BOARD MEETING DATE: March 7, 2003 AGENDA NO. 36

REPORT: Annual RECLAIM Audit Report for 2001 Compliance Year

SYNOPSIS: The annual report on the NOx and SOx RECLAIM program is prepared in accordance with Rule 2015 - Backstop Provisions. The report assesses emission reductions, average annual price and availability of RECLAIM Trading Credits, job impacts, compliance issues and other measures of performance for the eighth year of this program. This report also contains the program review as required under Rule 2020 - RECLAIM Reserve, regarding generation and use of emission reductions and participation in the RECLAIM AQIP and Mitigation Fee Program.

COMMITTEE: Stationary Source, February 28, 2003

RECOMMENDED ACTION:
Approve the attached report.

Barry R. Wallerstein, D. Env.
Executive Officer

CC:CM:DL:scs

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**Background**

The AQMD Governing Board adopted the RECLAIM program on October 15, 1993, to provide a more flexible compliance program for RECLAIM facilities representing the largest emitters of NOx and SOx. RECLAIM was designed to meet all state and federal requirements for clean air programs and a variety of performance criteria to ensure protection of public health, air quality improvement, effective enforcement, implementation costs, and minimal job impacts.

RECLAIM represents a significant departure from traditional command-and-control regulations. Therefore, the RECLAIM rules provide for annual program audits to verify that the program objectives are being met. Rule 2015 – Backstop Provisions, requires

AQMD to conduct an annual program audit to assess various aspects of the program to verify that the program objectives are being met. AQMD staff completed the audit of RECLAIM Compliance Year 2001. The audit results show that California's energy crisis, which began during Compliance Year 2000, continued to impact the RECLAIM program in Compliance Year 2001. The operation of power producing facilities in response to energy demands in California caused aggregate emissions in the RECLAIM program for Compliance Year 2001 to exceed allocations by 28 tons (less than one-quarter of one percent).

The increased demands for NOx RECLAIM Trading Credits (RTC) from power producing facilities in Compliance Year 2000 drove up NOx RTC prices in the RECLAIM market significantly. The Board acted expeditiously to amend the RECLAIM rules in May 2001 to stabilize RTC prices. The rule amendments included bifurcating power producing facilities from the rest of the RECLAIM facilities, requiring power producing facilities and facilities with annual emissions greater than 50 tons to submit compliance plans, and setting up a RECLAIM Reserve to provide emission reductions to ease RTC demand. As a result, NOx RTC prices started to decline and continued to decline through 2002. The average price for Compliance Year 2001 NOx RTCs traded during Calendar Year 2002 was $3,866 per ton. The attached report presents the annual audit for Compliance Year 2001. Pursuant to Rule 2015, this report will also be included in the AQMD's annual performance report to the California Legislature.

**Audit Findings**
The audit of the Compliance Year 2001 RECLAIM program indicates that:

- Aggregate SOx emissions from RECLAIM facilities continue to be below allocations. However, emissions from power producing facilities, due to the continuing impact of California's energy crisis in Compliance Year 2001, caused aggregate NOx emissions to exceed allocations by less than one-quarter of one percent. NOx Emissions from non-power producing facilities were well below their initial allocations.

- The RECLAIM universe consisted of 335 facilities at the end of the 2000 compliance year. There was a net decrease of five facilities in the RECLAIM universe during the 2001 compliance year. Thus, there were 330 facilities in the RECLAIM Universe at the end of the 2001 compliance year.

- The RTC trading market continues to be active. More than $650 million in RTCs have been traded since the adoption of RECLAIM, of which more than $48 million occurred in Calendar Year 2002. The annual average prices for NOx and SOx RTCs traded during Calendar Year 2002 were all below the backstop price of $15,000 per ton. Average prices for RTCs traded during Calendar Years 2000, 2001, and 2002 are summarized below:

| Calendar Year 2000 | Calendar Year 2001 | Calendar Year 2002 |
|---|---|---|
| • $45,609 per ton for Compliance Year 2000 NOx RTCs<br>• $13,809 per ton for Compliance Year 2003 NOx RTCs<br>• $4,915 per ton for Compliance Year 2010 NOx RTCs | • $ 52,537 per ton for Compliance Year 2001 NOx RTCs<br>• $17,064 per ton for Compliance Year 2003 NOx RTCs<br>• $9,510 per ton for Compliance Year 2010 NOx RTCs | • $5,110 per ton for Compliance Year 2002 NOx RTCs<br>• $8,952 per ton for Compliance Year 2003 NOx RTCs<br>• $8,839 per ton for Compliance Year 2010 NOx RTCs |
| • $2,426 per ton for Compliance Year 2000 SOx RTCs<br>• $2,951 per ton for Compliance Year 2003 SOx RTCs<br>• $2,951 per ton for Compliance Year 2010 SOx RTCs | • $5,669 per ton for Compliance Year 2001 SOx RTCs<br>• $3,503 per ton for Compliance Year 2003 SOx RTCs<br>• $3,503 per ton for Compliance Year 2010 SOx RTCs | • $8,986 per ton for Compliance Year 2002 SOx RTCs<br>• $7,849 per ton for Compliance Year 2003 SOx RTCs<br>• $7,166 per ton for Compliance Year 2010 SOx RTCs |

- Ninety-six percent of RECLAIM facilities complied with their allocations during the 2001 compliance year. Fifteen facilities exceeded their allocations during this compliance year. Failure to obtain sufficient RTCs to reconcile with emissions was the leading cause of exceedance.

- RECLAIM had minimal impact on employment during the 2001 compliance year, as in previous years. Six facilities attributed RECLAIM with generating jobs, although two of these facilities were unable to determine the number of jobs created due to RECLAIM. The remaining four facilities attributed RECLAIM with creating a total of four jobs. Ten facilities attributed 142 jobs lost to RECLAIM. Twelve RECLAIM facilities shut down or went out of business in 2001. None of the operators of these facilities indicated that RECLAIM contributed to their decisions to cease operations.

**Attachment**
Annual RECLAIM Audit Report for the 2001 Compliance Year

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

# Annual RECLAIM Audit Report for the 2001 Compliance Year

## March 1, 2003



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EXECUTIVE OFFICER

BARRY R. WALLERSTEIN, D. Env.

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# EXECUTIVE SUMMARY

## Introduction

The South Coast Air Quality Management District (AQMD) Governing Board adopted the Regional Clean Air Incentives Market (RECLAIM) program on October 15, 1993. The RECLAIM program represents a significant departure from traditional command-and-control regulations. RECLAIM's objective is to provide facilities with added flexibility in meeting emissions reduction requirements while lowering the cost of compliance. This is accomplished by establishing facility-specific emissions reduction targets without being prescriptive regarding the method of attaining compliance with the targets; each facility may determine for itself the most cost-effective approach to reducing emissions, including purchasing emission credits from facilities that reduce emissions below their target levels.

Rule 2015 - Backstop Provisions, includes provisions for annual program audits focusing on specific topics, as well as a more comprehensive three-year audit to ensure that RECLAIM is meeting all state and federal requirements and other performance criteria. This document constitutes the Rule 2015 annual audit for the 2001 compliance year (January 2001 through June 2002). A program review of the RECLAIM Reserve is also included pursuant to Rule 2020 – RECLAIM Reserve.

## Chapter 1: RECLAIM Universe

When RECLAIM was adopted in October 1993, 394 facilities were identified as the initial "universe" of sources subject to the requirements of RECLAIM. Between program adoption and June 30, 2001, 84 facilities were included into the program, 65 were excluded from the program, and 78 facilities ceased operation. Thus, the RECLAIM universe consisted of 335 facilities on July 1, 2001. During Compliance Year 2001, eight facilities were included into the RECLAIM universe, one was excluded from the program, and 12 facilities shut down. These changes resulted in a net decrease of five facilities in the universe, bringing the total number of facilities to 330 at the end of Compliance Year 2001. One of the facilities that shut down was in the Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx) universe; all the other facilities that shut down were in the NOx universe only.

## Chapter 2: RTC Allocations and Trading

The primary source of RECLAIM Trading Credits (RTCs) available for trade is the aggregate of all allocations issued to RECLAIM facilities. These RECLAIM allocations incorporated emission reduction requirements in AQMD rules and the control measures and projections specified in the Air Quality Management Plan (AQMP). RTC can also be converted from credits generated under other AQMD rules – Mobile Source Emission Reduction Credits (MSERCs) and Area Source Credits (ASCs). For Compliance Year 2001, approximately 77 tons of RTCs

converted from MSERCs generated from Rule 1631 – Pilot Credit Generation Program for Marine Vessels were added to the total RTC supply.

The Calendar Year 2002 trading market continues to be active with 1,071 registered RTC transactions. This is higher than the annual activities for Calendar Years 1994 through 2000 but lower than the record setting 1,255 transactions in Calendar Year 2001. RTCs valued at a total of $48.8 million were traded during 2002. Since the inception of the RECLAIM program in 1994, $650 million were traded in the RTC trading market.

NOx RTC prices continued a decline trend since the rule amendment in May 2001. Prices for near-term NOx RTCs returned to the pre-2000 price level. NOx RTCs expiring in June 2002 were traded under $1.00 per pound toward the end of the reconciliation period for each of the two cycles in 2001 Compliance Year. SOx prices continued to increase in Calendar Year 2002. Compliance Year 2002 RTCs were traded at an average price of $8,986 per ton, the highest average price for SOx since the inception of the program.

## Chapter 3: Emissions Reductions

Aggregate NOx and SOx emissions from RECLAIM facilities continued to decrease from the inception of RECLAIM through Compliance Year 2001. Aggregate SOx emissions from all RECLAIM facilities continued to be below allocations during this compliance year. Similarly, aggregate NOx emissions from non-power producing facilities continued to be below their initial allocations at the start of RECLAIM. However, because California's energy crisis continued through Compliance Year 2001, NOx emissions from power producing facilities remained significantly above their initial allocations. Consequently, NOx emissions from all RECLAIM facilities in Compliance Year 2001 exceeded allocations, in aggregate, by less than one-quarter of one percent. Excess emissions are being deducted according to rule provisions from the facilities' future compliance year allocations to ensure benefits to the environment.

In May 2001, the AQMD Governing Board adopted rule amendments to stabilize RTC prices that increased sharply in response to the strong demand from power producing facilities. The amendments included provisions to curtail RTC demand as well as increasing RTC supply. Rules 2009 and 2009.1 were adopted to require compliance plans from certain RECLAIM facilities to show how they would comply with annual allocations through Compliance Year 2005. In Compliance Year 2001, actual emissions from facilities subject to these two rules were lower than those projected under compliance plans and forecast reports. Three programs were set up under Rule 2020 – RECLAIM Reserve, to provide eligible facilities with emission reductions at a set price. No facility requested emission reduction from the RECLAIM Air Quality Investment Program (AQIP). Four power producing facilities requested emissions reductions from the Emissions Mitigation Fee Program. Two facilities requested emissions reductions from the State Emission Reduction Credit Bank. On the other hand, the AQMD Governing Board authorized $11.3 million to fund emission reduction projects in accordance to Rule 1631 – Pilot Credit Generation Program for Marine Vessels. These projects, when fully implemented, are expected to reduce 621 tons of NOx emissions annually. These emission reductions are designated for use in the RECLAIM AQIP and the Emission Mitigation Fee

Program. Emission Reductions generated from these projects in 2002 totaled 135 tons.

## Chapter 4: New Source Review Activity

The annual program audit assesses New Source Review (NSR) activity from RECLAIM facilities in order to ensure that RECLAIM is complying with the federal and state NSR requirements while providing flexibility to facilities in managing their operations and allowing new sources into the program. Review of NSR activity in Calendar Year 2001 shows that two new facilities joined the NOx program while no existing facilities joined the SOx program. The two facilities reported NSR NOx emission increases for this period. Additionally, 52 existing RECLAIM facilities reported NSR NOx emission increases due to expansion or modification. These data indicate that the RECLAIM program does not inhibit expansion and/or modification of sources at RECLAIM facilities.

RECLAIM is required to comply with federal NSR requirements for a 1.2-to-1 offset ratio for NOx and SOx emission increases on a programmatic basis. In Calendar Year 2001, RECLAIM provided an offset ratio of 184-to-1 for NOx on an aggregate basis, demonstrating federal equivalency. There were no NSR increases for RECLAIM SOx during Calendar Year 2001. Compliance with the federally required offset ratio also demonstrates compliance with the state requirement of no net emissions increases from new or modified sources. In addition, RECLAIM requires application of Best Available Control Technologies for all new or modified sources with emission increases.

## Chapter 5: Compliance

During Compliance Year 2001, 342 RECLAIM facilities were in the RECLAIM program. Of these 342 facilities, 327 facilities (96 percent) complied with their annual allocations, while all of the 37 SOx facilities complied with their annual allocations. NOx emissions in excess of individual facility allocations totaled 16 tons. The sum of excess emissions from all facilities is significantly less than the programmatic exceedance of 28 tons presented in Chapter 3. This is because in determining programmatic compliance, aggregate emissions in Compliance Year 2001 are compared only to allocations in the same compliance year. On the other hand, individual facilities can reconcile their emissions in Compliance Year 2001 by acquiring RTCs that are valid during the compliance year. As a result, a RECLAIM facility can use RTCs for Compliance Years 2000 or 2002 that are also valid during the overlapping periods in Compliance Year 2001 due to the two-cycle structure in RECLAIM. These extra RTCs are not included in the programmatic evaluation. The three main reasons for allocation exceedances were failure to purchase sufficient RTCs to reconcile their emissions, emission calculation errors, and failure to follow missing data procedures.

## Chapter 6: Job Impacts

Job impacts resulting from the RECLAIM program during Compliance Year 2001 continue to be negligible when compared to the overall employment in the Basin. Six RECLAIM facilities attributed job gains due to RECLAIM. Ten facilities

claimed the RECLAIM program caused a total of 142 job losses. Furthermore, 12 RECLAIM facilities shut down or went out of business during Compliance Year 2001. None of facilities attributed their ceasing operations in part to RECLAIM.

## Chapter 7: Air Quality and Public Health Impacts

The emissions reported by RECLAIM facilities from Compliance Years 1989 through 2001 are found to be in an overall downward trend. Quarterly NOx emissions showed a decreasing trend throughout Calendar Year 2001. This downward trend is due almost entirely to the power producing facilities. Quarterly SOx emissions also exhibited a similar, though less steep, downward trend. Furthermore, analysis of the geographical distribution of emissions during the first eight years of the program on a quarterly basis does not show any distinct shift in the geographical distribution of emissions.

The California Clean Air Act requires a 50 percent reduction in population exposure to ozone by December 31, 2000. Analysis of per capita exposure (the length of time each person is exposed) to ozone in 1998 and 2000 shows that the Basin achieved the December 2000 target for ozone well before the deadline. In fact, Los Angeles County, Orange County, and the South Coast Air Basin overall achieved attainment with the December 2000 target prior to 1994, and Riverside and San Bernardino Counties achieved attainment in 1996.

Air toxic health risk is primarily caused by emissions of volatile organic compounds (VOCs) and metals, rather than NOx or SOx emissions. Additionally, RECLAIM facilities are subject to the same air toxic regulations as other sources in the Basin. Therefore, it can be concluded that there is no toxic impact due to the implementation of the RECLAIM program beyond what would have occurred pursuant to the rules and control measures RECLAIM subsumed.

# INTRODUCTION

The South Coast Air Quality Management District's REgional CLean Air Incentives Market program (RECLAIM) was adopted in October 1993 and replaces certain command-and-control regulations with a new market incentives program for facilities that meet the inclusion criteria. The goal of RECLAIM is to provide facilities with added flexibility in meeting emissions reduction requirements and to lower the cost of compliance. The RECLAIM program was designed to meet all state and federal requirements for clean air programs, as well as other performance criteria such as equivalent air quality improvement, equivalent enforcement, lower implementation costs, lower job impacts, and no adverse public health impacts.

Since RECLAIM represents a significant change from traditional command-and-control regulations, the RECLAIM rules include provisions for program audits in order to verify that the RECLAIM objectives are being met. The rules provide for both annual audits and a more comprehensive audit of the first three years of program implementation. The audit results are used to help determine whether any program modifications are appropriate.

The RECLAIM Program Three-Year Audit and Progress Report was presented to the Governing Board May 8, 1998. This report presents the annual audit and progress report of RECLAIM's eighth compliance year (January 1, 2001 through June 30, 2002), also known as the 2001 compliance year. As required by Rule 2015(b)(1), this audit assesses:

- Emission reductions (see Chapters 3 and 5);
- Per capita exposure to air pollution (see Chapter 7);
- Facilities permanently ceasing operation of all sources (see Chapter 1 and Appendix C);
- Job impacts (see Chapter 6 and Appendix E);
- Average annual price of each type of RTC (See chapter 2);
- Availability of RTCs (see Chapters 2 and 3);
- Toxic risk reductions (see Chapter 7);
- New Source Review permitting activity (see Chapter 4);
- Compliance issues (see Chapter 5 and Appendix D);
- Emission trends/seasonal fluctuations (see Chapter 7, Appendices F and G); and
- Emission control requirement impacts on stationary sources in the program compared to other stationary sources identified in the AQMP (see Chapters 3 and 5).

The Annual Audit is organized into the following chapters:

1. RECLAIM Universe
   This chapter discusses changes in the universe of RECLAIM sources that occurred during the 2001 compliance year.

2. RTC Allocations and Trading
   This chapter summarizes changes in emissions allocations in the RECLAIM universe, RTC trading activity, and the average annual price, availability, and supply of RTCs.
3. Emissions Reductions
   This chapter assesses emissions trends and reductions for RECLAIM sources and emissions control requirement impacts on these sources compared to other stationary sources. The program review of the RECLAIM Reserve pursuant to Rule 2020(k) is also presented.
4. New Source Review Activity
   This chapter summarizes NSR activity of RECLAIM facilities.
5. Compliance
   This chapter discusses compliance activities and the compliance status of RECLAIM facilities and evaluates the effectiveness of AQMD's compliance program and the NOx and SOx monitoring, reporting, and recordkeeping protocols.
6. Job Impacts
   This chapter addresses job impacts.
7. Air Quality and Public Health Impacts
   This chapter discusses air quality trends in the South Coast Air Basin, seasonal and geographic emission trends for RECLAIM sources, per capita exposure to air pollution, and the toxic impacts of RECLAIM sources.

# CHAPTER 1
# RECLAIM UNIVERSE

## Summary

*When RECLAIM was adopted in October 1993, 394 facilities were identified as the initial "universe" of sources subject to the requirements of RECLAIM. Between program adoption and June 30, 2001, 84 facilities were included into the program, 65 were excluded from the program, and 78 facilities ceased operation. Thus, the RECLAIM universe consisted of 335 facilities on July 1, 2001. During Compliance Year 2001, eight facilities were included into the RECLAIM universe, one was excluded from the program, and 12 facilities shut down. These changes resulted in a net decrease of five facilities in the universe, bringing the total number of facilities to 330 at the end of Compliance Year 2001. One of the facilities that shutdown was in the NOx and SOx universe; all the other facilities that shut down were in the NOx universe only.*

## Background

The RECLAIM program replaced the traditional "command-and-control" rules for a defined list of facilities participating in the program (the RECLAIM "universe"). The criteria for inclusion in the RECLAIM program are specified in Rule 2001 – Applicability. Facilities are generally subject to RECLAIM if they have NOx or SOx emissions greater than or equal to four tons in 1990 or any subsequent year, although certain facilities are categorically excluded from RECLAIM. The categorically excluded facilities include restaurants, police and fire fighting facilities, potable water delivery operations, and all facilities located in the Riverside County and Los Angeles County portions of the Mojave Desert Air Basin and the Salton Sea Air Basin. Furthermore, there are other categories of facilities that are not automatically subject to RECLAIM, but individual facilities in these categories have the option to enter the program at their discretion. These categories include ski resorts, prisons, hospitals, and publicly-owned municipal waste-to-energy facilities. An initial universe of 394 RECLAIM facilities was developed using these criteria based on 1990, 1991 and 1992 facility emissions data.

A facility that is not categorically excluded from the program may voluntarily join RECLAIM, regardless of its emission level. Additionally, a facility may be required to enter the RECLAIM universe if:

- It increases its emissions above the four-ton threshold; or
- It ceases to belong to an exempt category; or
- It is discovered by AQMD staff to meet the applicability requirements of RECLAIM, but was initially misclassified as not subject to RECLAIM.

The facilities in the RECLAIM universe were issued an annually declining allocation of emission credits ("RECLAIM Trading Credits" or "RTCs") that constitutes an annual emissions budget. RTCs may be bought or sold as the facilities deem appropriate.

RECLAIM facilities that permanently go out of business after January 1, 1994 (Cycle 1) or after July 1, 1994 (Cycle 2) are removed from the active emitting RECLAIM universe, but may retain their RTCs and participate in the trading market.

## Universe Changes

The RECLAIM rules include several mechanisms to exclude facilities originally included in the universe and to add new facilities to the universe. The overall changes to the RECLAIM universe from the date of adoption through June 30, 2001 were: inclusion of 84 facilities (65 facilities were included and 19 facilities were created by partial change of ownership of existing RECLAIM facilities), exclusion of 65 facilities (63 facilities were excluded and consolidation of two pairs of adjacent RECLAIM facilities into two facilities), and 78 facility shutdowns. Thus, the net change in the RECLAIM universe during the first seven compliance years was a decrease from 394 to 335 facilities. During Compliance Year 2001, eight facilities were added to the RECLAIM universe. Among this group, two new facilities opted to join RECLAIM, three facilities were created by partial change of ownership, one existing facility started operation at a new location and two facilities were found to continue operations even though they reported shut down in prior years. During the same time period, one facility was merged into an existing facility[1], and 12 facilities were shut down. These changes brought the total number of facilities in the RECLAIM universe to 330 facilities.

Table 1-1 summarizes the changes in the RECLAIM universe between the start of program and the end of Compliance Year 2001. Additionally, the most current list of facilities in the RECLAIM universe as of June 30, 2002 is shown in Appendix A.

**Table 1-1**
**RECLAIM Universe Changes**

| | NOx Facilities | SOx Facilities | Total Facilities |
|---|---|---|---|
| **Start of Program** | 392 | 41 | 394 |
| Inclusions—1994-2000 | 84 | 8 | 84 |
| Exclusions—1994-2000 | 64 | 4 | 65 |
| Shutdowns—1994-2000 | 77 | 8 | 78 |
| **End of Compliance Year 2000** | 335 | 37 | 335 |
| Inclusions—2001 | 8 | 0 | 8 |
| Exclusions—2001 | 1 | 0 | 1 |
| Shutdowns—2001 | 12 | 1 | 12 |
| **End of Compliance Year 2001** | 330 | 36 | 330 |

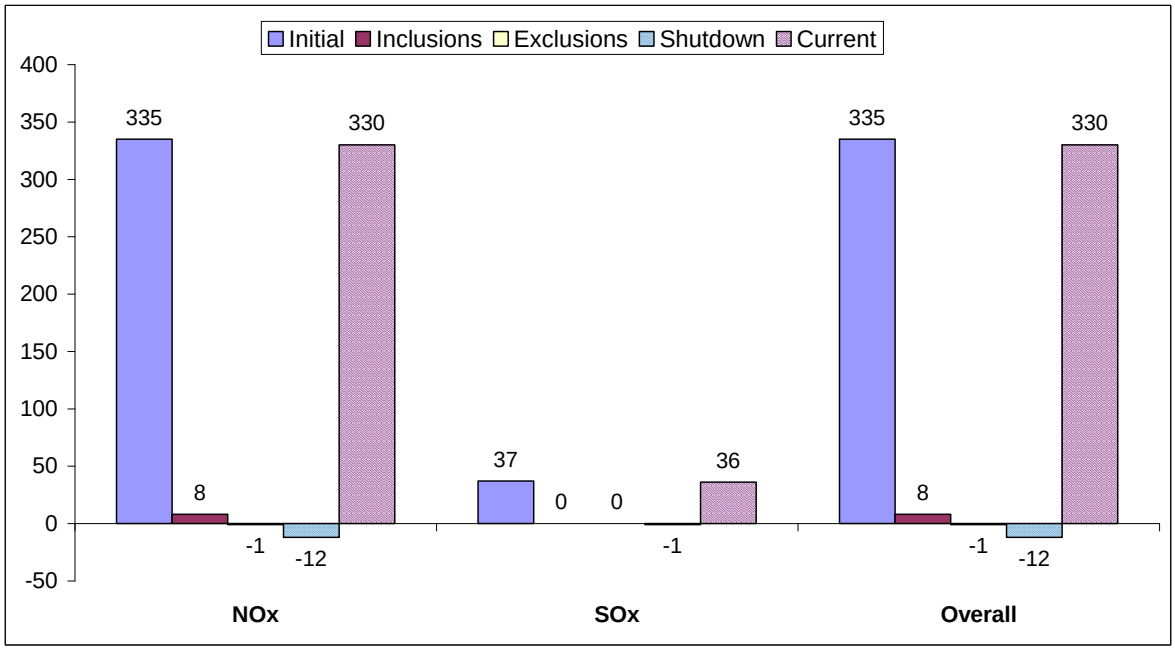
[1] This is accounted as the one exclusion in Table 1-1

## Facility Inclusions and Exclusions

During Compliance Year 2001, two new facilities opted to join RECLAIM, three facilities were created from partial changes in ownership, one additional facility was added when an existing facility started operation at a new location, and two facilities that previously reported to be shut down were found to have continued operations. A facility was merged into an existing RECLAIM facility. This facility was a cogeneration facility that provided heat and electricity to a "host" facility that is also a RECLAIM facility. The host facility took over the operation of this plant and the equipment was merged into the existing facility permit. This resulted in a reduction of a facility in the RECLAIM universe. One of the facilities that shut down was a NOx and SOx facility. All the other affected facilities were NOx facilities. These changes and the shutdowns discussed above together resulted in a net reduction of five facilities in the RECLAIM Universe.

A list of facilities included from the RECLAIM universe during Compliance Year 2001 is shown in Appendix B. Additionally, overall changes to the RECLAIM universe that occurred during Compliance Year 2001 for both NOx and SOx facilities are illustrated in Figure 1-1.

**Figure 1-1**
**Universe Changes during Compliance Year 2001**




## Facilities Permanently Ceasing Operations

Twelve RECLAIM facilities permanently ceased operations between January 1, 2001 and June 30, 2002. Shutdown facilities have the option to retain or sell their RTCs. None the facilities cited RECLAIM as a contributing factor in their decision to cease operation. Appendix C lists the shutdown facilities and brief descriptions of the known reasons for closing down operations.

# CHAPTER 2
# RTC ALLOCATIONS AND TRADING

## Summary

*The primary source of RTCs available for trade is the aggregate of all allocations issued to RECLAIM facilities. These RECLAIM allocations incorporated emission reduction requirements in AQMD rules and the control measures and projections specified in the Air Quality Management Plan (AQMP). RTCs can also be converted from credits generated under other AQMD rules – Mobile Source Emission Reduction Credits (MSERCs) and Area Source Credits (ASCs). For Compliance Year 2001, approximately 77 tons of RTCs converted from MSERCs generated from Rule 1631 – Pilot Credit Generation Program for Marine Vessels, were added to the total RTC supply.*

*The Calendar Year 2002 trading market continues to be active with 1,071 registered RTC transactions. This is higher than the annual activities for Calendar Years 1994 through 2000, but lower than the record setting 1,255 transactions in Calendar Year 2001. RTCs valued at a total of $48.8 million were traded during Calendar Year 2002. Since the inception of the RECLAIM program in 1994, $650 million were traded in the RTC trading market.*

*NOx RTC prices continued a declining trend since the rule amendment in May 2001. Prices for near-term NOx RTCs returned to the pre-2000 price level. NOx RTCs were traded under $1.00 per pound toward the end of the reconciliation period for each of the two cycles in 2001 Compliance Year. SOx RTC prices continued to increase in Calendar Year 2002. Compliance Year 2002 SOx RTCs were traded at an average price of $8,986 per ton, the highest average price for SOx RTCs since the inception of the program.*

## Background

When a facility enters the RECLAIM program, it is issued allocations for each compliance year based on the facility's operational history and the methodology specified in Rule 2002 – Allocations for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx). The allocations decline annually through the 2003 compliance year, and then remain constant for all subsequent years.

Allocations are issued as RTCs, denominated in pounds of NOx or SOx within a specific year. Each RTC may only be used for emissions occurring within the term of the RTC. The RECLAIM program has two staggered compliance cycles – Cycle 1 for compliance period of January 1 through December 31 of each year and Cycle 2 for compliance period of July 1 of each year through June 30 of the following year. Each RECLAIM facility is assigned to either Cycle 1 or Cycle 2 and issued RTCs with corresponding periods of validity.

The issuance of allocations for future years provides RECLAIM facilities guidance to their future emission reduction requirements. Facilities can plan their compliance strategies by reducing actual emissions or securing required

RTCs through trades (or a combination of the two), based on their operational needs.

Through trading, RECLAIM facilities may acquire RTCs issued for either cycle and apply them to emissions, provided that the RTCs are used for emissions occurring within their period of validity and the trades are made during the appropriate time period. In addition, RECLAIM facilities have a 60-day reconciliation period after the end of each compliance year to account for their total annual emissions and to secure adequate RTCs.

Unlike other chapters in this report where data pertain to Compliance Year 2001, RTC prices discussed in this chapter are for Calendar Year 2002. RTC prices during Calendar Year 2001 were presented in the previous Annual RECLAIM Audit Report submitted to the Governing Board in March 2002. In that report, NOx RTC prices were significantly higher in calendar years 2000 and 2001 when compared to any previous years. The increase in NOx RTC prices was mainly caused by the energy crisis and decreasing supply. In response, the AQMD Governing Board amended Regulation XX – RECLAIM, in May 2001 to include control measures designed to reduce emissions at RECLAIM facilities and stabilize RTC prices. The rule amendment resulted in reduced RTC demand and lower NOx RTC prices. Consequently, NOx RTC prices returned to a modest level in Calendar Year 2002.

## RTC Allocations and Supply

The methodology for determining RTC Allocations is stated in Rule 2002 – Allocations for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx). In addition, RTCs can be generated by conversions of emissions reductions from mobile and area sources. The aggregate of all RECLAIM facilities' allocations, conversions of emission reduction credits (ERCs) owned by RECLAIM and non-RECLAIM facilities, and conversion of ERCs from mobile sources and area sources, make up the total RTC supply in the program.

### Changes in RTC Allocations Pursuant to Rule 2002

Allocations for a facility are based on its historical operation and the emission reduction requirements under the command-and-control rules and the AQMP control measures subsumed by RECLAIM. As stated in Chapter 1 – RECLAIM Universe, two new facilities opted to join NOx RECLAIM. Additionally, three facilities were created by partial change of ownership, one existing facility started up at a new location, two facilities were merged into one, and 12 facilities shut down. The two new facilities were not issued any allocations since they had no prior operating history. These facilities were eligible for credits from the State Emission Reduction Bank, which obtained emission reductions from the Carl Moyer Program, discussed later in this chapter. There was no change in the supply of RTCs caused by facilities that were shut down, started by an existing facility, or created by partial change of ownership in that the original facilities retain the ownership of the RTCs.

During a recent emission audit of a RECLAIM facility, it was revealed that the facility was issued allocations based on an erroneous emission factor. Correction was made to the allocations of this facility starting from Compliance Year 2002. This correction resulted in a minor change to the RTC supply.

Rule 2002(c)(12) – Clean Fuel Adjustment to Starting Allocation, provides refineries with RTCs to compensate for actual emissions directly related to the production of California Air Resources Board Phase II reformulated gasoline. The amount of RTCs eligible is based on actual emissions for the subject compliance year and historical production data. In Compliance Year 1999, the refineries were issued a baseline of 86.3 tons of NOx and 52 tons of SOx for Compliance Year 1999 and 101 tons of NOx and 52.9 tons of SOx for each subsequent compliance year. However, these facilities are required to submit records to substantiate actual emission increases due solely to production of reformulated gasoline on an annual basis. If actual emission increases for a subject year are different, the RTCs issued will be adjusted accordingly (i.e., excess RTCs issued will be decreased if emissions were less than the amount of RTCs issued; the reverse is also true.) For Compliance Year 2001, there was a net decrease of 7.5 tons of NOx and 13.1 tons of SOx RTCs due to this section of the rule.

