

**BOARD OF COUNTY
COMMISSIONERS**

Karen Williams Seel - Chairman
Susan Latvala - Vice Chairman
Calvin D. Harris
John Morrone
Robert B. Stewart
Barbara Sheen Tood
Kenneth T. Welch



**2000 Ozone Precursor and Carbon Monoxide Emissions Inventory Update for
Pinellas County, Florida**

August 2003

Air Quality Division
300 South Garden Avenue
Clearwater, FL 33756
(727) 464-4422

Prepared by: *Om-Deey Ali* Date: 8/19/03
Sr. Env. Specialist Ph.D. P.E.
Reviewed by: *Robert Soster* Date: 8/19/03
Program Manager
Approved by: *Robert Soster* Date: 8/20/03
Division Administrator

PLEASE ADDRESS REPLY TO:
512 S. Ft. Harrison Avenue
Clearwater, Florida 33756
phone: 727-464-4761
fax: 727-464-3174
website: www.pinellascounty.org



FOREWORD

The 2000 Ozone Precursor and Carbon Monoxide Emissions Inventory Update for Pinellas County, Florida is prepared and submitted to the Florida Department of Environmental Protection (FDEP) and the United States Environmental Protection Agency (EPA). This inventory was prepared to satisfy the requirements of the Florida State Implementation Plan (SIP) for three-year periodic emissions inventories for the ozone maintenance area, and, in addition provides data to the 1999 National Emissions Inventory (NEI) for Pinellas County.

This emissions inventory report is different from previous reports. The 1990 report is based on 1991 inventory methods¹ for calculating area source and non-road source emissions. The 1994 and 1997 reports were based on the 1990 emissions inventory and used surrogates (e.g. growth rates) to update the emissions for area sources and non-road sources. The Pinellas County Air Quality Division (AQD) has prepared the 2000 emissions inventory report in coordination with Florida DEP's Periodic Emissions Inventory and incorporated the Emission Inventory Improvement Program's (EIIP) approved and updated methods to estimate emissions. Although certain area source subcategories are compiled statewide by FDEP, Pinellas County AQD has reviewed these emissions estimates, and made necessary adjustments for some area sources categories. These adjustments include: deduction of point source contributions; using county-specific data for calculations; calculating daily ozone seasonal emissions; and applying rule penetration. The description of emission source categories with EPA's Source Category Codes (SCC's) is also included in this report.

¹Procedures for the Preparation of Emission Inventories for Carbon Monoxide and Precursors of Ozone, Volume I: General Guidance for Stationary Sources, May 1991.

Table of Contents

1.0	INTRODUCTION	1
1.1	GEOGRAPHIC AND DEMOGRAPHIC DESCRIPTION	1
1.2	INVENTORY METHODOLOGY	2
1.3	RESPONSIBLE CONTACTS AND AGENCIES	3
2.0	PINELLAS COUNTY EMISSIONS SUMMARY.....	5
2.1	ANTHROPOGENIC SOURCES	5
2.2	INVENTORY COMPARISON AND ANALYSIS	8
3.0	STATIONARY POINT SOURCES.....	12
3.1	RULE EFFECTIVENESS.....	14
3.2	POINT SOURCE INVENTORY METHODOLOGY	14
	<i>Annual Emissions in Tons/year</i>	<i>14</i>
	<i>Ozone Season Daily Emissions in Lbs/day.....</i>	<i>15</i>
4.0	STATIONARY AREA SOURCES	17
4.1	ACCOUNTING FOR POINT SOURCE EMISSIONS	19
	<i>Graphic Arts.....</i>	<i>19</i>
4.2	RULE PENETRATION.....	20
	<i>Open Burning</i>	<i>20</i>
	<i>Architectural Coating</i>	<i>21</i>
4.3	SOURCE CLASSIFICATION CODES	21
4.4	OZONE SEASON EMISSIONS	21
	<i>Actual Emissions Method: Stage I VOC Emissions</i>	<i>22</i>
	<i>Seasonal Adjustment Method: Residential Natural Gas Combustion.....</i>	<i>22</i>
5.0	NON-ROAD MOBILE SOURCES.....	27
5.1	AIRCRAFT, LOCOMOTIVES, AND COMMERCIAL VESSELS.....	27
5.2	SMALL NON-ROAD ENGINES AND EQUIPMENT	27
6.0	ON-ROAD MOBILE SOURCES.....	29
6.1	VMT ESTIMATION	29
6.2	EMISSIONS ESTIMATION	30
	TECHNICAL APPENDIX.....	32
	Appendix A: Stationary Point Sources	
	Appendix B: Stationary Area Sources	
	Appendix C: Non-Road Mobile Sources	

LIST OF FIGURES

Figure 1. 2000 VOC Emissions Inventory.....	6
Figure 2. 2000 NOx Emissions Inventory.	7
Figure 3. 2000 CO Emissions Inventory.....	7
Figure 4. VOC Trend.	9
Figure 5. NOx Trend.....	10

LIST OF TABLES

Table 1. Emission Inventory Contacts.....	3
Table 2. Pinellas County 2000 Emissions Inventory Update.....	5
Table 3. Pinellas County Emissions Inventory Comparison.....	8
Table 4. Comparison of 2000 Ozone Season Projections to Actual Estimates	11
Table 5. 2000 Stationary Point Source Emissions.....	13
Table 6. Area Sources Categories and Modified FDEP Methods.....	18
Table 7. 2000 Stationary Area Source Emissions.....	19
Table 8. Seasonal Activity Factors and Days in Week data for Area Sources Inventory	23
Table 9. 2000 Non-Road Mobile Source Emissions	28
Table 10. 2000 On-Road Mobile Source Emissions	29
Table 11. Pinellas County 2000 HPMS Data.....	30
Table 12. MOBILE6 Vehicle Type and Mix for 2000.....	31

1.0 Introduction

The 2000 Ozone Precursor and Carbon Monoxide Emissions Inventory Update for Pinellas County, Florida has been prepared and submitted to the Florida Department of Environmental Protection (FDEP) for inclusion in the State's periodic inventory submittal to the United States Environmental Protection Agency (EPA). This document is developed under the authority of the Florida State Implementation Plan (SIP) pursuant to the State of Florida State Air Implementation Plan, Redesignation Request and Attainment/Maintenance Plan for the Tampa Bay Florida Ozone Nonattainment Area Part One, Section II.A.5, which requires a periodic inventory for calendar year 2000.

