3.67	3.44	2.48	2.32	1.78	2.93	3.77	3.47
N	303	273	303	289	309	281	309	302	296	307	260	299	3531	892	2093
12HR 8-8	1.55	1.99	2.60	3.34	3.51	3.69	3.62	3.47	3.22	2.31	2.14	1.68	2.77	3.59	3.30
N	364	325	359	340	364	329	364	358	352	362	307	352	4176	1051	2469

1993 POLLUTANT: OZONE COUNTY: Alameda SITE: 337

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	6	0	30	94	53	73	68	36	6	0	366	220	354
N	0	0	1	0	5	15	7	11	11	6	1	0	57	33	55
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.70	2.22	2.10	2.59	2.73	2.69	2.53	2.63	2.48	2.19	2.29	1.58	2.31	2.62	2.55
N	217	196	217	210	215	210	217	217	210	216	208	217	2550	644	1495
10 HR	1.69	2.16	2.03	2.49	2.68	2.56	2.36	2.41	2.47	2.07	2.14	1.50	2.21	2.44	2.43
N	310	280	310	300	308	300	310	310	300	309	298	310	3645	920	2137
12HR 8-8	1.72	2.16	1.95	2.38	2.57	2.44	2.20	2.29	2.35	2.01	2.15	1.49	2.14	2.31	2.32
N	372	336	372	360	370	360	372	372	360	371	358	372	4375	1104	2565

1993 POLLUTANT: OZONE COUNTY: Alameda SITE: 339

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	0	12	21	35	42	0	0	0	0	110	98	110
N	0	0	0	0	2	3	4	6	0	0	0	0	15	13	15
S>10	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1
N	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1
7 HR	1.02	1.40	1.71	2.31	2.29	2.11	1.96	1.89	1.96	1.56	1.34	.81	1.70	1.99	2.01
N	217	195	217	209	216	210	216	206	210	216	207	217	2536	632	1483
10 HR	.85	1.28	1.46	2.07	2.05	1.78	1.73	1.58	1.60	1.28	1.06	.67	1.45	1.70	1.73
N	310	279	310	299	310	300	310	297	300	309	297	310	3631	907	2125
12HR 8-8	.79	1.17	1.40	2.03	2.01	1.74	1.64	1.50	1.51	1.16	.97	.60	1.38	1.63	1.65
N	372	335	372	359	370	360	371	356	360	371	357	372	4355	1087	2547

1993 POLLUTANT: OZONE COUNTY: Alameda SITE: 340

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	74	51	140	395	634	514	599	220	82	0	2709	1543	2553
N	0	0	12	8	22	53	91	70	84	35	12	0	387	214	363
S>10	0	0	0	0	0	8	1	5	1	0	0	0	15	14	15
N	0	0	0	0	0	7	1	2	1	0	0	0	11	10	11
7 HR	2.12	2.86	3.05	3.90	3.88	4.48	4.57	4.36	4.61	3.38	2.80	1.56	3.46	4.47	4.17
N	216	194	213	210	217	203	217	214	210	217	207	214	2532	634	1488
10 HR	1.89	2.63	2.74	3.55	3.60	4.18	4.22	3.92	4.17	2.85	2.30	1.28	3.11	4.11	3.78
N	310	278	305	300	310	297	310	309	300	310	296	308	3633	916	2136
12HR 8-8	1.80	2.49	2.58	3.40	3.47	3.96	3.89	3.65	3.82	2.63	2.13	1.17	2.92	3.83	3.54
N	364	326	360	358	371	351	372	368	360	372	349	364	4315	1091	2552

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Alameda SITE: 343

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	49	0	85	167	76	202	72	75	30	0	756	445	677
N	0	0	8	0	13	24	8	28	10	11	5	0	107	60	94
S>10	0	0	0	0	0	0	5	1	0	0	0	0	6	6	6
N	0	0	0	0	0	0	3	1	0	0	0	0	4	4	4
7 HR	1.77	2.53	2.69	3.43	3.54	3.42	3.11	3.30	2.94	2.61	2.43	1.51	2.77	3.28	3.19
N	217	196	217	210	213	210	216	217	200	217	188	217	2518	643	1483
10 HR	1.65	2.34	2.42	3.06	3.19	3.05	2.75	2.87	2.67	2.29	2.20	1.29	2.48	2.89	2.84
N	310	280	310	300	305	300	309	310	288	310	270	310	3602	919	2122
12HR 8-8	1.58	2.23	2.26	2.96	3.11	2.90	2.59	2.68	2.49	2.14	2.03	1.25	2.35	2.72	2.70
N	372	336	372	360	367	360	371	372	344	372	323	372	4321	1103	2546

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 60

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	6	722	1310	1214	2292	2155	2308	1931	664	119	0	12721	6755	11874
N	0	1	94	162	149	206	231	226	186	74	16	0	1345	663	1234
S>10	0	0	14	69	49	441	202	338	300	70	0	0	1483	981	1469
N	0	0	7	28	20	92	68	82	74	16	0	0	387	242	380
7 HR	1.60	2.45	4.73	6.30	5.99	9.35	8.31	9.24	8.38	4.71	3.03	1.93	5.52	8.96	7.46
N	215	195	217	210	217	209	217	217	210	217	210	217	2551	643	1497
10 HR	1.32	2.10	4.35	5.81	5.33	8.38	7.66	8.10	7.28	4.01	2.60	1.68	4.90	8.04	6.64
N	308	279	310	300	310	299	310	310	300	310	300	310	3646	919	2139
12HR 8-8	1.26	2.01	3.91	5.29	4.90	7.52	6.95	7.19	6.46	3.57	2.42	1.58	4.43	7.22	5.98
N	370	335	372	360	372	359	372	372	360	372	360	372	4376	1103	2567

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 69

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	13	301	270	189	1429	898	1089	899	271	23	0	5382	3416	5045
N	0	2	45	38	28	158	124	135	104	27	3	0	664	417	614
S>10	0	0	0	2	1	90	9	45	54	37	0	0	238	144	238
N	0	0	0	2	1	36	5	19	19	8	0	0	90	60	90
7 HR	1.21	2.06	3.51	3.80	3.39	6.70	5.18	6.00	5.48	3.41	1.73	1.00	3.63	5.95	4.84
N	217	193	211	209	215	206	217	216	207	217	209	214	2531	639	1487
10 HR	.91	1.74	3.04	3.46	2.92	6.04	4.88	5.16	4.67	2.93	1.40	.79	3.17	5.35	4.29
N	310	278	305	300	309	298	310	309	299	310	299	307	3634	917	2135
12HR 8-8	.80	1.57	2.68	3.11	2.70	5.45	4.40	4.57	4.13	2.62	1.28	.70	2.84	4.80	3.85
N	372	333	366	358	370	355	372	371	356	372	358	369	4352	1098	2554

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 72

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	13	456	523	225	369	77	260	579	91	21	0	2614	706	2124
N	0	2	69	75	34	52	13	37	76	15	3	0	376	102	302
S>10	0	0	0	1	0	1	0	0	13	0	0	0	15	1	15
N	0	0	0	1	0	1	0	0	7	0	0	0	9	1	9
7 HR	1.51	2.41	3.76	4.58	3.55	4.18	3.45	3.82	4.24	2.87	1.93	1.31	3.12	3.81	3.80
N	217	196	217	207	217	197	216	206	201	214	209	216	2513	619	1458
10 HR	1.26	2.19	3.69	4.39	3.34	3.92	3.34	3.48	3.94	2.60	1.61	1.03	2.89	3.57	3.56
N	310	280	310	297	310	281	310	301	289	307	299	309	3603	892	2095
12HR 8-8	1.18	2.06	3.39	4.18	3.20	3.75	3.18	3.28	3.65	2.40	1.48	.88	2.71	3.39	3.36
N	372	336	372	356	372	337	370	361	345	369	359	371	4320	1068	2510

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 74

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	843	1143	1083	2103	1751	1810	1589	691	113	0	11126	5664	10170
N	0	0	113	150	144	227	218	214	181	86	17	0	1350	659	1220
S>10	0	0	23	11	24	203	42	99	141	44	0	0	587	344	564
N	0	0	11	8	8	60	22	38	37	13	0	0	197	120	186
7 HR	1.34	2.38	5.06	6.05	5.83	8.03	6.95	7.42	7.19	4.66	3.19	2.14	5.04	7.46	6.59
N	217	187	216	198	210	204	217	217	210	217	210	207	2510	638	1473
10 HR	1.16	2.12	4.77	5.67	5.45	7.63	6.60	6.67	6.54	4.20	2.60	1.75	4.61	6.96	6.11
N	310	273	309	283	300	295	310	310	300	310	300	301	3601	915	2108
12HR 8-8	1.07	1.91	4.31	5.22	5.13	6.94	6.05	6.07	5.91	3.70	2.40	1.59	4.20	6.34	5.57
N	372	327	371	337	361	353	372	372	360	372	360	362	4319	1097	2527