## Conversions of Mobile Source Emission Reductions

Conversions of mobile source emission reduction credits (MSERCs) to RTCs are allowed under Rule 2008 – Mobile Source Credits, and several programs under Regulation XVI – Mobile Source Offset Programs. Among these mobile source programs, additional NOx RTCs were created since July 2001 as a result of conversion of MSERCs generated under Rule 1612 – Credits for Clean On-Road Vehicle, and Rule 1631 - Pilot Credit Generation Program for Marine Vessels. One application was received from a private party to generate ERCs pursuant to Rule 1631. The project consisted of re-powering two marine vessels that carry passengers to and from Catalina Island. Rule 1631 requires the applicant to project credit generation through June 2005. At the end of each compliance year, the applicant is required to submit actual operation data to substantiate the emission reductions achieved. If actual emission reductions are greater than the projected amount, the applicant is issued additional credits. However, if the actual reductions are less than the projected amount, the applicant is required to surrender 110% of the shortfall. As a result, the applicant was underestimating the emission reduction to avoid this penalty. The project was started in July 2001 with one vessel and re-powering of the second vessel was completed in February 2002.

In addition to this project, there was a request to convert NOx MSERCs that were previously issued under Rule 1612 into 50 tons of Compliance Year 2002 RTCs. Total RTCs issued as a result of reductions from mobile sources are listed in Table 2-1.

**Table 2-1**
**RTCs Issued from Mobile Source Emission Reductions (lbs.) since July 2001[1]**

| Compliance Year | 2001 | 2002 | 2003 | 2004 | 2005[2] |
|---|---|---|---|---|---|
| Rule 1631 | 154,507 | 170,879 | 216,184 | 216,184 | 32,736 |
| Rule 1612 | NA | 100,000 | NA | NA | NA |

[1] Data Provided by Science & Technology Advancement Office
[2] Credits can only be generated up through June 2005

Another source of MSERCs that can be converted to RTCs is the Carl Moyer Memorial Air Standards Attainment Program as established under Health and Safety Code Division 26, Part 5, Chapter 9. Under this program, emission reductions are generated by the use of clean mobile sources. In 2001, the Governor of California issued Executive Orders D-24-01 and D-28-01 authorizing the use of these credits by natural gas-fired peaking plants through October 31, 2003. In May 2001, the Governing Board established a State Emission Reduction Bank under Rule 2020 to receive credits from the Carl Moyer Program. Eligible natural gas-fired peaking plants may apply to obtain RTCs in the form of non-tradeable RTCs to cover emissions from their operations.

PureEnergy Operating Services, LLC. operates two facilities (Drew Substation and Century Substation) in Colton. Each of these two facilities has eight natural gas-fired peaking turbines. These are the two new facilities that opted into the NOx RECLAIM program in Compliance Year 2001. Both facilities qualified and applied to use the emissions reductions from the State Emission Reduction Credit Bank. Each facility was issued 58 tons (totaling 116 tons) per year of non-tradeable NOx RTCs for the period of May 2, 2001 through October 31, 2003. As these are non-tradeable RTCs, they can only be used to offset emissions at the facilities. Therefore, for purposes of determining programmatic compliance, only Allocations equivalent to the emissions at these facilities were included.

A third power producing facility (Wildflower Energy, L.P. located in Palm Springs) operating three natural gas-fired peaking turbines also qualified to use and requested the emission reductions from the State Emission Reduction Credit Bank. Initially, this facility was permitted as a non-RECLAIM facility using the emission reductions from the State Emission Reduction Credit Bank. The facility started operation in July, 2001. In 2002, the facility requested to opt-in to the RECLAIM program and the request is currently under review by the AQMD.

Tables 2-2 and 2-3 summarize the changes in RTC supply that occurred since July 2001 and compare them to the total pool of RTCs. Figures 2-1 and 2-2 illustrate the total NOx and SOx RTC supplies, respectively.

**Table 2-2**
**Changes in total supply of NOx RTCs during Compliance Year 2001 (tons/year)**

| Source | 2001 | 2002 | 2003 and on |
|---|---|---|---|
| Universe changes | 0 | 0 | 0 |
| ASC conversion | 0 | 0 | 0 |
| MSERC conversion | 77.3 | 135.4 | 108.1[1] |
| Activity corrections[2] | 0 | 1.4 | 1.3 |
| Reformulated Gasoline | -7.5 | -2.3 | -2.4 |
| State bank[3] | 116 | 116 | 116 |
| Net change | 185.6 | 250.3 | 222.9 |
| Total Supply of NOx RTCs | 15,803 | 14,171 | 12,619 |

**Table 2-3**
**Changes in total supply of SOx RTCs during Compliance Year 2001 (tons/year)**

| Source | 2001 | 2002 | 2003 and on |
|---|---|---|---|
| Universe changes | 0 | 0 | 0 |
| Activity corrections[4] | 0 | 0 | 0 |
| Reformulated Gasoline | -13.1 | -12.7 | -12.7 |
| Net changes | -13.1 | -12.7 | -12.7 |
| Total Supply of SOx RTCs | 5,557 | 4,924 | 4,294 |

[1] Only for 2003; see Table 2-1 for later compliance years
[2] Allocations issued to a facility depend on historical production data. For various reasons, facilities file amendments to their historical production data that, when approved, cause changes to the facilities' Allocations.
[3] These values represent non-tradeable credits converted from state bank offsets. Only 6.5 tons of these credits were used to offset emissions at the facilities. Therefore, only 6.5 tons were included to determine programmatic compliance in Compliance Year 2001.

**Figure 2-1**
**NOx RTC Supply (tons/year)**

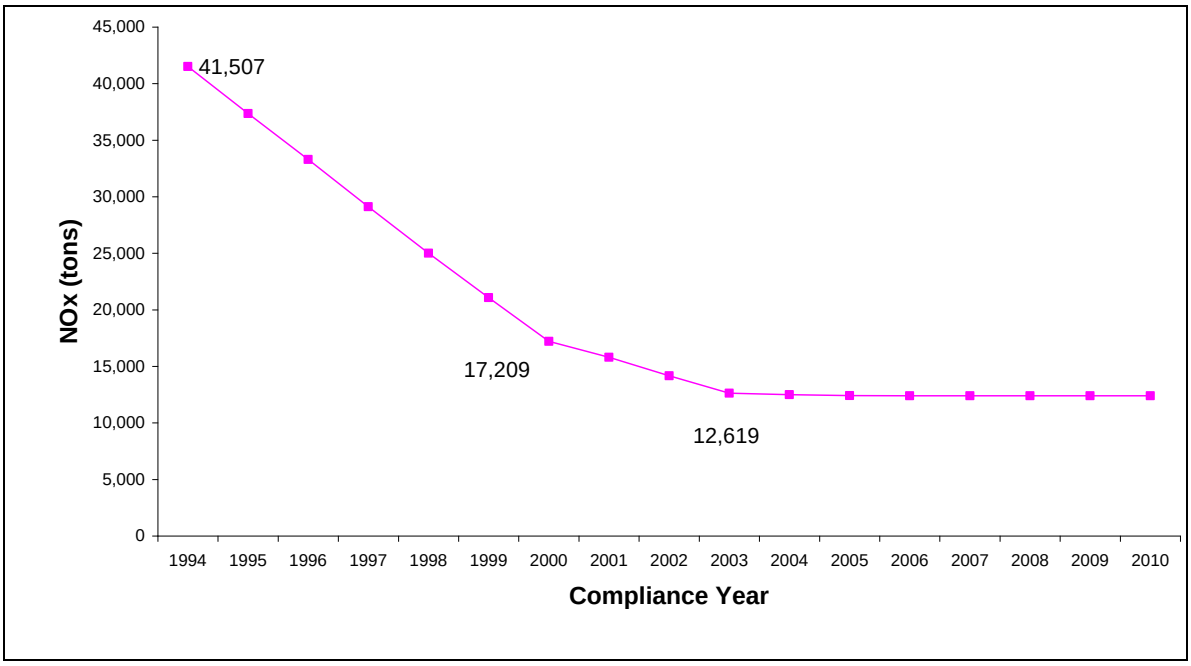
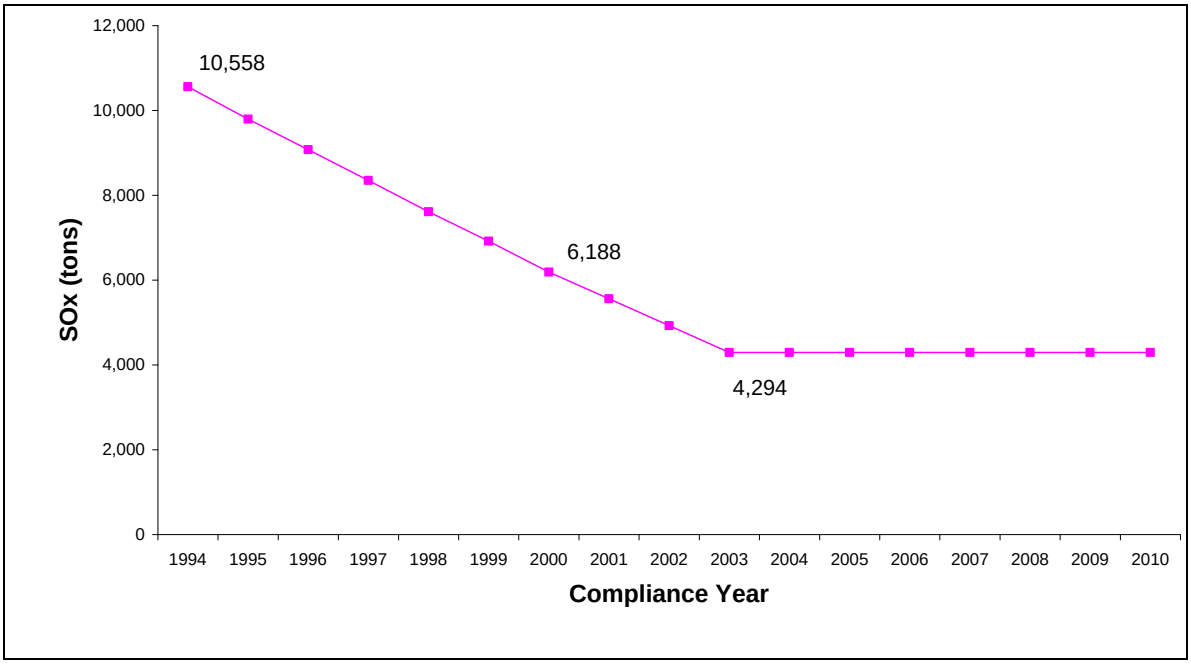


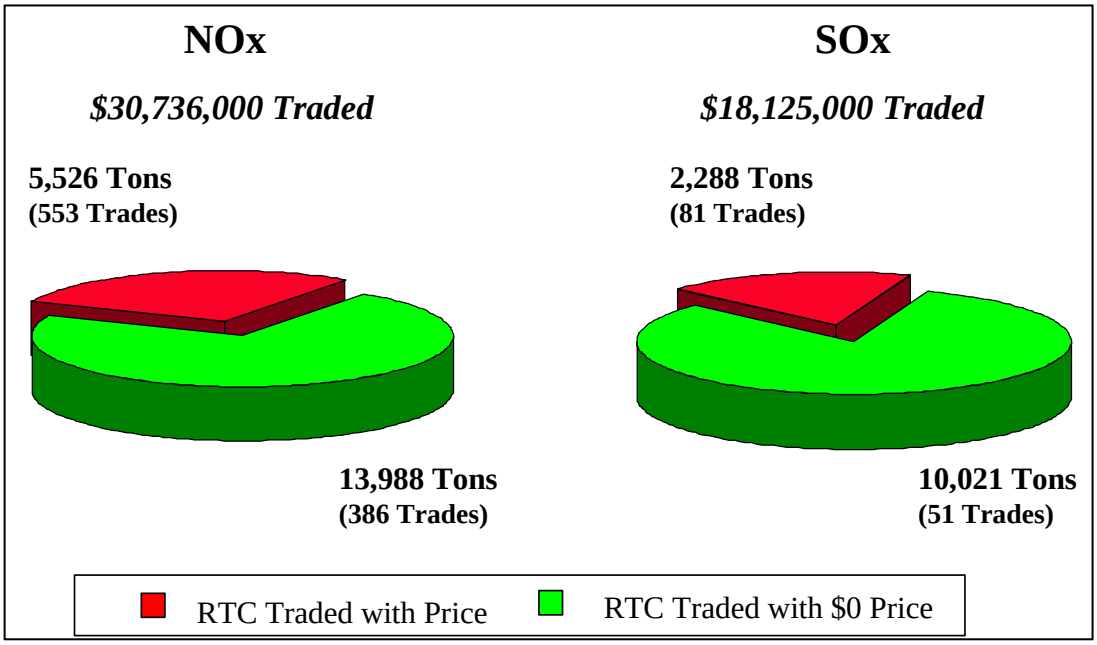

**Figure 2-2**
**SOx RTC Supply (tons/year)**



## RTC Trading Activity

The RTC trading market continued to be active in Calendar Year 2002. There were 1,071 trades totaling over 31,823 tons of NOx and SOx RTCs during Calendar Year 2002. In terms of the number of registrations, the total of 1,071 trades is lower than the record setting 1,255 trades in Calendar Year 2001. However, the total amount of 31,823 tons of RTCs traded is higher than the 25,140 tons of RTCs traded in 2001. These trades included both RTCs traded with prices and transfers with $0 price. Since the inception of the RECLAIM program in 1994 and excluding trades without price, 86,042 tons of NOx RTCs and 26,540 tons of SOx RTCs have been traded with a total price of more than $650 million ($584 million for NOx and $66 million for SOx RTCs). Figure 2-3 summarizes trading activity in Calendar Year 2002 by pollutants.

**Figure 2-3**
**2002 Trading Activity**




In Calendar Year 2002, 634 trades (553 for NOx and 81 for SOx ) totaling 5,526 tons of NOx and 2,288 tons of SOx occurred with prices. These trades included current and future year RTCs. The total value of the RTCs traded with prices for Calendar Year 2002 is $48.8 million. Most of the trades with prices are conducted through brokers.

Trades with $0 price generally occur when a seller transfers RTCs to a broker, when there is a transfer between brokers, between facilities under common ownership, or between facilities that have gone through change of ownership. These trades are indicators of available RTC supply, market dynamics, and credit management strategies.

In addition to traditional trades of RTCs for price, swaps of RTCs occurred between facilities. There were trades of current-year NOx RTCs for future-year

NOx RTCs. Some facilities traded RTCs of different pollutants where one facility transferred NOx RTCs to a second facility. In return, the second facility transferred SOx RTCs to the first facility. There were also trades that involved a combination of RTCs and cash payment. Facilities swapping RTCs were required to report the equivalent price of RTCs under individual trades. Figures 2-4 and 2-5 present historical trades in tons of NOx and SOx RTCs traded, respectively. These figures show trades with and without prices in Calendar Year 2002 and compare them with trading activity in prior years.

**Figure 2-4**
**Total Tons of NOx Traded**

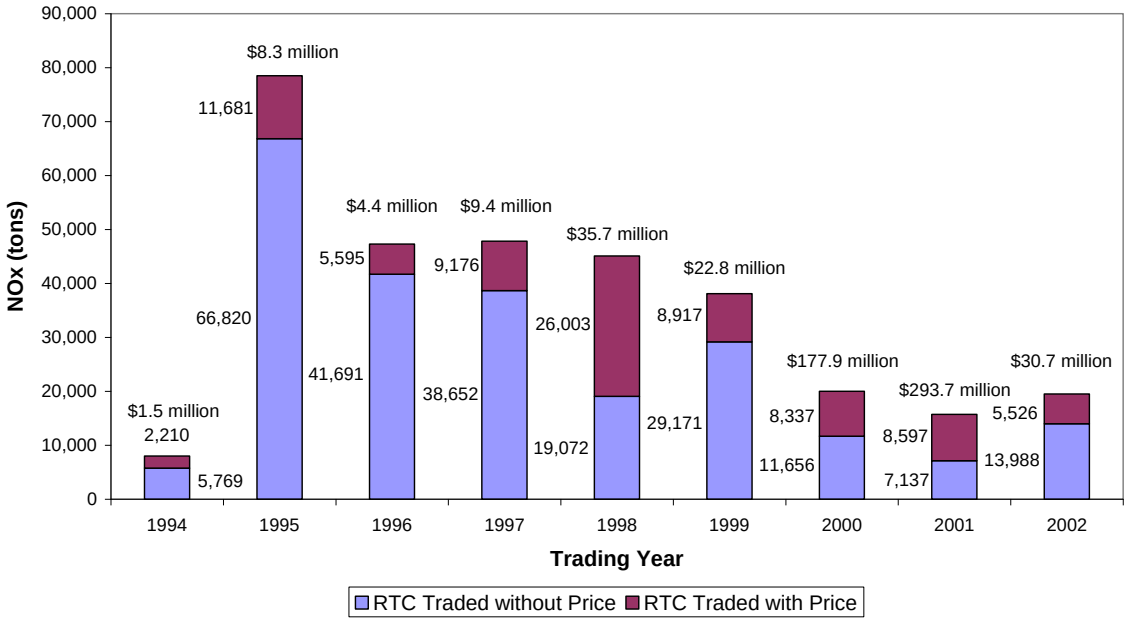
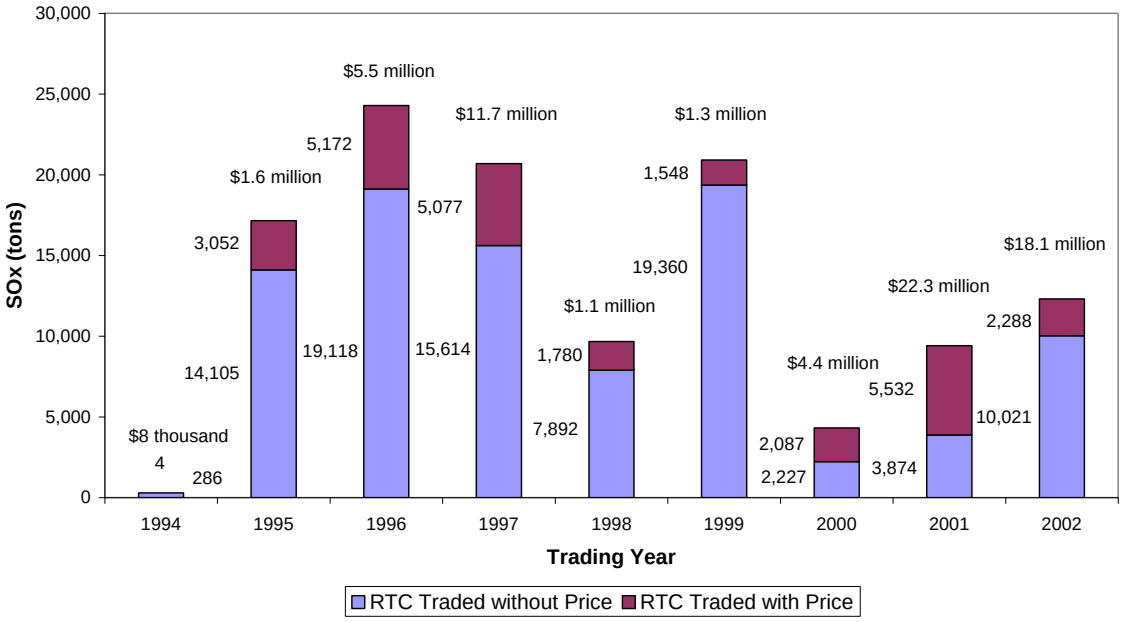


**Figure 2-5**
**Total Tons of SOx Traded**




## Comparison of Calendar Year 2002 Trading Activity to Previous Years

The total number of trades registered with AQMD in Calendar Year 2002 was more than the annual activities for Calendar Years 1994 through 2000, but less than the record setting Calendar Year 2001. During Calendar Year 2002, prices for NOx RTCs decreased significantly when compared to 2001. The decrease in price and quantity of NOx traded with prices resulted in only $30.7 million traded compared to $293.7 million in total NOx RTCs traded during Calendar Year 2001.

The total quantity of SOx RTCs traded in Calendar Year 2002 continued to increase compared to Calendar Years 2000 and 2001. However, the volume of SOx RTCs traded with prices in Calendar Year 2002 is lower compared to 2001. In Calendar Year 2002, just over $18 million of SOx RTCs were traded, whereas, over $22 million of SOx RTCs were traded in Calendar Year 2001.

## RTC Prices

Prices for NOx RTCs increased dramatically in Calendar Year 2000 in response to a high demand for NOx RTCs from the power producing sector to offset the increased emissions due to the California energy crisis. The high NOx RTC prices continued during the first half of Calendar Year 2001 and started to decline in the second half of the calendar year after the rule amendments in May 2001. In Calendar Year 2002 NOx RTC prices continued its declining trend. Prices for near-term NOx RTCs returned to the pre-2000 price level (see Figure 2-6). NOx RTCs that expired in June 2002 were trading below $1 per pound during the reconciliation period that followed the end of the 2001 Compliance Year.

Prices for SOx RTCs continued to increase at a steady pace. Average SOx RTC prices traded in 2002 were between $7,000 and $9,000 per ton. Overall, these prices were significantly higher than those traded in Calendar Year 2001 as illustrated in Figure 2-7. The highest average SOx RTC price was for Compliance Year 2002 RTCs, which was $8,986 per ton. This indicates that the supply of SOx RTCs is on a decline.

As in previous years, post-Compliance Year 2010 RTCs are traded as if they were collectively tied to the Compliance Year 2010 RTCs; all trades involving post-Compliance Year 2010 RTCs have been executed in blocks extending infinitely forward in time with a single aggregate price. Figures 2-6 and 2-7 show annual average prices for NOx and SOx RTCs respectively traded each year since 1994.

**Figure 2-6**
**Yearly Average Prices for NOx RTCs**

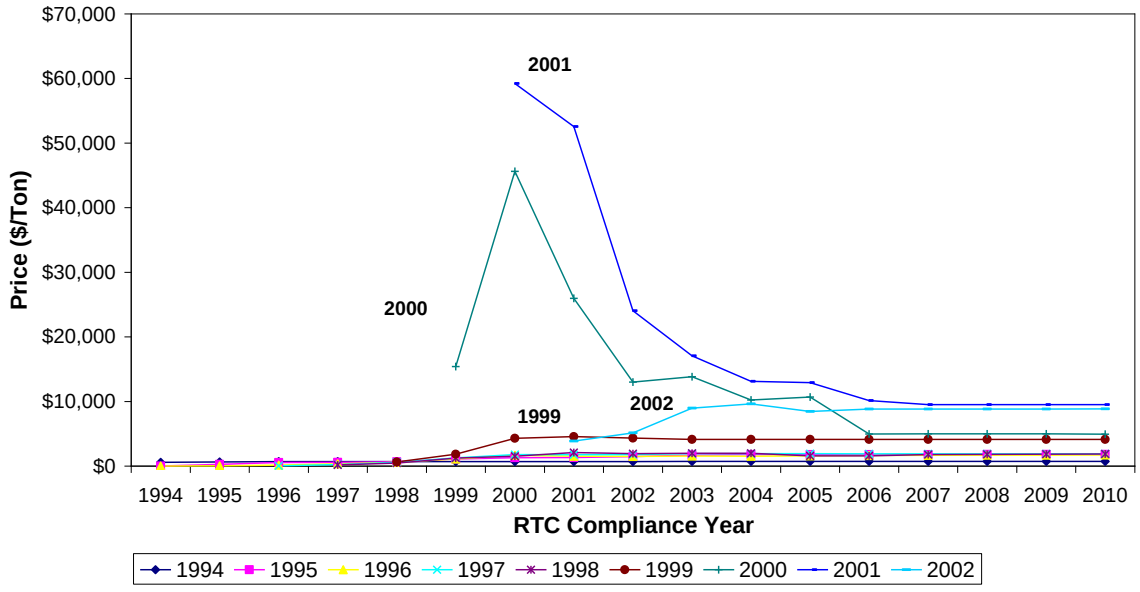
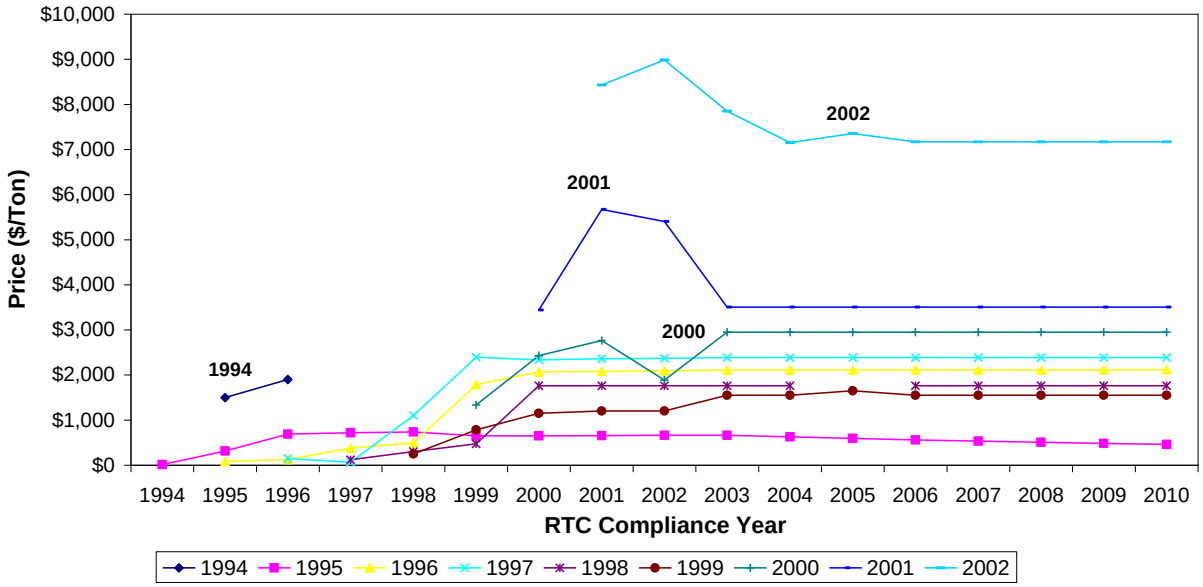


**Figure 2-7**
**Yearly Average Prices for SOx RTCs**

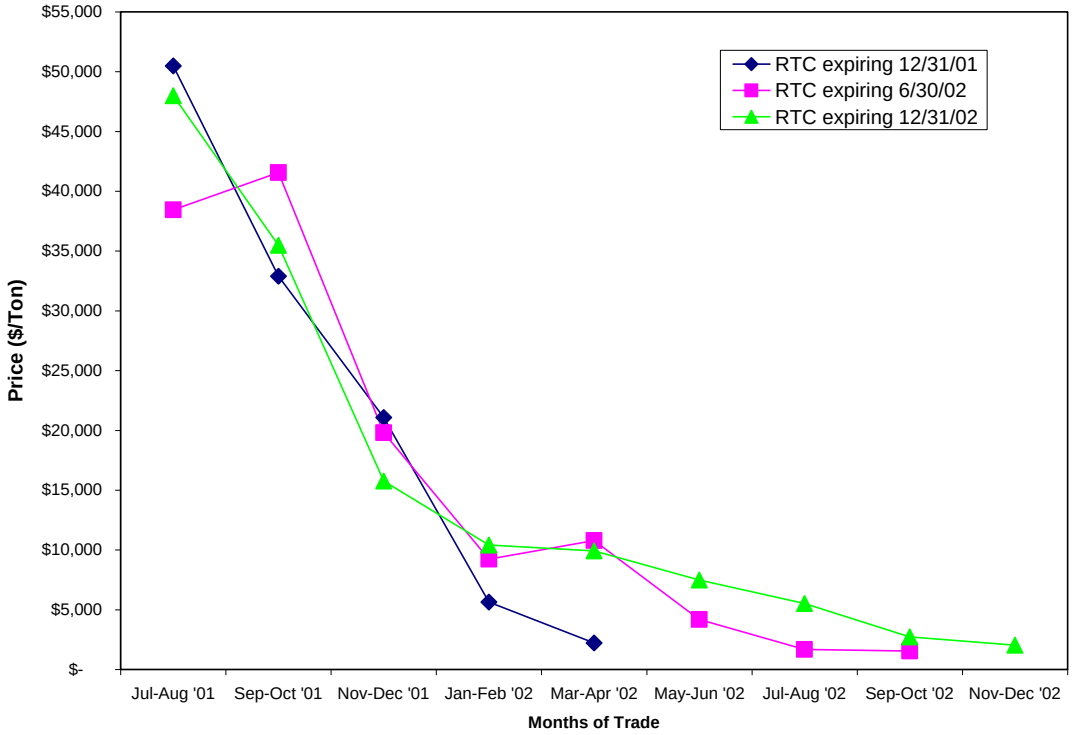



## The effects of the May 2001 Rule Amendment on RTC Prices

In response to the price spike in 2000, the AQMD started a review of the program in the second half of 2000. The White Paper on Stabilization of NOx Prices with recommended improvements was presented to the Governing Board for approval on January 11, 2001. The first measure taken to stabilize the price was the issuance of Executive Order #01-02 by the AQMD Executive Officer in February 2001 in response to the California energy crisis. Subsequently, the Governing Board adopted rule amendments in May 2001 to bifurcate the power producing facilities from the market and setting up emission reduction reserves for power producing facilities that choose to participate.

NOx RTC prices have been on a steady decline since the rule amendments in May 2001. Figure 2-8 illustrates this downward trend for near-term NOx RTCs. The price trend for these RTCs returned to the pattern seen prior to 2000, in that prices for RTCs started out high at the beginning of the compliance year and gradually declined over the course of the year. This is in stark contrast to the continued price increases over Compliance Years 2000 and 2001. Actual traded prices for NOx RTCs expiring in 2002 dipped under the $1 per pound level during the corresponding reconciliation periods.

**Figure 2-8**
**Changes in Monthly Average Prices for NOx RTCs since July 2001**




In the May 2001 amendments, the Governing Board also added new requirements to trade reporting so that market trading information can be provided to RECLAIM participants in a timely manner. RTC trades must be reported to the AQMD within five days of trade agreement. Additional information regarding RTC ownership was also required. In addition, future trades and contingent trades were also required to be reported to the AQMD within five days of reaching an agreement. When received, this information is entered into the AQMD databases and posted daily on the AQMD Internet web site at *http://www.aqmd.gov/reclaim/rtc_main.html*. In addition to trade data, a list of authorized RTC trade representatives registered with the AQMD is provided on this web page. This list was requested by RTC trade brokers to help in identifying the proper signatories for each RECLAIM participant. This new information source is being frequently accessed by RECLAIM participants and trade brokers.

# CHAPTER 3
# EMISSION REDUCTIONS

## Summary

*Aggregate NOx and SOx emissions from RECLAIM facilities continued to decrease from the inception of RECLAIM through Compliance Year 2001. Aggregate SOx emissions from all RECLAIM facilities continued to be below allocations during this compliance year. Similarly, aggregate NOx emissions from non-power producing facilities continued to be below their initial allocations at the start of RECLAIM. However, because California's energy crisis continued through Compliance Year 2001, NOx emissions from power producing facilities remained significantly above their initial allocations. Consequently, NOx emissions from all RECLAIM facilities in Compliance Year 2001 exceeded allocations, in aggregate, by less than one-quarter of one percent. Emissions in excess of individual facility allocations are being deducted according to rule provisions from the facilities' future compliance year allocations to ensure benefits to the environment.*

*In May 2001, the AQMD Governing Board adopted rule amendments to stabilize RTC prices that increased sharply in response to the strong demand from power producing facilities. The amendments included provisions to curtail RTC demand as well as increasing RTC supply. Rules 2009 and 2009.1 were adopted to require compliance plans from certain RECLAIM facilities to show how they would comply with annual allocations through Compliance Year 2005. In Compliance Year 2001, actual emissions from facilities subject to these two rules were lower than those projected under compliance plans and forecast reports. Three programs were set up under Rule 2020 – RECLAIM Reserve, to provide eligible facilities with emission reductions at set prices. No facility requested emission reduction from the RECLAIM Air Quality Investment Program (AQIP). Four power producing facilities requested emissions reductions from the Emissions Mitigation Fee Program. Two facilities requested emissions reductions from the State Emission Reduction Credit Bank. On the other hand, the AQMD Governing Board authorized $11.3 million to fund emission reduction projects in accordance to Rule 1631 – Pilot Credit Generation Program for Marine Vessels. These projects, when fully implemented, are expected to reduce 621 tons of NOx emissions annually. These emission reductions are designated for use in the RECLAIM AQIP and the Emission Mitigation Fee Program. Emission Reductions generated from these projects in 2002 totaled an estimate of 135 tons.*

## Background

One major objective of the RECLAIM program audit is to assess whether RECLAIM is achieving its targeted emission reductions. The annual allocations given to RECLAIM facilities reflect the required emission reductions mirroring the reductions anticipated under the command-and-control rules. As such, RECLAIM is designed to achieve by 2003 the same level of emissions reductions as would have been achieved in aggregate by implementing the subsumed rules

and command-and-control measures. From 2003 on, the level of allocation remains the same for each year thereafter.