This 2000 Emission Inventory is a detailed and comprehensive inventory of volatile organic compounds (VOC), oxides of nitrogen (NO_x), and carbon monoxide (CO) emissions from anthropogenic and biogenic sources. It contains a summary of ozone precursor and carbon monoxide emissions for the calendar year 2000 and estimated daily emissions during the ozone season (June, July, and August). Annual emissions are reported in tons per year and seasonal emissions in pounds per day or tons per day. The five (5) major source categories identified in this inventory are:

- § Stationary Point Sources;
- § Stationary Area Sources;
- § On-Road Mobile Sources;
- § Non-Road Mobile Sources;
- § Biogenic Sources.

Inventory methods and approaches are described for each major category and example calculations are provided. The technical appendix contains a detailed table of emissions by specific source category and sub-categories. FDEP has a list of possible area sources. In this list more subcategories were included in this inventory as included in the appendix section.

1.1 Geographic and Demographic Description

Pinellas County is a peninsula located along the west central coast of Florida and is bordered by the Gulf of Mexico on the west and by Tampa Bay on the east. Pinellas County is approximately 38 miles long and is 15 miles across at its widest point. The total land area covers approximately 264 square miles. Since the County is located in a subtropical zone, the area remains quite heavily vegetated despite the significant population growth over the past few decades. With an estimated permanent population of 921,482 for 2000, the County remains the most densely populated in the State of Florida.

The predominant land use throughout Pinellas County is residential. Commercial and industrial facilities are concentrated primarily in the center of the County with smaller areas located in the northeast and southeast sections. The industrial base of the County consists primarily of light manufacturing and high technology.²

² Pinellas County Emergency Management Plan. Pinellas County Board of County Commissioners: Pinellas

1.2 Inventory Methodology

The stationary point source inventory in this report is a part of the Florida Periodic Emissions Inventory (PEI). Florida DEP requires approved local air programs to annually collect and review annually the emission data from permitted facilities. The detailed methodology is discussed in the chapter for Stationary Point Sources.

The 2000 Emissions Inventory is the first periodic inventory that calculates the actual emissions for specific source categories and sub-categories for area sources emissions as similar to the 1990 Emission Inventory. This report has used the most up-to-date methodologies and has spent every effort in collecting local specific data for emissions estimation. Emissions from point source contributions are analyzed and deducted from some area source categories. Due to the time and cost constraints, the alternate methods contained in the EIIP are used instead of more expensive preferred (survey) methods. The methodology involved with area source emissions includes top-down and bottom-up methods. FDEP has estimated several source categories for statewide inventory using top-down methods. EPA's definition of volatile organic compounds excludes several photochemical non-reactive organic compounds³. Examples of these are methylene chloride, 1,1,1-trichloroethane (TCA), perchloroethylene (perc), several Freon compounds, and acetone, this inventory has subtracted these non-VOC emissions from source categories. Point-source contribution, rule penetration, and county-specific data were employed in the modifications. A brief explanation and example is given in the chapter for Stationary Area Sources and Appendix section. A detailed report of inventory methods of area sources is contained in a separate report: Documentation for 2000 Pinellas County Emissions Inventory. The appropriate EPA Source Classification Codes (SCCs) for area source categories were selected to describe the sources and to meet the submission requirements of EPA's NEI database.

The on-road mobile sources are on-highway vehicles. Emissions are calculated by using model generated emission factors and estimated vehicle miles traveled (VMT) by transportation facilities. Effective January 29, 2002, MOBILE6 became the official on-road mobile source model for use in meeting Clean Air Act requirements. One major change in this emissions inventory is the termination of the Florida Motor Vehicle Inspection Program (MVIP) by the Florida legislature in July 2000. Thus the VOC emission reduction credits were removed from the on-road emissions for this inventory. The MOBILE6 input parameters and VMT data are listed in the chapter of On-Road Mobile Sources and Appendix section.

The non-road mobile sources include non-road engines and equipments such as lawn and garden, recreational, construction, logging, agricultural, industrial, light commercial, airport service and recreational marine equipment, as well as commercial marine operations, aircraft and locomotives. With the exception of aircraft, marine vessels, and locomotives, emissions from the non-road mobile sources can be estimated with EPA's NONROAD model. Aircraft emissions from three airports are estimated using the FAA Aircraft Engine Emission Database (FAEED) model, reference number AEE-110, October 1995. The United States Coast Guard station at the Port of St. Petersburg reports emissions from marine vessels. The locomotive emissions for Pinellas County are

³ 40 CFR 51.100 Definition of Volatile Organic Compounds.

compiled by FDEP as part of the statewide inventory. A more detailed description is contained in the chapter of Non-Road Mobile Sources and Appendix section.

Biogenic sources of VOC and NO_x are the result of natural emissions from vegetation and microbial activity in soils, respectively. Estimates were determined using the PCBEIS2 model developed by the U.S. Environmental Protection Agency. The procedures and methodology for estimating biogenic emissions were based on guidance from the Emissions Inventory Improvement Program; Volume V, Biogenic Sources Preferred Methods, Final Report, May 1996. Biogenic emission estimates are provided by the FDEP⁴.

Please note that individual source emissions can be calculated out to multiple decimal places, however, when calculating totals, the numbers are rounded up or down to two decimal places. This may result in minor rounding errors (e.g. +/- .01 tons/year) when viewing table totals.