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 75

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	446	942	873	1951	1750	1878	1502	408	48	0	9798	5579	9304
N	0	0	61	122	112	188	197	197	154	46	6	0	1083	582	1016
S>10	0	0	7	20	24	302	111	191	181	38	0	0	874	604	867
N	0	0	3	13	10	69	43	60	49	11	0	0	258	172	255
7 HR	.98	1.83	3.65	5.20	5.03	8.21	7.17	7.59	6.98	3.62	1.84	.95	4.44	7.65	6.24
N	216	173	211	210	217	206	212	217	205	217	209	215	2508	635	1484
10 HR	.78	1.52	3.42	5.00	4.71	7.60	6.84	7.09	6.21	3.17	1.46	.72	4.07	7.17	5.79
N	309	249	304	300	310	296	306	310	296	310	298	308	3596	912	2128
12HR 8-8	.68	1.39	3.02	4.48	4.25	6.79	6.14	6.25	5.46	2.76	1.29	.61	3.62	6.39	5.15
N	371	297	365	360	372	356	366	372	353	372	358	370	4312	1094	2551

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 80

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	26	436	778	449	1030	846	966	1152	319	90	0	6092	2842	5540
N	0	4	66	109	62	128	116	124	137	41	13	0	800	368	717
S>10	0	0	0	2	5	43	16	30	57	2	0	0	155	89	155
N	0	0	0	1	5	23	5	12	27	2	0	0	75	40	75
7 HR	1.26	2.19	3.85	5.30	4.54	6.02	5.52	5.81	6.16	3.96	2.71	1.71	4.09	5.78	5.32
N	217	196	217	210	217	210	217	217	210	217	210	217	2555	644	1498
10 HR	1.00	1.80	3.56	4.78	4.02	5.36	5.06	5.08	5.37	3.33	2.12	1.27	3.57	5.16	4.71
N	310	280	310	300	310	300	310	310	300	310	300	310	3650	920	2140
12HR 8-8	.91	1.65	3.20	4.44	3.75	4.98	4.68	4.65	4.84	3.02	1.92	1.13	3.27	4.77	4.33
N	372	336	372	360	372	360	372	372	360	372	360	372	4380	1104	2568

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 84

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	53	206	105	247	170	317	425	105	14	0	1642	734	1575
N	0	0	8	30	15	37	26	45	59	16	2	0	238	108	228
S>10	0	0	0	0	0	0	0	0	2	0	0	0	2	0	2
N	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
7 HR	.77	1.41	2.71	3.70	3.07	3.79	3.78	4.10	4.10	2.41	1.36	.70	2.66	3.89	3.56
N	216	196	217	208	217	204	214	215	210	217	210	217	2541	633	1485
10 HR	.59	1.17	2.39	3.20	2.62	3.15	3.29	3.35	3.54	1.94	1.03	.51	2.23	3.26	3.01
N	309	280	310	298	310	296	307	309	300	310	300	310	3639	912	2130
12HR 8-8	.52	1.06	2.13	2.98	2.55	3.01	3.18	3.16	3.23	1.76	.93	.44	2.08	3.12	2.83
N	371	336	372	358	372	352	369	370	360	372	360	372	4364	1091	2553

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 85

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	6	435	882	712	1366	1110	1359	1478	493	116	0	7957	3835	7400
N	0	1	62	113	95	152	144	158	157	61	16	0	959	454	880
S>10	0	0	3	19	25	115	25	84	140	24	0	0	435	224	432
N	0	0	3	14	9	37	10	35	50	11	0	0	169	82	166
7 HR	.85	1.62	3.72	5.58	5.09	6.97	6.09	6.91	7.14	4.09	2.58	1.53	4.34	6.67	5.97
N	217	195	217	199	217	209	197	214	210	217	204	217	2513	620	1463
10 HR	.65	1.38	3.45	4.97	4.40	6.05	5.41	5.93	6.16	3.42	1.96	1.17	3.74	5.81	5.18
N	310	279	310	287	310	297	280	307	300	310	294	310	3594	884	2091
12HR 8-8	.56	1.21	3.02	4.47	4.10	5.51	4.96	5.33	5.44	2.99	1.73	1.01	3.35	5.27	4.67
N	372	335	372	344	371	357	338	369	360	372	354	372	4316	1064	2511

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 87

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	200	568	233	889	389	738	942	230	27	0	4216	2016	3989
N	0	0	29	78	29	114	55	98	113	28	4	0	548	267	515
S>10	0	0	0	1	15	15	1	10	31	7	0	0	80	26	80
N	0	0	0	1	5	9	1	7	18	3	0	0	44	17	44
7 HR	.90	.87	2.73	4.21	3.57	5.25	4.12	4.98	5.17	2.81	1.48	.57	3.07	4.78	4.29
N	214	194	216	210	215	209	216	215	210	215	206	217	2537	640	1490
10 HR	.65	.85	2.68	4.00	3.28	4.81	3.98	4.52	4.64	2.56	1.26	.45	2.82	4.43	3.96
N	308	278	310	300	309	299	309	308	300	309	298	310	3638	916	2134
12HR 8-8	.57	.73	2.31	3.54	2.98	4.27	3.54	3.96	4.04	2.22	1.10	.39	2.48	3.92	3.50
N	369	333	371	360	369	357	371	370	360	370	355	372	4357	1098	2557

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 88

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	32	949	1205	961	1974	1583	1908	1774	619	150	0	11155	5465	10024
N	0	5	125	154	126	199	190	209	176	70	21	0	1275	598	1124
S>10	0	0	12	44	21	216	65	158	231	60	0	0	807	439	795
N	0	0	4	18	10	59	24	47	63	14	0	0	239	130	235
7 HR	1.78	3.06	5.62	6.32	5.74	8.45	7.09	8.25	8.10	4.93	3.12	2.09	5.29	7.97	6.96
N	217	195	217	203	191	187	163	198	210	212	207	217	2417	548	1364
10 HR	1.37	2.46	4.86	5.58	4.86	7.39	6.27	7.02	6.90	4.01	2.31	1.48	4.47	6.92	5.97
N	310	279	310	293	280	269	236	286	300	307	297	310	3477	791	1971
12HR 8-8	1.30	2.35	4.48	5.23	4.63	6.83	5.77	6.36	6.22	3.68	2.13	1.32	4.12	6.34	5.50
N	372	335	372	351	336	321	282	343	360	367	357	372	4168	946	2360

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 89

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	13	402	734	812	2185	2284	2302	1454	717	110	6	11019	6771	10488
N	0	2	47	99	108	226	255	241	161	89	15	1	1244	722	1179
S>10	0	0	25	1	16	294	126	268	154	51	0	0	935	688	910
N	0	0	9	1	10	77	57	75	36	15	0	0	280	209	271
7 HR	1.97	2.72	4.35	5.23	5.34	8.13	7.91	8.63	6.67	4.50	3.16	2.44	5.10	8.23	6.63
N	217	196	211	210	217	210	217	217	210	217	210	217	2549	644	1498
10 HR	1.79	2.46	4.05	5.09	5.12	7.99	7.92	8.01	6.34	4.20	2.68	2.03	4.82	7.97	6.38
N	310	280	304	300	310	300	310	310	300	310	300	310	3644	920	2140
12HR 8-8	1.66	2.24	3.65	4.74	4.78	7.35	7.18	7.27	5.73	3.77	2.48	1.86	4.40	7.27	5.83
N	372	336	366	360	372	360	372	372	360	372	360	372	4374	1104	2568

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 91

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	13	543	838	425	711	356	530	774	550	182	6	4928	1597	4184
N	0	2	80	109	58	99	55	75	98	79	27	1	683	229	573
S>10	0	0	0	29	24	3	0	3	20	4	0	0	83	6	83
N	0	0	0	12	5	2	0	3	8	1	0	0	31	5	31
7 HR	1.01	2.03	3.85	5.29	4.36	5.09	4.35	4.70	5.17	3.94	2.85	1.70	3.69	4.71	4.69
N	217	196	217	205	217	207	217	210	209	213	204	215	2527	634	1478
10 HR	.90	1.86	3.85	4.90	3.96	4.79	4.26	4.56	4.84	3.76	2.57	1.38	3.47	4.53	4.43
N	310	280	310	296	310	297	310	304	299	306	291	308	3621	911	2122
12HR 8-8	.79	1.64	3.38	4.38	3.76	4.46	4.03	4.19	4.34	3.32	2.33	1.22	3.16	4.22	4.06
N	372	336	372	355	372	357	372	365	359	368	349	370	4347	1094	2548

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 94

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	6	6	366	454	231	365	133	314	612	406	202	6	3101	812	2515
N	1	1	54	64	31	54	22	47	86	64	30	1	455	123	368
S>10	0	0	0	4	1	0	0	0	5	0	0	0	10	0	10
N	0	0	0	2	1	0	0	0	3	0	0	0	6	0	6
7 HR	1.17	2.34	3.65	4.57	3.81	4.40	3.86	3.98	4.82	3.79	2.75	1.57	3.40	4.08	4.17
N	206	196	217	202	217	210	216	213	210	217	207	217	2528	639	1485
10 HR	1.17	2.51	3.92	4.61	3.73	4.18	3.78	3.90	4.70	3.91	2.82	1.56	3.40	3.95	4.11
N	300	280	310	290	310	300	309	306	300	310	297	310	3622	915	2125
12HR 8-8	1.04	2.24	3.49	4.17	3.55	3.97	3.59	3.64	4.34	3.48	2.50	1.34	3.11	3.73	3.81
N	361	336	372	348	372	360	371	368	359	372	357	372	4348	1099	2550