In 2000, power producing facilities increased their power generation in response to the California energy crisis. The corresponding increases in NOx emissions caused a sudden surge in the NOx RTC prices that adversely impacted other RECLAIM participants and the overall objective of the program. To correct this problem, the Governing Board amended Regulation XX to bifurcate power producing facilities from the rest of the RECLAIM program participants to stabilize the RTC prices. The Board also adopted Rule 2020 – RECLAIM Reserve, to provide a reserve of NOx emission reductions that can be used for the RECLAIM Air Quality Investment Program (RECLAIM AQIP), Emission Mitigation Fee Program, or natural gas turbine power plant peaking sources. A program review as required under Rule 2020 (k) – Program Review, is presented in this chapter.

## Emissions Audit Process

AQMD has conducted annual audits on the data submitted by RECLAIM facilities for the past eight compliance years to ensure the integrity and reliability of the data. The process begins when each facility submits a comprehensive Annual Permit Emissions Program (APEP) report within sixty days of the end of each compliance year. AQMD staff then reviews the APEP reports to assess the accuracy of reported emissions. This process includes field inspections to check the equipment, monitoring devices, and operational records. It also involves verification of emissions data reported during the course of the year (daily, monthly, quarterly, and annually).

These audits have revealed that some facilities have made errors in quantifying their emissions, such as arithmetic errors, use of inappropriate emission factors, or inappropriate use of missing data substitution. Consequently, the reported emissions in the APEP reports for those facilities were adjusted to correct the errors. When AQMD staff made any adjustments to the emissions data in the APEP reports, facilities were provided an opportunity to review the changes and to present additional data or arguments supporting the data in their APEP reports. This kind of rigorous audit process reinforces RECLAIM's emissions monitoring and reporting requirements and enhances the validity and reliability of the reported emissions data.

## Emission Trends and Analysis

RECLAIM achieves its emission reduction goals on an aggregate basis by ensuring that aggregate annual emissions are below allocations. Allocations are based on projected emission levels in 2003 if the rules and control measures identified in the AQMP that RECLAIM subsumed were implemented.

Tables 3-1, 3-2, and 3-4 summarize emissions from RECLAIM facilities for each of the first eight compliance years. At the time of preparation of this report, auditing of approximately 67 percent of the Compliance Year 2001 APEP reports submitted by all RECLAIM facilities has been completed. Emissions data for Compliance Year 2001 contained in this report have been compiled based on the available audited emissions combined with emissions extracted from the APEP

reports for those facilities with audits still under review. The resultant emissions are presented under Tables 3-1, 3-2, and 3-4.

**Table 3-1**
**Annual NOx Emissions[1] for Compliance Years 1994 through 1999**

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|
| Annual Emissions (ton) | 25,314 | 25,764 | 24,796 | 21,786 | 20,982 | 20,775 |
| % Change from 1994 | 0 % | +1.8 % | -2.0 % | -13.9 % | -17.1 % | -17.9 % |
| Total RTCs[2] (ton) | 40,127 | 36,031 | 32,017 | 27,919 | 24,678 | 21,013 |
| RTC Balance (ton) | 14,813 | 10,267 | 7,221 | 6,133 | 3,696 | 238 |
| % Excess RTCs | 37 % | 28 % | 23 % | 22 % | 15 % | 1.1 % |

1. The RECLAIM universe is divided into two cycles with compliance schedules staggered by six months. Compliance years for Cycle 1 facilities run from January 1 through December 31 and Cycle 2 compliance years are from July 1 through June 30.
2. Total RTCs = Allocations + Converted ERCs

As shown in the Table 3-1, RECLAIM facilities have not exceeded their NOx allocations on an aggregate basis for the first six compliance years (1994 through 1999).

Beginning in Compliance Year 2000, power producing facilities operated at a production level significantly higher than their past operation levels due to California's energy crisis. The high production level continued into Compliance Year 2001. Table 3-2 illustrates the impact of NOx emissions from the power producing facilities on the overall RECLAIM NOx allocations. Although they were initially allocated 2,103 tons of NOx RTCs for Compliance Year 2001 based on their historical operations, these facilities emitted 3,820 tons of NOx in Compliance Year 2001. Nonetheless, this level was almost 3,000 tons less than the emissions from power producing facilities in Compliance Year 2000. This reduction may be attributed to NOx control equipment installed at many power producing facilities during Compliance Year 2001.

In contrast, Compliance Year 2001 NOx emissions of 11,901 tons from the non-power producing facilities were well below their initial allocations of 13,590 tons for that year. However, when emissions from both power producing facilities and non-power producing facilities are considered together, NOx emissions in Compliance Year 2001 exceeded allocations in aggregate by 28 tons, or less than one-quarter of one percent of the total allocations for the compliance year.

**Table 3-2**
**Impact of NOx Emissions from Power Producing Facilities on the Overall NOx Allocations for Compliance Years 2000 and 2001**

| | Compliance Year 2000 | | | | | Compliance Year 2001 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Non-Power Producing Facilities (a) | | Power Producing Facilities (b) | | All Facilities (a) + (b) | Non-Power Producing Facilities (a) | | Power Producing Facilities (b) | | All Facilities (a) + (b) |
| | RTCs Held | Initial Allocations | RTCs Held | Initial Allocations | | RTCs Held | Initial Allocations | RTCs Held | Initial Allocations | |
| Allocations (tons) | 12,345 | 14,895 | 4,852 | 2,302 | 17,197 | 13,425 | 13,590 | 2,268 | 2,103 | 15,693 |
| Emissions (tons) | 13,703 | | 6,788 | | 20,491 | 11,901 | | 3,820 | | 15,721 |
| Difference (Exceedance) | (1,358) | 1192 | (1,936) | (4,486) | (3,294) | 1,524 | 1,689 | (1,552) | (1,717) | (28) |

Table 3-2 shows the overall programmatic exceedance by comparing Compliance Years 2000 and 2001 emissions to the allocations for the corresponding compliance year. However, when evaluated individually, the total amount of emission in excess of allocations held by individual facilities is different. For Compliance Year 2001, 15 facilities exceeded their individual allocations and the total amount of exceedance was only 16 tons. The difference between the programmatic exceedance and the sum of the individual facility exceedance is the two-cycle structure of RECLAIM. RECLAIM facilities are divided in two cycles and are allowed to acquire and use RTCs from either cycle. The two cycles overlap each other by six months. This structure allows facilities to use RTCs that are valid in Compliance Years 2000 and 2002 to offset emissions in Compliance Year 2001 during the overlapping six months of each of the two years.

For Compliance Year 2001, approximately 493 tons of NOx emissions from four power producing facilities are not included in the determination of individual facility exceedance due to an Executive Order (No. D-40-01) issued by the

Governor of the State of California. Under this order, emissions from qualified power producing facilities were excluded from the determination of compliance with their emissions caps. The Executive Order was in effect between June 11 and October 31, 2001. In addition to other requirements, emissions excluded must be a result of producing electricity for consumption within California and the qualified power producing facilities pay an emissions fee of $7.50 per pound of NOx emissions. Table 3-3 lists the four facilities qualified under the Executive Order and the amounts of emissions that were excluded when determining the facilities' annual allocation compliance as shown in Table 3-3. As provided by the Order, these emissions were also excluded from the 16 tons of exceedance by individual facilities as discussed in the previous paragraph. However, these emissions were included in determining RECLAIM programmatic compliance, which resulted in a total exceedance of 28 tons of NOx emissions.

**Table 3-3**
**Emissions Excluded by the Governor's Executive Order from Determining Individual Facility Allocation Compliance**

| Facility (Location) | Emissions | Emission Period |
|---|---|---|
| AES Alamitos (Long Beach) | 518,724 lbs. | 2nd, 3rd, and 4th Quarters 2001 |
| AES Redondo Beach (Redondo Beach) | 281,874 lbs. | 2nd, 3rd, and 4th Quarters 2001 |
| Reliant Energy, Etiwanda (Etiwanda) | 76,306 lbs. | 2nd, 3rd, and 4th Quarters 2001 |
| City of Burbank (Burbank) | 108,441 lbs. | 3rd Quarter 2001 |
| Total | 985,345 lbs. (493 tons) | |

As shown in Table 3-4, RECLAIM facilities have not exceeded their SOx allocations on an aggregate basis during any of the eight completed compliance years (1994 through 2001). This indicates that RECLAIM met its programmatic SOx emission reduction goals and demonstrated equivalency in SOx emissions reduction compared to the traditional command-and-control measures. Table 3-4 shows that there is a slight increase in SOx emissions for Compliance Year 1998 compared to those reported in 1997. Compliance Year 1999 SOx emissions were comparable to 1997 SOx emissions. SOx emissions in Compliance Year 2001 continued the declining trend and decreased approximately 31 percent from 7,232 tons in 1994 to 5,003 tons in 2001. However, the amount of excess SOx RTCs has diminished to only one percent of the total allocations for Compliance Year 2001. Figures 3-1 and 3-2 illustrate the comparison of emissions and the RTC supply for NOx and SOx respectively.

**Table 3-4**
**Annual SOx Emissions[1] for Compliance Years 1994 through 2001**

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|
| Annual Emissions (ton) | 7,232 | 8,064 | 6,484 | 6,464 | 6,793 | 6,378 | 6,009 | 5,003 |
| % Change from 1994 | 0 % | +11.5 % | -10.3 % | -10.6 % | -6.1 % | -11.8 % | -16.9 % | -30.8% |
| Total RTCs[2] (ton) | 10,365 | 9,612 | 8,894 | 8,169 | 7,577 | 6,911 | 6,185 | 5,557 |
| RTC Balance (ton) | 3,133 | 1,548 | 2,410 | 1,705 | 784 | 533 | 176 | 554 |
| % Excess RTCs | 30 % | 16% | 27 % | 21% | 10 % | 8 % | 3 % | 1 % |

1. The RECLAIM universe is divided into two cycles with compliance schedules staggered by six months. Compliance years for Cycle 1 facilities run from January 1 through December 31, and Cycle 2 compliance years are from July 1 through June 30.
2. Total RTCs = Allocations + Converted ERCs

**Figure 3-1**
**NOx Emissions and Available RTCs**

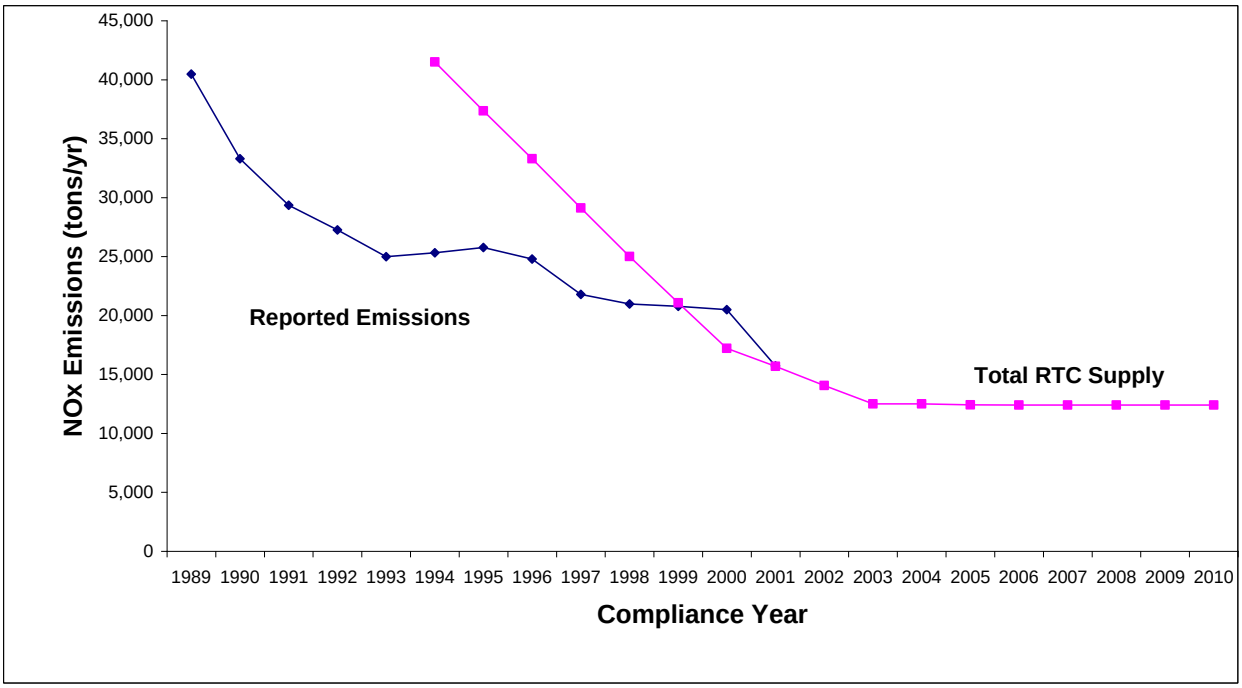
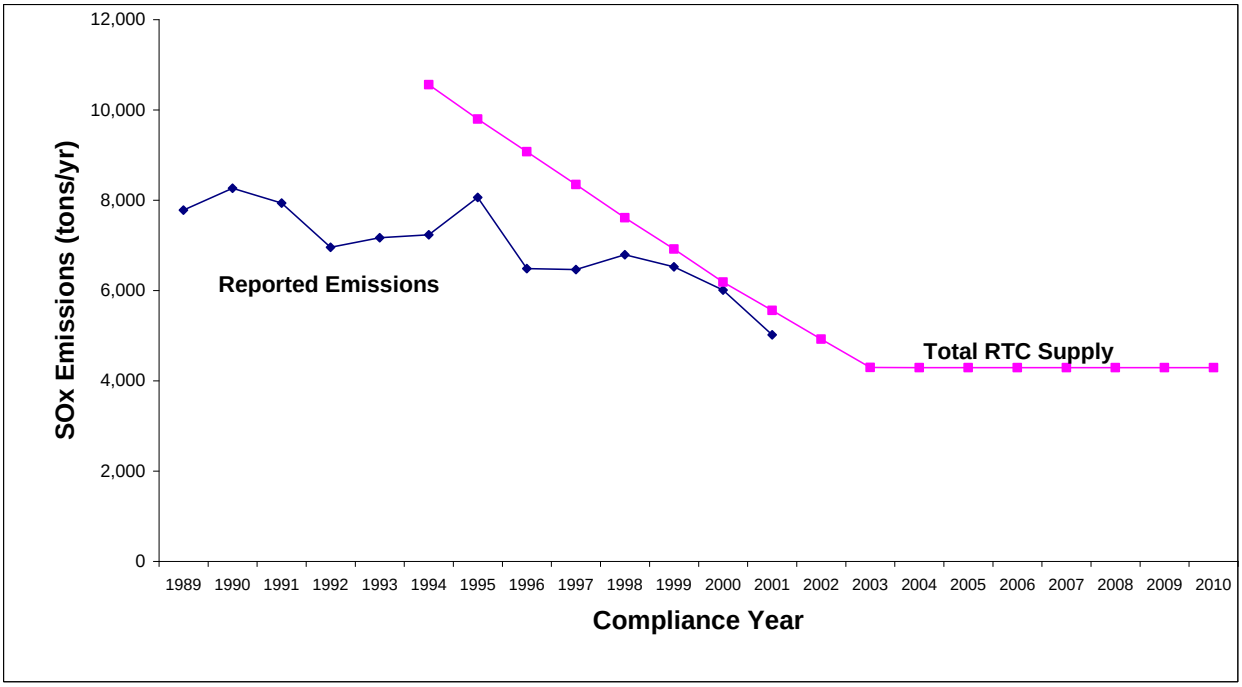


**Figure 3-2**
**SOx Emissions and Available RTCs**




## Comparison to Command-and-Control Rules

As mentioned previously, RECLAIM subsumed a number of command-and-control rules[1], and sought to achieve equivalent reductions as these subsumed rules. RECLAIM facilities are exempt from the requirements of these rules as they are applicable to NOx or SOx emissions. No change was made to these subsumed rules during Compliance Year 2001.

## Program Amendments

Rule 2015 – Backstop Provisions, requires that the AQMD review the program and implement necessary measures to amend the program whenever aggregate emissions exceed the allocations by five percent or more, or whenever the average price of RTCs exceed $15,000 per ton. A program review was initiated in 2000 upon recognition of the RTC shortage and the surge of RTC prices. This effort culminated in the amendments of the RECLAIM rules on May 11, 2001, to implement the following key backstop measures:

- Isolating power producing facilities from the rest of the RECLAIM facilities;
- Requiring power producing facilities to submit compliance plans delineating schedule for installation of Best Available Retrofit Control Technology (BARCT) on power producing facilities by the end of 2003;
- Requiring facilities with 50 tons or more NOx emissions to submit compliance plans specifying approaches to complying with the facility

[1]See Tables 1 and 2 of Rule 2001

allocations;

- Requiring facilities with NOx emissions between 25 and 50 tons to submit forecast reports projecting allocations for Compliance Years 2002 through 2005;
- Requiring timely registration of RTC trades to provide RECLAIM facilities with better price information;
- Creating an Emission Mitigation Fee Program to provide a means for power producing facilities to comply with annual allocations;
- Creating an Air Quality Investment Program (AQIP) to provide small RECLAIM facilities with needs for additional emission reduction credits;
- Creating a reserve of emission reductions to support the Emission Mitigation Fee Program and AQIP.

## Compliance Plans and Forecast Reports

The May 2001 rule amendments included provisions for compliance plans to be submitted by power producing facilities (Rule 2009 – Compliance Plan for Power Producing Facilities) and by non-power producing facilities with NOx emissions of 50 tons or more in Compliance Year 1999 or any compliance year thereafter (Rule 2009.1(b) – Compliance Plans and Forecasts Reports for Non-Power Producing Facilities). The compliance plans were due by September 1, 2001. A report was presented to the Governing Board on November 9, 2001, presenting data collected under these compliance plans and the expected compliance with allocations for power producing and non-power producing sectors through Compliance Year 2005. Forecast reports are also required under Rule 2009.1(e) – Forecast Reports, from non-power producing facilities with annual NOx emissions between 25 and 50 tons. At the time of preparing this report, there are 14 power producing facilities, 41 facilities subject to the Rule 2009.1 compliance plans requirement, and 24 facilities subject to the Rule 2009.1 forecast reports requirement.

Table 3-5 lists the Compliance Years 2000 and 2001 emissions from the three groups of facilities and compares them to the projected 2001 emissions as specified under the compliance plans or forecast reports and also to their current RTC holdings. The table shows the two groups of facilities that are required to submit compliance plans were able to achieve lower emissions than those projected for Compliance Year 2001. Non-power producing facilities that submitted forecast reports had actual emissions slightly higher than those projected for Compliance Year 2001. However, the group held an aggregate allocation well above the total actual emissions.

**Table 3-5**
**Comparison of 2001 Emissions for Facilities Subject to Compliance Plans Requirement**

| Facility Category | Power Producing Facilities (tons) | Non-Power Producing Facilities with Annual Emissions > 50 tons (tons) | Non-Power Producing Facilities with Annual Emissions between 25 and 50 tons (tons) |
|---|---|---|---|
| Compliance Year 2000 Reported Emissions | 6,786 | 10,227 | 802 |
| Compliance Year 2001 Reported Emissions | 3,820 | 8,446 | 608 |
| Projected Emissions for 2001 | 4,041 | 9,668 | 579 |
| Compliance Year 2001 RTC Holdings | 2,802 | 9,853 | 711 |

## Rule 2020 – RECLAIM Reserve

In May 2001, the AQMD Governing Board amended RECLAIM rules to address the conditions caused by the California energy crisis and the NOx RTC shortage experienced by RECLAIM facilities. The Board established a RECLAIM Air Quality Investment Program (RECLAIM AQIP) and an Emission Mitigation Fee Program to ease NOx RTC demand of qualified participants. These programs are available only through Compliance Year 2004.

The RECLAIM AQIP is set up for structural buyers of RTCs who may obtain available emission reductions from the program by demonstrating their eligibility and paying a participation fee of $7.50 per pound of NOx emissions. Structural buyers are RECLAIM facilities that are either new facilities built after October 1993 or facilities with annual emissions of less than six tons, and meet certain conditions contained under Rule 2000 (c)(74). The amendments have been effective in stabilizing NOx RTC prices, which have been significantly lower than the $7.50 per pound level since the rules were amended. Therefore, no request for emission reductions was received under the RECLAIM AQIP.

The Emission Mitigation Fee Program is available only to power producing facilities that meet the requirements under Rule 2004(o) – Emission Mitigation Fee Program for Power Producing Facilities. A power producing facility may obtain emission reductions from the Emission Mitigation Fee Program provided it has not sold since January 11, 2001, any NOx RTCs valid for the compliance year that it is requesting emission reductions. An equivalent amount of NOx RTCs is deducted from the requesting facility's future year allocations (up to two years from the compliance year requested) to protect the environment. When emission reductions are generated under the Emission Mitigation Fee Program, the reductions are distributed to the participants on a prorated basis to replace the future allocations that were deducted up-front. Four power producing facilities requested emission reductions during Calendar Year 2001 and no request was received during Calendar Year 2002.

The Emission Mitigation Fee Program superseded the Executive Order (#01-03)

that was issued by the AQMD Executive Officer on January 11, 2001. Under this Executive Order, power producing facilities that had not sold any NOx RTCs and that had agreed to certain operating conditions may pay mitigation of $7.50 per pound of NOx emissions. At the same time, an equivalent amount of NOx RTCs were reduced from the facilities' 2003 allocations. Four facilities requested participation under the AQMD Executive Order. Table 3-6 lists the four power producing facilities that participated in both the Executive Order and the Emission Mitigation Fee Program, the amounts of emission reductions requested, and the quarters when the emission reductions were needed. The future year allocations for these four facilities have been deducted by the same amounts in accordance to Rule 2010 – Administrative Remedies and Sanctions. In 2001, a total of $23 million was collected under the AQMD Executive Order, the Emission Mitigation Fee Program and the Governor's Executive Order. The emissions covered are 1,528 tons.

**Table 3-6**
**Participating Facilities under the AQMD Executive Order and Emission Mitigation Fee Program**

| Facility (Location) | Amount (tons) | Emission Period |
|---|---|---|
| AES Huntington Beach (Huntington Beach) | 174 | 1st and 2nd Quarters, 2001 |
| AES Alamitos (Long Beach) | 324 | 1st, 2nd, and 4th Quarters 2001 |
| AES Redondo Beach (Redondo Beach) | 159 | 1st, 2nd, and 4th Quarters 2001 |
| Reliant Energy, Etiwanda (Etiwanda) | 379 | 1st, 2nd, 3rd, and 4th Quarters 2001 |

The Board also adopted Rule 2020 – RECLAIM Reserve, to provide a reserve of NOx emission reductions that can be used for the AQIP, the Emission Mitigation Fee Program and natural gas turbine power plant peaking sources. The sources of emission reductions for the RECLAIM AQIP include emission reduction projects that meet the requirements of State Implementation Plan (SIP) approved pilot credit generation rules and the State Emission Reduction Credit Bank. Table 3-7 lists the pilot credit generation rules adopted by the Board and their SIP approval status.

**Table 3-7**
**Pilot Credit Generation Rules**

| Rule Description | Approval Status (Approval Date) |
|---|---|
| Rule 1612.1 – Mobile Source Credit Generation Pilot Program | Approved (2/7/2002) |
| Rule 1631 - Pilot Credit Generation Program for Marine Vessels | Original Rule Approved (2/7/2002) 10/2002 Amendments pending EPA review |
| Rule 1632 - Pilot Credit Generation Program for Hotelling Operations | Approved (2/7/2002) |
| Rule 1633 – Pilot Credit Generation Program for Truck/Trailer Refrigeration Units | Approved (2/7/2002) |
| Rule 1634 – Pilot Credit Generation Program for Truck Stops | Pending EPA Review |
| Rule 2507 – Pilot Credit Generation Program for Agricultural Pumps | Approved (2/7/2002) |

The AQMD Governing Board authorized funding of projects under the Emission Mitigation Fee Program and the RECLAIM AQIP for credits generation in accordance with Rules 1631 and 2507. No project has been initiated under the other pilot credit generation programs. A project was initially funded for the RECLAIM AQIP. However, due to lack of demand under the AQIP program, the project was transferred to the Emission Mitigation Fee Program in September 2002. The Board has authorized total funding of $11.3 million to convert 41 marine vessels. The projected annual emission reductions are 621 tons when all vessels are in operation. At the time this report was prepared, 13 vessels under two different contractors have been converted and are already in service and generating emission reductions. Table 3-8 presents the details of the Rule 1631 projects that are currently generating emissions reductions in 2002 under the Emission Mitigation Fee Program. Additionally, a Rule 2507 project has been authorized by the Board to re-power agricultural pumps with electrical motors. No emission reduction has yet been generated from the project.

**Table 3-8 Emission Reductions Achieved Pursuant to Rule 1631 in Calendar Year 2002 [1]**

| Contractor | Number of Marine Vessels Currently Generating Credits | Location of Reduction Project | Total NOx Reductions[2] (pounds) | 10% Retirement[3] (pounds) | NOx RTCs Generated (pounds) |
|---|---|---|---|---|---|
| Ocean Air Environmental | 11 | District Waters | 280,330 | 28,033 | 252,297 |
| Seaboard Marine | 2 | District Waters | 19,408 | 1,940 | 17,468 |
| | | Total: | 299,738 | 29,973 | 269,765 (135 tons) |

[1] Data provided by Science and Technology Advancement Office
[2] Includes 4th quarter emission reductions that have not been verified
[3] Ten percent of all credits generated are retired for the benefit of the environment pursuant to rule requirements.

As mentioned in Chapter 1, there were two new facilities that opted into RECLAIM during Compliance Year 2001. The two facilities are located in Colton. Both of these facilities are peaking power plants, each with four electric generating natural gas fired turbines. Each of the turbines is rated at 10.5 megawatts and is limited to operating a maximum of 2,415 hours per year. These two facilities qualified and applied to obtain credits from the State Emission Reduction Credit Bank. Each of the facilities obtained 58 tons (total of 116 tons) of NOx emission reductions from the Bank for Compliance Year 2001. These credits are issued as non-tradeable RTCs. However, the facilities only emitted 6.5 tons of NOx emissions during Compliance Year 2001. For purposes of programmatic comparisons under Figure 3-1, all NOx emissions from these plants and only 6.5 tons of the non-tradeable NOx RTCs were included.

## Impact of Changing Universe

As discussed in Chapter 1, changes to the NOx RECLAIM universe during Compliance Year 2001 were: two new facilities opted into RECLAIM, four new facilities were created, one existing facility was merged into another, and 12 facilities ceased operations. Among these changes, one facility was a NOx and SOx facility. Staff conducted an analysis to evaluate the impact on emissions reductions due to such changes in the RECLAIM universe.

When a new facility is constructed and its NOx or SOx emissions exceed four tons per year, it is brought into the RECLAIM universe. Such facilities are required to obtain sufficient RTCs to offset their NOx or SOx emissions. These RTCs must be obtained through the trading market and are not issued to the facility (external offsets used, if any, to obtain permits are converted to RTCs). Such facilities increase the overall demand for the fixed supply of RTCs because they increase total RECLAIM emissions without increasing the total supply of RTCs.

The shutdown of a RECLAIM facility results in a reduction in actual emissions. The shutdown facility retains its RTC holdings, which it may continue to hold as an investment, transfer to another facility under common ownership, or trade on the market. Therefore, although the facility is no longer emitting, its RTCs may be used at another facility. This has the opposite effect on the RTC market as

does a new facility—in this case the overall demand for RTCs is reduced while the supply remains constant.

There is no net effect on the overall RECLAIM program when two facilities are merged to form one or when a facility splits into two. A facility is excluded from the Universe if it is determined that the circumstance that caused the inclusion changed or was found to be inaccurate. The RTCs that were issued to the facility for the future years are also withdrawn. This also decreases the supply of RTCs.

Some facilities that did not initially meet the inclusion criteria subsequently chose to enter the program. These facilities were issued RTC allocations based upon their operational history using the same methodology as was used for the facilities in the initial universe. Inclusions shift the accounting of emissions from the universe of non-RECLAIM sources to the universe of RECLAIM sources without actually changing the overall emissions inventory. They also change the rules and requirements that apply to the affected facilities.

In short, new facilities and shutdown facilities change the demand for RTCs without changing the supply while exclusions and inclusions make corresponding changes to both the demand and the supply, thereby mitigating their own impact on the markets.

Tables 3-9 and 3-10 summarize NOx and SOx emissions from new facilities and facilities that were shut down, excluded from the program, or included into the program for the Compliance Year 2001. Three of the shutdown facilities previously went through a partial change of ownership. At that time, all the allocations issued to the facility were transferred to the newly formed facilities that are still in operation. The three facilities shut down at this time did not retain any initially allocated RTCs. Therefore, the data presented in Table 3-9 does not include those allocations.

**Table 3-9**
**NOx Emissions Impact from the Changes in Universe (Tons)**

| Category | 2001 NOx Emissions (tons) | 2001 NOx Initial Allocations (tons) | 2003 NOx Initial Allocations (tons) |
|---|---|---|---|
| Shutdown Facilities[1] | 21.1 | 247.0 | 197.0 |
| Excluded Facilities[2] | 0 | 0 | 0 |
| Included Facilities[3] | 6.5 | 116 | 116 |
| RECLAIM Universe | 15,721 | 15,693 | 12,619 |

1. Included in these facilities that shut down were three Southern California Edison facilities that had previously undergone partial change of ownership in Compliance Year 1998. At that time, all the allocations were transferred to the new operator of the power plants. Therefore, these figures do not include any of those allocations.
2. This was a consolidation of two adjacent facilities into one facility; no equipment was shutdown or removed from the RECLAIM universe. Therefore, there is no change in emissions or allocations.
3. Two new facilities obtained non-tradeable RTCs from the State Emission Reduction Bank. The amount of non-tradeable RTCs obtained is shown as allocations. However, only 6.5 tons of Non-Tradeable RTCs were included as allocations for the purpose of determining programmatic compliance in Compliance Year 2001 (see Figure 3-1).

**Table 3-10**
**SOx Emissions Impact from the Changes in Universe (Tons)**

| Category | 2001 SOx Emissions (tons) | 2001 SOx Initial Allocations (tons) | 2003 SOx Initial Allocations (tons) |
|---|---|---|---|
| Shutdown Facilities[1] | 0.0 | 98.6 | 75.3 |
| Included Facilities | 0 | 0 | 0 |
| RECLAIM Universe | 5,017 | 5,557 | 4,294 |

1. The facility has not operated for several years before shutting down.

# CHAPTER 4
# NEW SOURCE REVIEW ACTIVITY

## Summary

*The annual program audit assesses New Source Review (NSR) activity from RECLAIM facilities in order to ensure that RECLAIM is complying with the federal and state NSR requirements while providing flexibility to facilities in managing their operations and allowing new sources into the program. Review of NSR activity in Calendar Year 2001 shows that two new facilities joined the NOx program, while no existing facilities joined the SOx program. The two facilities reported NSR NOx emission increases for this period. Additionally, 52 existing RECLAIM facilities reported NSR NOx emission increases due to expansion or modification. These data indicate that the RECLAIM program does not inhibit expansion and/or modification of sources at RECLAIM facilities.*

*RECLAIM is required to comply with federal NSR requirements for a 1.2-to-1 offset ratio for NOx and SOx emission increases on a programmatic basis. In Calendar Year 2001, RECLAIM provided an offset ratio of 184-to-1 for NOx on an aggregate basis, demonstrating federal equivalency. There were no NSR increases for RECLAIM SOx during Calendar Year 2001. Compliance with the federally required offset ratio also demonstrates compliance with the state requirement of no net emissions increases from new or modified sources. In addition, RECLAIM requires application of Best Available Control Technologies for all new or modified sources with emission increases.*

## Background

Emissions increases from the construction of new or modified stationary sources in non-attainment areas are regulated by both federal and state NSR requirements to ensure that progress toward attainment of ambient air quality standards is not hampered. RECLAIM is designed to comply with federal and state NSR requirements without hindering facilities' ability to expand or modify their operations.