1.3 Responsible Contacts and Agencies

The Pinellas County Department of Environmental Management, Air Quality Division was responsible for compiling the majority of this emissions inventory. Several categories of area sources, on-road mobile sources, non-road small engine mobile sources, and biogenic source categories were estimated by the Florida Department of Environmental Protection and provided for inclusion to this document. The official contacts for the Pinellas County 2000 Emission Inventory for Pinellas County and their inventory contributions are listed in table 1-1.

Table 1. Emission Inventory Contacts.

Contact	Address	Inventory Area
Peter A. Hessling, Pinellas County Department of Environmental Management, Air Quality Division	300 South Garden Avenue Clearwater, Florida 33756 (727) 464-4422	Coordinate Inventory, Overall Inventory Report
Yi Zhu, Office of Policy Analysis and Program Management, Florida Department of Environmental Protection	2600 Blairstone Road MS 5500 Tallahassee, Florida 32399 (850) 488-0114	Stationary Area Sources
Richard McElveen, Bureau of Air Monitoring and Mobile Sources Florida Department of Environmental Protection	2600 Blairstone Road MS 5510 Tallahassee, Florida 32399 (850) 921-9582	On-Road Mobile Sources, Locomotive, Non-Road Engines & Equipment
Gary Robbins, Pinellas County Department of Environmental Management, Air Quality Division	300 South Garden Avenue Clearwater, Florida 33756 (727) 464-4422	Stationary Point Sources, Review Point Sources Contribution
Bob Soptei, Pinellas County Department of Environmental Management, Air Quality Division	300 South Garden Avenue Clearwater, Florida 33756 (727) 464-4422	Review Report
Pwu-Sheng Liu, Pinellas County Department of Environmental Management, Air Quality Division	300 South Garden Avenue Clearwater, Florida 33756 (727) 464-4422	Stationary Point Sources Emissions Calculation, Stationary Area Sources, Aircraft, Marine Vessels, Organize Data, Report Writing

⁴ Tom Rogers, Office of Policy Analysis and Program Management, Florida Department of Environmental Protection.

(This page is intentionally left blank.)

2.0 Pinellas County Emissions Summary

Ozone precursor emissions are estimated for the 2000 calendar year in tons per year (tpy). The emissions calculations are based on annual activity obtained from actual data. Similarly, daily emissions for each category and subcategory are estimated for a typical weekday during the ozone season. The seasonal emissions are reported in pounds per day (lb/day) or tons per day (tpd) and are based on actual 2000 activity data. The seasonal daily emissions for point, area, and mobile sources are calculated with seasonal throughputs during ozone season (June, July and August). Biogenic emissions are estimated by EPA model - BEIS (Biogenic Emissions Inventory System); this model generates daily emissions.

Table 2. Pinellas County 2000 Emissions Inventory Update.

2000 Update Major Source Category	VOC Emissions		CO Emissions		NOx Emissions	
	Tpd Seasonal	Tpy Annual	Tpd Seasonal	Tpy Annual	Tpd Seasonal	Tpy Annual
Stationary Point Sources	4.01	1,209.16	2.75	649.74	26.63	4,864.50
Stationary Area Sources	36.98	11,560.62	2.62	949.56	3.74	1,299.28
On-Road Mobile Sources	37.66	14,128.11	431.59	161,888.61	58.40	21,906.39
Non-Road Mobile Sources	19.57	6,067.95	283.55	84,433.86	24.19	6,368.63
Biogenic Sources	29.50	n/a	0.00	n/a	0.02	n/a
Total Emissions	127.72	32,965.83	720.52	247,921.78	112.98	34,438.80

2.1 Anthropogenic Sources

On-road mobile sources and stationary area sources continue to be a dominant origin of anthropogenic VOC emissions in Pinellas County. However, when compared to all sources, biogenic source emissions are also a significant contributor to atmospheric ozone formation. Figure 1 illustrates the contribution of each major source category to the total VOC inventory. On-road mobile sources emit 38 tons of VOC/day about the same as area sources emissions. Emissions from on-road mobile sources are dependent on federal and state regulations. As a result of the abolishment of the Florida Motor Vehicle Inspection Program in calendar year 2000; modeled VOC emissions from on-road sources are higher because the Inspection/Maintenance credit in EPA's MOBILE6 model is not used. Emissions from area sources are uncontrolled emission points in the County. Individual area sources do not emit large quantities, however, collectively their emissions are significant. Figures 2 and 3 show the percent contribution of the different source categories to NOx and CO emissions, respectively. As in previous inventory years, on-road mobile sources are the dominant emitters of NOx and CO in the County. The average daily vehicle miles traveled (ADVMT) on the County roadway network are estimated by the Florida Department of Transportation. For calendar year 2000, the ADVMT for Pinellas County is 18,873,458 miles during the summer months. Although the ADVMT continues to increase each year, federal regulations toward with respect to fuels and vehicle emissions result in emission reductions that keep pace with ADVMT growth in Pinellas County.

As previously stated in section 1.1 Geographic and Demographic Description, the industrial base in Pinellas County consists of light manufacturing and high technology facilities. Consequently,

there are few large external combustion point sources operating in the County. As a result, the stationary point source contribution to the total NOx inventory is only 23.6%.

Each major source category, with the exception of biogenic sources, is further broken down into subcategory classifications in subsequent sections of this report. A more detailed summary of emissions is included in the respective sections and complete tables are located in the technical appendix.