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 96

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	272	903	1175	1985	3517	2582	1811	501	71	0	12817	8084	12474
N	0	0	39	133	172	272	464	338	256	73	11	0	1758	1074	1708
S>10	0	0	0	0	10	59	58	46	14	1	0	0	188	163	188
N	0	0	0	0	6	22	30	25	9	1	0	0	93	77	93
7 HR	2.18	3.10	3.88	4.97	5.46	5.96	7.39	6.83	5.99	3.94	3.06	2.10	4.56	6.74	5.79
N	217	196	217	202	217	210	217	217	186	217	210	217	2523	644	1466
10 HR	2.03	2.85	3.84	5.23	5.47	6.26	7.86	7.24	6.18	3.77	2.62	1.80	4.59	7.13	6.00
N	310	280	310	290	310	300	310	310	268	310	300	310	3608	920	2098
12HR 8-8	1.89	2.73	3.60	5.05	5.28	6.05	7.52	6.87	5.87	3.53	2.42	1.58	4.36	6.82	5.74
N	372	336	372	346	372	360	372	372	320	372	360	372	4326	1104	2514

1993 POLLUTANT: OZONE COUNTY: Los Angeles SITE: 591

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	13	956	1876	1655	2745	2527	2735	2315	874	205	0	15901	8007	14727
N	0	2	121	225	191	238	250	253	214	98	28	0	1620	741	1469
S>10	0	0	29	117	88	604	315	493	419	92	1	0	2158	1412	2128
N	0	0	12	39	38	113	99	115	95	21	1	0	533	327	520
7 HR	2.16	2.72	5.32	7.17	6.61	10.45	9.23	10.19	9.28	5.36	3.46	2.28	6.27	9.96	8.31
N	170	194	217	210	217	210	208	217	210	217	210	217	2497	635	1489
10 HR	1.89	2.41	5.05	6.81	6.08	9.54	8.65	9.19	8.35	4.80	3.11	2.04	5.74	9.12	7.62
N	247	278	310	300	310	300	304	310	300	310	300	310	3579	914	2134
12HR 8-8	1.82	2.31	4.60	6.24	5.59	8.64	7.88	8.22	7.53	4.38	2.91	1.95	5.24	8.24	6.91
N	294	334	372	360	372	360	362	372	360	372	360	372	4290	1094	2558

1993 POLLUTANT: OZONE COUNTY: San Diego SITE: 114

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	20	55	488	853	429	426	83	151	923	448	272	55	4203	660	3313
N	3	9	78	122	68	65	13	25	122	65	40	9	619	103	480
S>10	0	0	0	1	0	1	0	0	7	1	0	0	10	1	10
N	0	0	0	1	0	1	0	0	5	1	0	0	8	1	8
7 HR	2.73	3.59	4.58	5.62	4.48	4.63	3.81	4.20	5.65	4.82	3.91	2.85	4.24	4.21	4.73
N	209	192	212	203	213	204	214	206	201	212	200	204	2470	624	1453
10 HR	2.23	3.16	4.20	5.36	4.21	4.31	3.57	3.90	5.17	4.20	3.03	2.12	3.79	3.92	4.38
N	302	276	305	294	307	296	307	294	293	307	290	298	3569	897	2098
12HR 8-8	2.12	2.98	3.96	5.20	4.15	4.22	3.52	3.77	4.89	3.98	2.86	1.97	3.63	3.83	4.24
N	364	332	367	353	368	354	369	350	350	367	350	357	4281	1073	2511

1993 POLLUTANT: OZONE COUNTY: San Diego SITE: 115

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	1390	762	1040	582	670	1243	603	150	18	6458	2292	6290
N	0	0	0	198	111	143	90	103	160	83	24	3	915	336	888
S>10	-1	-1	-1	6	0	3	2	0	28	5	0	0	44	5	44
N	0	0	0	4	0	3	1	0	10	3	0	0	21	4	21
7 HR	-1.00	-1.00	-1.00	6.42	5.33	6.03	5.12	5.42	6.33	5.11	3.76	2.89	5.15	5.51	5.67
N	0	0	0	198	209	203	213	212	206	209	201	209	1860	628	1450
10 HR	-1.00	-1.00	-1.00	6.02	4.96	5.45	4.67	4.75	5.67	4.27	2.99	2.32	4.56	4.95	5.10
N	0	0	0	290	302	295	306	303	298	306	293	303	2696	904	2100
12HR 8-8	-1.00	-1.00	-1.00	5.78	4.80	5.22	4.48	4.54	5.38	4.05	2.82	2.16	4.35	4.74	4.88
N	0	0	0	347	364	352	368	362	351	361	351	363	3219	1082	2505

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: San Diego SITE: 123

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	13	64	441	1077	527	636	162	329	1120	520	179	32	5100	1127	4371
N	2	10	68	157	82	94	24	53	147	73	27	5	742	171	630
S>10	0	0	0	3	0	2	0	0	25	7	0	0	37	2	37
N	0	0	0	2	0	1	0	0	12	3	0	0	18	1	18
7 HR	2.63	3.56	4.58	5.79	4.64	4.87	4.10	4.66	5.74	4.61	3.88	2.97	4.33	4.55	4.92
N	211	190	200	204	203	199	189	214	194	179	207	203	2393	602	1382
10 HR	2.12	2.97	4.16	5.51	4.25	4.48	3.80	4.17	5.31	3.88	2.99	2.17	3.81	4.16	4.50
N	302	274	296	297	293	287	274	304	287	265	298	300	3477	865	2007
12HR 8-8	2.00	2.83	3.96	5.29	4.20	4.36	3.71	4.04	4.98	3.73	2.89	2.09	3.66	4.04	4.34
N	364	328	353	351	351	339	326	365	344	316	357	356	4150	1030	2392

1993 POLLUTANT: OZONE COUNTY: San Diego SITE: 128

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	2311	1283	2260	1645	1941	2453	1543	637	79	14152	5846	13436
N	0	0	0	315	179	280	212	249	316	205	98	12	1866	741	1756
S>10	-1	-1	-1	23	6	57	23	16	76	33	0	0	234	96	234
N	0	0	0	12	5	41	13	13	29	15	0	0	128	67	128
7 HR	-1.00	-1.00	-1.00	7.10	6.17	7.75	7.09	7.67	7.54	6.09	4.85	4.04	6.49	7.50	7.05
N	0	0	0	203	212	200	213	214	206	215	192	203	1858	627	1463
10 HR	-1.00	-1.00	-1.00	6.71	5.58	7.11	6.47	6.69	6.89	5.53	4.31	3.53	5.88	6.75	6.42
N	0	0	0	293	305	292	306	308	297	308	279	294	2682	906	2109
12HR 8-8	-1.00	-1.00	-1.00	6.40	5.37	6.75	6.05	6.33	6.55	5.27	4.21	3.48	5.61	6.37	6.09
N	0	0	0	353	365	349	365	366	354	370	335	356	3213	1080	2522

1993 POLLUTANT: OZONE COUNTY: San Diego SITE: 131

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	19	39	457	1201	582	983	720	641	1110	622	226	26	6626	2344	5859
N	3	6	69	169	88	134	105	97	144	85	36	4	940	336	822
S>10	0	0	0	2	0	6	2	1	19	3	0	0	33	9	33
N	0	0	0	2	0	6	1	1	10	3	0	0	23	8	23
7 HR	2.45	3.41	4.73	6.26	5.05	5.94	5.43	5.30	6.22	5.08	3.92	2.80	4.73	5.55	5.60
N	207	188	208	208	214	199	207	215	209	215	210	199	2479	621	1467
10 HR	2.02	2.97	4.23	5.74	4.50	5.21	4.71	4.44	5.39	4.27	3.18	2.09	4.07	4.78	4.89
N	305	274	305	300	308	291	303	309	300	308	299	296	3598	903	2119
12HR 8-8	1.87	2.70	3.93	5.47	4.37	5.03	4.53	4.24	5.09	3.99	2.94	1.87	3.84	4.59	4.67
N	360	328	362	354	366	346	361	369	358	370	359	353	4286	1076	2524

1993 POLLUTANT: OZONE COUNTY: San Diego SITE: 133

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	19	122	1182	1482	552	629	159	268	1505	752	446	147	7263	1056	5347
N	3	19	173	211	86	97	25	43	198	111	63	22	1051	165	771
S>10	0	0	0	10	0	0	0	0	49	0	0	0	59	0	59
N	0	0	0	6	0	0	0	0	15	0	0	0	21	0	21
7 HR	2.74	3.75	5.25	6.06	4.61	4.78	4.14	4.42	5.76	4.69	4.24	3.15	4.46	4.44	4.92
N	213	185	212	208	213	192	207	214	204	212	206	214	2480	613	1450
10 HR	2.61	3.79	5.38	6.13	4.48	4.57	3.97	4.19	5.66	4.64	4.08	2.89	4.36	4.23	4.80
N	306	270	308	299	306	272	300	308	294	305	296	307	3571	880	2084
12HR 8-8	2.42	3.51	4.98	5.85	4.43	4.50	3.93	4.16	5.39	4.29	3.75	2.61	4.15	4.19	4.64
N	368	324	367	355	368	327	361	369	354	367	356	369	4285	1057	2501