Sources in extreme non-attainment areas such as the South Coast Air Basin are required by Title 42, U.S.C. §7511a(e), to mitigate their emissions increases by providing emissions offsets at a 1.2-to-1 ratio or higher. Although RECLAIM allows a 1-to-1 offset ratio for emissions increases, RECLAIM complies with the federal offset requirement by demonstrating compliance with the 1.2-to-1 offset requirement on an aggregate basis. The annual reductions of aggregate allocations generate sufficient excess emissions reductions to mitigate the difference between the RECLAIM emissions offset ratio and the higher offset ratios required under federal law.

RECLAIM requires Best Available Control Technology (BACT) analysis for new or modified sources with emissions increases of RECLAIM pollutants. This provision demonstrates compliance with both the state and federal requirements regarding control technologies. In addition to offset and BACT requirements, RECLAIM subjects those RTC trades, which are conducted to mitigate emissions

increases over the sum of the facility's starting allocation and non-tradable credits, to trading zone restrictions to ensure net ambient air quality improvement within the sensitive zone, as established in Health and Safety Code §40410.5. This annual audit report assesses NSR permitting activities for the 2001 calendar year to verify that programmatic compliance of RECLAIM with state and federal NSR requirements has been maintained.

## NSR Activity

Evaluation of NSR data for Calendar Year 2001 indicates that RECLAIM facilities continue to successfully expand or modify their operations while complying with NSR requirements. Two new facilities joined the NOx program, and no new or existing facilities joined the SOx program. There was a total of 23.4 tons of NOx NSR activity (i.e., increases) at the two new facilities. An additional 52 existing RECLAIM facilities experienced a total of 118 tons of NOx NSR emission increases due to expansion or modification. Table 4-1 shows the NSR activity for RECLAIM facilities since the program inception in 1994.

**Table 4-1**
**RECLAIM Facilities with NSR Activity**

| Facility Type | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|
| Facilities New to RECLAIM | 2 | 0 | 0 | 0 | 0 | 7 | 0 | 2 |
| Existing RECLAIM Facilities with Expansions or Modifications | 41 | 114 | 50 | 44 | 40 | 70 | 41 | 52 |

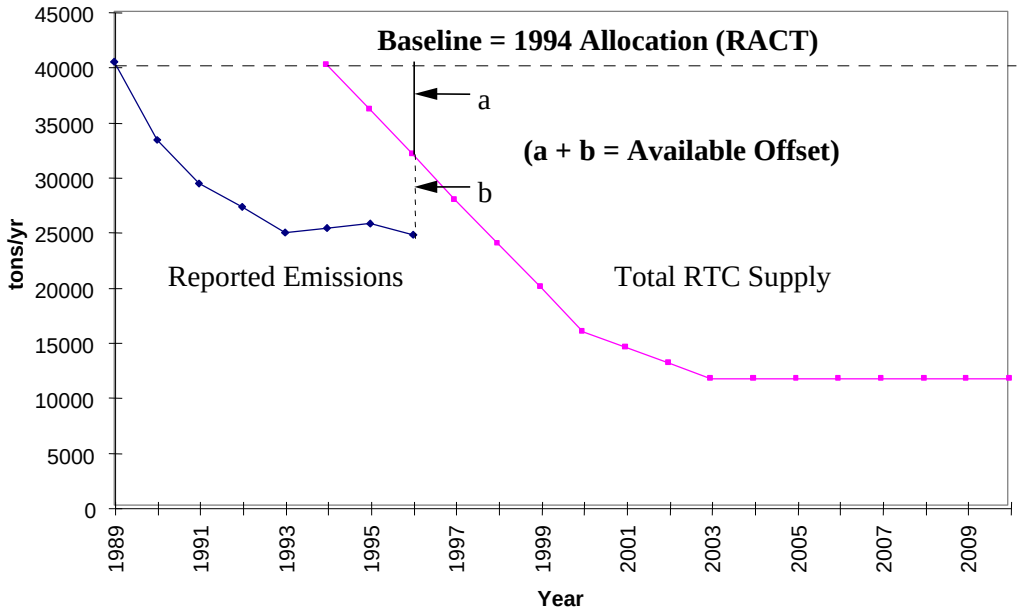
## NSR Compliance Demonstration

RECLAIM is designed to comply with the federal NSR offset requirements. Meeting the NSR requirement (offset ratio of 1.2-to-1) also indicates compliance with the state requirement of no net emission increases from new or modified sources. Section 173 (c) of the federal Clean Air Act (Act) states that only emissions reductions beyond the requirements of the Act, such as Reasonably Available Control Technology (RACT), shall be considered creditable as emissions reductions for offset purposes. Since the initial allocations (total RTC supply in compliance year 1994) already met federal RACT requirements, any emissions reductions beyond the initial allocations are available for NSR offset purposes.

The methodology for determining the available offsets for NSR emissions increases from RECLAIM facilities is illustrated in Figure 4-1. In the figure, the solid line indicated by the letter "a" represents the programmatic reductions beyond the 1994 allocation level (baseline) via declining allocations. The dotted line indicated by the letter "b" accounts for the unused RTCs, (allocations - reported emissions) which also qualify as available NSR offsets. Consequently, the combined total of "a" and "b" is considered the total available offset for

calculating the offset ratio to demonstrate compliance with federal NSR requirements.

**Figure 4-1**
**Available Offsets for NSR Emissions Increase**




To determine the NSR offset ratio, the available offset for each year is compared to the NSR emission increase for the same year according to the following methodology:

1. Offset Available = 1994 Initial Allocation (all available RTCs) - Annual Emission Reported (RTC used); "a" + "b" as shown in Figure 4-1
2. Offset Ratio = [1 + (Offset Available/NSR Emission Increase)] to 1
   (One is added to "Offset Available/NSR Emission Increase" to reflect the fact that the NSR Emission Increase is included in reported emissions and, therefore, offset at a 1-to-1 ratio by the RTCs used to offset reported emissions)

Table 4-2 and Table 4-3 summarize the NSR emission increases and the offset ratios calculated based on the above methodology for each calendar year since the start of the RECLAIM program in 1994. As noted in the tables, the aggregate offset ratio for RECLAIM facilities is 184 to 1 for NOx in Calendar Year 2001.

**Table 4-2**
**Emission Reductions and Offset Ratios for NOx**

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|
| **NSR Emission Increase (tons)** | 66 | 393 | 174 | 318 | 275 | 75 | 121 | 141 |
| **Offsets Available (tons)** | 11,028 | 14,253 | 18,341 | 15,331 | 19,753 | 20,648 | 21,008 | 25,752 |
| **Offset Ratio** | 168:1 | 37:1 | 106:1 | 49:1 | 73:1 | 276:1 | 175:1 | 184:1 |

**Table 4-3**
**Emission Reductions and Offset Ratios for SOx**

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|
| **NSR Emission Increase (tons)** | 37 | 42 | 63 | 62 | 8 | 0 | 0 | 0 |
| **Offsets Available (tons)** | 2,242 | 2,299 | 3,901 | 3,881 | 3,698 | 4,113 | 4,548 | 5,555 |
| **Offset Ratio** | 62:1 | 56:1 | 63:1 | 64:1 | 451:1 | N/A | N/A | N/A |

RECLAIM continues to generate sufficient excess emissions reductions to provide greater than 1.2-to-1 offset ratios as required by federal law. This compliance with the federal offset requirements is built into the design of the RECLAIM program through the annual reductions of the allocations assigned to RECLAIM facilities.

BACT and modeling are also required for any RECLAIM facility that installs new equipment or modifies existing sources if the installation or modification results in an increase in emissions of RECLAIM pollutants above the facility's original (1994) allocation and Non-Tradable Credits. Furthermore, the RTC trading zone restrictions in Rule 2005 – New Source Review for RECLAIM, limit trades conducted to mitigate emission increases over the sum of the facility's starting allocation and non-tradable credits to ensure net ambient air quality improvement within the sensitive zone as required by state law.

The result of the review of the NSR activity in Calendar Year 2001 shows that RECLAIM is in compliance with both state and federal NSR requirements. AQMD will continue to monitor NSR activity under RECLAIM in order to assure continued progress toward attainment of ambient air quality standards without hampering economic growth in the Basin.

## Rule 2004(q) Modeling Requirements

Rule 2004 as amended in May 2001 requires RECLAIM facilities with actual NOx or SOx emissions exceeding their initial allocation in Compliance Year by forty (40) tons per year or more to conduct modeling to analyze the potential impact of the increased emissions. The modeling analysis is required to be submitted within 90 days of the end of the compliance year. For Compliance Year 2001, three facilities were found to be subject to this requirement based on their reported emissions. One of the three facilities exceeded its NOx Initial Allocations and the remaining two exceeded SOx Initial Allocations. One facility submitted the analysis within the required time frame, and the analysis is currently being evaluated by AQMD staff. The remaining two facilities were issued Notices of Violations for failing to submit the modeling analysis by the deadline. AQMD staff will review the analysis from these facilities when they are received.

# CHAPTER 5
# COMPLIANCE

## Summary

*During Compliance Year 2001, 342 RECLAIM facilities were in the RECLAIM program. Of these 342 facilities, 327 facilities (96 percent) complied with their annual allocations, while all of the 37 SOx facilities complied with their annual allocations. NOx emissions in excess of individual facility allocations totaled 16 tons. The sum of excess emissions from all facilities is significantly less than the programmatic exceedance of 28 tons presented in Chapter 3. This is because in determining programmatic compliance, aggregate emissions in Compliance Year 2001 are compared only to allocations in the same compliance year. On the other hand, individual facilities can reconcile their emissions in Compliance Year 2001 by acquiring RTCs that are valid during the compliance year. As a result, a RECLAIM facility can use RTCs for Compliance Years 2000 or 2002 that are also valid during the overlapping periods in Compliance Year 2001 due to the two-cycle structure in RECLAIM. These extra RTCs are not included in the programmatic evaluation. The three main reasons for allocation exceedances were failure to purchase sufficient RTCs to reconcile their emissions, emission calculation errors, and failure to follow missing data procedures.*

## Background

RECLAIM facilities are provided with the flexibility to choose among compliance options, either trading RTCs or reducing emissions, to meet their annual allocations. However, this flexibility must be supported by standardized emission monitoring, reporting, and recordkeeping (MRR) requirements to ensure the reported emissions are real, quantifiable, and enforceable. In order to meet clean air goals, AQMD must ensure that the annual emissions targets for the RECLAIM facilities are being met. As a result, compliance is one of the most critical elements of the RECLAIM program.

The MRR requirements were designed to provide more accurate and up-to-date emissions reports. Once facilities install and complete the certification of the required monitoring and reporting equipment, they are relieved from command-and-control rule limits and requirements. Failure to obtain quality assured data from the monitoring equipment or failure to file daily emissions reports by the time due, result in emissions determined by a rule prescribed methodology known as Missing Data Procedure (MDP). Depending on the performance of the monitoring equipment (i.e., availability of quality assured data), the MDP uses a tiered approach to calculate emissions. As availability of quality assured data increases, the calculated emissions become more representative of the actual emissions.

# Allocation Compliance

## Requirements

At the beginning of the program, each RECLAIM facility received an annual allocation for each compliance year from 1994. Upon entry to the RECLAIM program, each facility new to the program is also issued annual allocations according to the same methodology as those facilities that were initially included at the start of the program. With the knowledge of emission goals, RECLAIM facilities have the flexibility to decide how to manage their emissions in order to meet their allocations in the most cost-effective manner. Facilities may buy RTCs to increase their allocations or sell unneeded RTCs.

At the end of each quarter and each compliance year, each facility must hold sufficient RTCs in its Allocation account to cover its emissions for the compliance year. Facilities may buy or sell RTCs from each other at any time of the year in order to ensure that their emissions are covered. In addition, after the end of each compliance year, there is a 60-day reconciliation period during which facilities have a final opportunity to buy or sell RTCs for that compliance year. At the end of this reconciliation period, each facility is required to certify the emissions for the preceding compliance year by submitting its Annual Permit Emissions Program (APEP) Report.

## Compliance Audit

AQMD has conducted annual audits on the data submitted by RECLAIM facilities to ensure the integrity and reliability of the data each compliance year since the beginning of the program in 1994. The audit process includes field inspections to check the equipment, monitoring devices, operational records, and checking emissions calculations to verify the emissions data reported to AQMD's Central Station or submitted in APEP reports. These inspections revealed that some facilities made errors in quantifying their emissions, such as arithmetic errors, use of inappropriate emission factors, or inappropriate use of missing data substitution. Therefore, some of the reported emissions in the APEP reports had to be adjusted after completion of the audits.

Whenever an audit revealed a facility to be in exceedance of its annual allocation, the facility was provided an opportunity to review the audit and to present additional data to further refine the audit results. Emissions data are ensured to be valid and reliable through this extensive and rigorous audit process.

## Compliance Status

During Compliance Year 2001, 342 RECLAIM facilities were in the RECLAIM program. Of these 342 facilities, 327 facilities (96 percent) complied with their NOx allocations for the 2001 compliance year. This is a marked improvement over the compliance rate for Compliance Year 2000 during the peak of the California power crisis when the compliance rate dipped to a low of 88 percent.

Based on APEP reports and completed AQMD audit results, only 15 facilities did not reconcile their emissions with allocations. The amount of excess emissions

from these facilities totaled 16 tons.[1] Of the 15 facilities, only one was a power producing facility. Of all the facilities that violated the annual allocations, nine facilities exceeded their allocations by less than five percent and 9 facilities exceeded their allocations by less than 1,000 pounds.

Based upon the APEP reports and completed AQMD audit results, all facilities complied with their SOx annual allocations during this compliance year. Appendix D lists facilities that were unable to reconcile NOx emissions for Compliance Year 2001 based either on emissions from APEP reports or completed audits. Staff is finalizing the audits of emissions reported by the remaining facilities. Staff is maintaining and updating the list of facilities that exceeded their allocations. The up-to-date list is available to the public at District Headquarters by contacting RECLAIM Administration Team staff. Additional cases of allocation violation may be identified after audits are finalized. All of the allocation exceedances occurred within the NOx RECLAIM universe.

Based on the results from completed annual RECLAIM compliance audits conducted by AQMD staff, the reasons for Allocation exceedances are summarized as follows:

- **Failure to Reconcile**
  Eight facilities did not have sufficient RTCs to cover their reported emissions yet did not purchase any RTCs to reconcile their emissions. One facility eventually sought and obtained a Stipulated Order of Abatement from the Hearing Board. The terms of the order included installation of air pollution control equipment in an accelerated schedule and a scheme to deduct their future allocations in an amount equal to the exceedance amount.

- **Emission Calculation Errors**
  Six facilities exceeded their allocations due to emission calculation errors. Typical errors included using the wrong pressure and temperature correction factors and making arithmetic errors in the calculations.

- **Failure to Follow Missing Data Procedures**
  RECLAIM rules require facilities to report emissions according to MDP when valid data are not obtained from the monitoring equipment or when daily emission reports for major sources are not submitted on time. MDP uses a conservative approach to estimate emissions. One of the 15 facilities that had an allocation exceedance failed to properly apply MDP to its process units because of lack of individual fuel consumption data. There was no MDP applied to major sources in this category.

[1] Note that this amount is much less than the total amount of emissions (28 tons) in excess of the programmatic allocations as presented in Chapter 3. The data presented in Chapter 3 compare emissions in Compliance Year 2001 only to allocations issued for Compliance Year 2001. However, there are two cycles in RECLAIM. This structure creates overlapping six-month periods wherein RTCs from different compliance years can be used to offset emissions. Many facilities complied with their annual allocations by acquiring RTCs from a different cycle to reconcile with emissions. These different cycle RTCs can be from Compliance Years 2000 and 2002.

## Power Producing Facilities

Power producing facilities continued their heightened level of operations in 2001. As illustrated in Table 3-2, power producing facilities had aggregate NOx emissions of 3,820 tons but only held 2,268 tons of allocations. Power producing facilities were allowed to continue to operate under various programs in order to ease the California power crisis. The first effort was the issuance of an executive order by the AQMD Executive Officer on February 6, 2001. Under the order, a qualified power producing facility may obtain NOx emission reduction credits to reconcile its emissions at a rate of $7.50 per pound of NOx. The same facility will also have the same amount of NOx credits deducted from its allocations for the 2003 Compliance Year. In May 2001, the AQMD Governing Board amended the RECLAIM rules to bifurcate power producing facilities from the rest of the RECLAIM facilities. In an effort to stabilize RTC prices, power producing facilities were prohibited to acquire NOx RTCs from the rest of the RECLAIM facilities. Instead, power producing facilities are allowed to participate in the Mitigation Fee Program set up under Rule 2004(o). The details of the Mitigation Fee Program are discussed in Chapter 3 of this report. The AQMD Executive Order expired upon amendment of the RECLAIM rules in May 2001. In addition, the Governor of California issued an Executive Order in June 2001 to exclude emissions from being accounted under the annual allocations of a qualified power producing facility. No provision for deduction of future allocations was included in the Governor's Executive Order, which expired in October 2001.

The facilities that participated in these programs in Calendar Year 2001 are presented in Tables 3-3 and 3-6. No facility requested participation in these programs in Calendar Year 2002. Funds collected under these programs are invested to generate NOx emissions reductions. As NOx emissions reductions are generated, the participating facilities' deducted future year allocations are replaced on a prorated basis. In addition, the AQMD Governing Board authorized the Executive Officer to purchase, with the collected funds excess NOx RTCs from the market. Aggregately, 531 tons of future year NOx allocation deductions have been replaced as of December 2002.

The power producing facility that exceeded allocations participated in all three of the above described programs. The facility made an error in calculating emissions from its small equipment (not used for power generation). As a result, it did not request the needed NOx emission reductions from the programs. The facility exceeded its NOx Allocations by 225 pounds, which were relatively minute when compared to its emissions in Compliance Year 2001.

## Impact of Missing Data Procedure

MDP was designed to provide a method for determining emissions when an emission monitoring system fails to yield valid emissions. These occurrences may be caused by failure of the monitoring systems or the data acquisition and handling system (DAHS), which is required for major sources. In addition, major sources are required to use MDP for determining emissions whenever daily emissions reports are not submitted by the applicable deadline. Different sets of MDP are defined for different source classifications.

In addition to MDP for major sources, there are also MDP defined in the RECLAIM rules for large sources and process units. These procedures are applicable when a process monitoring device fails or when the facility operators fail to record process rates or fuel usage. However, the resulting emissions reports are reasonably representative of the actual emissions because average or maximum emissions from previous operating periods are allowed to be used.

According to Compliance Year 2001 APEP reports, 47 NOx facilities and nine SOx facilities used MDP in reporting their annual emissions. In terms of mass emissions, 8.1 percent of the total reported NOx emissions and 11.0 percent of the total reported SOx emissions in the APEP reports for Compliance Year 2001 were calculated using MDP. Table 5-1 summarizes the impact of MDP on annual emissions for the past seven years from the 1995 through 2001 compliance years (MDP did not apply during the 1994 compliance year).

**Table 5-1**
**MDP Impact on Annual Emissions**

| | Percent of Reported Emissions Using Substituted Data[1] | | | | | | |
|---|---|---|---|---|---|---|---|
| **Emittants** | **1995** | **1996** | **1997** | **1998** | **1999** | **2000** | **2001** |
| NOx | 23% (65) | 20% (61) | 18% (83) | 7.3% (77) | 9.6% (84) | 6.5% (82) | 8.1% (47) |
| SOx | 40% (12) | 16% (11) | 16% (17) | 13% (15) | 20% (13) | 10.7% (13) | 11% (9) |

1. Numbers in parenthesis represent the number of facilities that reported use of MDP in each compliance year.

As indicated in the table, the impact of MDP on reported emissions has significantly decreased since the beginning of the program. In most of the cases where MDP was used, the substituted data were representative of actual emissions, as explained below. Based on past audits, the data seem to suggest that facilities have gained experience in the operation and maintenance of the monitoring equipment to achieve much higher quality emissions data over time.

Most of the issues associated with Continuous Emissions Monitoring Systems (CEMS) certifications were resolved prior to the 1999 compliance year. Very few facilities have had to submit emissions reports based on the worst case scenario under MDP that considerably overstates the actual emissions from major sources. This scenario is applicable to sources that failed to have their CEMS certified in a timely manner where required, and therefore, no valid CEMS data can be used in the substitution. In cases where prior CEMS data is available, MDP is applied in tiers depending on the duration of missing data periods and the availability of monitoring systems. As the duration of missing data periods gets shorter and the historic availability of monitoring systems gets higher, the substitute data yielded by MDP become more representative of actual emissions.

As an example, most facilities that reported emissions using MDP in 1995 did so because they did not have their CEMS certified in time to report actual emissions. Since their CEMS had no prior data, MDP called for an application of the most conservative procedure to calculate substitute data by assuming

continuous operation at the maximum rated capacity of their equipment, regardless of the actual operational level during the missing data periods. As a result, the calculation yielded substitute data that may have been much higher than the actual emissions. On the other hand, 47 facilities reported NOx emissions using MDP in 2001. This is lower than those in 1995 both in terms of the number of facilities and in the percentage of emissions reported. Since most CEMS have been certified and had been reporting actual emissions by the beginning of the 1997 compliance year, facilities that had to calculate substitute data were able to apply less conservative methods of calculating MDP for systems with high availability and shorter duration of missing data periods. Therefore, the substitute data they calculated for their missing data periods were more representative of the actual emissions.

It is important to note that the portions of annual emissions that are attributed to MDP include actual emissions from the sources as well as the possible overestimated emissions due to MDP bias. For example, it is estimated that 8.1 percent of NOx annual emissions were reported using MDP in 2001. This does not mean that 8.1 percent of 2001 reported NOx emissions were not real. A portion of the 8.1 percent may be overestimated emissions due to MDP bias, but a significant portion (or possibly all) of it could have been actual emissions from the sources. Unfortunately, the portion that represents the actual emissions cannot be readily estimated because the extent of this effect varies widely depending on source categories and operating parameters. As an example, refineries tend to operate at maximum capacity for 24 hours/day and seven days/week, barring major breakdowns or other unforeseeable circumstances. Therefore, missing data emissions calculated for such facilities could be more reflective of the actual emissions than those calculated for facilities that do not operate on a continuous basis. On the other hand, MDP could significantly overestimate emissions from sources that operate intermittently. The majority of NOx emissions data quantified using MDP (48 percent) was reported by power producing facilities. The majority of SOx emissions data quantified using MDP (57 percent) was reported by refineries.

## Emissions Monitoring

### Overview

The accuracy of reported RECLAIM facility emissions—and thereby the enforceability of the RECLAIM program—is assured through a three-tiered hierarchy of MRR requirements. The MRR category into which equipment at a facility falls is based on what kind of equipment it is and on the level of emissions produced or potentially produced by the equipment. RECLAIM divides all NOx sources into major sources, large sources, process units, and equipment exempt pursuant to Rule 219 - Equipment Not Requiring a Written Permit Pursuant to Regulation II. All SOx sources are divided into major sources, process units, and equipment exempt pursuant to Rule 219. Table 5-2 shows the monitoring requirements applicable to each of these categories.

**Table 5-2**
**Monitoring Requirements for RECLAIM Sources**

| Source Category | Major Sources (NOx and SOx) | Large Sources (NOx only) | Process Units and Rule 219 Equipment (NOx and SOx) |
|---|---|---|---|
| Monitoring Method | Continuous Emission Monitoring System (CEMS) | Fuel Meter or Continuous Process Monitoring System (CPMS) | Fuel Meter and/or Timer |
| Reporting Frequency | Daily | Monthly | Quarterly |

## Continuous Emission Monitoring Systems (CEMS)

### *Requirements*

CEMS represent both the most accurate and the most reliable method for continuously monitoring all of the parameters necessary to directly determine mass emissions of NOx and SOx, as well as the most costly method. These attributes make CEMS the most appropriate method for the largest equipment in the RECLAIM universe, major sources, which are relatively few in number but represent a majority of the total emissions from all equipment.

Alternatives to CEMS, namely Alternative Continuous Emission Monitoring Systems (ACEMS), are allowed under the RECLAIM regulation. These are devices that do not directly monitor NOx or SOx mass emissions, instead, they correlate multiple process parameters to arrive at mass emissions. The requirements for ACEMS are that they must be determined by the AQMD to be equivalent to CEMS in relative accuracy, reliability, reproducibility, and timeliness.

### *Compliance Status*

By the end of Calendar Year 1999, almost all facilities that were required to have CEMS had certified or provisionally approved their CEMS. The uncertified CEMS are for sources that recently became subject to major source reporting requirements or sources that modified their CEMS. It is expected that there will be a few new major sources each year. Therefore, there will continue to be a small number of CEMS in the certification process at any time. However, there are no longer any CEMS that have been in the process for a significant length of time and that are experiencing delays due to unusual circumstances.

### *Standing Working Group on RECLAIM CEMS Technical Issues (SWG)*

CEMS technical issues, which delayed certification of many CEMS, arose over the course of RECLAIM implementation. To address these issues and further assist facilities in complying with major source monitoring requirements, a Standing Working Group (SWG) on RECLAIM CEMS Technical Issues was formed to provide a forum in which facility representatives, consultants and AQMD staff could discuss and work out technically sound and reasonable solutions. The SWG meets quarterly to discuss progress and also bring up new

issues. For Compliance Year 2001, no new issues have been brought up for discussion by the SWG.

### *Semiannual and Annual Assessments of CEMS*

RECLAIM facilities have been conducting the Relatively Accuracy Test Audit (RATA) of certified CEMS—using private sector testing laboratories approved under the AQMD Laboratory Approval Program (LAP)—at their prescribed intervals, either semiannually or annually depending on the most recent relative accuracy value (the sum of the average differences and the confidence coefficient). The interval is annual only when all relative accuracies are 7.5 percent or less.

To verify the quality of CEMS, this audit report compares the CEMS data to reference method data taken simultaneously by a LAP-approved source testing contractor. The relative accuracy performance requirements for the RATAs are ±20 percent for pollutant concentration, ±15 percent for stack flow rate, and ±20 percent for pollutant mass emission rate (the product of concentration and stack flow rate). The RATAs also determine whether CEMS data must be adjusted for low readings compared to the reference method (bias adjustment factor), and by how much. The RATA presents two pieces of data, the CEMS bias (how much it differs from the reference method on the average) and the CEMS confidence coefficient (how variable that bias or average difference is).

Table 5-3 summarizes passing rates for RATAs of certified CEMS, for NOx and SOx concentration, total sulfur in fuel gas concentrations, stack flow rate (in-stack monitors and F-factor based calculation), and NOx and SOx mass emissions through the 2001 calendar year.

**Table 5-3**
**Passing Rates Based on Relative Accuracy Test Audits of Certified CEMS in 2001[1]**

| Concentration | | | | | | Stack Flow Rate | | | | Mass Emissions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOx | | $SO_2$ | | Total Sulfur | | In-Stack Monitor | | F-Factor Based Calc. | | NOx | | SOx[2] | |
| No. | % Pass | No. | % Pass | No. | % Pass | No. | % Pass | No. | % Pass | No. | % Pass | No. | % Pass |
| 303 | 100 | 55 | 100 | 12 | 100 | 45 | 100 | 379 | 100 | 303 | 100 | 42 | 100 |

1. All passing rates calculated from data submitted before January 1, 2002 and may exclude data from the 4th quarter of calendar year 2001. About 5 percent of test audits are still submitted in paper form and are not included in this table.
2. Does not include SOx emissions calculated from total sulfur analyzers.

Table 5-4 summarizes the 2002 calendar year passing rates for RATAs of certified CEMS, for NOx and SOx concentration, total sulfur in fuel gas concentrations, stack flow rate (in-stack monitors and F-factor based calculation), and NOx and SOx mass emissions.

**Table 5-4**
**Passing Rates Based on Relative Accuracy Test Audits of Certified CEMS in 2002[1]**

| Concentration | | | | | | Stack Flow Rate | | | | Mass Emissions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOx | | $SO_2$ | | Total Sulfur | | In-Stack Monitor | | F-Factor Based Calc. | | NOx | | SOx[2] | |
| No. | % Pass | No. | % Pass | No. | % Pass | No. | % Pass | No. | % Pass | No. | % Pass | No. | % Pass |
| 378 | 100 | 57 | 100 | 15 | 100 | 55 | 100 | 360 | 100 | 378 | 100 | 57 | 100 |

1. All passing rates calculated from data submitted in electronic form before January 1, 2003 and may exclude some data from the 4th quarter of calendar year 2002. About 5 percent of test audits are still submitted in paper form and are not included in this table.
2. Does not include SOx emissions calculated from total sulfur analyzers.

As indicated in Tables 5-3 and 5-4, the passing rates for NOx/$SO_2$ concentration, stack flow rate, and mass emissions were high. There have been significant improvements with respect to the availability of reliable calibration gas, the reliability of the reference method, and an understanding of the factors that influence the ability to obtain valid total sulfur analyzer data. For this technical issue, the SWG process worked well in evaluating the problems and recommending the appropriate solutions to address them.

### *Electronic Data Reporting of RATA Results*

Facilities operating CEMS under RECLAIM are required to submit RATA results. Traditionally, these results are presented in formal source test reports. AQMD with help of the SWG, set up an electronic reporting system, known as Electronic Data Reporting (EDR), to allow RATA results to be submitted on diskettes or by electronic mail using a standardized format. This system minimizes the amount of material the facility has to submit to the AQMD and also facilitates the RATA review process. With this added option, many facilities have employed the EDR system to report RATA results that, in turn, has helped the AQMD in expediting the review process.

## Emissions Reporting

## *Requirements*

RECLAIM is designed to take advantage of electronic reporting technology to streamline reporting requirements for both facilities and AQMD, and to help automate tracking compliance. Under RECLAIM, facilities report their emissions electronically on a per device basis to the AQMD's Central Station computer as follows:

- Major sources must use a Remote Terminal Unit (RTU) to telecommunicate rule compliance data to the AQMD Central Station. The RTU collects data, performs calculations, generates the appropriate data files, and transmits the data to the Central Station.
- Rule compliance data for large sources and process units may be transmitted via RTU. Alternatively, RECLAIM facilities may compile the data manually for large sources and process units and transmit it to the Central Station via modem. The data may be transmitted directly from the facility or through a third party.

### *Compliance Status*

The main concern for emission reporting is the timely submittal of daily reports from major sources. If daily reports are not submitted within the specified deadlines, RECLAIM rules may require that emissions from CEMS be ignored and the emissions be calculated using MDP. Daily emission reports are submitted by the RTU of the CEMS to the AQMD Central Station via telephone lines. Often communication errors between the two points are not readily detectable by the facility operators. Undetected errors will cause the facility operators to believe that the daily reports were submitted when they were not received by the AQMD. In order to provide operators a means to confirm the receipt of the reports, the AQMD set up an internet based application (known as Web Access to Electronic Reporting System (WATERS)) to view the electronic reports that were submitted to and received by the Central Station. This system helps to reduce the instances where MDP had to be used for late or missing daily reports in that the operators can re-submit the daily reports if there was communication errors.

## Protocol Review

Even though it is only required for the first three compliance years of the RECLAIM program, staff continues to review the effectiveness of enforcement and MRR protocols. Based on such review, appropriate revisions to the protocols may be needed to achieve improved measurement and enforcement of RECLAIM emission reductions while minimizing administrative cost to the District and RECLAIM participants.

Since the program was adopted, staff has produced rule interpretations and implementation guidance documents to clarify and resolve specific concerns about the protocols raised by RECLAIM participants. In situations where staff could not make interpretations to existing rule requirements to adequately address the issues at hand, the protocols or rules have been amended. No RECLAIM rule was amended since the last annual report was produced.

AQMD will continue to work closely with RECLAIM participants to resolve their issues and concerns in the most timely and appropriate manner.

# CHAPTER 6
# JOB IMPACTS

## Summary

*Job impacts resulting from the RECLAIM program during Compliance Year 2001 continue to be negligible when compared to the overall employment in the Basin. Six RECLAIM facilities attributed four job gains due to RECLAIM. Ten facilities claimed the RECLAIM program caused a total of 142 job losses. Furthermore, 12 RECLAIM facilities shut down or went out of business during Compliance Year 2001. None of facilities attributed their ceasing operations in part to RECLAIM.*

## Background

AQMD staff has assessed RECLAIM's impacts on jobs in the regional economy each year of the program. The assessment for Compliance Year 2001 was performed by examining job data submitted by RECLAIM facilities as part of their Compliance Year 2001 Annual Permit Emissions Program (APEP) reports.