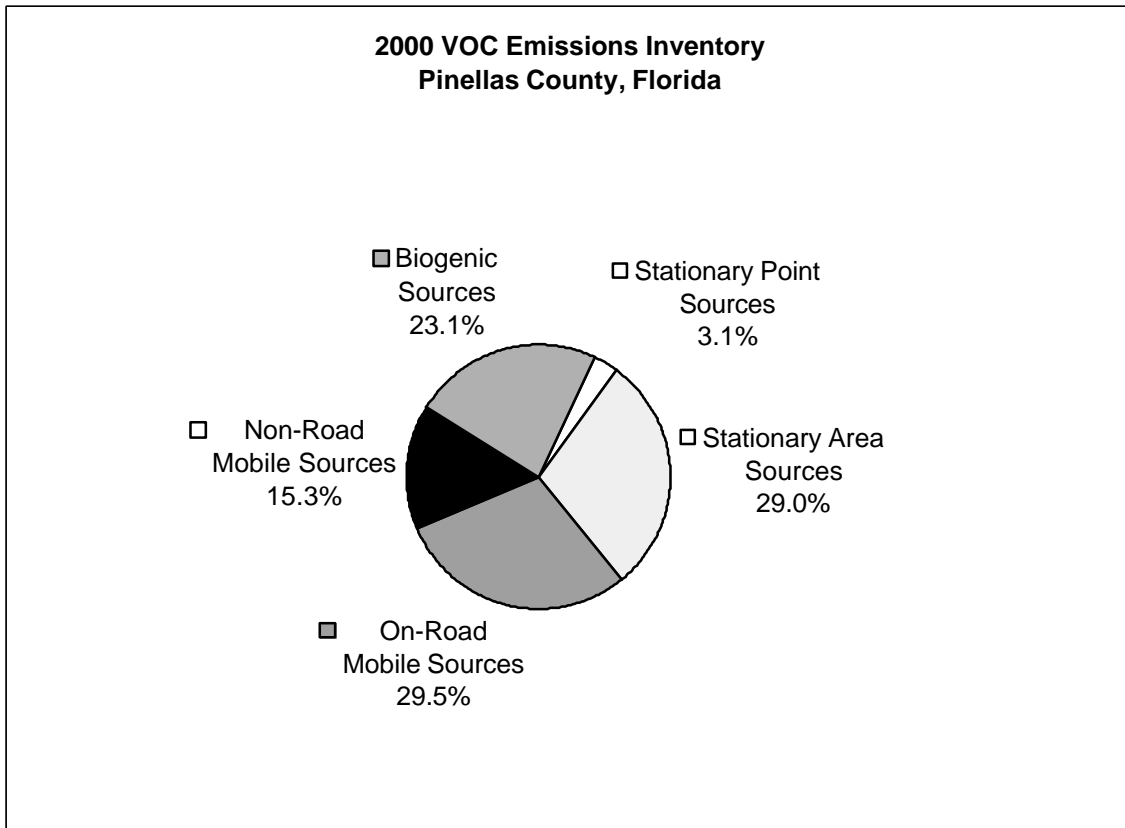


Figure 1. 2000 VOC Emissions Inventory.

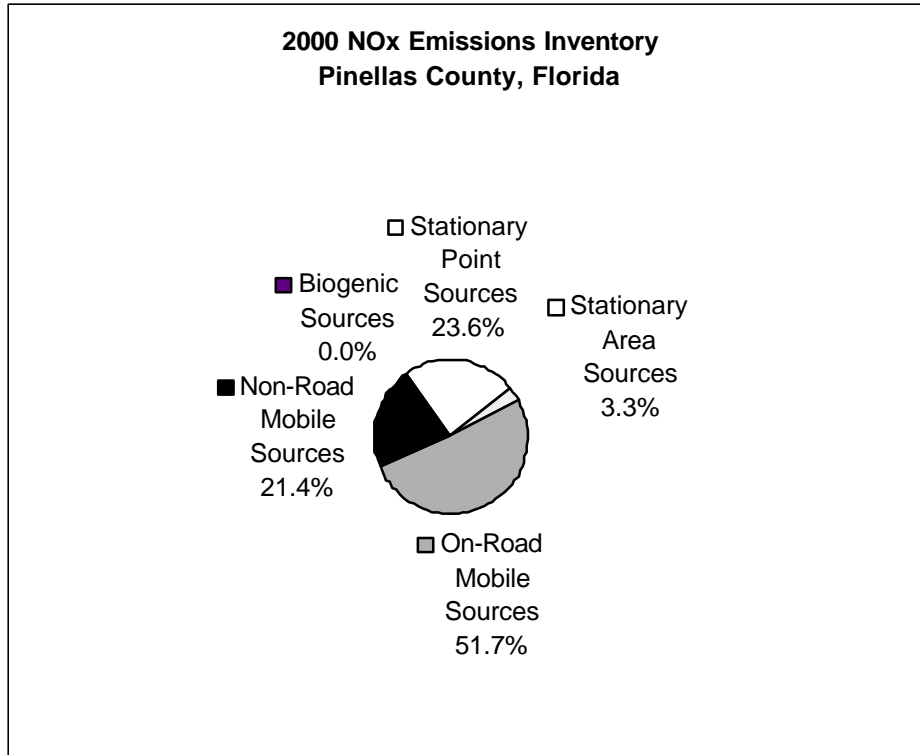


Figure 2. 2000 NOx Emissions Inventory.