1993 POLLUTANT: OZONE COUNTY: San Diego SITE: 134

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	34	44	502	718	216	482	179	129	870	455	152	56	3837	790	3049
N	5	7	80	106	35	73	29	21	107	71	23	9	566	123	442
S>10	0	0	0	5	0	0	0	0	46	0	0	0	51	0	51
N	0	0	0	3	0	0	0	0	16	0	0	0	19	0	19
7 HR	2.48	3.35	4.27	5.01	4.02	4.56	3.95	4.08	5.29	4.23	3.62	2.65	3.96	4.19	4.44
N	193	181	195	197	198	205	213	210	200	198	201	204	2395	628	1421
10 HR	2.19	3.03	4.20	4.93	3.83	4.35	3.69	3.88	5.14	3.84	3.09	2.09	3.69	3.97	4.23
N	287	265	290	290	296	296	309	305	291	289	294	299	3511	910	2076
12HR 8-8	2.07	2.82	3.97	4.73	3.77	4.26	3.66	3.80	4.84	3.59	2.89	1.94	3.53	3.90	4.09
N	346	321	349	345	351	353	365	364	349	348	350	359	4200	1082	2475

1993 POLLUTANT: OZONE COUNTY: San Diego SITE: 138

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	983	434	494	73	37	727	372	188	74	3382	604	3120
N	0	0	0	146	69	77	11	6	102	58	28	12	509	94	469
S>10	-1	-1	-1	0	0	0	0	0	1	0	0	0	1	0	1
N	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
7 HR	-1.00	-1.00	-1.00	5.53	4.31	4.59	3.84	3.93	4.98	4.11	3.67	2.71	4.18	4.11	4.47
N	0	0	0	203	207	198	204	201	195	206	199	204	1817	603	1414
10 HR	-1.00	-1.00	-1.00	5.38	4.12	4.29	3.54	3.58	4.56	3.78	3.26	2.31	3.87	3.80	4.18
N	0	0	0	297	302	290	298	296	289	303	291	298	2664	884	2075
12HR 8-8	-1.00	-1.00	-1.00	5.15	4.04	4.22	3.50	3.50	4.31	3.50	3.00	2.11	3.70	3.74	4.03
N	0	0	0	350	362	348	357	355	343	360	349	359	3183	1060	2475

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

1993 POLLUTANT: OZONE COUNTY: San Diego SITE: 139

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	-1	-1	-1	1001	399	594	268	299	909	453	212	25	4160	1161	3923
N	0	0	0	143	61	84	42	48	122	64	32	4	600	174	564
S>10	-1	-1	-1	0	0	2	0	0	1	0	0	0	3	2	3
N	0	0	0	0	0	1	0	0	1	0	0	0	2	1	2
7 HR	-1.00	-1.00	-1.00	5.97	4.60	5.15	4.54	4.55	5.64	4.80	4.34	3.53	4.78	4.74	5.03
N	0	0	0	199	215	199	197	211	208	213	207	213	1862	607	1442
10 HR	-1.00	-1.00	-1.00	5.17	4.05	4.39	3.84	3.79	4.68	3.77	3.36	2.70	3.96	4.00	4.23
N	0	0	0	293	310	293	286	308	299	308	298	309	2704	887	2097
12HR 8-8	-1.00	-1.00	-1.00	5.13	4.04	4.39	3.83	3.77	4.63	3.72	3.36	2.69	3.94	3.99	4.21
N	0	0	0	348	364	345	340	364	357	366	357	367	3208	1049	2484

1993 POLLUTANT: OZONE COUNTY: San Francisco SITE: 306

MON	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR TOT	JUN-AUG	APR-OCT
SUM06	0	0	0	0	0	8	21	12	0	0	0	0	41	41	41
N	0	0	0	0	0	1	3	2	0	0	0	0	6	6	6
S>10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 HR	1.17	1.79	1.97	2.30	2.02	1.85	2.02	1.68	1.72	1.53	1.23	.82	1.67	1.85	1.87
N	215	192	215	204	216	199	214	215	208	217	209	216	2520	628	1473
10 HR	1.05	1.67	1.97	2.17	2.12	1.80	2.03	1.68	1.76	1.52	1.05	.76	1.63	1.84	1.87
N	308	276	308	294	309	291	308	308	298	310	299	309	3618	907	2118
12HR 8-8	.99	1.60	1.86	2.16	2.05	1.71	1.92	1.58	1.67	1.40	.97	.69	1.55	1.74	1.78
N	367	328	367	354	370	349	365	370	357	372	354	368	4321	1084	2537

SUM06 & its N are adjusted for missing data, '-1' indicates no data available for this calculation
N is no. of values reported for 7,10 & 12 hr means. For SUM06 & S>10, N is no. of values >05 or >10.

Appendix: Table C

Estimated crop loss from ozone exposure by county and commodity, 1993.

Assumptions

Baseline 7 hr mean ozone concentration:	**2.72pphm**
Baseline 12 hr mean ozone concentration:	**2.50pphm**
Base T:	**542**
Baseyr:	**0**
Standard1:	**99**