The Compliance Year 2001 APEP reports include the number of manufacturing, non-manufacturing, and sale of products jobs at each facility at the beginning of the compliance year. In addition to the numbers of jobs at the beginning of the compliance year, the APEP asks for the number of job increases and decreases (as opposed to the net change), which occurred during the compliance year, the extent to which any increase or decrease in the number of jobs was attributable to the RECLAIM program, and a brief explanation of the job increases or decreases attributed to RECLAIM.

## Job Impacts

During Compliance Year 2001, a total of 105 facilities reported 6,487 overall job gains while a total of 152 facilities reported 14,809 overall job losses, which resulted in 8,322 net job losses for RECLAIM facilities in the Basin. This net job loss constituted about seven percent of the overall RECLAIM facility employment (117,957 jobs). The information gathered from Compliance Year 2001 APEP forms regarding overall employment and RECLAIM job impacts are tabulated and summarized in Table 6-1.

Table 6-1 also shows that during Compliance Year 2001, 4,586 "Manufacturing" jobs, 28 "Sales of Products" jobs, 3,708 "Non-Manufacturing" jobs were lost (net). Furthermore, 12 RECLAIM facilities shut down or went out of business during Compliance Year 2001. None of the facilities that shut down attributed their ceasing operations in part to RECLAIM.

**Table 6-1**
**Job Impacts at RECLAIM Facilities During the 2001 Compliance Year**

| Description | Manufacture | Sales of Products | Non-Manufacture | Total |
|---|---|---|---|---|
| Initial Jobs | 62,650 | 1,324 | 62,305 | 126,279 |
| Overall Job Gain | 2,977 | 134 | 3,376 | 6,487 |
| Overall Job Loss | 7,563 | 162 | 7,084 | 14,809 |
| Final Jobs | 58,064 | 1,296 | 58,597 | 117,957 |
| Net Job Change | -4,586 | -28 | -3,708 | -8,322 |
| Percent Job Change | -7% | -2% | -6% | -6.59% |
| Facilities Reporting Job Gains | 73 | 22 | 60 | 105 |
| Facilities Reporting Job Losses | 127 | 27 | 98 | 152 |

To properly assess RECLAIM's impact on jobs in the regional economy, AQMD staff has identified and reviewed the APEP forms from those facilities that reported job losses specifically due to the RECLAIM program. A total of 16 facilities indicated in their APEP forms that they experienced job gains and/or job losses due to RECLAIM. Six facilities attributed four job gains due to RECLAIM while 10 facilities attributed a total of 142 jobs lost to RECLAIM. Out of the number of jobs lost, the majority of jobs (78) lost was reported by one company that operates two facilities. Both of the facilities have high energy demand. The company also reported high fuel cost as cause for the decrease in jobs. According to statements to an AQMD inspector, the company lost a major contract to supply their products to an automobile manufacturer. The detailed information for facilities that reported job gains and losses in APEP forms for Compliance Year 2001 are summarized in Appendix E.

The job gains/losses attributed to RECLAIM are summarized in Table 6-2. As indicated in Table 6-2, the RECLAIM-related job gains and losses are negligible when compared to the total number of jobs at RECLAIM facilities as listed in Table 6-1.

**Table 6-2**
**Job Gains/Losses Attributed Solely to RECLAIM During the 2001 Compliance Year**

| Description | No. of Jobs | No. of Facilities |
|---|---|---|
| Gain Attributed to RECLAIM | 4 | 6[1] |
| Loss Attributed to RECLAIM | 142 | 10 |

It should also be noted that the analysis of job impacts is confined to job gains and losses that occurred at RECLAIM facilities. It does not address jobs created or eliminated in the economy outside of RECLAIM facilities as a result of the RECLAIM program.

[1] Of these six facilities, two did not provide the actual numbers of jobs gain due to RECLAIM.

# CHAPTER 7
# AIR QUALITY AND PUBLIC HEALTH IMPACTS

## Summary

*The emissions reported by RECLAIM facilities from Compliance Years 1989 through 2001 are found to be in an overall downward trend. Quarterly NOx emissions show a decreasing trend throughout Calendar Year 2001. This downward trend is due almost entirely to the power producing facilities. Quarterly SOx emissions also exhibited a similar, though less steep, downward trend. Furthermore, analysis of the geographical distribution of emissions during the first eight years of the program on a quarterly basis does not show any distinct shift in the geographical distribution of emissions.*

*The California Clean Air Act requires a 50 percent reduction in population exposure to ozone by December 31, 2000. Analysis of per capita exposure (the length of time each person is exposed) to ozone in 1998 and 2000 shows that the Basin achieved the December 2000 target for ozone well before the deadline. In fact, Los Angeles County, Orange County, and the South Coast Air Basin overall achieved attainment with the December 2000 target prior to 1994 and Riverside and San Bernardino Counties achieved attainment in 1996.*

*Air toxic health risk is primarily caused by emissions of VOCs and metals, rather than NOx or SOx emissions. Additionally, RECLAIM facilities are subject to the same air toxic regulations as other sources in the Basin. Therefore, it can be concluded that there is no toxic impact due to the implementation of the RECLAIM program beyond what would have occurred pursuant to the rules and control measures RECLAIM subsumed.*

## Background

RECLAIM is designed to achieve the same, or a higher level of, benefits in terms of air quality and public health as would have been achieved from implementation of the control measures and command-and-control rules that RECLAIM subsumed. Therefore, as a part of each annual program audit, AQMD evaluates per capita exposure to air pollution, toxic risk reductions, emission trends, and seasonal fluctuations in emissions. AQMD also maintains quarterly emissions maps depicting the geographic distribution of RECLAIM emissions. This chapter addresses:

- Emission trends for RECLAIM facilities;
- Seasonal fluctuations in emissions;
- Geographic patterns of emissions;
- Per capita exposure to air pollution; and
- Toxics impacts.

## Emission Trends for RECLAIM Sources

Concerns were expressed during program development that RECLAIM might cause sources to increase their aggregate emissions during the early years of the program due to perceived over-allocation of emissions. The analysis of emissions from RECLAIM sources indicates that this did not occur. Figures 7-1 and 7-2 show NOx and SOx emissions for RECLAIM sources for Compliance Years 1989 through 2001.

**Figure 7-1**
**NOx Emission Trend for RECLAIM Sources**

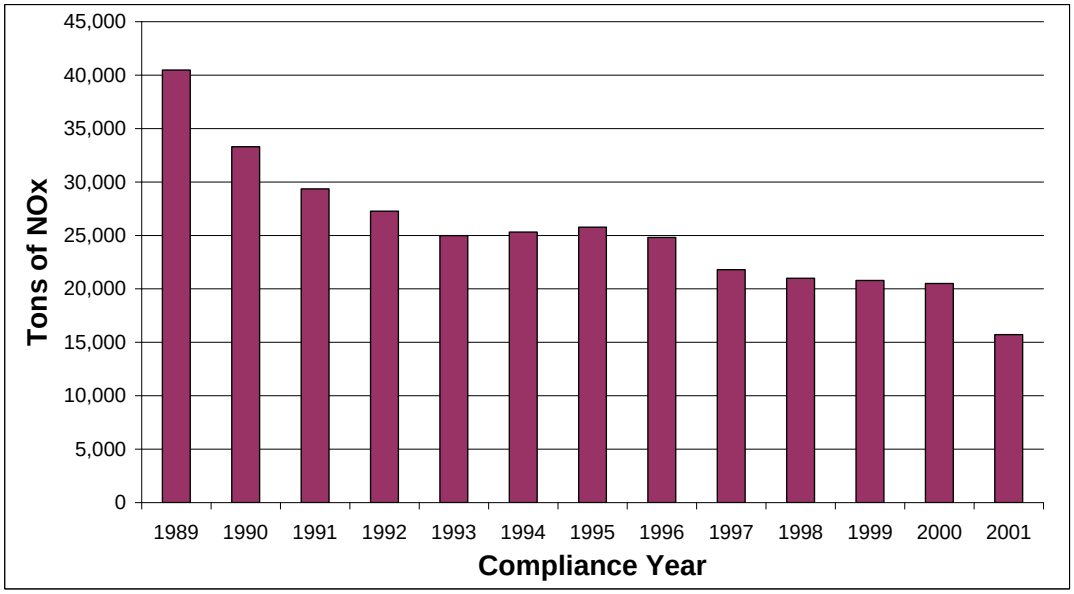
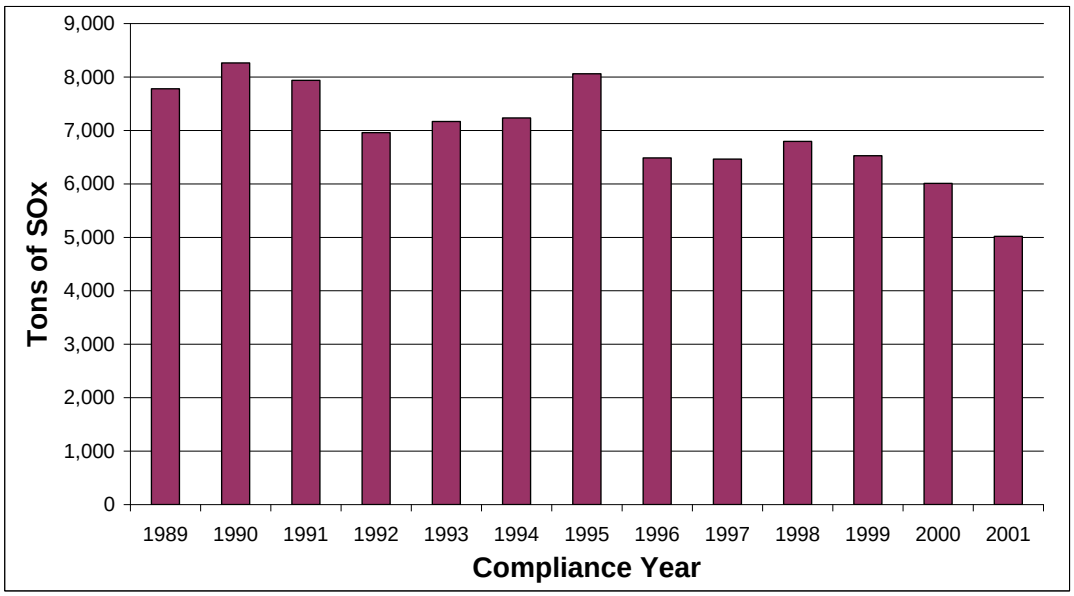



**Figure 7-2**
**SOx Emission Trend for RECLAIM Sources**



As indicated in Figures 7-1 and 7-2, there is an overall downward trend in both NOx and SOx emissions. When comparing SOx emissions for Compliance Years 1997 through 2001, there was a slight increase in SOx emissions in Compliance Year 1998, with Compliance Year 1999 SOx emissions comparable to Compliance Year 1997. Compliance Year 2001 SOx emissions are the lowest of the five years. The decrease of SOx emissions continued from Compliance Years 1999 to 2001. Overall, the figures clearly show that RECLAIM facilities did not increase their aggregate emissions during the earlier years of the program, dispelling the concerns about higher emissions in the early years.

## Seasonal Fluctuation in Emissions for RECLAIM Sources

During program development, another concern was that RECLAIM might cause facilities to shift emissions from the winter season into the summer ozone season, thus exacerbating air quality. To address this concern, AQMD staff analyzed quarterly emissions during calendar year 2001 to assess if there had been such a shift in emissions. Where available, audited quarterly emissions data was used for this analysis. Where audited emissions were unavailable, emissions as reported by facilities (either under the Annual Permitted Emissions Program or the Quarterly Certification of Emissions Report) were used.

**Figure 7-3**
**Calendar Year 2001 NOx Quarterly Emissions**

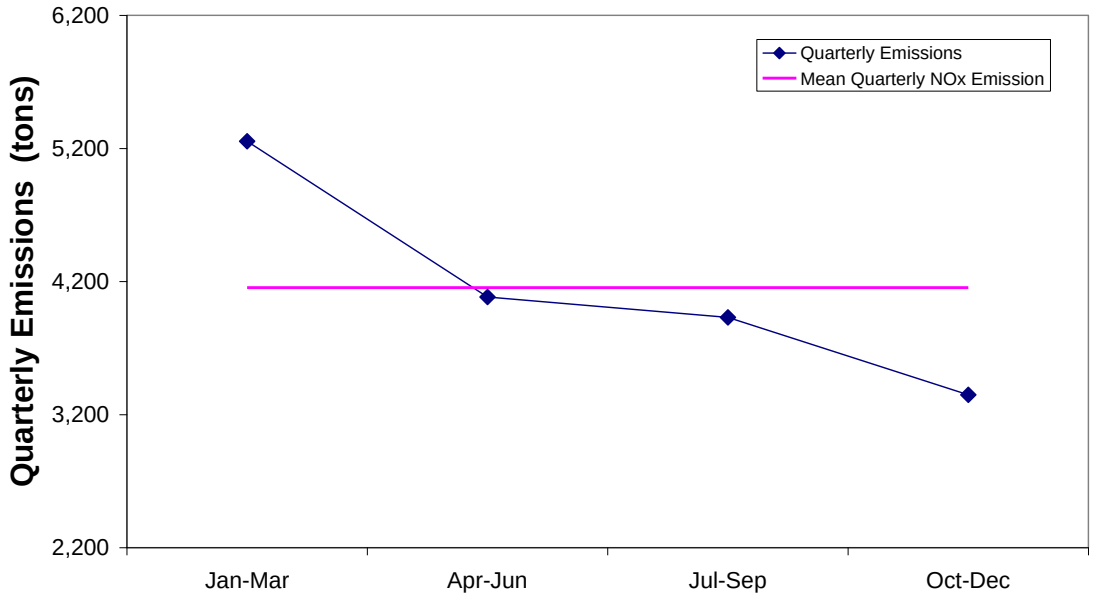



Figure 7-3 shows the mean quarterly emission, which is the average of the four quarterly emissions, versus the actual quarterly emissions. Quarterly emissions vary about the mean quarterly emission with maximum percent differences in the first quarter (January through March) of 27 percent above the mean and 19 percent below the mean in the fourth quarter (October through December). Aggregate quarterly emissions were decreasing throughout the year. To show the cause of this downward trend, Figure 7-4 was plotted to separate power

producing facility emissions and from the rest of RECLAIM facilities. This figure shows that the downward trend is mostly attributed to the reduction in emissions from power producing facilities because the slope of decreasing emissions from power producing facilities matches similarly to the slope of decreasing emissions from all facilities during the calendar year. In addition, emissions from non-power producing facilities were essentially flat throughout the Calendar Year 2001.

**Figure 7-4**
**Comparison of Calendar Year 2001 NOx Quarterly Emissions from Power Producing Facilities and Non-power Producing Facilities**

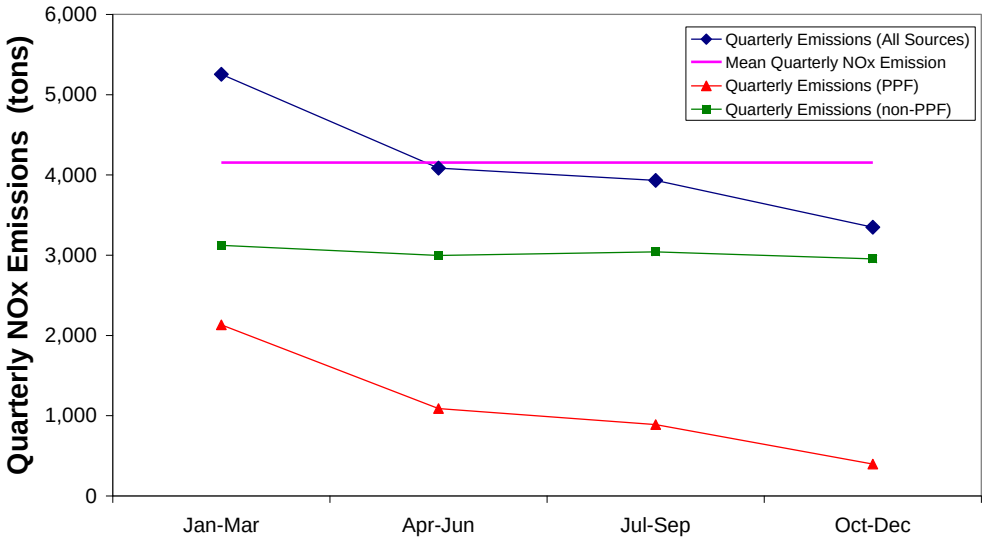
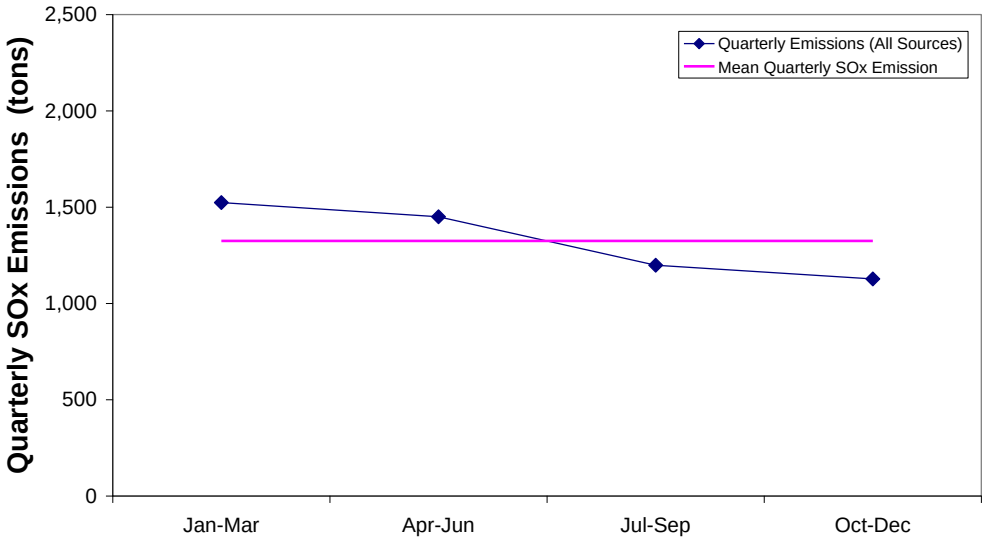



Figure 7-5 shows quarterly SOx emissions during Calendar Year 2001. Similar to Figure 7-3, SOx emissions also exhibited a downward trend even though the slope is less steep. The peak SOx emissions and the lowest SOx emissions both deviated from the mean by 15 percent.

**Figure 7-3**
**Calendar Year 2001 SOx Quarterly Emissions**




## Geographic Distribution of Emissions

As part of this program audit, AQMD staff examined the quarterly emissions maps, which were developed pursuant to Rule 2015(b)(2), for any notable changes in the geographic distribution of emissions. RECLAIM facilities have the flexibility to increase emissions as much as they need to, as long as they can provide RTCs to offset the emissions exceeding their allocations; however, there are NSR implications if they increase above their Compliance Year 1994 Allocation including non-tradable credits. Because of this flexibility and the ability of RECLAIM facilities to purchase RTCs from other facilities, some people were concerned that RECLAIM could alter the geographic distribution of emissions in the Basin and adversely affect air quality in certain areas.

Quarterly emissions for both NOx and SOx were mapped for Compliance Year 2001 (all four quarters of 2001 and the first two quarters of 2002). These maps are included in Appendices F and G. The quarterly emission maps do not show any distinct shift in the geographic pattern of emissions. AQMD will continue to review additional quarterly maps and assess the geographic patterns of emissions as the information becomes available.

## Per Capita Exposure to Pollution

The predicted effects of RECLAIM on air quality and public health were thoroughly analyzed through modeling during program development. The results were compared to projected impacts from the continuation of the traditional command-and-control regulations and implementation of control measures in the 1991 AQMP. One of the criteria examined in the analysis was per capita population exposure.

Per capita population exposure reflects the length of time each person is exposed to unhealthful air quality. The modeling performed in the analysis projected that the reductions in per capita exposure under RECLAIM in Calendar

Year 1994 would be nearly identical to the reductions projected for implementation of the control measures in the 1991 AQMP, and the reductions resulting from RECLAIM would be greater in Calendar Years 1997 and 2000.

Table 7-1 compares the projected Calendar Years 1994 and 1997 per capita exposures to ozone based upon continuation of the command-and-control regulatory approach and the implementation of the control measures in the 1991 AQMP with the actual per capita exposure in the Basin for Calendar Years 1994 and 1997. Table 7-2 summarizes Calendar Years 1998 through 2002 ozone data in terms of the number of days that exceeded the state and federal ambient ozone standards and the Basin's maximum concentration during each of the five calendar years.

**Table 7-1**
**Comparison of Per Capita Exposures Over State Standard for Ozone**
**1991 AQMP Projection Vs Actual Exposures**

| Calendar Year | Projected Per Capita Exposure based on 1991 AQMP (hrs) | Actual Per Capita Exposure (hrs) |
|---|---|---|
| 1994 | 38.6 | 37.6 |
| 1997 | 32.0 | 5.9 |

**Table 7-2**
**Summary of Ozone Data**

| | Calendar Year | | | | |
|---|---|---|---|---|---|
| | 1998 | 1999 | 2000 | 2001 | 2002 |
| Days exceeding state standard | 113 | 120 | 125 | 121 | 118 |
| Days exceeding federal standard | 62 | 42 | 40 | 36 | 49 |
| Basin Maximum (pphm) | 24 | 17 | 18.5 | 19.1 | 16.9 |

Table 7-3 compares the actual per capita exposures to the exposure milestones as specified in the California Clean Air Act (CCAA) for Calendar Years 1997 and 2000. The CCAA establishes specific milestones for achieving reductions in overall population exposure to severe non-attainment pollutants in the Basin. These milestones include a 25 percent reduction by December 31, 1994, a 40 percent reduction by December 31, 1997, and a 50 percent reduction by December 31, 2000, relative to a Calendar Years' 1986-88 baseline. The data presented in Table 7-3 for actual per capita exposure in both Calendar Years 1997 and 2000 for the four counties, and the Basin overall, have shown substantial progress toward continuous attainment of the state standard. As indicated in Table 7-3, actual reductions in per capita exposure in Calendar Year 1997 have gone well beyond the 50 percent reduction target scheduled for Calendar Year 2000.

**Table 7-3**
**Per Capita Exposure to Ozone above the State Standard of 0.09 ppm (hours)**

| Calendar Year | Basin | Los Angeles | Orange | Riverside | San Bernardino |
|---|---|---|---|---|---|
| 1986-88 baseline[1] | 80.5 | 75.8 | 27.2 | 94.1 | 192.6 |
| 1994 actual | 37.6 | 26.5 | 9 | 71.1 | 124.9 |
| 1995 actual | 27.7 | 20 | 5.7 | 48.8 | 91.9 |
| 1996 actual | 20.3 | 13.2 | 4 | 42.8 | 70 |
| 1997 actual | 5.9 | 3 | 0.6 | 13.9 | 24.5 |
| 1998 actual | 12.1 | 7.9 | 3.1 | 25.2 | 40.2 |
| 2000 actual | 3.8 | 2.6 | 0.7 | 8.5 | 11.4 |
| 2001 actual | 1.73 | 0.88 | 0.15 | 6 | 5.68 |
| 2002 actual | 3.87 | 2.16 | 0.13 | 11.12 | 12.59 |
| 1997 target[2] | 48.3 | 45.5 | 16.3 | 56.5 | 115.6 |
| 2000 target[3] | 40.2 | 37.9 | 13.6 | 47 | 96.3 |

1. Average over three years, 1986 through 1988
2. 60% of the 1986-88 baseline exposures
3. 50% of the 1986-88 baseline exposures

The three tables (Tables 7-1, 7-2, and 7-3) in combination show that actual per capita exposure during all the years mentioned continues to be well under the projected exposure in the 1991 AQMP. It should also be noted that air quality in the Basin is a complex function of meteorological conditions and an array of different emission sources, including mobile, area, RECLAIM stationary sources, and non-RECLAIM stationary sources. Therefore, the reduction of per capita exposure beyond the projected level is not necessarily attributable to implementation of the RECLAIM program. It is possible that actual per capita exposure might have been as low, if not lower, with continuation of command-and-control regulations.

## Toxic Impacts

Based on a comprehensive toxic impact analysis performed during program development, it was concluded that RECLAIM would not result in any significant impacts on air toxic emissions. Nevertheless, to ensure that the implementation of RECLAIM does not result in adverse toxic impacts, each annual program audit is required to assess any increase in the public health exposure to toxics as a result of RECLAIM.

RECLAIM sources are subject to the same air toxic regulations (i.e., AQMD Regulation XIV, State AB 2588, Federal NESHAP, etc.) as other sources in the Basin. These regulations further ensure that RECLAIM does not result in adverse air toxic health impacts. In addition, air toxic health risk is primarily caused by emissions of VOC and certain metals, rather than NOx or SOx emissions. The majority of VOC sources at RECLAIM facilities are subject to source-specific command-and-control rules, in addition to the applicable toxics requirements described above. Similarly, sources of toxic metals emissions are also subject to the above-identified regulations pertaining to toxic emissions. As a result, implementation of NOx and SOx RECLAIM is not expected to significantly impact air toxic emissions. That is, the substitution of NOx and SOx

RECLAIM for the command-and-control rules and the measures RECLAIM subsumes are not relevant to toxic emissions; the same toxics requirements and VOC rules and control measures apply in either case. However, AQMD will continue to monitor and assess toxic risk reduction as part of future annual audits.

# APPENDIX A
# RECLAIM UNIVERSE OF SOURCES

The RECLAIM universe of sources as of the end of the 2001 compliance year is provided below.

| Facility ID | Cycle | Facility Name | Market |
|---|---|---|---|
| 16395 | 2 | AAA GLASS CORP | NOx |
| 73635 | 1 | ABLESTIK LABORATORIES | NOx |
| 104012 | 1 | AERA ENERGY LLC | NOx |
| 104013 | 2 | AERA ENERGY LLC | NOx |
| 104015 | 2 | AERA ENERGY LLC | NOx |
| 104017 | 1 | AERA ENERGY LLC | NOx |
| 23752 | 2 | AEROCRAFT HEAT TREATING CO INC | NOx |
| 115394 | 1 | AES ALAMITOS, LLC | NOx |
| 115389 | 2 | AES HUNTINGTON BEACH, LLC | NOx/SOx |
| 42676 | 2 | AES PLACERITA INC | NOx |
| 115536 | 1 | AES REDONDO BEACH, LLC | NOx |
| 3417 | 1 | AIR PROD & CHEM INC | NOx |
| 101656 | 2 | AIR PRODUCTS HYCAL CO L.P.,AIR PROD&CHEM | NOx |
| 5998 | 1 | ALL AMERICAN ASPHALT | NOx |
| 114264 | 1 | ALL AMERICAN ASPHALT | NOx |
| 3704 | 2 | ALL AMERICAN ASPHALT, UNIT NO.01 | NOx |
| 127380 | 1 | ALLIANCE COLTON, LLC | NOx |
| 127381 | 1 | ALLIANCE COLTON, LLC | NOx |
| 21290 | 1 | ALPHA BETA CO./RALPH GROCERY CO. | NOx |
| 17840 | 2 | ALPHA THERAPEUTIC CORP | NOx |
| 800196 | 2 | AMERICAN AIRLINES INC (EIS USE) | NOx |
| 45527 | 2 | AMERICAN RACING EQUIPMENT INC | NOx |
| 60540 | 1 | AMERICAN RACING EQUIPMENT INC, PLNT #2 | NOx |
| 10141 | 2 | ANGELICA TEXTILE SERVICES | NOx |
| 21598 | 2 | ANGELICA TEXTILE SERVICES | NOx |
| 74424 | 2 | ANGELICA TEXTILE SERVICES | NOx |
| 16642 | 1 | ANHEUSER-BUSCH INC., (LA BREWERY) | NOx/SOx |
| 117140 | 2 | AOC, LLC | NOx |
| 47232 | 1 | ARCO CQC KILN | NOx/SOx |
| 124808 | 2 | ARCO POLYPROPYLENE LLC | NOx/SOx |
| 11640 | 1 | ARLON ADHESIVE SYSTEM/DECORATIVE FILMS | NOx |
| 12155 | 1 | ARMSTRONG WORLD INDUSTRIES INC | NOx |
| 100130 | 2 | ARTESIA SAWDUST PRODUCTS, INC. | NOx |
| 16737 | 2 | ATKINSON BRICK CO | NOx |
| 10094 | 2 | ATLAS CARPET MILLS INC | NOx |
| 117290 | 2 | B BRAUN MEDICAL, INC | NOx |
| 800016 | 2 | BAKER COMMODITIES INC | NOx |
| 117785 | 1 | BALL METAL BEVERAGE CONTAINER CORP. | NOx |
| 800205 | 2 | BANK OF AMERICA NT & SA, BREA CENTER | NOx |
| 40034 | 1 | BENTLEY MILLS INC | NOx |

| Facility ID | Cycle | Facility Name | Market |
|---|---|---|---|
| 119907 | 1 | BERRY PETROLEUM COMPANY | NOx |
| 109879 | 1 | BESTFOODS BAKING CO | NOx |
| 113240 | 2 | BLACK HILLS ONTARIO LLC | NOx |
| 19390 | 1 | BLUE DIAMOND MATERIALS, SUN VALLEY PLANT | NOx |
| 115241 | 1 | BOEING SATELLITE SYSTEMS INC | NOx |
| 800067 | 1 | BOEING SATELLITE SYSTEMS INC | NOx |
| 800343 | 2 | BOEING SATELLITE SYSTEMS, INC | NOx |
| 131003 | 2 | BP WEST COAST PRODUCTS LLC | NOx/SOx |
| 10340 | 1 | BREA CANYON OIL CO INC | NOx |
| 6714 | 2 | BREA CITY | NOx |
| 98159 | 2 | BREITBURN ENERGY CORP | NOx |
| 25638 | 2 | BURBANK CITY, PUB SERV DEPT | NOx |
| 800344 | 1 | CALIFORNIA AIR NATIONAL GUARD, MARCH AFB | NOx |
| 22607 | 2 | CALIFORNIA DAIRIES, INC | NOx |
| 800181 | 2 | CALIFORNIA PORTLAND CEMENT CO (NSR USE) | NOx/SOx |
| 46268 | 1 | CALIFORNIA STEEL INDUSTRIES INC | NOx |
| 107653 | 2 | CALMAT CO | NOx |
| 107654 | 2 | CALMAT CO | NOx |
| 107655 | 2 | CALMAT CO | NOx |
| 107656 | 2 | CALMAT CO | NOx |
| 119104 | 1 | CALMAT CO | NOx/SOx |
| 8791 | 2 | CAL-PACIFIC DYEING & FINISHING CORP | NOx |
| 9141 | 1 | CANNERS STEAM CO INC | NOx/SOx |
| 94930 | 1 | CARGILL INC | NOx |
| 22911 | 2 | CARLTON FORGE WORKS | NOx |
| 118406 | 1 | CARSON COGENERATION COMPANY | NOx |
| 25016 | 2 | CASTAIC CLAY MFG CO., INC | NOx |
| 800373 | 1 | CENCO REFINING COMPANY | NOx/SOx |
| 40764 | 1 | CENTURY LAMINATORS INC | NOx |
| 800030 | 2 | CHEVRON PRODUCTS CO. | NOx/SOx |
| 95212 | 1 | CHROMA SYSTEMS PARTNERS | NOx |
| 56940 | 1 | CITY OF ANAHEIM/COMB TURBINE GEN STATION | NOx |
| 16978 | 2 | CLOUGHERTY PACKING CO, FARMER JOHN MEATS | NOx |
| 62281 | 2 | COASTCAST CORP | NOx |
| 110982 | 1 | COMMONWEALTH ALUMINUM CONCAST | NOx |
| 800210 | 2 | CONEXANT SYSTEMS INC | NOx |
| 122822 | 2 | CONSOLIDATED FILM INDUSTRIES, LLC | NOx |
| 38440 | 2 | COOPER & BRAIN - BREA | NOx |
| 68042 | 2 | CORONA ENERGY PARTNERS, LTD | NOx |
| 117572 | 1 | CRIMSON RESOURCE MANAGEMENT CORP | NOx |
| 117581 | 1 | CRIMSON RESOURCE MANAGEMENT CORP | NOx |
| 65384 | 1 | CRITERION CATALYST CO L.P. | NOx |
| 18648 | 1 | CROWN CITY PLATING CO. | NOx |
| 3950 | 1 | CROWN CORK & SEAL CO INC | NOx |
| 15982 | 2 | CUSTOM ALLOY SALES INC | NOx |
| 50098 | 1 | D&D DISPOSAL INC,WEST COAST RENDERING CO | NOx |
| 63180 | 1 | DARLING INTERNATIONAL INC | NOx |
| 3721 | 2 | DART CONTAINER CORP OF CALIFORNIA | NOx |
| 7411 | 2 | DAVIS WIRE CORP | NOx |
| 47771 | 1 | DELEO CLAY TILE CO INC | NOx |
| 800037 | 2 | DEMENNO/KERDOON | NOx |