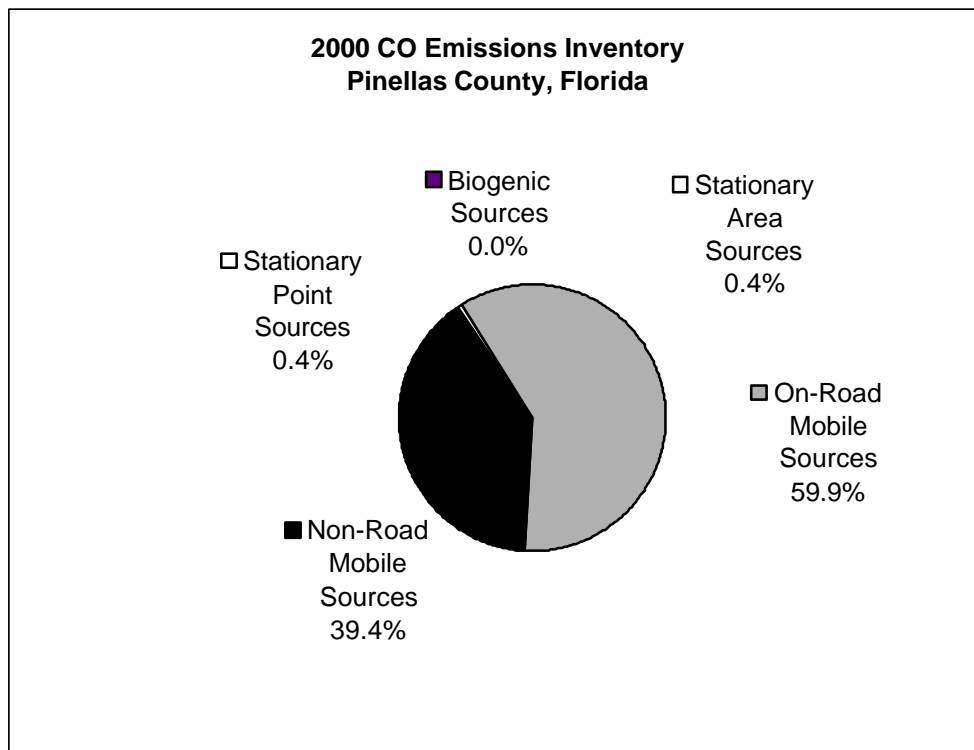


Figure 3. 2000 CO Emissions Inventory.

2.2 Inventory Comparison and Analysis

In February 1995, the FDEP submitted to EPA an ozone maintenance plan as part of the redesignation request for the Tampa Bay ozone nonattainment area. The maintenance plan requires an emissions inventory update of the base year inventory for calendar years 1990, 1994, 1997, and 2000. Furthermore, the maintenance plan projected emissions levels for these years that serve as motor vehicle emissions budgets for conformity⁵ purposes. Table 3 and figures 4 and 5 show a comparison of the 1990 Base Year inventory with the inventory updates compiled in 1994, 1997 and 2000 for VOC and NO_x, respectively.

As the result of changing methodologies, models, etc. caution should be used when comparing emission inventory numbers from year to year. For example, the MOBILE model has been improved. The MOBILE6 model used for this inventory produces higher nitrogen oxides emission factors than its predecessors (MOBILE5) for calendar year 2000.

Table 3. Pinellas County Emissions Inventory Comparison

Source Category	VOC tpd				NO _x tpd			
	1990	1994	1997	2000	1990	1994	1997	2000
Anthropogenic Sources								
Stationary Point Sources	6.70	5.20	2.60	4.01	19.09	20.70	27.19	26.63
Stationary Area Sources	50.79	49.57	50.00	36.98	8.69	6.96	8.08	3.74
On-Road Mobile Sources	76.35	46.61	41.12	37.66	51.10	48.29	44.84	58.40
Non-Road Mobile Sources	25.18	25.92	25.46	19.57	17.34	17.33	17.46	24.19
Total	159.02	127.30	119.18	98.22	96.22	93.28	97.57	112.96

⁵ Transportation Conformity Criteria And Procedures. FDEP: Tallahassee, Florida, 1998

VOC Emission Trends Pinellas County, Florida

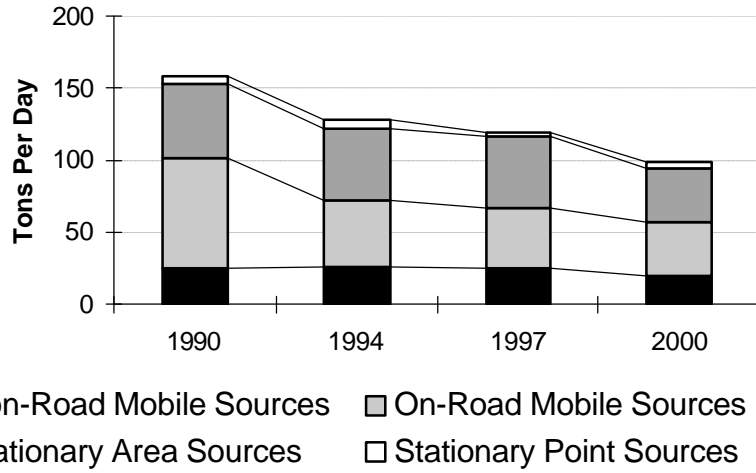


Figure 4. VOC Trend.