Table C. STATEWIDE PREDICTED YIELD LOSSES ASSOCIATED WITH OZONE IN 1993

Crop	County	Yield (tons)	Ozone Exposure Statistics (pphm) SUM06	>10	7hr	10hr	12hr	Percent Loss for Predictive Model (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ALFALFA HAY	Alameda	9605		15.0	4.4	4.0	3.8	6.0	.1	4.7	4.8				
ALFALFA HAY	Amador	1268		61.0	5.5	5.5	5.1	12.5	.6	9.9	10.0				
ALFALFA HAY	Butte	16918		.0	4.7	4.6	4.4	9.0	.0	7.1	7.2				
ALFALFA HAY	Colusa	72885		.0	4.7	4.8	4.5	9.5	.0	7.5	7.6				
ALFALFA HAY	Contra Costa	19000		15.0	4.4	4.2	3.9	6.7	.1	5.3	5.3				
ALFALFA HAY	Fresno	568000		89.0	6.3	6.2	5.8	15.7	.8	12.4	12.5				
ALFALFA HAY	Glenn	123095		.0	4.9	4.9	4.6	9.8	.0	7.7	7.8				
ALFALFA HAY	Humboldt	1300		.0	3.1	3.0	2.9	1.8	.0	1.4	1.4				
ALFALFA HAY	Imperial	1433785		24.0	6.0	5.8	5.6	14.9	.2	11.8	11.9				
ALFALFA HAY	Inyo	21600		.0	5.0	5.0	4.9	11.3	.0	8.9	9.0				
ALFALFA HAY	Kern	604000		189.5	7.3	7.2	6.8	20.6	1.8	16.3	16.4				
ALFALFA HAY	Kings	196867		142.0	6.9	7.0	6.5	19.2	1.3	15.2	15.3				
ALFALFA HAY	Lake	1565		.0	3.1	3.0	2.9	1.8	.0	1.4	1.4				
ALFALFA HAY	Lassen	144000		.0	5.0	5.1	4.8	11.0	.0	8.7	8.8				
ALFALFA HAY	Los Angeles	44518		187.0	6.3	6.6	6.3	18.2	1.7	14.4	14.5				
ALFALFA HAY	Madera	251220		66.0	6.4	6.4	6.0	16.7	.6	13.2	13.3				
ALFALFA HAY	Merced	496600		20.0	5.9	6.3	5.9	16.0	.2	12.7	12.8				
ALFALFA HAY	Modoc	116000		.0	5.0	5.1	4.8	11.0	.0	8.7	8.8				
ALFALFA HAY	Mono	36000		.0	5.0	5.3	5.2	12.8	.0	10.1	10.2				
ALFALFA HAY	Monterey	11800		.0	2.8	2.8	2.7	.9	.0	.7	.7				
ALFALFA HAY	Plumas	12100		.0	4.7	4.6	4.4	9.0	.0	7.1	7.2				
ALFALFA HAY	Riverside	361873		46.0	5.6	5.4	5.3	13.1	.4	10.4	10.5				
ALFALFA HAY	Sacramento	50610		.0	4.8	4.7	4.4	9.0	.0	7.1	7.2				
ALFALFA HAY	San Benito	8946		.0	4.4	4.2	4.0	7.1	.0	5.6	5.7				
ALFALFA HAY	San Bernardino	137819		315.0	6.6	6.4	5.8	16.0	2.9	12.6	12.7				
ALFALFA HAY	San Joaquin	448000		1.0	4.5	4.4	4.1	7.6	.0	6.0	6.1				
ALFALFA HAY	San Luis Obisp	24420		.0	3.2	3.2	3.0	2.5	.0	2.0	2.0				
ALFALFA HAY	Santa Barbara	22114		.3	4.1	4.0	3.8	6.3	.0	5.0	5.0				
ALFALFA HAY	Shasta	52800		.0	5.0	5.1	4.8	11.0	.0	8.7	8.8				
ALFALFA HAY	Sierra	1384		38.0	5.7	5.9	5.6	14.8	.4	11.7	11.8				
ALFALFA HAY	Siskiyou	242708		.0	5.0	5.1	4.8	11.0	.0	8.7	8.8				
ALFALFA HAY	Solano	125255		6.0	4.1	3.8	3.6	5.1	.1	4.1	4.1				
ALFALFA HAY	Stanislaus	313600		9.0	4.9	5.1	4.7	10.7	.1	8.4	8.5				
ALFALFA HAY	Sutter	33873		9.5	4.7	4.7	4.4	9.0	.1	7.1	7.2				
ALFALFA HAY	Tehama	32265		.0	5.0	5.1	4.8	11.0	.0	8.7	8.8				
ALFALFA HAY	Trinity	300		.0	3.1	3.0	2.9	1.8	.0	1.4	1.4				
ALFALFA HAY	Tulare	625000		142.0	6.9	7.0	6.5	19.2	1.3	15.2	15.3				
ALFALFA HAY	Yolo	210022		5.0	4.9	4.7	4.4	9.2	.0	7.3	7.3				
ALFALFA HAY	Yuba	4006		.0	4.7	4.6	4.4	9.0	.0	7.1	7.2				
	STATEWIDE	6877121													
	STATEWIDE % LOSS							14.5	.6	11.4	11.5				
ALFALFA SEED	Fresno	7540		89.0	6.3	6.2	5.8	15.7	.8	12.4	12.5				
ALFALFA SEED	Imperial	985		24.0	6.0	5.8	5.6	14.9	.2	11.8	11.9				
ALFALFA SEED	Kings	1450		142.0	6.9	7.0	6.5	19.2	1.3	15.2	15.3				
ALFALFA SEED	Lassen	84		.0	5.0	5.1	4.8	11.0	.0	8.7	8.8				
	STATEWIDE	10059													
	STATEWIDE % LOSS							16.1	.8	12.7	12.9				
BEANS-DRY	Butte	1940	2588.	.0	4.8	4.7	4.5	.0	15.4	13.9	20.3	20.8	55.1	21.0	
BEANS-DRY	Colusa	6950	2604.	.0	4.9	5.0	4.6	.0	15.9	15.0	21.9	22.4	55.9	21.4	
BEANS-DRY	Fresno	17500	5220.	88.5	6.6	6.5	6.0	2.1	27.6	24.8	36.2	37.1	99.0	79.0	
BEANS-DRY	Glenn	3315	2643.	.0	4.9	5.0	4.6	.0	16.4	15.1	22.0	22.6	58.0	22.1	
BEANS-DRY	Kern	6990	8511.	188.0	7.7	7.6	7.2	4.5	34.3	33.0	48.3	49.4	99.0	99.0	
BEANS-DRY	Kings	2641	6639.	142.0	7.3	7.4	6.8	3.4	31.6	30.6	44.8	45.8	99.0	94.9	
BEANS-DRY	Madera	1628	5684.	66.0	6.7	6.7	6.2	1.6	27.9	26.3	38.5	39.4	99.0	86.0	
BEANS-DRY	Merced	2870	5944.	20.0	6.2	6.6	6.2	.5	24.8	25.7	37.6	38.5	99.0	89.1	
BEANS-DRY	Monterey	141	130.	.0	2.8	2.7	2.6	.0	.5	.8	1.1	1.2	.0	.0	
BEANS-DRY	Orange	1253	2455.	69.0	5.3	4.9	4.5	1.7	18.5	14.3	21.0	21.5	47.9	18.5	
BEANS-DRY	Riverside	661	5198.	294.0	6.8	6.7	6.0	7.1	28.9	24.7	36.1	37.0	99.0	78.6	
BEANS-DRY	Sacramento	1080	2010.	.0	4.8	4.7	4.4	.0	15.0	13.2	19.3	19.8	25.9	11.3	
BEANS-DRY	San Joaquin	17200	1919.	1.0	4.5	4.5	4.1	.0	13.2	11.3	16.6	17.0	22.1	10.0	
BEANS-DRY	San Mateo	192	172.	.0	2.3	2.2	2.0	.0	-3.2	-3.2	-4.6	-4.7	.0	.0	
BEANS-DRY	Solano	4802	1060.	6.0	4.1	3.8	3.6	.1	10.4	7.7	11.2	11.5	2.5	2.1	
BEANS-DRY	Stanislaus	2940	3242.	9.0	5.1	5.3	4.9	.2	17.1	16.7	24.4	25.0	85.3	35.2	
BEANS-DRY	Sutter	3909	2292.	9.5	4.8	4.8	4.5	.2	15.7	13.9	20.3	20.8	39.3	15.7	
BEANS-DRY	Tehama	495	2855.	.0	5.2	5.2	4.9	.0	18.0	17.1	25.0	25.6	69.0	26.5	
BEANS-DRY	Tulare	10200	6639.	142.0	7.3	7.4	6.8	3.4	31.6	30.6	44.8	45.8	99.0	94.9	
BEANS-DRY	Yolo	2067	2331.	5.0	5.0	4.8	4.5	.1	16.6	14.1	20.7	21.2	41.3	16.3	
	STATEWIDE	88774													
	STATEWIDE % LOSS							1.4	22.6	20.9	31.4	32.2	98.0	92.2	
CANTALOUPES	Fresno	287000		89.0	6.3	6.2	5.8	36.1							
CANTALOUPES	Imperial	170716		29.0	5.5	5.3	5.0	27.6							
CANTALOUPES	Kern	21100		67.5	6.7	6.8	6.4	39.8							
CANTALOUPES	Kings	11100		32.0	6.6	6.8	6.3	38.9							
CANTALOUPES	Merced	80640		20.0	5.9	6.3	5.9	32.2							
CANTALOUPES	Orange	144		12.0	4.7	4.2	4.0	19.3							
CANTALOUPES	Riverside	24245		179.0	5.2	5.3	5.1	24.3							
CANTALOUPES	San Bernardino	210		18.0	5.6	5.6	5.4	28.4							
CANTALOUPES	Stanislaus	21000		9.0	4.9	5.1	4.7	22.0							
	STATEWIDE	616155													
	STATEWIDE % LOSS							32.8							

Table C - continued. STATEWIDE PREDICTED YIELD LOSSES ASSOCIATED WITH OZONE IN 1993