| Facility ID | Cycle | Facility Name | Market |
|---|---|---|---|
| 125579 | 1 | DIRECTV | NOx |
| 800189 | 1 | DISNEYLAND RESORT | NOx |
| 38872 | 1 | DOANE PRODUCTS CO | NOx |
| 800038 | 2 | DOUGLAS PRODUCTS DIVISION | NOx |
| 129729 | 2 | DRS TECHNOLOGIES INC | NOx |
| 121746 | 2 | DUKESOLUTIONS HUNTINGTON BEACH, LLC | NOx |
| 104571 | 2 | E & J TEXTILE GROUP, INC | NOx |
| 800264 | 2 | EDGINGTON OIL COMPANY | NOx/SOx |
| 115663 | 1 | EL SEGUNDO POWER, LLC | NOx |
| 10873 | 1 | ELSINORE READY-MIX CO INC | NOx |
| 117247 | 1 | EQUILON ENTERPRISES, LLC | NOx/SOx |
| 800370 | 1 | EQUILON ENTERPRISES, LLC | NOx/SOx |
| 800372 | 2 | EQUILON ENTERPRISES, LLC | NOx/SOx |
| 122295 | 2 | FALCON FOAM, A DIV OF ATLAS ROOFING CORP | NOx |
| 22047 | 1 | FANSTEEL/CALIFORNIA DROP FORGE | NOx |
| 11716 | 1 | FONTANA PAPER MILLS INC | NOx |
| 2418 | 2 | FRUIT GROWERS SUPPLY CO | NOx |
| 5814 | 1 | GAINEY CERAMICS INC | NOx |
| 11016 | 2 | GEORGIA-PACIFIC CORP | NOx |
| 44551 | 1 | GNB TECHNOLOGIES INC | NOx/SOx |
| 800184 | 2 | GOLDEN WEST REF CO | NOx/SOx |
| 10055 | 2 | G-P GYPSUM CORP | NOx |
| 67945 | 2 | GREAT WESTERN MALTING CO., INC. | NOx/SOx |
| 40196 | 2 | GUARDIAN INDUSTRIES CORP. | NOx/SOx |
| 861 | 1 | H J HEINZ, L P | NOx |
| 109208 | 2 | HANYOUNG AMERICA, INC.. | NOx |
| 106325 | 2 | HARBOR COGENERATION CO | NOx |
| 45953 | 1 | HAYES  LEMMERZ INTERNATIONAL CAL INC | NOx |
| 123774 | 1 | HERAEUS METAL PROCESSING, INC. | NOx |
| 15164 | 1 | HIGGINS BRICK CO | NOx |
| 113160 | 2 | HILTON COSTA MESA | NOx |
| 800066 | 1 | HITCO CARBON COMPOSITES INC | NOx |
| 2912 | 2 | HOLLIDAY ROCK CO INC | NOx |
| 800003 | 2 | HONEYWELL INTERNATIONAL INC | NOx |
| 124619 | 1 | IMPRESS USA INC | NOx |
| 123087 | 2 | INDALEX WEST INC | NOx |
| 800240 | 2 | INLAND PAPERBOARD AND PACKAGING INC | NOx |
| 5830 | 1 | INTERMETRO INDUSTRIES CORP | NOx |
| 23589 | 2 | INTERNATIONAL EXTRUSION CORP | NOx |
| 106810 | 2 | INTERSTATE BRANDS CORP | NOx |
| 119134 | 2 | ITW CALIFORNIA INDS PRODS, LLC/STAMPINGS | NOx |
| 22373 | 1 | JEFFERSON SMURFIT CORPORATION (U.S.) | NOx |
| 16338 | 1 | KAISER ALUMINUM & CHEM CORP | NOx |
| 18865 | 2 | KAL KAN FOODS INC | NOx |
| 11142 | 2 | KEYSOR-CENTURY CORP | NOx |
| 21887 | 2 | KIMBERLY-CLARK WORLDWIDE INC.-FLTN MILL | NOx/SOx |
| 1744 | 2 | KIRKHILL RUBBER CO | NOx |
| 57329 | 2 | KWIKSET CORP | NOx |
| 800335 | 2 | LA CITY, DEPT OF AIRPORT | NOx |
| 800170 | 1 | LA CITY, DWP HARBOR GENERATING STATION | NOx |
| 800074 | 1 | LA CITY, DWP HAYNES GENERATING STATION | NOx |

| Facility ID | Cycle | Facility Name | Market |
|---|---|---|---|
| 800075 | 1 | LA CITY, DWP SCATTERGOOD GENERATING STA | NOx |
| 800193 | 2 | LA CITY, DWP VALLEY GENERATING STATION | NOx |
| 61962 | 1 | LA CITY, HARBOR DEPT | NOx |
| 550 | 1 | LA CO., INTERNAL SERVICE DEPT | NOx |
| 7931 | 1 | LA PAPER BOX & BOARD MILLS | NOx |
| 115277 | 1 | LAFAYETTE TEXTILE IND LLC | NOx |
| 12912 | 2 | LIBBEY GLASS INC | NOx/SOx |
| 57892 | 2 | LIFE-LIKE PRODUCTS INC. | NOx |
| 83102 | 2 | LIGHT METALS INC | NOx |
| 31046 | 2 | LISTON BRICK COMPANY OF CORONA | NOx |
| 115314 | 2 | LONG BEACH GENERATION LLC | NOx |
| 14229 | 2 | LORBER INDUSTRIES OF CALIFORNIA | NOx |
| 17623 | 2 | LOS ANGELES ATHLETIC CLUB | NOx |
| 58622 | 2 | LOS ANGELES COLD STORAGE CO | NOx |
| 125015 | 2 | LOS ANGELES TIMES COMMUNICATIONS LLC | NOx |
| 800080 | 2 | LUNDAY-THAGARD OIL CO | NOx |
| 14049 | 2 | MARUCHAN INC | NOx |
| 3029 | 2 | MATCHMASTER DYEING & FINISHING INC | NOx |
| 2825 | 1 | MCP FOODS INC | NOx |
| 101843 | 1 | MCWHORTER TECHNOLOGIES INC | NOx |
| 100844 | 2 | MEDALLION CALIFORNIA PROPERTIES CO | NOx |
| 115563 | 1 | METAL COATERS OF CALIFORNIA | NOx |
| 94872 | 2 | METAL CONTAINER CORP | NOx |
| 14855 | 1 | MILLER BREWING CO | NOx |
| 800088 | 2 | MINNESOTA MINING & MFG CO | NOx |
| 12372 | 1 | MISSION CLAY PRODUCTS | NOx |
| 115211 | 2 | MISSION DYE HOUSE LLC | NOx |
| 800089 | 1 | MOBIL OIL CORP (EIS USE) | NOx/SOx |
| 800094 | 1 | MOBIL OIL CORP, NEWHALL STA (EIS USE) | NOx |
| 17344 | 1 | MOBIL OIL CORP, WEST COAST PIPELINES DIV | NOx |
| 25058 | 2 | MOBIL OIL CORP, WEST COAST PIPELINES DIV | NOx |
| 121737 | 1 | MOUNTAINVIEW POWER COMPANY LLC | NOx |
| 16274 | 2 | NABISCO BRANDS INC | NOx |
| 11887 | 2 | NASA JET PROPULSION LAB | NOx |
| 12428 | 2 | NATIONAL GYPSUM CO | NOx |
| 40483 | 2 | NELCO PROD. INC | NOx |
| 16531 | 2 | NEVILLE CHEM CO | NOx |
| 84223 | 1 | NEWELLRUBBERMAID INC | NOx |
| 800167 | 2 | NORTHROP GRUMMAN CORP | NOx |
| 18294 | 1 | NORTHROP GRUMMAN CORP, AIRCRAFT DIV | NOx |
| 112853 | 2 | NP COGEN INC | NOx |
| 45471 | 2 | OGLEBAY NORTON INDUSTRIAL SANDS INC | NOx |
| 89248 | 2 | OLD COUNTRY MILLWORK INC | NOx |
| 47781 | 1 | OLS ENERGY-CHINO C/O GPU INT'L., INC. | NOx |
| 35302 | 2 | OWENS CORNING | NOx/SOx |
| 7427 | 1 | OWENS-BROCKWAY GLASS CONTAINER INC | NOx/SOx |
| 17953 | 1 | PACIFIC CLAY PRODUCTS INC | NOx |
| 45746 | 2 | PACIFIC COAST BLDG PRODS INC,PABCO PAPER | NOx/SOx |
| 59618 | 1 | PACIFIC CONTINENTAL TEXTILES, INC. | NOx |
| 60531 | 2 | PACIFIC FABRIC FINISHING | NOx |
| 2946 | 1 | PACIFIC FORGE INC | NOx |

| Facility ID | Cycle | Facility Name | Market |
|---|---|---|---|
| 800208 | 2 | PAPER PAK PROD. INC | NOx |
| 89429 | 2 | PARADISE TEXTILE CO | NOx |
| 800183 | 1 | PARAMOUNT PETR CORP (EIS USE) | NOx/SOx |
| 19989 | 2 | PARKER HANNIFIN AEROSPACE CORP | NOx |
| 800168 | 1 | PASADENA CITY, DWP (EIS USE) | NOx |
| 119920 | 1 | PECHINEY CAST PLATE INC | NOx |
| 115449 | 1 | PLAYA PHASE I COMMERCIAL LAND, LLC | NOx |
| 117151 | 2 | POMONA PAPER COMPANY | NOx |
| 117485 | 2 | PORT OF LONG BEACH | NOx |
| 7416 | 1 | PRAXAIR INC | NOx |
| 42630 | 1 | PRAXAIR INC | NOx |
| 75411 | 1 | PRECISION SPECIALTY METALS INC (PSM) | NOx |
| 136 | 2 | PRESS FORGE CO | NOx |
| 22808 | 2 | PRICE PFISTER INC | NOx |
| 102969 | 2 | QUEEN CARPET CORP, TUFTEX CARPET DIV | NOx |
| 8547 | 1 | QUEMETCO INC | NOx/SOx |
| 19167 | 2 | R J NOBLE COMPANY | NOx |
| 3585 | 2 | R. R. DONNELLEY & SONS CO, LA MFG DIV | NOx |
| 20604 | 2 | RALPHS GROCERY CO | NOx |
| 114997 | 1 | RAYTHEON SYSTEMS COMPANY | NOx |
| 115002 | 1 | RAYTHEON SYSTEMS COMPANY | NOx |
| 115041 | 1 | RAYTHEON SYSTEMS COMPANY | NOx |
| 115172 | 2 | RAYTHEON SYSTEMS COMPANY | NOx |
| 800371 | 2 | RAYTHEON SYSTEMS COMPANY - FULLERTON OPS | NOx |
| 346 | 1 | RECOT, INC. | NOx |
| 20543 | 1 | REDCO II | NOx |
| 15544 | 2 | REICHHOLD INC | NOx |
| 115315 | 1 | RELIANT ENERGY ETIWANDA, LLC. | NOx |
| 52517 | 1 | REXAM PLC, REXAM BEVERAGE CAN COMPANY | NOx |
| 114801 | 1 | RHODIA, INC. | NOx/SOx |
| 61722 | 2 | RICOH ELECTRONICS INC | NOx |
| 108113 | 1 | RIDGEWOOD/CALIFORNIA POWER PARTNERS,L.P. | NOx |
| 114138 | 2 | RIPON COGENERATION, INC. | NOx |
| 115666 | 2 | RIVERSIDE CANAL POWER COMPANY | NOx |
| 800182 | 1 | RIVERSIDE CEMENT CO (EIS USE) | NOx/SOx |
| 98812 | 2 | RMS FOUNDATION INC | NOx |
| 800113 | 2 | ROHR,INC | NOx |
| 18455 | 2 | ROYALTY CARPET MILLS INC | NOx |
| 93073 | 1 | SABA PETROLEUM INC | NOx |
| 106797 | 1 | SAINT-GOBAIN CONTAINERS LLC | NOx/SOx |
| 108701 | 1 | SAINT-GOBAIN CONTAINERS LLC | NOx/SOx |
| 4242 | 2 | SAN DIEGO GAS & ELECTRIC | NOx |
| 15504 | 2 | SCHLOSSER FORGE CO | NOx |
| 20203 | 2 | SCOPE PRODUCTS INC, DEXT CO | NOx |
| 9053 | 1 | SEMPRA ENERGY SOLUTIONS/CENTRAL PLANTS | NOx |
| 9217 | 1 | SEMPRA ENERGY SOLUTIONS/CENTRAL PLANTS | NOx |
| 11034 | 2 | SEMPRA ENERGY SOLUTIONS/CENTRAL PLANTS | NOx |
| 16575 | 1 | SEMPRA ENERGY SOLUTIONS/CENTRAL PLANTS | NOx |
| 37603 | 1 | SGL TECHNIC INC, POLYCARBON DIVISION | NOx |
| 117227 | 2 | SHCI SM BCH HOTEL LLC, LOWES SM BCH HOTE | NOx |
| 16639 | 1 | SHULTZ STEEL CO | NOx |

| Facility ID | Cycle | Facility Name | Market |
|---|---|---|---|
| 54402 | 2 | SIERRA ALUMINUM COMPANY | NOx |
| 85943 | 2 | SIERRA ALUMINUM COMPANY | NOx |
| 101977 | 1 | SIGNAL HILL PETROLEUM INC | NOx |
| 82727 | 2 | SMURFIT NEWSPRINT CORPORATION | NOx |
| 4477 | 1 | SO CAL EDISON CO | NOx |
| 18763 | 1 | SO CAL EDISON CO | NOx |
| 800123 | 2 | SO CAL EDISON CO | NOx |
| 800124 | 2 | SO CAL EDISON CO | NOx |
| 800125 | 1 | SO CAL EDISON CO | NOx |
| 800126 | 2 | SO CAL EDISON CO | NOx |
| 800224 | 1 | SO CAL EDISON CO (EIS USE) | NOx |
| 5973 | 1 | SO CAL GAS CO | NOx |
| 11119 | 1 | SO CAL GAS CO | NOx |
| 14926 | 1 | SO CAL GAS CO | NOx |
| 800127 | 1 | SO CAL GAS CO (EIS USE) | NOx |
| 800128 | 1 | SO CAL GAS CO (EIS USE) | NOx |
| 8582 | 1 | SO CAL GAS CO/PLAYA DEL REY STORAGE FACI | NOx |
| 9114 | 1 | SOMITEX PRINTS OF CAL INC | NOx |
| 14871 | 2 | SONOCO PRODUCTS CO | NOx |
| 103618 | 1 | SPECIALTY BRANDS INC | NOx |
| 800338 | 2 | SPECIALTY PAPER MILLS INC | NOx |
| 1634 | 2 | STEELCASE INC, WESTERN DIV | NOx |
| 131824 | 2 | STEELCASE INC. | NOx |
| 126498 | 2 | STEELSCAPE, INC | NOx |
| 83753 | 1 | STOCKER RESOURCES INC | NOx |
| 112164 | 2 | STOCKER RESOURCES, INC | NOx |
| 34055 | 2 | SULLY MILLER CONTRACTING CO | NOx |
| 105277 | 2 | SULLY MILLER CONTRACTING CO | NOx |
| 23196 | 2 | SUNKIST GROWERS, INC | NOx |
| 55711 | 1 | SUNLAW COGENERATION PARTNERS I | NOx |
| 55714 | 1 | SUNLAW COGENERATION PARTNERS I | NOx |
| 2083 | 1 | SUPERIOR INDUSTRIES INTERNATIONAL INC | NOx |
| 3968 | 1 | TABC, INC | NOx |
| 18931 | 2 | TAMCO | NOx |
| 56427 | 1 | TANDEM INDUSTRIES | NOx |
| 14944 | 1 | TECHALLOY CO., INC. | NOx/SOx |
| 126050 | 2 | TERADYNE, INC | NOx |
| 96587 | 1 | TEXOLLINI INC | NOx |
| 4451 | 1 | TEXTRON AEROSPACE FASTENERS | NOx |
| 14736 | 2 | THE BOEING COMPANY | NOx |
| 800110 | 2 | THE BOEING COMPANY | NOx |
| 800259 | 1 | THE BOEING COMPANY | NOx |
| 11435 | 2 | THE PQ CORP | NOx/SOx |
| 97081 | 1 | THE TERMO COMPANY | NOx |
| 7053 | 1 | THERMO ELECTRON CORP, CAL-DORAN DIVISION | NOx |
| 800330 | 1 | THUMS LONG BEACH | NOx |
| 800325 | 2 | TIDELANDS OIL PRODUCTION CO | NOx |
| 68118 | 2 | TIDELANDS OIL PRODUCTION COMPANY ETAL | NOx |
| 68122 | 2 | TIDELANDS OIL PRODUCTION COMPANY ETAL | NOx |
| 43436 | 1 | TIMCO | NOx |
| 55758 | 1 | TISSURAMA INDUSTRIES INC | NOx |

| Facility ID | Cycle | Facility Name | Market |
|---|---|---|---|
| 108616 | 1 | TORCH OPERATING CO | NOx |
| 109192 | 2 | TORCH OPERATING COMPANY | NOx |
| 109198 | 2 | TORCH OPERATING COMPANY | NOx |
| 109207 | 2 | TORCH OPERATING COMPANY | NOx |
| 800362 | 1 | TOSCO REFINING COMPANY | NOx/SOx |
| 800363 | 2 | TOSCO REFINING COMPANY | NOx/SOx |
| 53729 | 1 | TREND OFFSET PRINTING SERVICES, INC | NOx |
| 11674 | 1 | TRI-ALLOY INC | NOx |
| 800219 | 2 | TRW INC, | NOx |
| 800218 | 1 | TRW INC, (EIS & NSR USE ONLY) | NOx |
| 800391 | 2 | TWA AIRLINES, LLC | NOx |
| 83738 | 1 | U.S. DYEING & FINISHING INC. | NOx |
| 800026 | 1 | ULTRAMAR INC (NSR USE ONLY) | NOx/SOx |
| 118618 | 2 | UNI-PRESIDENT (U.S.A.) INC | NOx |
| 9755 | 2 | UNITED AIRLINES INC | NOx |
| 60342 | 2 | UNITED STATES CAN CO | NOx |
| 800258 | 1 | UNOCAL CORP., HARTLEY CENTER | NOx |
| 73022 | 2 | US AIRWAYS INC | NOx |
| 800149 | 2 | US BORAX INC | NOx |
| 800150 | 1 | US GOVT, AF DEPT, MARCH AFB (NSR USE) | NOx |
| 12185 | 2 | US GYPSUM CO | NOx/SOx |
| 18695 | 1 | US GYPSUM CO | NOx |
| 1073 | 1 | US TILE CO | NOx |
| 800393 | 1 | VALERO WILMINGTON ASPHALT PLANT | NOx |
| 111415 | 2 | VAN CAN COMPANY | NOx |
| 61589 | 2 | VANGUARD ENERGY SYS | NOx |
| 14502 | 2 | VERNON CITY, LIGHT & POWER DEPT | NOx |
| 115130 | 1 | VERTIS, INC | NOx |
| 101369 | 2 | VINTAGE PETROLEUM INC | NOx |
| 122012 | 2 | VINTAGE PETROLEUM, INC DEL VALLE OIL FLD | NOx |
| 14495 | 2 | VISTA METALS CORPORATION | NOx |
| 126501 | 2 | VOUGHT AIRCRAFT INDUSTRIES | NOx |
| 42775 | 1 | WEST NEWPORT OIL CO | NOx/SOx |
| 17956 | 1 | WESTERN METAL DECORATING CO | NOx |
| 1962 | 2 | WEYERHAEUSER COMPANY | NOx |
| 51620 | 1 | WHEELABRATOR NORWALK ENERGY CO INC | NOx |
| 129238 | 1 | XYRON INC | NOx |

# APPENDIX B
# FACILITY INCLUSIONS

As discussed in Chapter 1, eight facilities were added to the NOx market of the RECLAIM universe for the 2001 compliance year. Of these eight, three new facilities were created by partial change of ownership of existing RECLAIM facilities, one new facility was started by an existing facility, two existing facilities opted to join RECLAIM, and two facilities reported to be out of business during a previous report but were found to have continued operations.

| Facility ID | Cycle | Facility Name | Market | Date | Reason |
|---|---|---|---|---|---|
| 127380 | 1 | Alliance Colton, LLC | NOx | 5/2/01 | Opt-in at facility request. |
| 127381 | 1 | Alliance Colton, LLC | NOx | 5/2/01 | Opt-in at facility request. |
| 125579 | 1 | DirecTV | NOx | 11/16/01 | Partial change of ownership. |
| 129729 | 2 | DRS Technologies Inc | NOx | 11/16/01 | Partial change of ownership. |
| 124619 | 1 | Impress USA Inc | NOx | 5/2/01 | Partial change of ownership. |
| 57329 | 2 | Kwikset Corp | NOx | 10/15/93 | Reported to be out of business but continued to operate site remedial equipment. |
| 19989 | 2 | Parker Hannifin Aerospace Corp | NOx | 10/15/93 | Reported to be out of business but continued to operate site remedial equipment. |
| 131824 | 2 | Steelcase Inc. | NOx | 5/31/02 | New facility started by an existing facility. |

# APPENDIX C
# RECLAIM FACILITIES CEASING OPERATION OR EXCLUDED

AQMD staff is aware of the following RECLAIM facilities that permanently ceased all operations and went out of business during 2001 Compliance Year. The reasons for shutdown cited below are based on AQMD staff's best available information.

| | |
|---|---|
| Facility ID | 121190 |
| Facility Name | Astoria Metal Corporation – Long Beach |
| City and County | Long Beach, Los Angeles County |
| SIC | 9999 |
| Pollutants | NOx |
| 1994 Allocation | 207,094 |
| Reason for Shutdown | Out of business; reason unknown. |

| | |
|---|---|
| Facility ID | 75479 |
| Facility Name | CES Energy Alberhill LTD |
| City and County | Lake Elsinore, Riverside County |
| SIC | 4911 |
| Pollutants | NOx |
| 1994 Allocation | 14,528 |
| Reason for Shutdown | Facility was purchased by a neighboring facility which also participates in the RECLAIM NOx market. The two facilities were merged into one RECLAIM facility. |

| | |
|---|---|
| Facility ID | 61210 |
| Facility Name | Filtrol Corp |
| City and County | Vernon, Los Angeles County |
| SIC | 2819 |
| Pollutants | NOx |
| 1994 Allocation | 108,634 |
| Reason for Shutdown | Operations consolidated with another plant in Texas. |

| | |
|---|---|
| Facility ID | 40030 |
| Facility Name | LA Dye & Print Works Inc |
| City and County | Los Angeles, Los Angeles County |
| SIC | 2257 |
| Pollutants | NOx |
| 1994 Allocation | 18,350 |
| Reason for Shutdown | The facility cited the declining demand for products and the high costs of manufacturing, production, or raw material. |

| | |
|---|---|
| Facility ID | 51949 |
| Facility Name | LA Dye & Print Works Inc |
| City and County | Pico Rivera, Los Angeles County |
| SIC | 2261 |
| Pollutants | NOx |
| 1994 Allocation | 7,294 |
| Reason for Shutdown | Out of business; reason unknown. |

| | |
|---|---|
| Facility ID | 90307 |
| Facility Name | LA Dye & Print Works Inc |
| City and County | Vernon, Los Angeles County |
| SIC | 2261 |
| Pollutants | NOx |
| 1994 Allocation | 11,415 |
| Reason for Shutdown | The facility cited the declining demand for products and the high costs of manufacturing, production, or raw material. |

| | |
|---|---|
| Facility ID | 13976 |
| Facility Name | Lucky Stores Inc, #952 |
| City and County | Buena Park, Orange County |
| SIC | 4226 |
| Pollutants | NOx |
| 1994 Allocation | 7,558 |
| Reason for Shutdown | The parent company of this facility merged with another company. This store was closed following the merger. |

| | |
|---|---|
| Facility ID | 62897 |
| Facility Name | Northrop Grumman Corp, MASD |
| City and County | Pico Rivera, Los Angeles County |
| SIC | 3720 |
| Pollutants | NOx |
| 1994 Allocation | 31,516 |
| Reason for Shutdown | Operations consolidated with another plant in Los Angeles County that does not participate in RECLAIM. |

| | |
|---|---|
| Facility ID | 1026 |
| Facility Name | So Cal Edison Co |
| City and County | San Bernardino, San Bernardino County |
| SIC | 4911 |
| Pollutants | NOx |
| 1994 Allocation | 30,727 |
| Reason for Shutdown | This facility was a power plant in 1994 at the beginning of RECLAIM. The company sold its generation plant at this location in 1998 but retained other operations at this location. The bulk of the allocations for this facility were transferred to the new operator of the power generation facility in 1998. This facility ceased operation in 2001. |

| | |
|---|---|
| Facility ID | 14052 |
| Facility Name | So Cal Edison Co |
| City and County | Redondo Beach, Los Angeles County |
| SIC | 5171 |
| Pollutants | NOx |
| 1994 Allocation | 2,540,631 |
| Reason for Shutdown | This facility was a power plant in 1994 at the beginning of RECLAIM. The company sold its generation plant at this location in 1998 but retained other operations at this location. The bulk of the allocations for this facility were transferred to the new operator of the power generation facility in 1998. This facility ceased operation in 2001. |

| | |
|---|---|
| Facility ID | 15872 |
| Facility Name | So Cal Edison Co |
| City and County | Colton, San Bernardino County |
| SIC | 5171 |
| Pollutants | NOx |
| 1994 Allocation | 3,936 |
| Reason for Shutdown | This facility was a power plant in 1994 at the beginning of RECLAIM. The company sold its generation plant at this location in 1998 but retained other operations at this location. The bulk of the allocations for this facility were transferred to the new operator of the power generation facility in 1998. This facility ceased operation in 2001. |

# APPENDIX D
# Facilities that were Unable to Reconcile Emissions for Compliance Year 2001

The following is a list of facilities that were unable to reconcile their allocations with their NOx emissions in Compliance Year 2001 based on either emissions reported under the APEP report filed by the facility or completed audits conducted by AQMD staff. This list is being maintained and updated as audits are completed. The updated list is available by contacting the RECLAIM Administration Team at 21865 E. Copley Drive, Diamond Bar, CA 91765, (909) 396-3119.

All American Asphalt (ID# 3704)
Breitburn Energy Corp (ID# 98159)
Fansteel/California Drop Forge (ID# 22047)
Gainey Ceramics (ID# 5814)
Lucky Stores Inc. #952 (ID# 13976)
Metal Coaters of California (ID# 115563)
Pomona Paper Company (ID# 117151)
REDCO II (ID# 20543)
Reliant Energy Etiwanda, LLC (ID# 115315)
Sempra Energy Solutions/Central Plants (ID# 11034)
Textron Aerospace Fasteners (ID# 4451)
Torch Operating Company (ID# 109192)
Torch Operating Company (ID# 109198)
Torch Operating Company (ID# 109207)
Wheelabrator Norwalk Energy Co. Inc. (ID# 51620)

# APPENDIX E
# JOB IMPACTS ATTRIBUTED TO RECLAIM

Each RECLAIM facility operator is requested to include in their Annual Permit Emissions Program (APEP) report an assessment of job increases and decreases that occurred during the compliance year and the extent to which any increase or decrease in the number of jobs is attributable to the RECLAIM program. The job impact resulting from the RECLAIM program during the 2001 compliance year was assessed by examining data in APEP reports submitted by RECLAIM facilities.