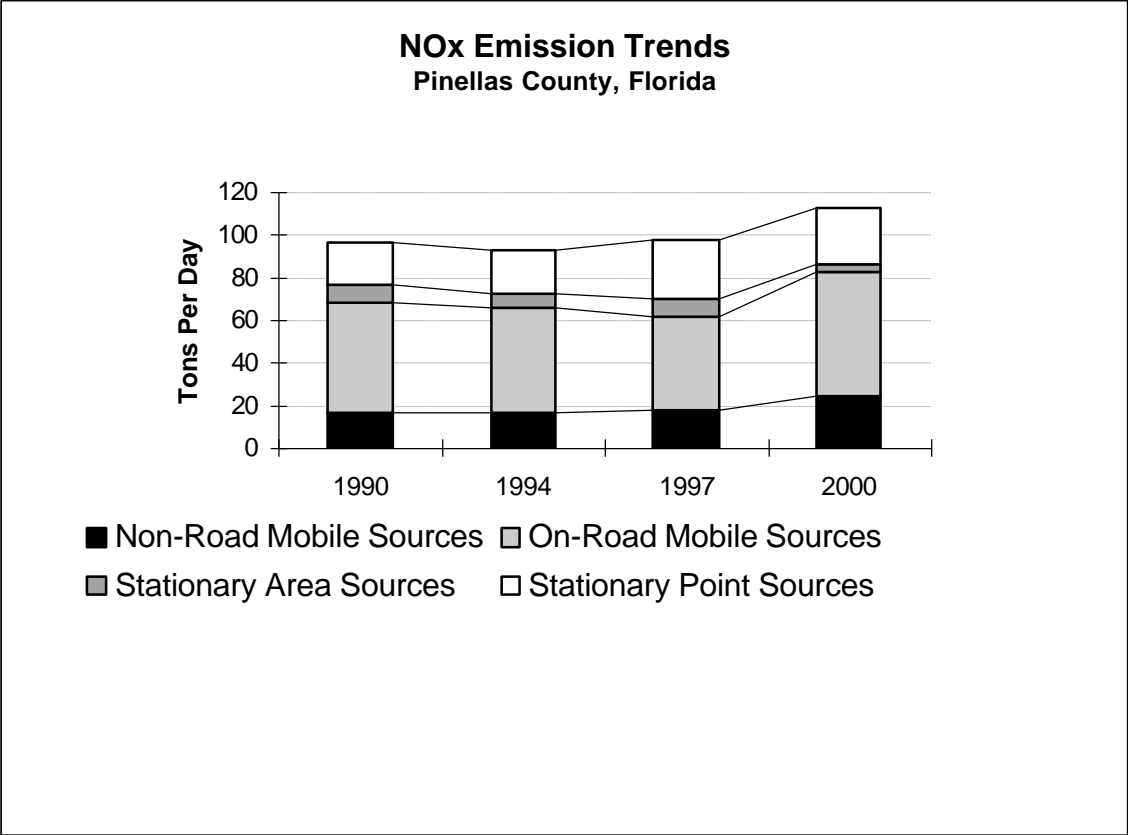


Figure 5. NOx Trend.

The Tampa Bay Area Maintenance Plan⁶ is part of the Florida SIP and contains projected emission levels for 1994, 1997, and 2000. Table 4 compares the projected emissions with emission inventory (EI) estimates for 2000. Actual emission estimates of volatile organic compounds, in 2000, are less than projected emissions. However, the inventoried emissions for oxides of nitrogen are approximately 23.9 tons per day higher.

Table 4. Comparison of 2000 Ozone Season Projections to Actual Estimates

Category	VOC (tpd)		NOx (tpd)	
	Projection	EI	Projection	EI
Stationary Point Sources	15.2	4.0	15.7	26.6
Stationary Area Sources	52.0	37.0	10.0	3.7
On-Road Mobile Sources	33.9	37.7	43.4	58.4
Non-Road Mobile Sources	29.0	19.6	20.0	24.2
Total	130.2	98.2	89.1	113.0

⁶ State of Florida State Air Implementation Plan, Redesignation Request and Attainment/Maintenance Plan for the Tampa Bay Florida Ozone Nonattainment Area Part Two. FDEP: Tallahassee, Florida. 1995

3.0 Stationary Point Sources

Stationary point sources are stationary, identifiable sources of emissions that release pollutants into the atmosphere. A single facility may contain many emission units, which fall into several point source categories. For the purposes of this inventory stationary point sources are defined as any permitted facility that was required to submit an “Annual Operating Report” (AOR). By state rule⁷, all Title V sources, all synthetic non-Title V sources, all facilities with the potential to emit ten (10) tons per year or more of volatile organic compounds or twenty-five (25) tons per year or more of nitrogen oxides and located in an ozone nonattainment area or ozone air quality maintenance area, and all facilities for which an annual operating report is required by rule or permit are required to submit an annual operating report. The AOR requires reporting for any pollutant which is subject to an emissions limiting standard, either by rule or permit condition, regardless of the amount. Also, for VOC, CO, and NOx emissions that do not have emission limiting standards, emissions have a reporting threshold of 5 tons/year per SCC. For this inventory, Pinellas County calculated VOC, CO, and NOx emissions, regardless of the level, if there was available information, such as emission factors. The emission levels reported here are estimates of actual emission based on operating activity during the 2000 calendar year and the three-month (June, July, and August) ozone season.

Point sources comprise various combustion, manufacturing and production activities. In Pinellas County, the stationary point source emissions are grouped according to similar activities or processes. The subcategory groupings were determined by methodologies employed in the 1990 Base Year Inventory and are identified as follows:

\$	Storage, Transport and Marketing of Volatile Organic Liquids	\$	Other Solvent Utilization
\$	Industrial Processes and Bioprocesses	\$	Waste Disposal, Treatment and Recovery
\$	Industrial Surface Coating	\$	External Combustion
\$	Non-Industrial Surface Coating	\$	Internal Combustion

As previously stated in section 1.1, the industrial base in Pinellas County consists of light manufacturing and high technology businesses. There are no point sources emissions from the storage, transport and marketing of petroleum products or non-industrial surface coating operations. These emissions are compiled as stationary area sources. Table 5 summarizes emissions from stationary point sources in the County. The majority of VOC emissions in this source category are the result of Solvent Evaporation, and Industrial Processes and Bioprocesses. They constitute 32.7 % and 32.3 % respectively of the total point source inventory in the ozone season. The majority of NOx emissions come from Internal Fuel Combustion sources that contribute about 50.8 % of the total point source inventory in the ozone season. External Fuel Combustion contributes the most CO emissions: 48.6 % in the ozone season.