Crop	County	Yield (tons)	Ozone Exposure Statistics (pphm) SUM06	>10	7hr	10hr	12hr	Percent Loss for Predictive Model (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CORN-GRAIN&SEE	Amador	1658	3372.	42.0	5.2	5.2	4.9	1.4	5.6	1.2					
CORN-GRAIN&SEE	Butte	5365	2588.	.0	4.6	4.5	4.3	.8	2.7	.4					
CORN-GRAIN&SEE	Colusa	3150	2604.	.0	4.7	4.7	4.4	.9	2.7	.4					
CORN-GRAIN&SEE	Contra Costa	24500	1775.	1.0	4.4	4.4	4.2	.7	.9	.1					
CORN-GRAIN&SEE	Fresno	17400	4949.	49.0	5.9	5.9	5.5	2.3	15.7	6.0					
CORN-GRAIN&SEE	Glenn	54356	2103.	.0	4.6	4.6	4.4	.8	1.5	.2					
CORN-GRAIN&SEE	Lassen	220	2205.	.0	4.7	4.8	4.5	.9	1.7	.2					
CORN-GRAIN&SEE	Madera	47850	5411.	23.0	5.9	6.0	5.7	2.3	19.7	8.7					
CORN-GRAIN&SEE	Merced	27600	3128.	9.0	4.7	4.9	4.6	.9	4.6	.8					
CORN-GRAIN&SEE	Sacramento	117600	4105.	61.0	5.3	5.3	5.0	1.6	9.6	2.7					
CORN-GRAIN&SEE	San Joaquin	283000	1898.	1.0	4.3	4.3	4.0	.7	1.1	.1					
CORN-GRAIN&SEE	Solano	69072	830.	6.0	3.9	3.7	3.5	.4	.1	.0					
CORN-GRAIN&SEE	Stanislaus	4200	3128.	9.0	4.7	4.9	4.6	.9	4.6	.8					
CORN-GRAIN&SEE	Sutter	9468	2006.	9.0	4.5	4.5	4.2	.8	1.3	.1					
CORN-GRAIN&SEE	Tehama	7266	2205.	.0	4.7	4.8	4.5	.9	1.7	.2					
CORN-GRAIN&SEE	Tulare	74500	6326.	68.0	6.3	6.5	6.0	3.0	28.9	16.3					
CORN-GRAIN&SEE	Yolo	85340	2331.	5.0	4.8	4.6	4.3	1.0	2.0	.2					
CORN-GRAIN&SEE	Yuba	3244	2217.	.0	4.4	4.4	4.2	.7	1.8	.2					
	STATEWIDE	835789													
	STATEWIDE % LOSS							1.2	7.3	2.8					
COTTON	Fresno	252000	5220.	89.0	6.3	6.2	5.8	17.9	15.3	16.2	24.5	27.5	18.1	41.6	44.6
COTTON	Imperial	5954	5402.	27.0	5.8	5.7	5.4	14.1	13.5	13.9	21.7	24.3	14.0	43.8	46.1
COTTON	Kern	167000	8511.	189.5	7.3	7.2	6.8	25.7	18.6	20.4	32.2	36.1	31.8	76.0	67.4
COTTON	Kings	156936	6639.	142.0	6.9	7.0	6.5	22.7	17.4	18.8	30.0	33.6	27.4	58.1	55.5
COTTON	Madera	32973	5684.	66.0	6.4	6.4	6.0	18.4	15.6	16.5	26.1	29.3	20.6	47.2	48.3
COTTON	Merced	53750	5944.	20.0	5.9	6.3	5.9	15.0	13.9	14.4	25.1	28.1	18.9	50.2	50.4
COTTON	Riverside	6846	6370.	46.0	5.3	5.1	4.9	10.4	11.3	11.3	17.9	20.1	9.4	55.1	53.5
COTTON	Tulare	96773	6639.	142.0	6.9	7.0	6.5	22.7	17.4	18.8	30.0	33.6	27.4	58.1	55.5
	STATEWIDE	772232													
	STATEWIDE % LOSS							21.1	16.6	17.8	28.1	31.6	24.6	60.0	55.5
GRAPES-ALL	Alameda	4248		15.0	4.4	4.0	3.8	10.6	8.7						
GRAPES-ALL	Amador	9407		61.0	5.5	5.5	5.1	22.1	18.3						
GRAPES-ALL	Calaveras	625		1.0	4.5	4.4	4.1	13.4	11.1						
GRAPES-ALL	Contra Costa	2290		15.0	4.4	4.2	3.9	11.8	9.7						
GRAPES-ALL	El Dorado	3344		13.0	5.7	5.9	5.7	26.7	22.1						
GRAPES-ALL	Fresno	2220120		89.0	6.3	6.2	5.8	27.7	22.9						
GRAPES-ALL	Kern	718500		189.5	7.3	7.2	6.8	36.4	30.1						
GRAPES-ALL	Kings	59761		142.0	6.9	7.0	6.5	33.9	28.0						
GRAPES-ALL	Lake	11466		.0	3.1	3.0	2.9	3.1	2.6						
GRAPES-ALL	Madera	787588		66.0	6.4	6.4	6.0	29.5	24.4						
GRAPES-ALL	Mariposa	128		9.0	4.9	5.1	4.7	18.8	15.5						
GRAPES-ALL	Mendocino	60269		.0	3.2	3.0	2.8	2.7	2.2						
GRAPES-ALL	Merced	126264		20.0	5.9	6.3	5.9	28.3	23.4						
GRAPES-ALL	Monterey	134408		.0	2.8	2.8	2.7	1.5	1.2						
GRAPES-ALL	Napa	111589		3.0	4.1	3.8	3.6	9.2	7.6						
GRAPES-ALL	Nevada	595		38.0	5.7	5.9	5.6	26.1	21.5						
GRAPES-ALL	Placer	224		38.0	5.7	5.9	5.6	26.1	21.5						
GRAPES-ALL	Riverside	119943		201.3	6.2	6.2	5.9	28.3	23.4						
GRAPES-ALL	Sacramento	43800		.0	4.8	4.7	4.4	15.9	13.1						
GRAPES-ALL	San Benito	7152		.0	4.4	4.2	4.0	12.6	10.4						
GRAPES-ALL	San Bernardino	13517		315.0	6.6	6.4	5.8	28.2	23.3						
GRAPES-ALL	San Diego	429		33.0	5.6	5.1	4.9	20.0	16.5						
GRAPES-ALL	San Joaquin	340000		1.0	4.5	4.4	4.1	13.4	11.1						
GRAPES-ALL	San Luis Obisp	47351		.0	3.2	3.2	3.0	4.5	3.7						
GRAPES-ALL	Santa Barbara	37879		.5	4.3	4.1	4.0	12.4	10.2						
GRAPES-ALL	Santa Clara	4001		1.0	4.4	4.2	3.9	12.0	9.9						
GRAPES-ALL	Santa Cruz	152		.0	3.5	3.4	3.2	6.1	5.1						
GRAPES-ALL	Solano	7377		6.0	4.1	3.8	3.6	9.1	7.5						
GRAPES-ALL	Sonoma	131039		.0	3.2	3.0	2.8	2.7	2.2						
GRAPES-ALL	Stanislaus	151900		9.0	4.9	5.1	4.7	18.8	15.5						
GRAPES-ALL	Tulare	722620		142.0	6.9	7.0	6.5	33.9	28.0						
GRAPES-ALL	Yolo	9664		5.0	4.9	4.7	4.4	16.2	13.4						
	STATEWIDE	5887650													
	STATEWIDE % LOSS							27.5	22.5						
GRAPES-RAISIN	Fresno	1434120		89.0	6.3	6.2	5.8	27.7	22.9						
GRAPES-RAISIN	Kern	42500		189.5	7.3	7.2	6.8	36.4	30.1						
GRAPES-RAISIN	Kings	29038		142.0	6.9	7.0	6.5	33.9	28.0						
GRAPES-RAISIN	Madera	229841		66.0	6.4	6.4	6.0	29.5	24.4						
GRAPES-RAISIN	Merced	9324		20.0	5.9	6.3	5.9	28.3	23.4						
GRAPES-RAISIN	San Bernardino	6749		315.0	6.6	6.4	5.8	28.2	23.3						
GRAPES-RAISIN	Tulare	133200		142.0	6.9	7.0	6.5	33.9	28.0						
	STATEWIDE	1884772													
	STATEWIDE % LOSS							28.7	23.7						

Table C - continued. STATEWIDE PREDICTED YIELD LOSSES ASSOCIATED WITH OZONE IN 1993

Crop	County	Yield (tons)	Ozone Exposure Statistics (pphm) SUM06	>10	7hr	10hr	12hr	Percent Loss for Predictive Model (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GRAPES-TABLE	Fresno	118900		89.0	6.3	6.2	5.8	27.7	22.9						
GRAPES-TABLE	Kern	263000		189.5	7.3	7.2	6.8	36.4	30.1						
GRAPES-TABLE	Kings	9727		142.0	6.9	7.0	6.5	33.9	28.0						
GRAPES-TABLE	Madera	40342		66.0	6.4	6.4	6.0	29.5	24.4						
GRAPES-TABLE	Riverside	111382		53.0	5.8	5.9	5.7	26.6	22.0						
GRAPES-TABLE	San Bernardino	165		315.0	6.6	6.4	5.8	28.2	23.3						
GRAPES-TABLE	San Joaquin	8050		1.0	4.5	4.4	4.1	13.4	11.1						
GRAPES-TABLE	Tulare	325000		142.0	6.9	7.0	6.5	33.9	28.0						
	STATEWIDE	876566													
	STATEWIDE % LOSS							32.7	27.0						
GRAPES-WINE	Alameda	4248		15.0	4.4	4.0	3.8	10.6	8.7						
GRAPES-WINE	Amador	9407		61.0	5.5	5.5	5.1	22.1	18.3						
GRAPES-WINE	Calaveras	625		1.0	4.5	4.4	4.1	13.4	11.1						
GRAPES-WINE	Fresno	667100		89.0	6.3	6.2	5.8	27.7	22.9						
GRAPES-WINE	Kern	413000		189.5	7.3	7.2	6.8	36.4	30.1						
GRAPES-WINE	Kings	20996		142.0	6.9	7.0	6.5	33.9	28.0						
GRAPES-WINE	Lake	11466		.0	3.1	3.0	2.9	3.1	2.6						
GRAPES-WINE	Madera	517405		66.0	6.4	6.4	6.0	29.5	24.4						
GRAPES-WINE	Mariposa	128		66.0	6.4	6.4	6.0	29.5	24.4						
GRAPES-WINE	Mendocino	60269		.0	3.2	3.0	2.8	2.7	2.2						
GRAPES-WINE	Merced	116940		20.0	5.9	6.3	5.9	28.3	23.4						
GRAPES-WINE	Monterey	134408		.0	2.8	2.8	2.7	1.5	1.2						
GRAPES-WINE	Napa	111589		3.0	4.1	3.8	3.6	9.2	7.6						
GRAPES-WINE	Nevada	595		38.0	5.7	5.9	5.6	26.1	21.5						
GRAPES-WINE	Riverside	8561		165.5	6.1	5.9	5.5	24.9	20.5						
GRAPES-WINE	Sacramento	43800		.0	4.8	4.7	4.4	15.9	13.1						
GRAPES-WINE	San Benito	7152		.0	4.4	4.2	4.0	12.6	10.4						
GRAPES-WINE	San Bernardino	6603		315.0	6.6	6.4	5.8	28.2	23.3						
GRAPES-WINE	San Diego	429		33.0	5.6	5.1	4.9	20.0	16.5						
GRAPES-WINE	San Joaquin	331950		1.0	4.5	4.4	4.1	13.4	11.1						
GRAPES-WINE	San Luis Obisp	47351		.0	3.2	3.2	3.0	4.5	3.7						
GRAPES-WINE	Santa Clara	4001		1.0	4.4	4.2	3.9	12.0	9.9						
GRAPES-WINE	Santa Cruz	152		.0	3.5	3.4	3.2	6.1	5.1						
GRAPES-WINE	Solano	7377		6.0	4.1	3.8	3.6	9.1	7.5						
GRAPES-WINE	Sonoma	131039		.0	3.2	3.0	2.8	2.7	2.2						
GRAPES-WINE	Stanislaus	151900		9.0	4.9	5.1	4.7	18.8	15.5						
GRAPES-WINE	Tulare	264420		142.0	6.9	7.0	6.5	33.9	28.0						
GRAPES-WINE	Yolo	9664		5.0	4.9	4.7	4.4	16.2	13.4						
	STATEWIDE	3082575													
	STATEWIDE % LOSS							25.1	20.5						
LEMONS	Fresno	4520		105.5	6.0	5.8	5.8	9.5							
LEMONS	Imperial	13152		29.0	5.9	5.7	4.4	7.2							
LEMONS	Kern	16400		174.0	6.7	6.6	6.4	10.1							
LEMONS	Orange	6131		69.0	5.0	4.6	4.1	6.5							
LEMONS	Riverside	82492		51.0	5.3	5.2	4.4	7.2							
LEMONS	San Bernardino	2951		2332.0	8.6	8.6	8.0	11.4							
LEMONS	San Diego	70553		44.0	5.7	5.1	5.1	8.5							
LEMONS	San Luis Obisp	21896		.0	3.8	3.6	3.7	5.4							
LEMONS	Santa Barbara	23564		1.0	4.4	4.2	3.9	6.0							
LEMONS	Tulare	23600		161.0	6.5	6.5	5.7	9.3							
LEMONS	Ventura	441379		14.0	5.4	5.3	5.3	8.8							
	STATEWIDE	706638													
	STATEWIDE % LOSS							8.4							
LETTUCE	Fresno	321100		88.0	5.0	4.9	4.5	4.6	.0						
LETTUCE	Imperial	298663		18.0	4.4	4.1	3.9	.9	.0						
LETTUCE	Kern	92800		196.0	5.3	5.2	4.9	10.2	.1						
LETTUCE	Monterey	1721618		1.0	3.5	3.4	3.2	.1	.0						
LETTUCE	Orange	4809		50.0	3.8	3.3	3.1	2.6	.0						
LETTUCE	Riverside	54513		24.0	3.5	3.0	2.8	1.2	.0						
LETTUCE	San Benito	99593		.0	4.2	4.1	3.9	.0	.0						
LETTUCE	San Bernardino	60		84.0	3.6	3.5	3.1	4.4	.0						
LETTUCE	San Luis Obisp	167110		.0	3.2	3.1	3.0	.0	.0						
LETTUCE	Santa Barbara	195403		1.0	3.9	3.8	3.6	.1	.0						
LETTUCE	Santa Clara	22510		1.0	4.1	3.9	3.7	.1	.0						
LETTUCE	Santa Cruz	112483		.0	3.3	3.1	3.0	.0	.0						
LETTUCE	Ventura	65720		13.0	4.4	4.3	4.0	.7	.0						
	STATEWIDE	3156382													
	STATEWIDE % LOSS							1.0	.0						