The detailed information for facilities that reported job gains and losses in their APEP forms for Compliance Year 2001 is summarized below:

| | |
|---|---|
| Facility ID | **104012** |
| Facility Name | Aera Energy LLC |
| City and County | Huntington Beach, Orange County |
| SIC | 1311 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 1 (unknown number attributed to RECLAIM) |
| Job Loss | 0 (unknown number attributed to RECLAIM) |
| Comments | This company cited "increased recordkeeping and compliance activities." |

| | |
|---|---|
| Facility ID | **104017** |
| Facility Name | Aera Energy LLC |
| City and County | Huntington Beach, Orange County |
| SIC | 1311 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 1 (1 attributed to RECLAIM) |
| Job Loss | 1 (unknown number attributed to RECLAIM) |
| Comments | This company cited “increased recordkeeping and compliance activities." |

| | |
|---|---|
| Facility ID | **45527** |
| Facility Name | American Racing Equipment Inc |
| City and County | Rancho Dominguez, Los Angeles County |
| SIC | 3714 |
| Pollutant(s) | NOx |
| Cycle | 2 |
| Job Gain | 0 (unknown number attributed to RECLAIM) |
| Job Loss | 50 (40 attributed to RECLAIM) |
| Comments | A company representative indicated the company lost a major contract with an automobile manufacturer and also cited "increasing permitting & other fees. High NOx RTC cost." |

| | |
|---|---|
| Facility ID | **60540** |
| Facility Name | American Racing Equipment Inc, Plnt |
| City and County | Rancho Dominguez, Los Angeles County |
| SIC | 3714 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 23 (unknown number attributed to RECLAIM) |
| Job Loss | 61 (38 attributed to RECLAIM) |
| Comments | A company representative indicated the company lost a major contract with an automobile manufacturer and also cited "too high NOx unit price, negative impact on natural gas cost." |

| | |
|---|---|
| Facility ID | **40764** |
| Facility Name | Century Laminators Inc |
| City and County | Anaheim, Orange County |
| SIC | 3672 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 0 (unknown number attributed to RECLAIM) |
| Job Loss | 34 (32 attributed to RECLAIM) |
| Comments | The company stated "because of ceiling we operate under for NOx credit, we had to by RTCs to accommodate our production needs. The price increased so drastically that we decided to buy the materials instead of making it. Thus the # of jobs needed decreased." |

| | |
|---|---|
| Facility ID | **50098** |
| Facility Name | D&D Disposal Inc, West Coast Rendering Co |
| City and County | Vernon, Los Angeles County |
| SIC | 2077 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 0 (unknown number attributed to RECLAIM) |
| Job Loss | 0 (1 attributed to RECLAIM) |
| Comments | This facility claimed "In order to avoid greatly exceeding emission limits, additional raw materials had to be turned down, reducing additional job openings." However, they facility did not report any job losses in the annual report. Therefore, it appears that these are lost job opportunities instead of actual job loss. |

| | |
|---|---|
| Facility ID | **104571** |
| Facility Name | E & J Textile Group, Inc |
| City and County | Hawthorne, Los Angeles County |
| SIC | 2260 |
| Pollutant(s) | NOx |
| Cycle | 2 |
| Job Gain | 0 (unknown number attributed to RECLAIM) |
| Job Loss | 10 (5 attributed to RECLAIM) |
| Comments | This facility cited "increased costs of purchasing credits and complying with RECLAIM program." |

| | |
|---|---|
| Facility ID | **44551** |
| Facility Name | GNB Technologies Inc |
| City and County | Los Angeles, Los Angeles County |
| SIC | 3341 |
| Pollutant(s) | NOx/Sox |
| Cycle | 1 |
| Job Gain | 0 (unknown number attributed to RECLAIM) |
| Job Loss | 62 (unknown number attributed to RECLAIM) |
| Comments | This facility stated "environmental costs are factored into all operations and employee and material costs must be adjusted accordingly." |

| | |
|---|---|
| Facility ID | **45953** |
| Facility Name | Hayes Lemmerz International Cal Inc |
| City and County | La Mirada, Los Angeles County |
| SIC | 3714 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 0 (unknown number attributed to RECLAIM) |
| Job Loss | 20 (20 attributed to RECLAIM) |
| Comments | This facility stated "eliminate operations and transfer business to reduce emissions." |

| | |
|---|---|
| Facility ID | **75411** |
| Facility Name | Precision Specialty Metals Inc (PSM) |
| City and County | Los Angeles, Los Angeles County |
| SIC | 3312 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 13 (unknown number attributed to RECLAIM) |
| Job Loss | 62 (1 attributed to RECLAIM) |
| Comments | This facility stated "the increase in NOx credit cost/lbs forced the company to reduce our environmental tech's by 50 percent." |

| | |
|---|---|
| Facility ID | **115315** |
| Facility Name | Reliant Energy Etiwanda, LLC |
| City and County | Etiwanda, San Bernardino County |
| SIC | 4911 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 26 (1 attributed to RECLAIM) |
| Job Loss | 48 (unknown number attributed to RECLAIM) |
| Comments | According to the facility, "one person was performing safety-environmental & air. Due to the extremely high work load to comply with all requirements of the AQMD, one person was added to only take care of air issues." |

| | |
|---|---|
| Facility ID | **16639** |
| Facility Name | Shultz Steel Co |
| City and County | South Gate, Los Angeles County |
| SIC | 3462 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 28 (unknown number attributed to RECLAIM) |
| Job Loss | 0 (unknown number attributed to RECLAIM) |
| Comments | This company reported no job loss, only job gains. However, they claimed "we have had to increase our overhead staff to administer the program and maintain compliance. Admin & RTC costs of the program have forced us to cut production staff and R&D. Overall, RECLAIM has caused a net increase in payroll." |

| | |
|---|---|
| Facility ID | **800128** |
| Facility Name | So Cal Gas Co |
| City and County | Northridge, Los Angeles County |
| SIC | 4923 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 2 (1 attributed to RECLAIM) |
| Job Loss | 2 (unknown number attributed to RECLAIM) |
| Comments | The facility stated "to meet the demands of RECLAIM and Title V." |

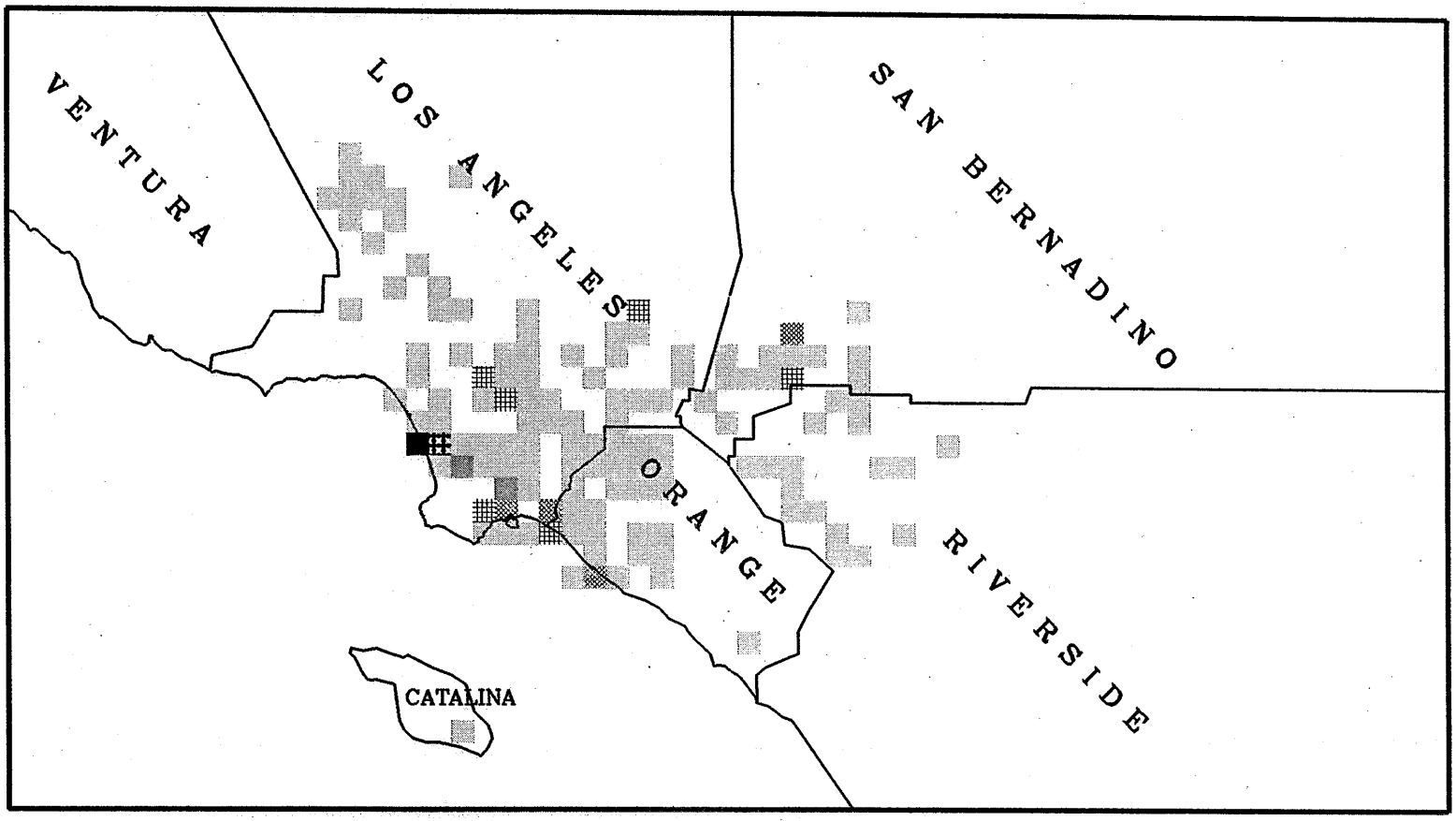
| | |
|---|---|
| Facility ID | **14495** |
| Facility Name | Vista Metals Corporation |
| City and County | Fontana, San Bernardino County |
| SIC | 3341 |
| Pollutant(s) | NOx |
| Cycle | 2 |
| Job Gain | 0 (1 attributed to RECLAIM) |
| Job Loss | 0 (unknown number attributed to RECLAIM) |
| Comments | The facility cited "additional paperwork, testing, phone calls, inspections, fees." |

| | |
|---|---|
| Facility ID | **17956** |
| Facility Name | Western Metal Decorating Co |
| City and County | Rancho Cucamonga, San Bernardino County |
| SIC | 3411 |
| Pollutant(s) | NOx |
| Cycle | 1 |
| Job Gain | 0 (unknown number attributed to RECLAIM) |
| Job Loss | 6 (6 attributed to RECLAIM) |
| Comments | The facility claimed "cost of control equipment caused the facility to decrease the number of jobs." |

# APPENDIX F
# QUARTERLY NOx EMISSION MAPS

# RECLAIM Facilities

## Certified NOx Emissions (Tons) from 01/2001 to 03/2001



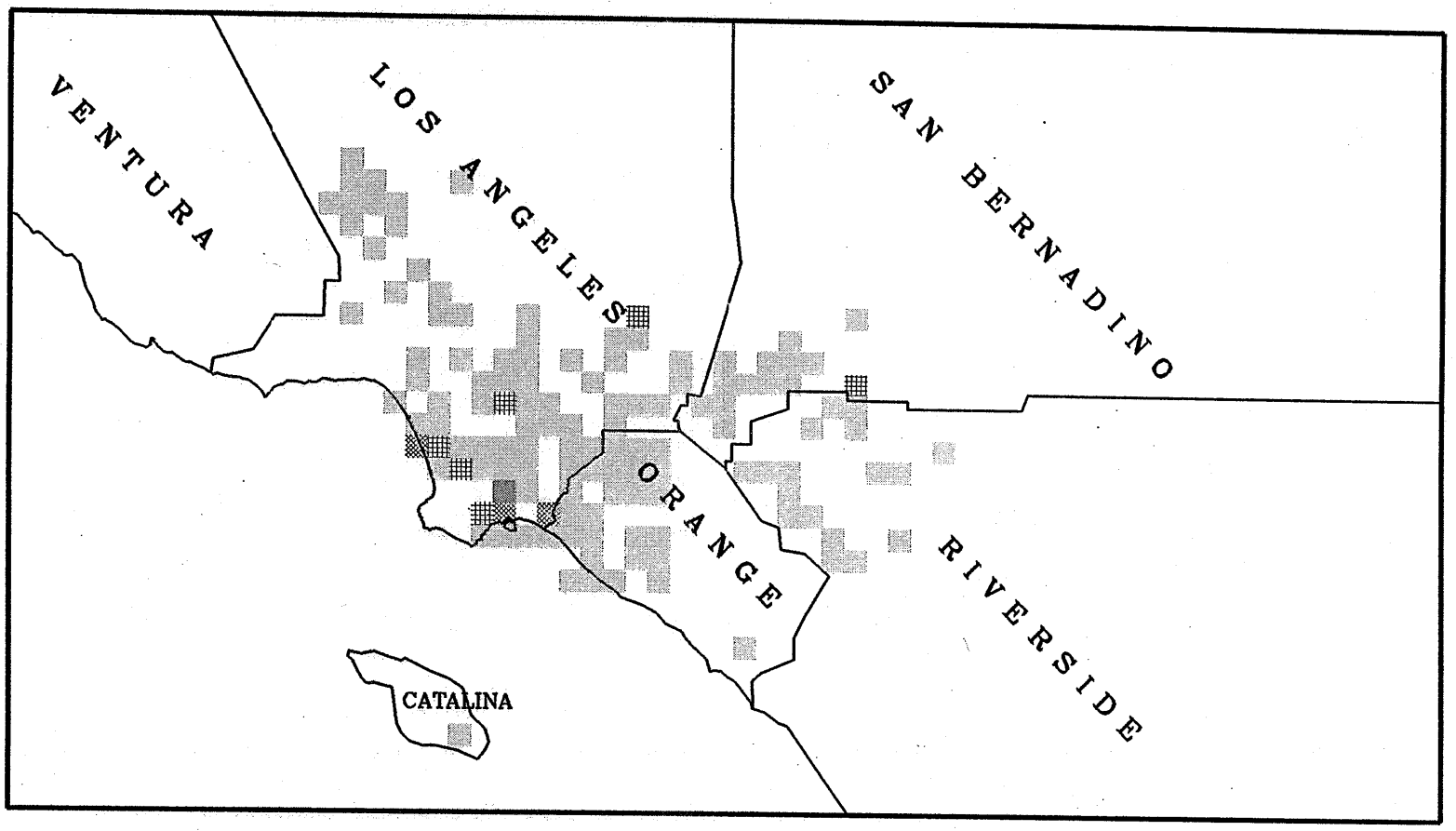

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 750 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified NOx Emissions (Tons) from 04/2001 to 06/2001



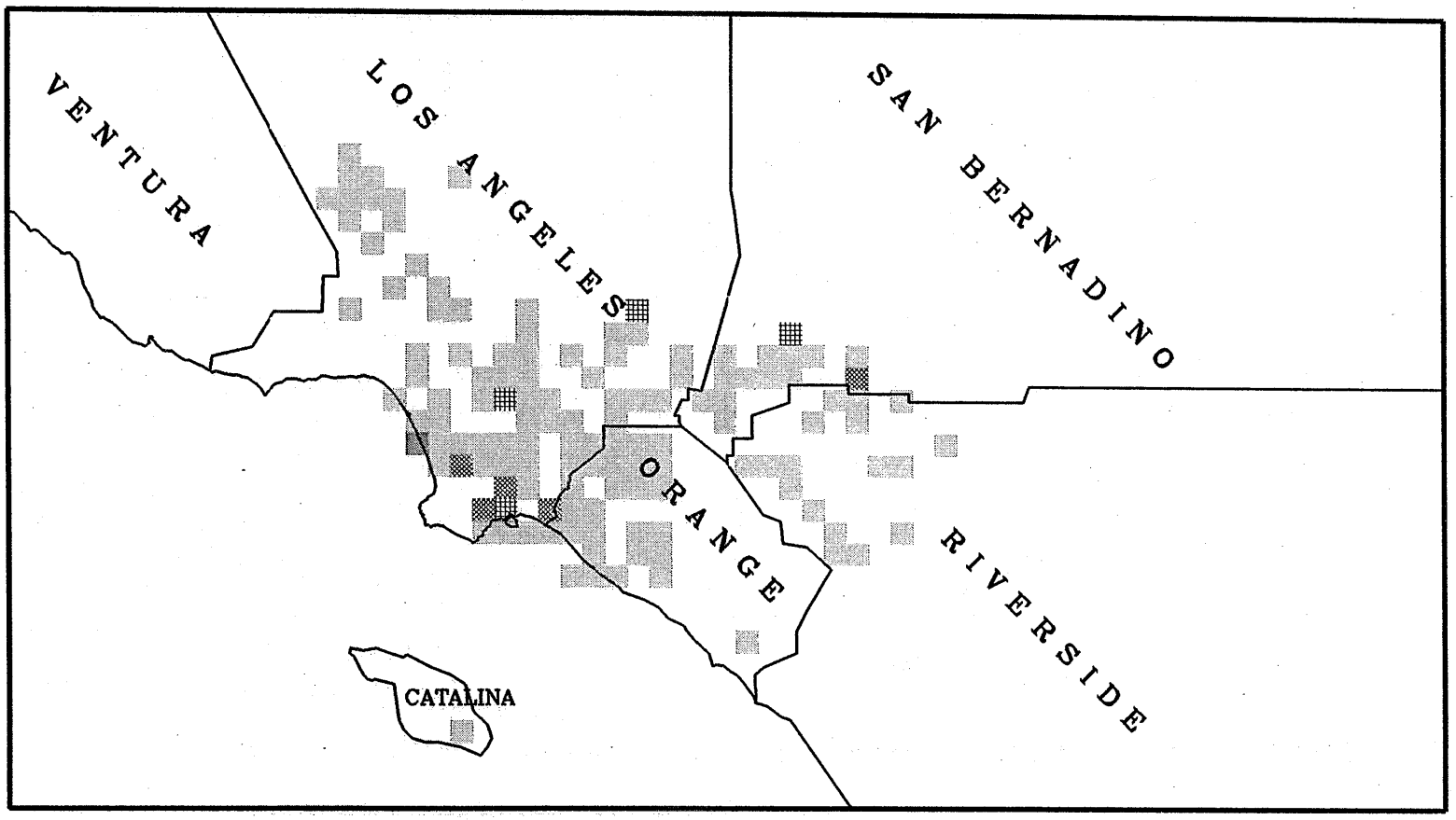

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 567 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified NOx Emissions (Tons) from 07/2001 to 09/2001



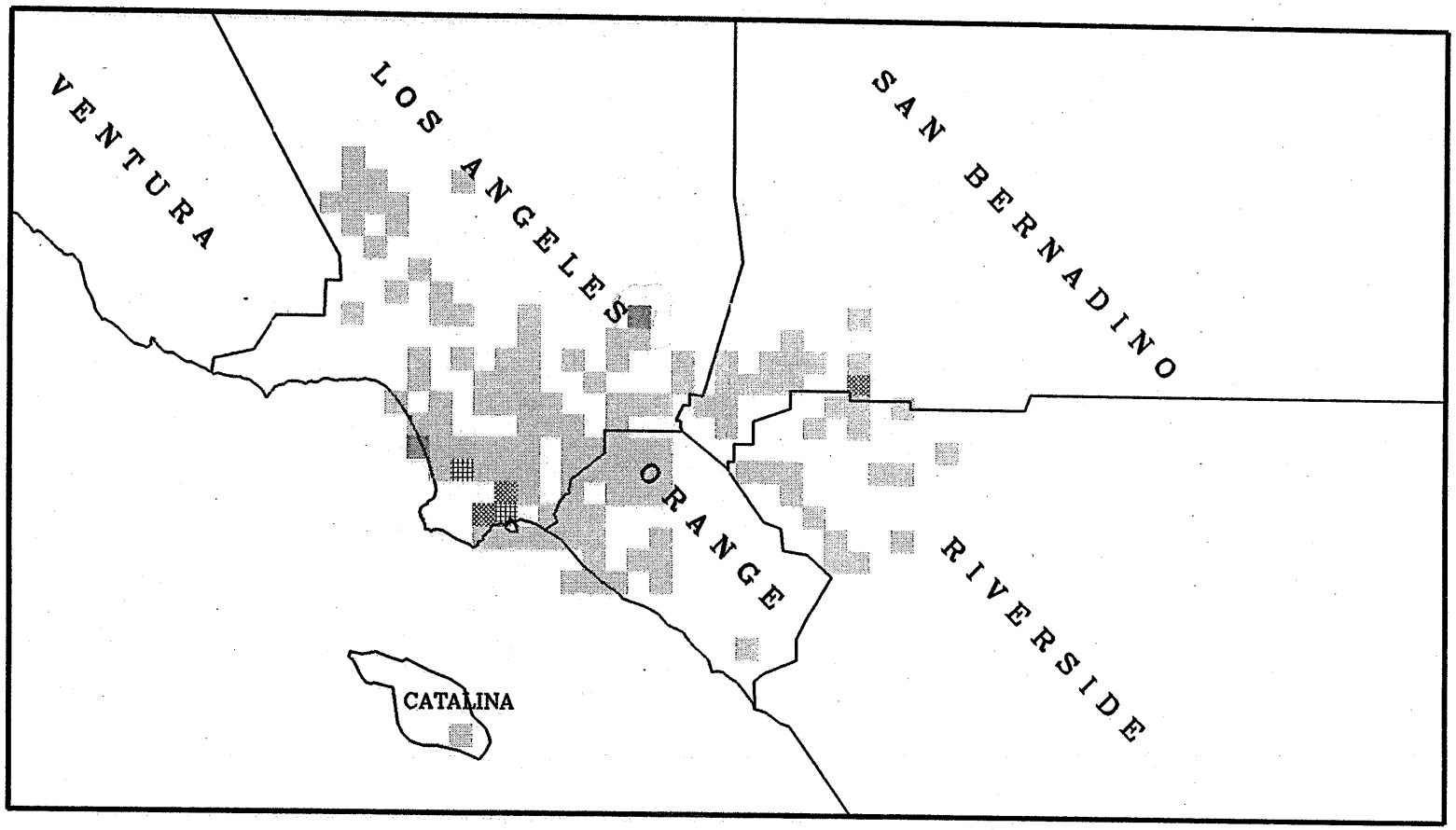

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 548 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified NOx Emissions (Tons) from 10/2001 to 12/2001



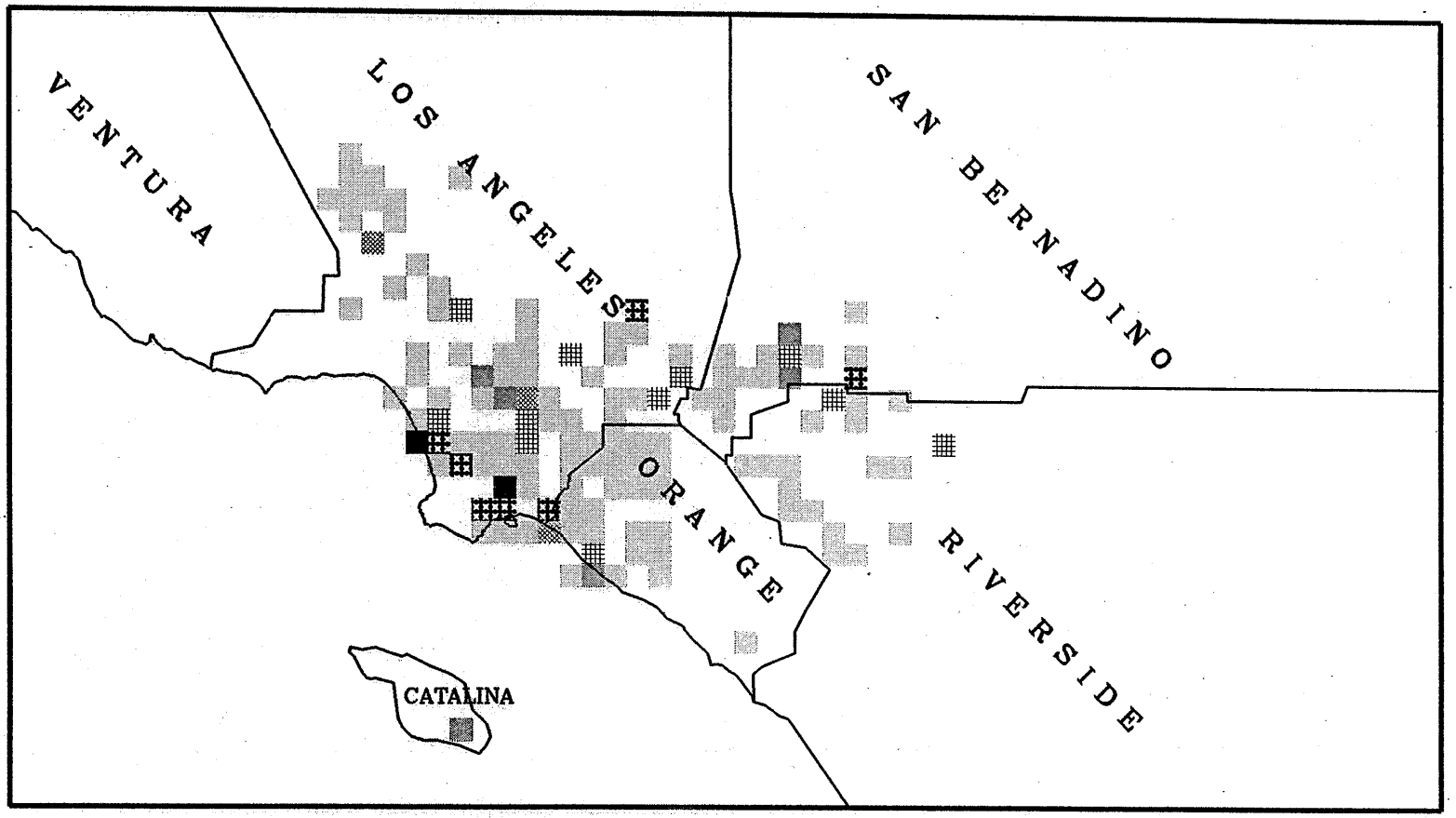

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 550 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified NOx Emissions (Tons) Year to date (12/31/2001)



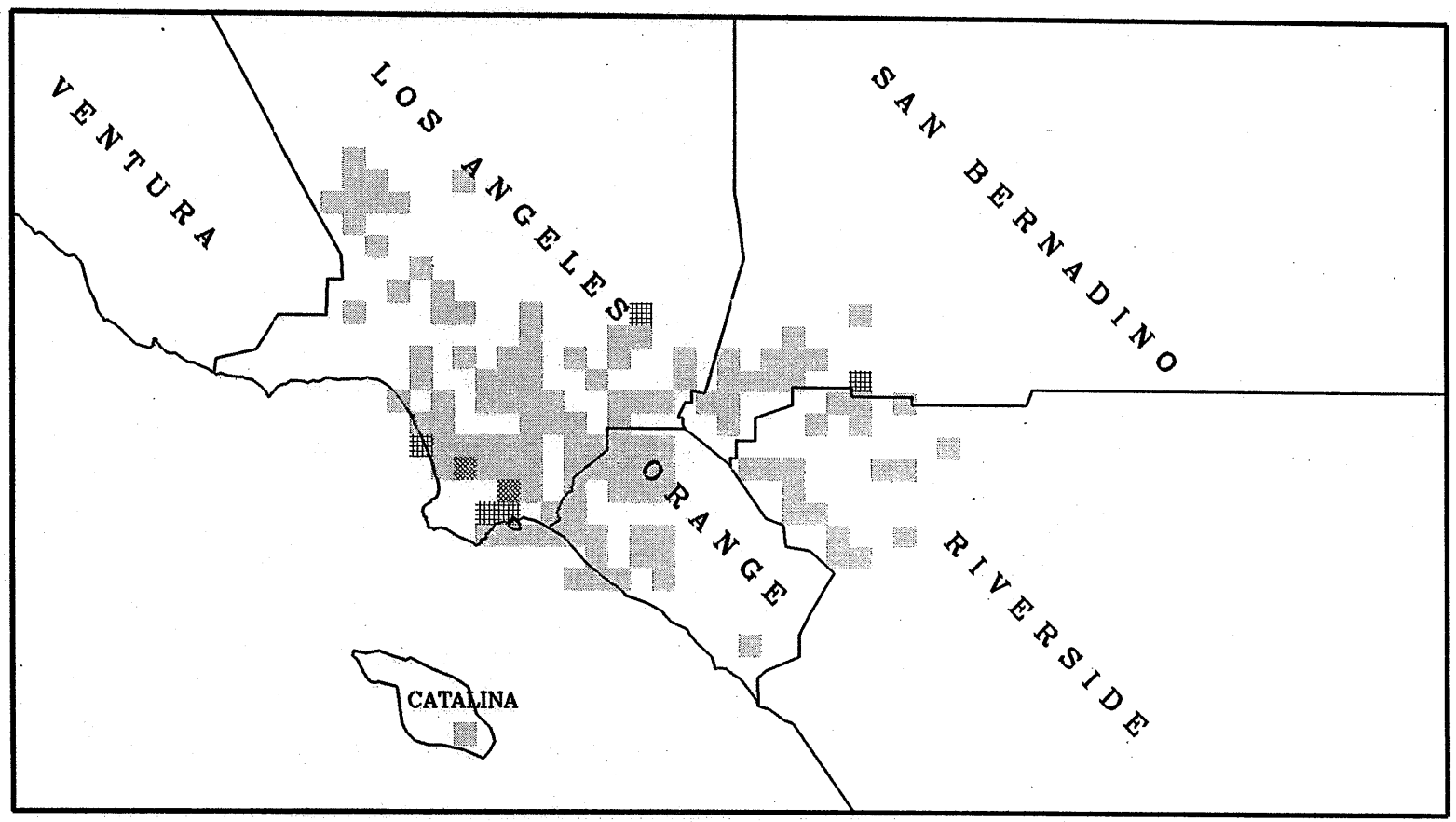

>0 – 100 | 100 – 200 | 200 – 400 | 400 – 800 | 800 –1600 | over 1600

max. emissions = 2144 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified NOx Emissions (Tons) from 01/2002 to 03/2002



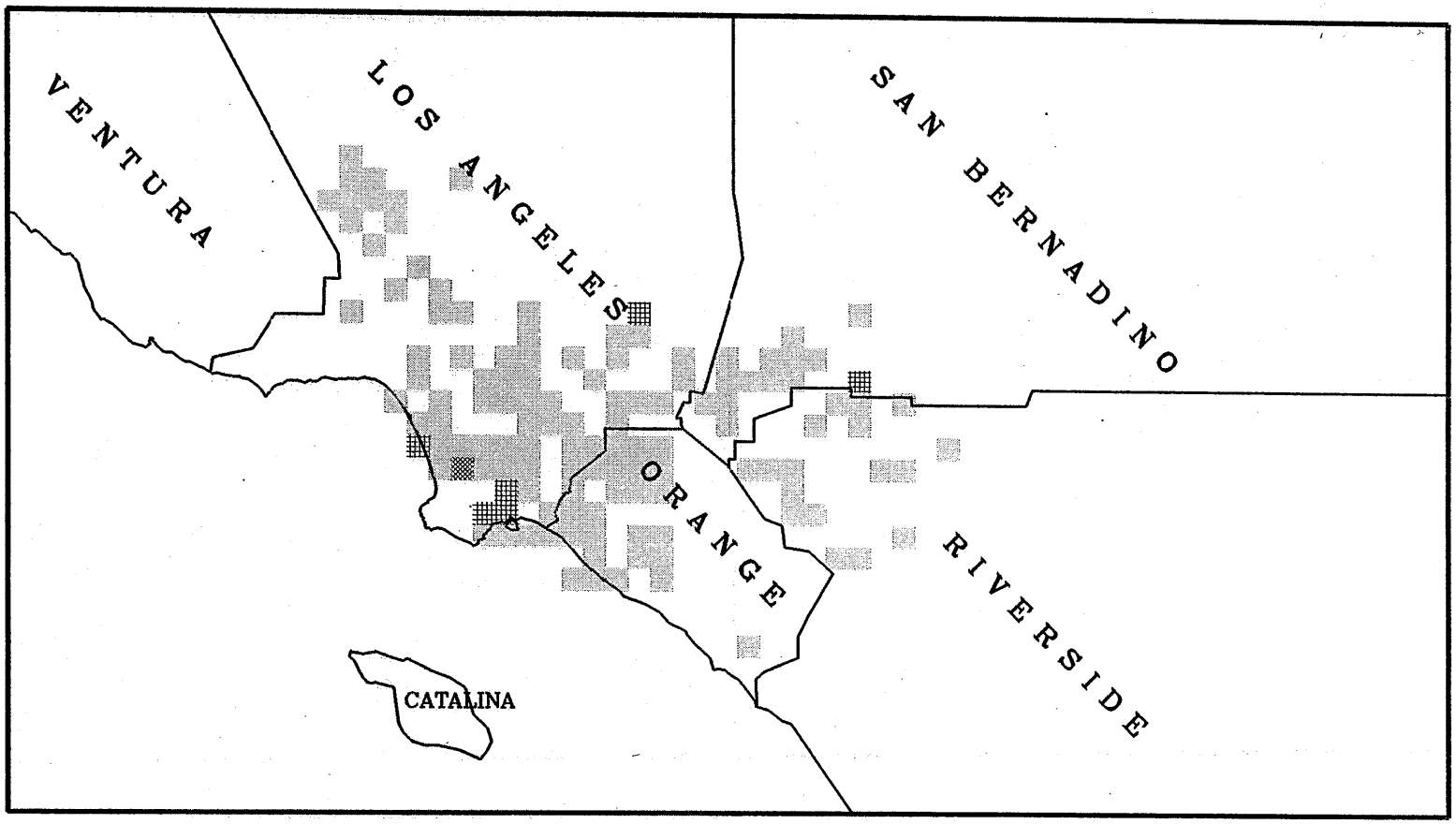

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 334 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified NOx Emissions (Tons) from 04/2002 to 06/2002



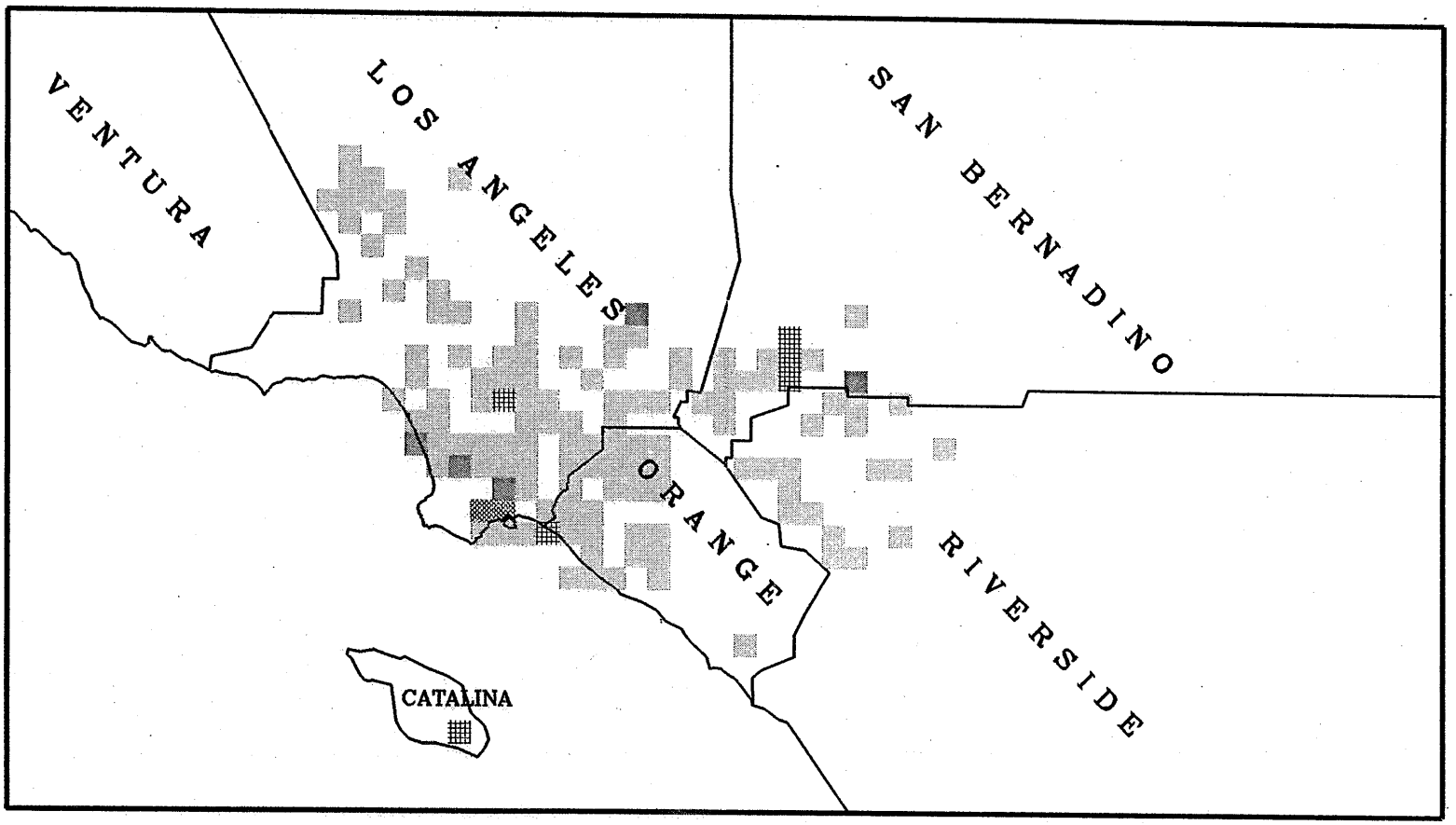

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 357 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified NOx Emissions (Tons) Year to date (06/30/2002)