⁷ Rule 62-210.370 (3), F.A.C., the Annual Operating Report for Air Pollution Emitting Facility

Table 5. 2000 Stationary Point Source Emissions

2000 Update	VOC		CO		NOx	
Stationary Point Sources	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual
Storage, Transportation, and Marketing of VOL	0.00	0.00	0.00	0.00	0.00	0.00
Industrial Process & Bioprocess	2,578.48	366.34	0.00	0.00	31.63	2.79
Solvent Evaporation	2,645.67	473.35	76.69	9.52	157.71	20.68
Non-industrial Surface Coating	0.00	0.00	0.00	0.00	0.00	0.00
Industrial Surface Coating	2,156.82	291.00	279.91	26.57	15.23	3.37
Waste Disposal	129.80	23.53	404.55	92.84	7,466.70	1,357.26
External Combustion	443.66	51.50	2,674.44	406.77	18,542.38	2,069.60
Internal Combustion	61.25	3.44	2,071.51	114.05	27,050.13	1,410.80
POINT SOURCE TOTAL	8,015.68	1,209.16	5,507.10	649.74	53,263.78	4,864.50

3.1 Rule Effectiveness

The emissions of stationary point sources in Pinellas County are inventoried individually and are subject to periodic compliance inspections. Certain subcategories are subject to a state or federal rule, or regulatory program and therefore, the emissions calculation is adjusted by the ability of a regulatory program to achieve expected emission reductions. This adjustment factor is addressed through rule effectiveness (RE). The intent behind the RE factor is to account for the fact that most emission control equipment does not achieve emission reductions at the designed rates at all times and under all conditions and that some intentional noncompliance exists. Process upsets, control equipment malfunctions, operator error, equipment maintenance, and other non-routine operations are examples of times when control performance is expected to be less than optimal. Although Pinellas County annually inspects all point sources for compliance with applicable regulatory programs, this inventory remains consistent with the 1990 Base Year Inventory in applying rule effectiveness.⁸ The national default of 80% rule effectiveness has been used in preparing this inventory for facilities having control devices.

3.2 Point Source Inventory Methodology

Pinellas County created a detailed point source database for calculating and reporting emissions for the 2000 Ozone SIP Inventory. This AQ ACCESS© (Microsoft Access®) database is maintained by the Pinellas County Department of Environmental Management, Air Quality Division. The database utilizes the Fire 6.23 emission factor data table from EPA's *Air Chief*, Version 9, as an emission factor lookup table. The data table consolidates emission data from AP-42, Fire 6.23, XATEF, AFSEF, and special EPA sponsored studies. Since Fire 6.23 does not contain all the emission factors contained in *Air Chief*, Version 9, the other emission factor tools contained in *Air Chief*, Version 9 were used to supplement the emission factor table. Other emissions factors were calculated by Pinellas County, when site-specific information, such as stack testing data, was known. The activity data reported by each facility along with annual and seasonal daily emission are compiled in a separate report included in appendix B.

The general methodology for estimating stationary point source emissions is defined by the following formulas for both annual emissions and ozone daily emissions:

Annual Emissions in Tons/year

$$EMA_{ijk} = PR_{ik} \times ef_i \times PRCNT_{ij} \times (1 - C_{ij} \times RE) / 2000$$

where;

EMA_{ijk} / the annual inventory, k, point source emissions of pollutant, i, for activity, j, in tons/year;

PR_{ik} / the process rate for pollutant, i, and activity, j, in Emission Units/year;

⁸ Pinellas County Department of Environmental Management, 1990 Base Year Ozone Emission Inventory For Volatile Organic Compounds (VOC) Total Oxides Of Nitrogen (NOx) And Carbon Monoxide (CO) for Pinellas County, Florida Marginal Ozone Nonattainment Area (Revised). Pinellas County, Florida, September 1993, p. 12.

ef _i	/	the applicable emissions factor for pollutant, i, in lbs/Emission Unit;
PRCNT _{ij}	/	the percentage of pollutant, i, per unit of activity, j;
C _{ij}	/	capture efficiency x control efficiency (expressed in percent), C _{ij} equals zero if no control device is in place, for pollutant i, and activity, j;
RE	/	rule effectiveness, an adjustment to C _{ij} to account for failures and uncertainties that affect the actual performance of control = 0.8.
2000	/	conversion factor for lbs/ton.

Ozone Season Daily Emissions in Lbs/day

$$EMS_{ijk} = PRO_{ik} \times ef_i \times PRCNT_{ij} \times (1 - C_{ij} \times RE)$$

where;

EMS _{ijk}	/	the ozone season inventory, k, point source emissions of pollutant, i, for activity, j, in lbs/day;
PRO _{ik}	/	the ozone season process rate for pollutant, i, and activity, j, in Emission Units/day;
ef _i	/	the applicable emissions factor for pollutant, i, in lbs/Emission Unit;
PRCNT _{ij}	/	the percentage of pollutant, i, per unit of activity, j;
C _{ij}	/	capture efficiency x control efficiency (expressed in percent), C _{ij} equals zero if no control device is in place, for pollutant i, and activity, j;
RE	/	rule effectiveness, an adjustment to C _{ij} to account for failures and uncertainties that affect the actual performance of control = 0.8.

The following is an example calculation, estimating emissions from a stationary point source surface coater. All emission factors are reported in pounds per a given process rate.

Category: Surface Coating - Coil Coater with a Control Device.
Annual VOC emissions in tons per year (tpy)

Step 1:

Calculate a site-specific overall control efficiency (oce_i), from stack test data, given: Capture efficiency (ce_i) = 100%, destruction efficiency (de_i) = 98.9%.

$$\begin{aligned}
 \text{Calculation: } oce_i &= (1 - (1 - ce_i))(1 - (1 - de_i)) * 100\% \\
 &= (1 - (1 - 1))(1 - (1 - .989)) * 100\% \\
 &= (1 - 0)(1 - .011) * 100\% \\
 &= (1)(.989) * 100\% \\
 &= 98.9\%
 \end{aligned}$$

Calculate emission factor (pounds/process rate), given that process rate is in tons VOC applied; and overall control efficiency = 98.9% or 0.989.