Table C - continued. STATEWIDE PREDICTED YIELD LOSSES ASSOCIATED WITH OZONE IN 1993

Crop	County	Yield (tons)	Ozone Exposure Statistics (pphm) SUM06	>10	7hr	10hr	12hr	Percent Loss for Predictive Model (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ONIONS	Contra Costa	805		.0	3.4	3.3	3.1	5.8	1.4						
ONIONS	Fresno	440000		44.5	4.3	4.2	3.9	13.6	3.1						
ONIONS	Imperial	186070		24.0	5.0	4.8	4.5	20.1	4.7						
ONIONS	Kern	170900		224.5	6.0	5.9	5.6	30.5	7.1						
ONIONS	Los Angeles	42884		188.0	5.0	5.1	4.8	23.2	5.4						
ONIONS	Modoc	32721		.0	3.8	3.7	3.5	9.7	2.3						
ONIONS	Monterey	21600		.0	2.9	2.8	2.7	1.8	.4						
ONIONS	Orange	391		12.0	3.5	3.1	2.9	3.9	.9						
ONIONS	Riverside	27412		102.3	4.7	4.4	4.1	16.2	3.8						
ONIONS	San Benito	28192		.0	4.0	3.9	3.7	11.9	2.8						
ONIONS	San Bernardino	430		229.0	4.7	4.5	4.1	16.0	3.7						
ONIONS	San Joaquin	63500		1.0	3.2	3.0	2.8	3.0	.7						
ONIONS	Santa Clara	6900		.0	3.5	3.3	3.2	6.9	1.6						
ONIONS	Siskiyou	10971		.0	3.8	3.7	3.5	9.7	2.3						
ONIONS	Stanislaus	19800		4.0	3.2	3.1	2.9	3.9	.9						
ONIONS	Ventura	46431		15.0	4.5	4.2	4.0	14.9	3.4						
	STATEWIDE	1099007													
	STATEWIDE % LOSS							17.3	3.9						
ORANGES	Butte	250		.0	4.3	4.2	4.0	8.3	4.2						
ORANGES	Fresno	287000		105.5	6.0	5.8	5.8	18.3	9.1						
ORANGES	Imperial	4794		29.0	5.9	5.7	4.4	10.5	5.3						
ORANGES	Kern	399000		224.5	6.9	6.8	6.4	21.6	10.8						
ORANGES	Madera	58379		81.0	6.1	6.0	5.4	16.1	8.0						
ORANGES	Orange	27910		69.0	5.0	4.6	4.1	8.9	4.4						
ORANGES	Riverside	133446		870.8	7.2	7.0	7.0	24.9	12.5						
ORANGES	San Bernardino	56599		2332.0	8.6	8.6	8.0	30.4	15.2						
ORANGES	San Diego	220952		44.0	5.7	5.1	5.1	14.4	7.2						
ORANGES	San Luis Obisp	2508		.0	3.8	3.6	3.7	6.6	3.3						
ORANGES	Tulare	1150200		161.0	6.5	6.5	5.7	17.7	8.9						
ORANGES	Ventura	131471		15.0	5.0	4.7	5.6	17.2	8.6						
	STATEWIDE	2472509													
	STATEWIDE % LOSS							18.7	9.3						
RICE	Butte	341119		.0	4.4	4.3	4.1	4.6	4.1	1.6					
RICE	Colusa	461390		.0	4.6	4.6	4.3	5.1	4.5	1.9					
RICE	Fresno	26700		104.0	6.2	5.9	5.5	9.0	8.2	4.5					
RICE	Glenn	332923		.0	4.7	4.6	4.3	5.3	4.8	2.0					
RICE	Merced	17900		20.0	5.8	6.1	5.6	8.1	7.4	3.8					
RICE	Placer	58600		38.0	5.5	5.6	5.3	7.4	6.7	3.3					
RICE	Sacramento	35670		.0	4.5	4.4	4.1	4.9	4.3	1.8					
RICE	San Joaquin	18900		1.0	4.3	4.2	3.9	4.3	3.8	1.5					
RICE	Stanislaus	8370		9.0	4.7	4.8	4.4	5.2	4.7	2.0					
RICE	Sutter	333166		9.5	4.5	4.4	4.1	4.9	4.3	1.8					
RICE	Tehama	4960		.0	4.8	4.8	4.5	5.6	5.0	2.2					
RICE	Yolo	90484		5.0	4.7	4.5	4.3	5.4	4.8	2.1					
RICE	Yuba	146282		.0	4.4	4.3	4.1	4.6	4.1	1.6					
	STATEWIDE	1876464													
	STATEWIDE % LOSS							5.1	4.6	1.9					
TOMATOES-FRESH	Contra Costa	541		15.0	4.4	4.2	3.9	.3							
TOMATOES-FRESH	Fresno	155000		47.5	6.2	6.1	5.7	1.1							
TOMATOES-FRESH	Humboldt	37		.0	3.2	3.0	2.8	.0							
TOMATOES-FRESH	Imperial	13602		24.0	6.0	5.8	5.6	.6							
TOMATOES-FRESH	Kern	14600		69.3	6.3	6.3	6.0	1.6							
TOMATOES-FRESH	Kings	16275		32.0	6.1	6.3	5.8	.7							
TOMATOES-FRESH	Merced	99188		4.0	4.6	4.8	4.5	.1							
TOMATOES-FRESH	Monterey	62720		.0	3.0	3.0	2.9	.0							
TOMATOES-FRESH	Orange	21209		69.0	5.1	4.8	4.5	1.6							
TOMATOES-FRESH	Riverside	2356		27.0	5.5	5.4	5.2	.6							
TOMATOES-FRESH	Sacramento	7420		.0	4.8	4.7	4.4	.0							
TOMATOES-FRESH	San Bernardino	61		267.0	6.4	6.2	5.7	6.2							
TOMATOES-FRESH	San Diego	102464		46.0	4.4	4.2	4.1	1.1							
TOMATOES-FRESH	San Joaquin	95000		1.0	4.5	4.4	4.1	.0							
TOMATOES-FRESH	San Luis Obisp	2122		.0	3.5	3.5	3.4	.0							
TOMATOES-FRESH	Santa Clara	3850		1.0	4.4	4.2	3.9	.0							
TOMATOES-FRESH	Stanislaus	17980		9.0	4.7	4.8	4.4	.2							
TOMATOES-FRESH	Sutter	465		9.5	4.7	4.7	4.4	.2							
TOMATOES-FRESH	Tulare	1520		32.0	6.1	6.3	5.8	.7							
	STATEWIDE	616410													
	STATEWIDE % LOSS							.6							