>0 – 100 | 100 – 200 | 200 – 400 | 400 – 800 | 800 –1600 | over 1600

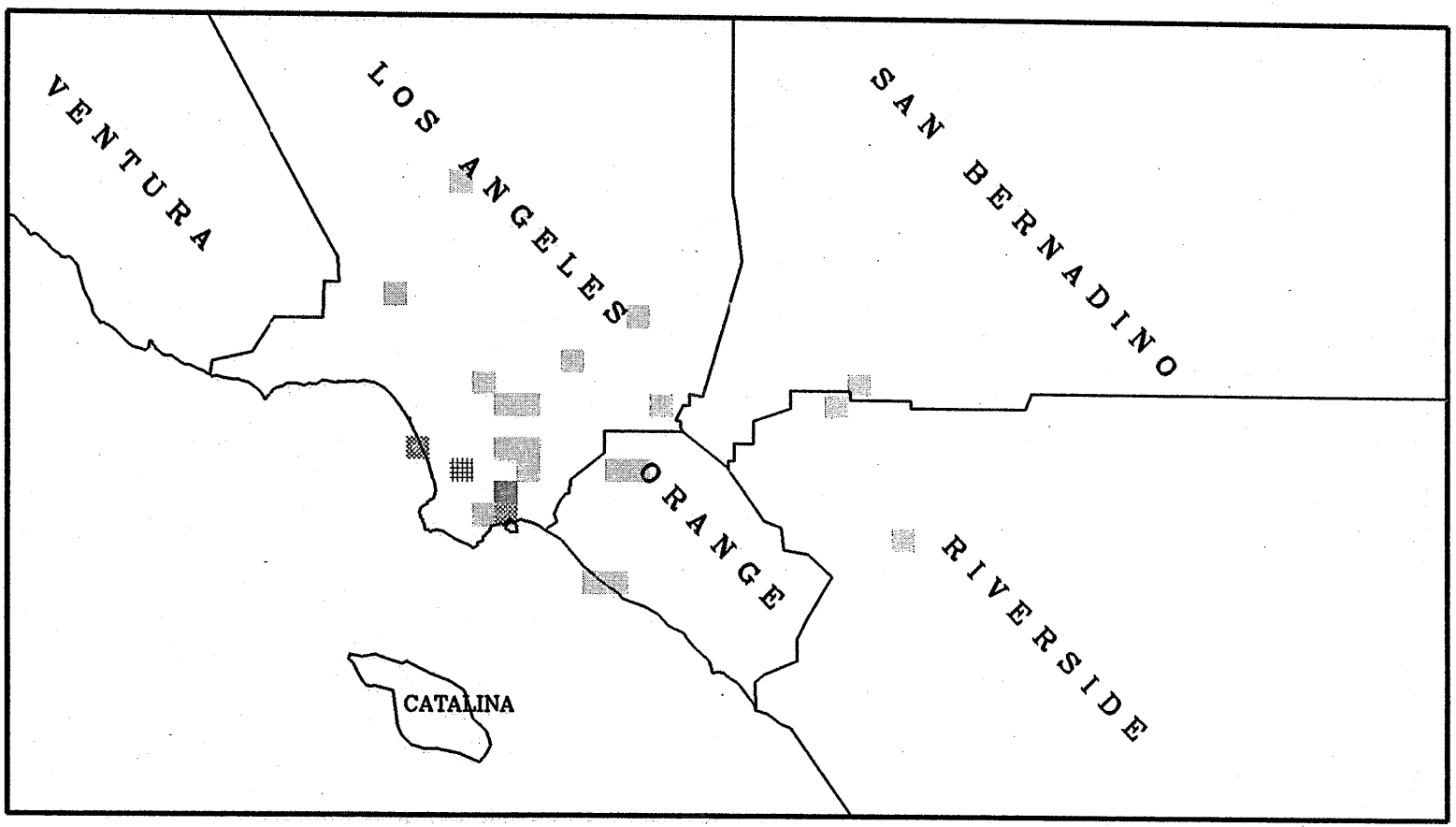
max. emissions = 686 tons

Generated on 1/10/ 3

# APPENDIX G
# QUARTERLY SOx EMISSION MAPS

# RECLAIM Facilities

## Certified SOx Emissions (Tons) from 01/2001 to 03/2001



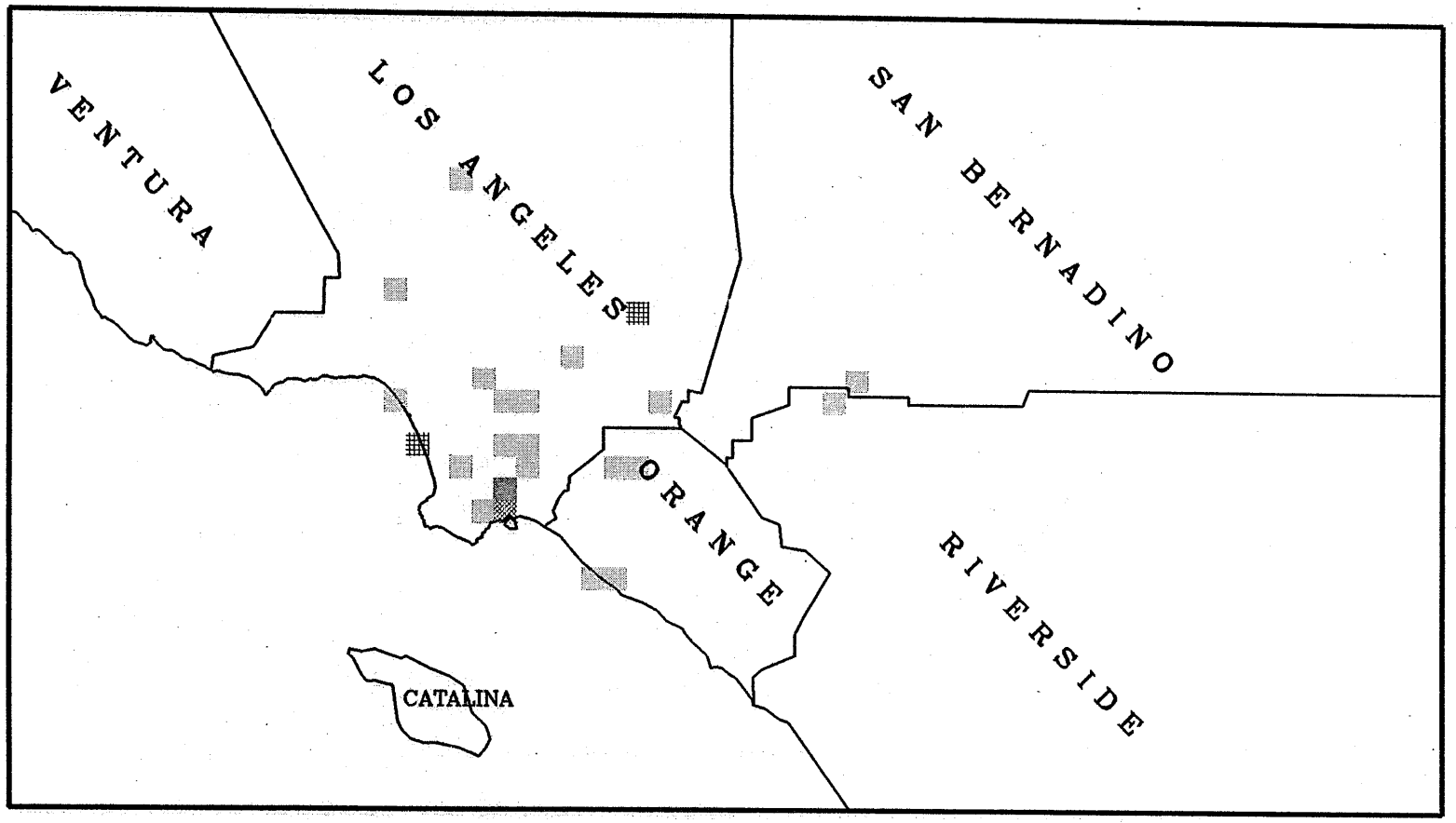

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 523 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified SOx Emissions (Tons) from 04/2001 to 06/2001



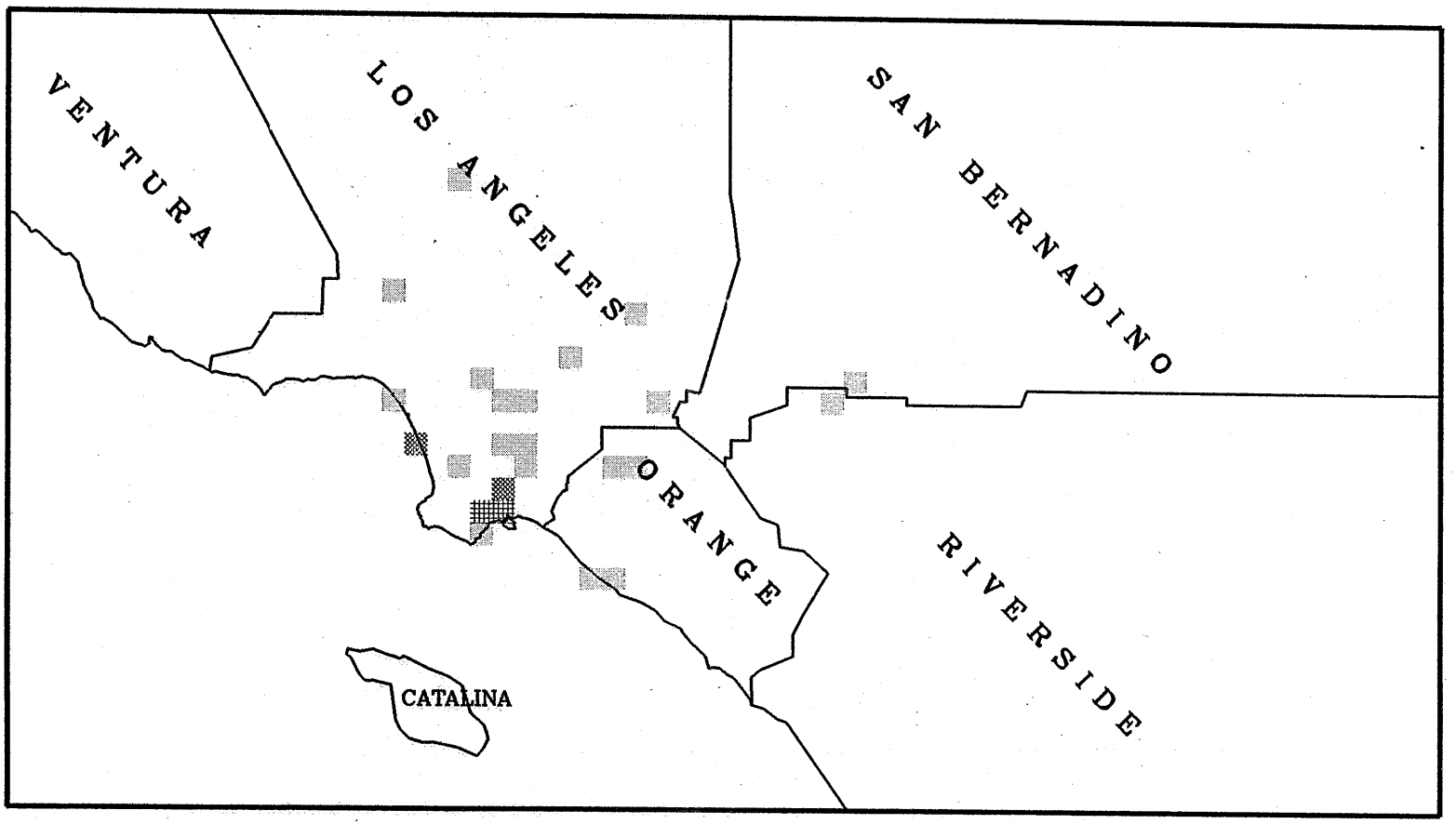

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 502 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified SOx Emissions (Tons) from 07/2001 to 09/2001



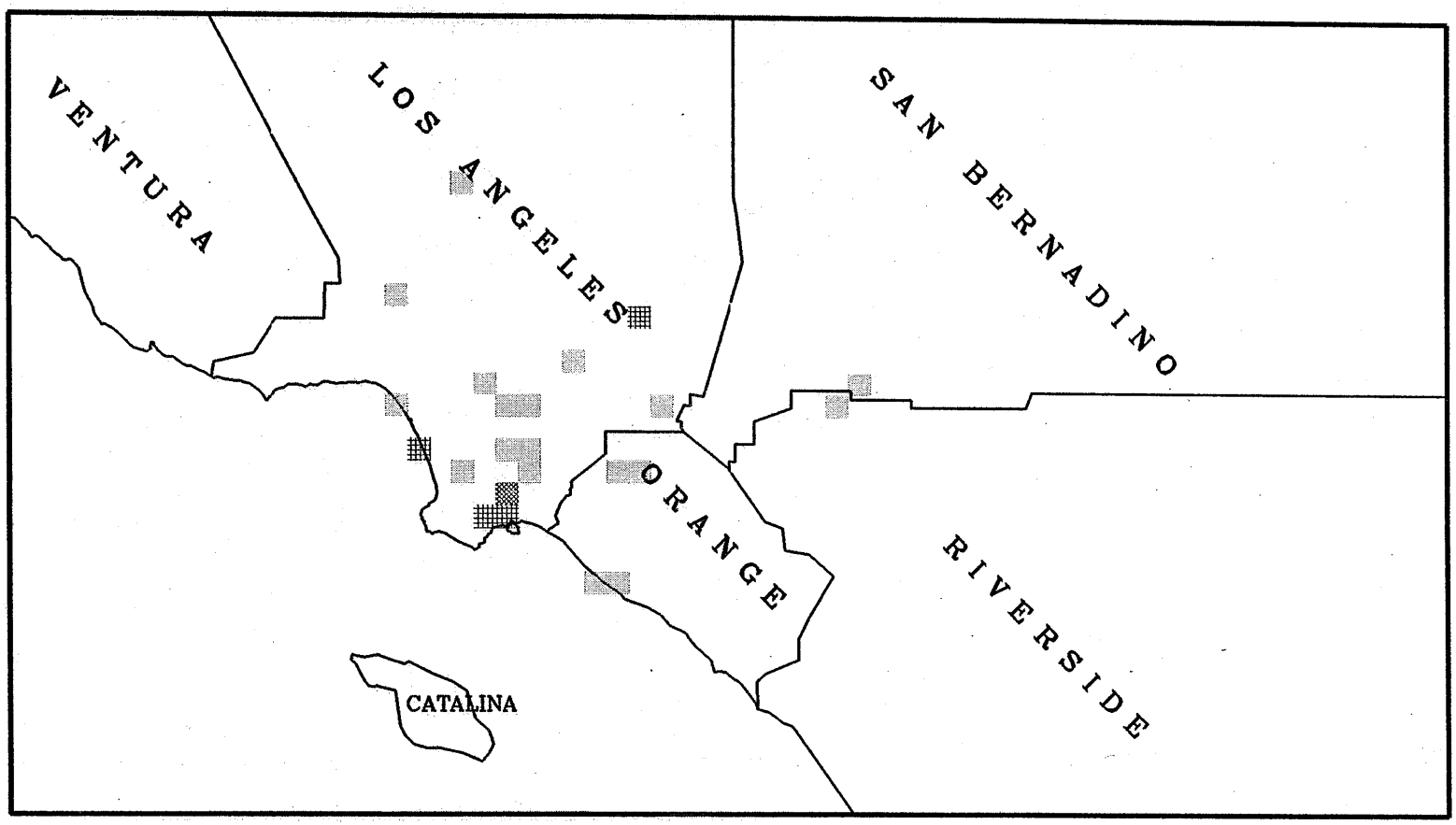

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 348 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified SOx Emissions (Tons) from 10/2001 to 12/2001



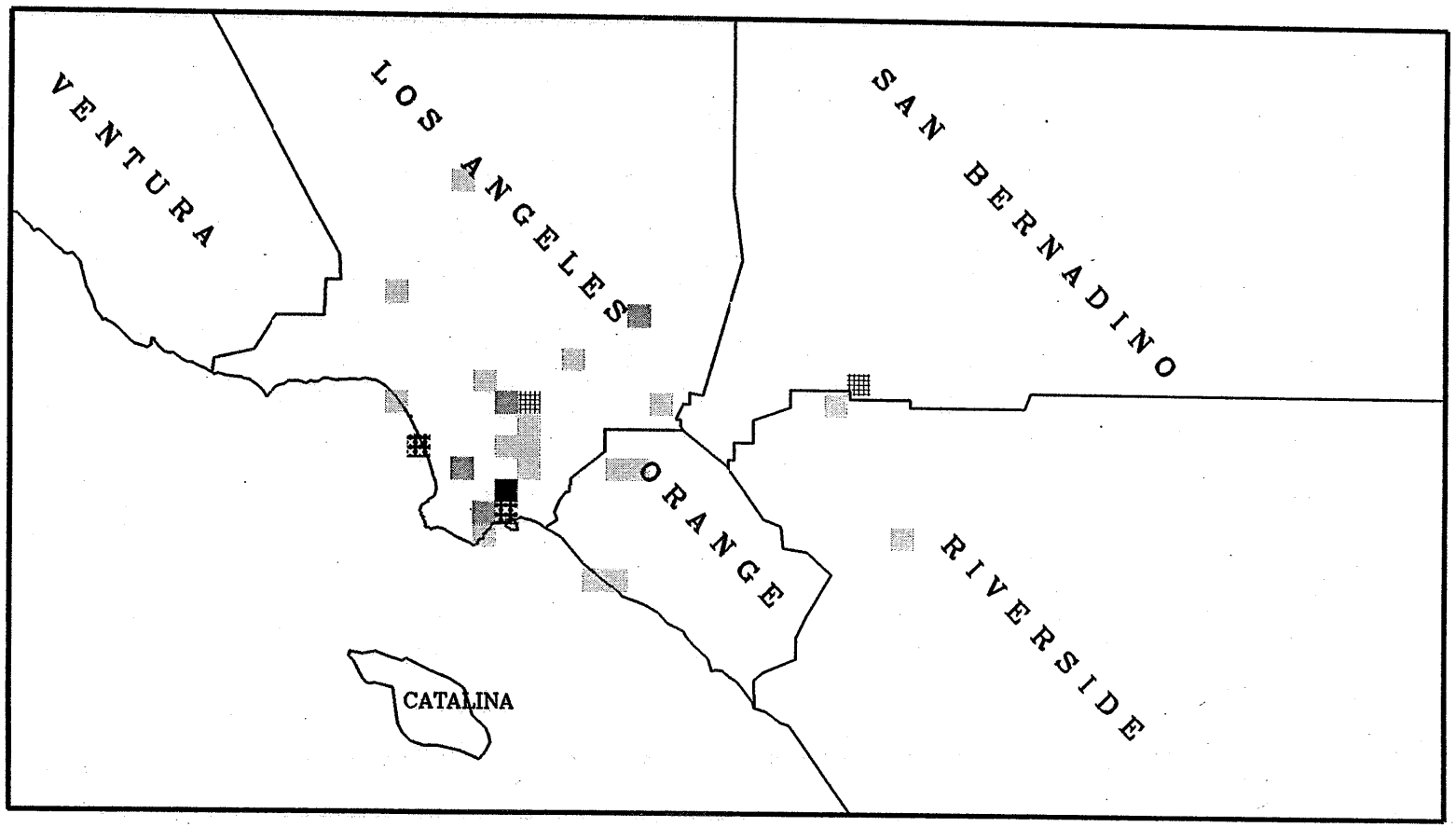

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 346 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified SOx Emissions (Tons) Year to date (12/31/2001)



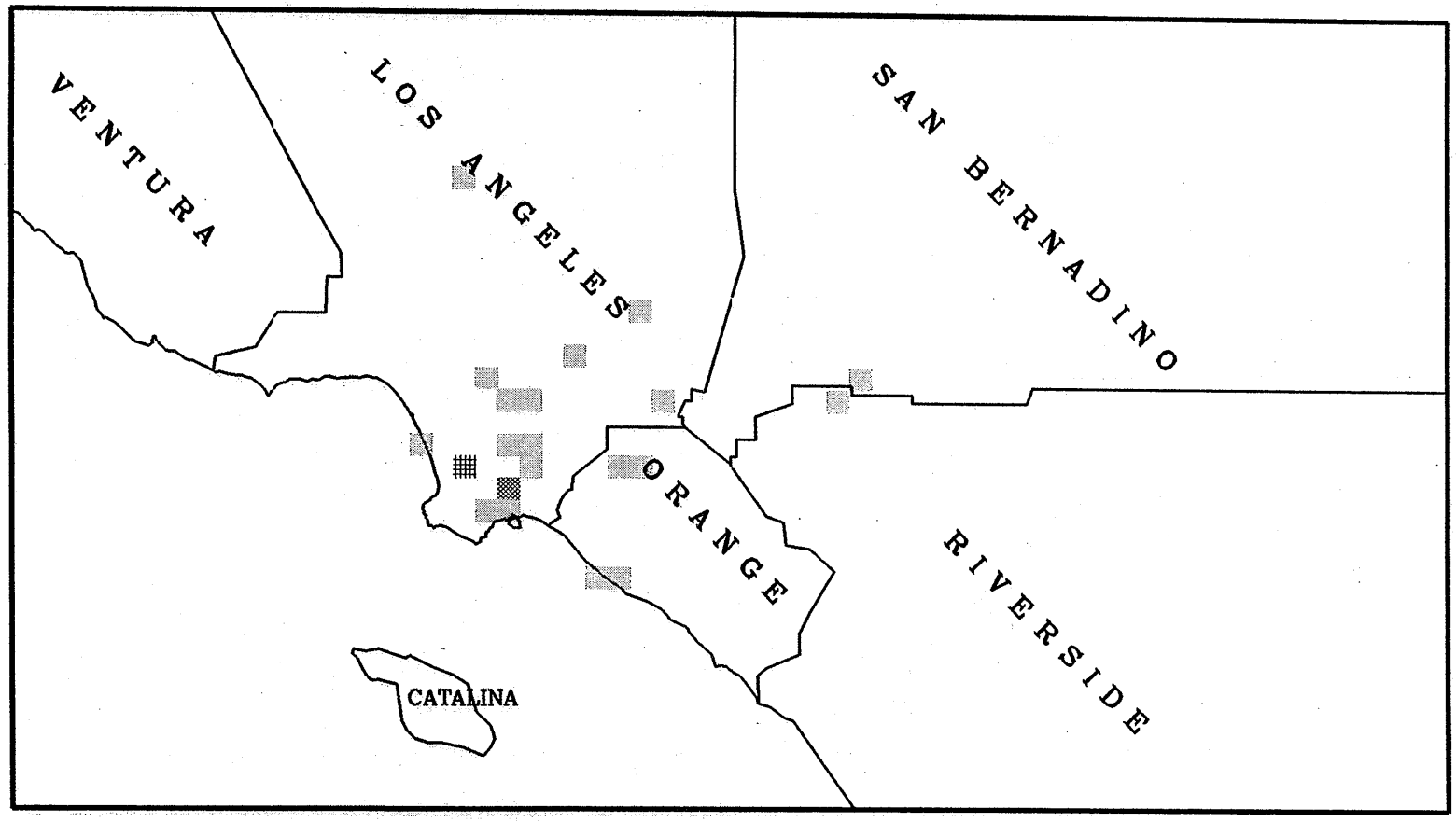

>0 – 100 | 100 – 200 | 200 – 400 | 400 – 800 | 800 –1600 | over 1600

max. emissions = 1684 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified SOx Emissions (Tons) from 01/2002 to 03/2002



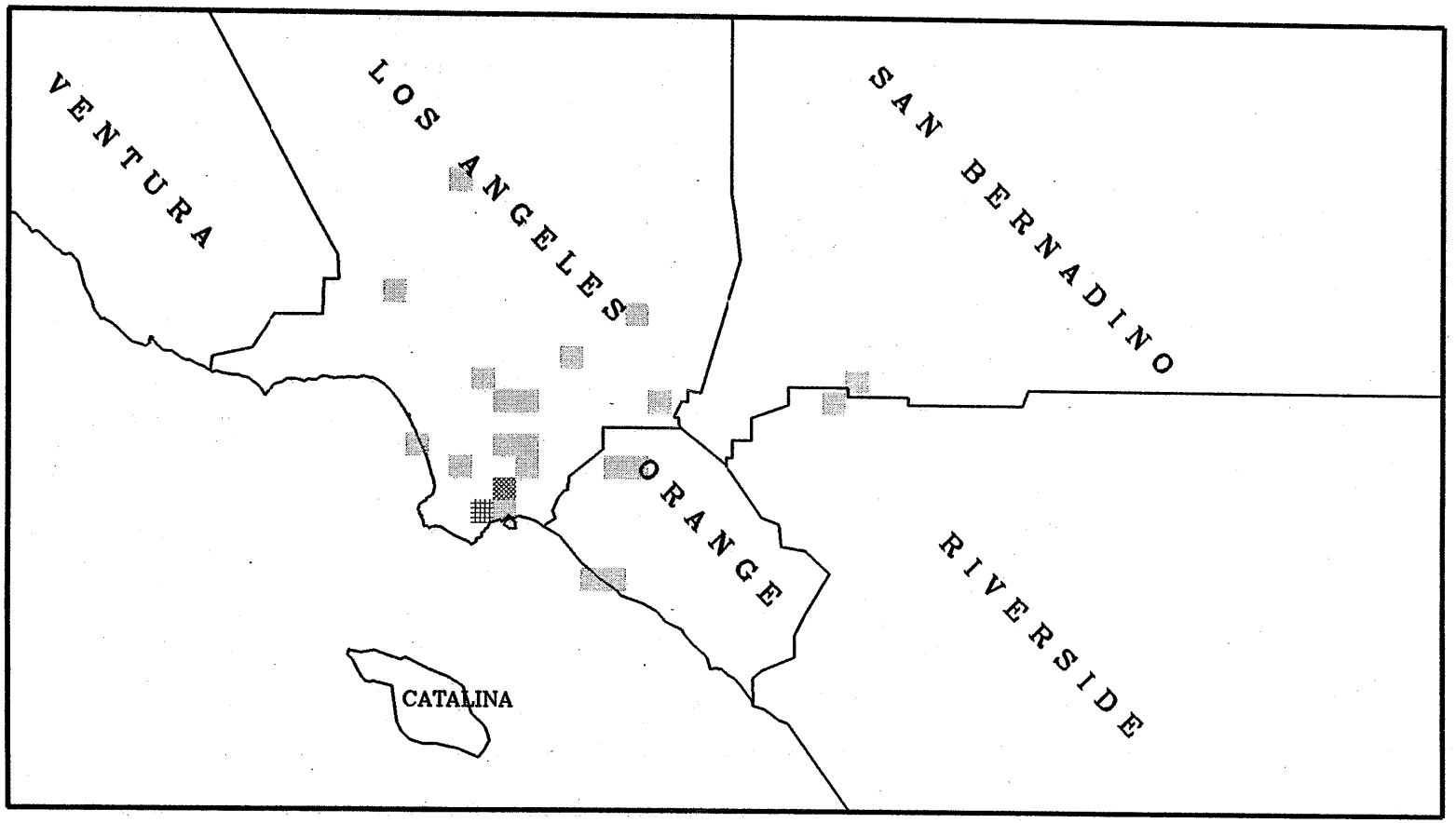

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 365 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified SOx Emissions (Tons) from 04/2002 to 06/2002



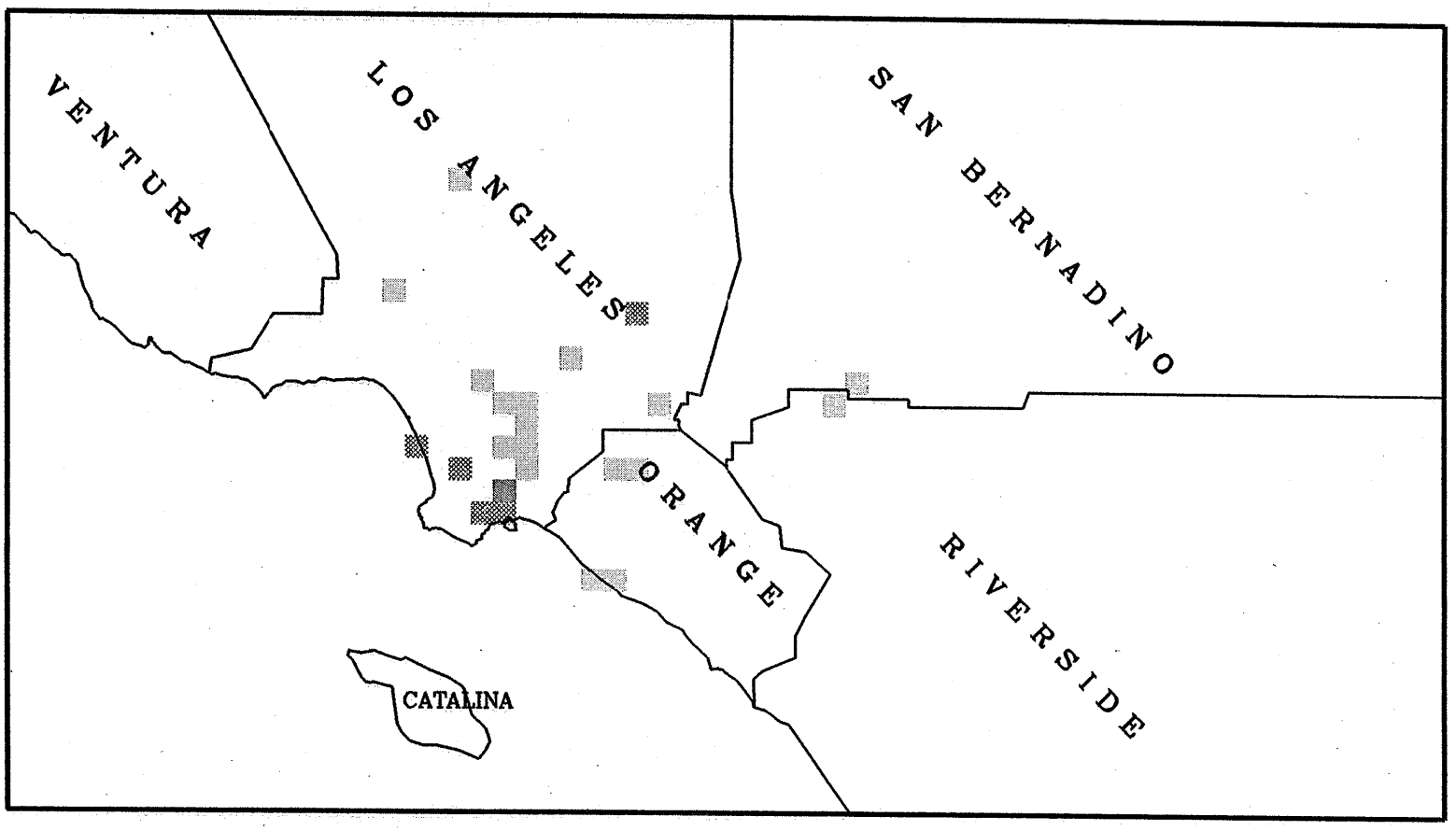

>0 – 150 | 150 – 300 | 300 – 450 | 450 – 600 | 600 – 750 | over 750

max. emissions = 433 tons

Generated on 1/10/ 3

# RECLAIM Facilities

## Certified SOx Emissions (Tons) Year to date (06/30/2002)




>0 – 100 | 100 – 200 | 200 – 400 | 400 – 800 | 800 –1600 | over 1600

max. emissions = 798 tons

Generated on 1/10/ 3