Table C - continued. STATEWIDE PREDICTED YIELD LOSSES ASSOCIATED WITH OZONE IN 1993

Crop	County	Yield (tons)	Ozone Exposure Statistics (pphm) SUM06	>10	7hr	10hr	12hr	Percent Loss for Predictive Model (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TOMATOES-PROCE	Colusa	679650		.0	4.7	4.7	4.4	.0	1.2	7.5	6.9	10.4			
TOMATOES-PROCE	Contra Costa	146000		15.0	4.3	4.1	3.9	.3	.9	5.4	5.0	7.5			
TOMATOES-PROCE	Fresno	3436000		90.5	6.1	6.1	5.6	2.1	3.8	12.3	11.4	17.1			
TOMATOES-PROCE	Imperial	87830		26.0	6.1	5.9	5.7	.6	3.7	12.5	11.6	17.4			
TOMATOES-PROCE	Kern	122000		191.0	7.0	6.9	6.6	4.4	6.3	16.0	14.8	22.2			
TOMATOES-PROCE	Kings	344410		142.0	6.6	6.7	6.2	3.2	5.0	14.4	13.4	20.1			
TOMATOES-PROCE	Merced	379000		9.0	4.7	4.9	4.6	.2	1.3	8.0	7.5	11.2			
TOMATOES-PROCE	Monterey	20560		.0	2.9	2.8	2.8	.0	.1	1.0	.9	1.4			
TOMATOES-PROCE	Sacramento	213900		61.0	5.3	5.3	5.0	1.4	2.2	9.7	9.0	13.5			
TOMATOES-PROCE	San Benito	89118		.0	4.3	4.2	4.0	.0	.9	5.8	5.4	8.0			
TOMATOES-PROCE	San Joaquin	689000		1.0	4.4	4.3	4.0	.0	.9	6.0	5.5	8.3			
TOMATOES-PROCE	Santa Clara	74000		1.0	4.3	4.2	3.9	.0	.9	5.5	5.1	7.6			
TOMATOES-PROCE	Solano	685728		6.0	4.0	3.7	3.5	.1	.6	4.1	3.8	5.7			
TOMATOES-PROCE	Stanislaus	393100		9.0	4.7	4.9	4.6	.2	1.3	8.0	7.5	11.2			
TOMATOES-PROCE	Sutter	633073		9.5	4.6	4.6	4.3	.2	1.2	6.9	6.4	9.6			
TOMATOES-PROCE	Yolo	1793955		5.0	4.8	4.6	4.3	.1	1.4	7.3	6.7	10.1			
	STATEWIDE	9787324													
	STATEWIDE % LOSS							1.0	2.3	9.3	8.6	13.0			
WHEAT	Alameda	2608	265.	.0	2.9	2.6	2.5	.1	3.2	3.0	9.1				
WHEAT	Amador	308	1036.	.0	3.3	3.2	3.0	.3	10.2	13.9	31.2				
WHEAT	Butte	16640	928.	.0	3.0	2.9	2.7	.2	5.7	12.3	28.4				
WHEAT	Colusa	99060	358.	.0	3.1	3.0	2.9	.2	7.1	4.2	12.1				
WHEAT	Contra Costa	6160	355.	.0	2.8	2.7	2.5	.1	2.4	4.2	12.0				
WHEAT	Fresno	85700	1928.	2.0	3.5	3.5	3.2	.5	14.3	26.7	50.1				
WHEAT	Glenn	82576	443.	.0	2.9	2.7	2.5	.1	2.6	5.4	14.8				
WHEAT	Imperial	151782	3250.	10.0	4.5	4.2	3.9	1.6	28.4	43.6	69.0				
WHEAT	Kern	106000	3270.	3.0	4.6	4.6	4.3	1.7	29.2	43.8	69.2				
WHEAT	Kings	84145	1985.	.0	3.6	3.5	3.2	.6	15.3	27.4	51.1				
WHEAT	Lassen	3280	2217.	.0	4.4	4.4	4.2	1.5	27.3	30.6	55.0				
WHEAT	Madera	59400	1619.	.0	3.3	3.2	3.0	.3	10.0	22.3	44.2				
WHEAT	Merced	31200	637.	.0	2.6	2.5	2.4	.0	-1.5	8.1	20.5				
WHEAT	Modoc	5811	2217.	.0	4.4	4.4	4.2	1.5	27.3	30.6	55.0				
WHEAT	Monterey	3358	41.	.0	3.1	2.9	2.8	.2	6.2	.3	1.4				
WHEAT	Placer	1466	443.	.0	2.9	2.8	2.7	.1	3.9	5.4	14.8				
WHEAT	Riverside	46945	3500.	9.0	4.2	3.9	3.7	1.2	23.8	46.4	71.7				
WHEAT	Sacramento	50400	1043.	1.5	3.2	3.1	2.9	.3	9.2	14.0	31.3				
WHEAT	San Benito	5200	285.	.0	3.4	3.3	3.2	.5	12.7	3.2	9.8				
WHEAT	San Diego	2969	1436.	5.0	3.6	3.4	3.2	.6	15.8	19.7	40.4				
WHEAT	San Joaquin	129000	545.	.0	2.8	2.7	2.5	.1	2.2	6.8	17.8				
WHEAT	San Luis Obisp	10465	50.	.0	2.7	2.5	2.4	.0	-1.3	.4	1.8				
WHEAT	Santa Barbara	2695	457.	.3	3.7	3.5	3.4	.7	16.4	5.6	15.2				
WHEAT	Santa Clara	5700	285.	.0	3.4	3.3	3.2	.5	12.7	3.2	9.8				
WHEAT	Shasta	2400	443.	.0	2.9	2.8	2.7	.1	3.9	5.4	14.8				
WHEAT	Siskiyou	23745	1556.	.0	4.0	4.0	3.8	1.0	21.6	21.4	42.9				
WHEAT	Solano	117768	270.	.0	2.9	2.8	2.6	.1	3.5	3.0	9.3				
WHEAT	Stanislaus	18500	637.	.0	2.6	2.5	2.4	.0	-1.5	8.1	20.5				
WHEAT	Sutter	51285	499.	.0	2.9	2.8	2.6	.1	3.3	6.2	16.5				
WHEAT	Tehama	8350	420.	.0	3.2	3.1	3.0	.3	9.0	5.1	14.1				
WHEAT	Tulare	106000	1985.	.0	3.3	3.2	2.9	.3	10.2	27.4	51.1				
WHEAT	Yolo	128286	789.	.0	3.0	2.9	2.7	.1	5.1	10.3	24.8				
WHEAT	Yuba	2352	443.	.0	2.9	2.7	2.5	.1	2.6	5.4	14.8				
	STATEWIDE	1451554													
	STATEWIDE % LOSS							.5	12.8	22.8	45.8				

STATEWIDE AVERAGE PREDICTED YIELD LOSS

Crop	County	Yield (tons)	Ozone Exposure Statistics (pphm) SUM06	>10	7hr	10hr	12hr	Percent Loss for Predictive Model (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ALFALFA HAY	STATEWIDE % LOSS							14.5	.6	11.4	11.5				
ALFALFA SEED	STATEWIDE % LOSS							16.1	.8	12.7	12.9				
BEANS-DRY	STATEWIDE % LOSS							1.4	22.6	20.9	31.4	32.2	98.0	92.2	
CANTALOUPES	STATEWIDE % LOSS							32.8							
CORN-GRAIN&SEED	STATEWIDE % LOSS							1.2	7.3	2.8					
COTTON	STATEWIDE % LOSS							21.1	16.6	17.8	28.1	31.6	24.6	60.0	55.5
GRAPES-ALL	STATEWIDE % LOSS							27.5	22.5						
GRAPES-RAISIN	STATEWIDE % LOSS							28.7	23.7						
GRAPES-TABLE	STATEWIDE % LOSS							32.7	27.0						
GRAPES-WINE	STATEWIDE % LOSS							25.1	20.5						
LEMONS	STATEWIDE % LOSS							8.4							
LETTUCE	STATEWIDE % LOSS							1.0	.0						
ONIONS	STATEWIDE % LOSS							17.3	3.9						
ORANGES	STATEWIDE % LOSS							18.7	9.3						
RICE	STATEWIDE % LOSS							5.1	4.6	1.9					
TOMATOES-FRESH	STATEWIDE % LOSS							.6							
TOMATOES-PROCESS	STATEWIDE % LOSS							1.0	2.3	9.3	8.6	13.0			
WHEAT	STATEWIDE % LOSS							.5	12.8	22.8	45.8				