Step 2:

Calculate annual emissions where the process rate, given as tons of solvent in coating, $PR_{ik} = 92.37$ tpy; $ef_i = 2000$ lbs/ton; $PRCNT_{ij} = 1$ (100%); $RE = 0.8$.

$$\begin{aligned}EMA_{ijk} &= PR_{ik} \times ef_i \times PRCNT_{ij} \times (1 - C_{ij} \times RE) / 2000 \\ &= 92.37 \text{ tpy} \times 2000 \text{ lbs/ton} \times 1.0 \times (1 - (0.989 \times 0.8)) / 2000 \\ &= 19.29 \text{ tpy}\end{aligned}$$

Calculate ozone daily emissions where the daily process rate, $PRO_{jk} = 0.26$ tpd.

$$\begin{aligned}EMS_{ijk} &= PRO_{jk} \times ef_i \times PRCNT_{ij} \times (1 - (C_{ij} \times RE)) \\ &= 0.26 \text{ tpd} \times 2000 \text{ lbs/ton} \times 1.0 \times (1 - (0.989 \times 0.8)) \\ &= 108.58 \text{ lbs/day}\end{aligned}$$

4.0 Stationary Area Sources

The estimates for the stationary area source categories reflect aggregate emissions at the county level. They collectively represent groups of sources that are small and numerous, and are not inventoried as specific point, mobile, or biogenic sources. For purposes of the 2000 Emissions Inventory Update, area sources are defined as; 1) unpermitted facilities emitting less than 10 tons per year of VOCs and less than 25 tons per year of NOx, 2) individual activities not regulated by permit, and 3) commercial and consumer product uses.

The stationary area source categories are grouped according to similar uses, processes, or estimation methods. The subcategory groupings were determined by methodologies employed in the 1990 Base Year Inventory and are identified as follows:

\$	Storage, Transport and Marketing of Volatile Organic Liquids	\$	Solvent Utilization
\$	Industrial Processes and Bioprocesses	\$	Waste Disposal, Treatment and Recovery
\$	Industrial Surface Coating	\$	External Combustion of Fossil Fuels
\$	Non-Industrial Surface Coating		

This inventory contains a comprehensive and detailed inventory of area sources. The primary estimation methods for most stationary area sources come from the Emissions Inventory Improvement Program (EIIP). EIIP is a jointly sponsored effort of EPA and the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials (STAPPA/ALAPCO). EIIP has developed a set of “preferred and alternative methods” for inventory tasks. EPA has indicated that where appropriate emissions inventories should be prepared using EIIP methods instead of existing Federal guidance. Due to the time constraint and cost, the alternative methods are used for most of the area sources emissions inventory. FDEP has used the top-down method for several area sources categories as shown in table 6.

The Pinellas County Air Quality Division has made modifications to FDEP’s inventory and added more subcategories. Emissions from aircraft refueling, brewery/winery, catastrophic-accidental release, charbroiling restaurants, marine vessel blasting, open burning, polyester resin plastic products, structure fire, vehicle fire, wastewater treatment plants, wildfire, and residential wood combustion were estimated by Air Planning staff. Table 6 shows all the categories inventoried and the adjustments to FDEP’s methods. The point-source contributions, non-VOC emissions, rule penetration factors, seasonal activity factors, and available local-specific data were used to adjust for the actual area source emissions inventory. Stationary area source emissions are summarized by subcategory in table 7.

Table 6. Area Sources Categories and Modified FDEP Methods.

Area Categories	Modification on methodology
Aircraft Refueling	
Architectural Coating	PC AQD took 20% reduction from FDEP's estimation to account for 1998 regulations 40 CFR 59 (rule penetration).
Asphalt Paving	
Asphalt Roofing Kettle	
Auto Body Refinish	
Bakery	PC AQD used surveyed data for calculating emissions from straight dough and sponge dough.
Brewery/winery	
Catastrophic-Accidental Release	
Charbroiling Restaurant	
Coal Combustion	Did not report, source information is not reliable.
Consumer Commercial Solvent	
Crematory	
Dry Cleaners	PC AQD used ASGP data and calculated actual perc usage and surveyed the Stoddard solvent dry cleaners.
Fuel Oil Kerosene Combustion	PC AQD used US Census employment data to apportion commercial/institutional, and industrial usage from state emissions; and household data for residential usage.
Gasoline Marketing	PC AQD modified stage I emission factors for permitted facilities.
Graphic Arts	PC AQD subtracts point sources contribution from FDEP data.
Industrial Surface Coating	
Marine Vessel L_B_T	
Natural Gas_LPG Combustion	PC AQD modified emissions with 2000 data, and used employment and household data to apportion the state emissions.
Open Burning	
Paved Road	
Pesticides	FDEP used top-down method. PC AQD chose to use local data for emissions calculation.
Polyester Resin Plastic Product	
Prescribed Burning	
Solvent Cleaning	PC AQD subtracted the non-VOC emissions from area sources under Title V general permits.
Structure Fires	
Traffic Marking	PC AQD used water-based emission factors (40 CFR 261.24).
Vehicle Fires	
Wastewater	
Wildfire	
Wood Combustion	

Table 7. 2000 Stationary Area Source Emissions.

2000 Update Stationary Area Sources	VOC		CO		NOx	
	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual
Storage, Transportation, and Marketing of VOL	7,996.95	1,446.49	0.00	0.00	0.00	0.00
Industrial Process & Bioprocess	999.77	172.76	0.00	0.00	0.00	0.00
Solvent Evaporation	34,789.65	5,974.21	0.00	0.00	0.00	0.00
Non-industrial Surface Coating	11,479.44	1,387.02	0.00	0.00	0.00	0.00
Industrial Surface Coating	18,146.57	2,359.05	0.00	0.00	0.00	0.00
Waste Disposal	151.15	20.92	334.08	60.80	23.31	4.24
External Combustion of Fossil Fuels	393.79	200.15	4,912.73	888.76	7,454.91	1,295.04
Stationary Internal Combustion	0.00	0.00	0.00	0.00	0.00	0.00
AREA SOURCE TOTAL	73,957.33	11,560.62	5,246.81	949.56	7,478.22	1,299.28

Solvent evaporation is the major VOC contributor to area sources emissions and accounts for 47% of the total emissions during ozone season. This category includes traffic marking, architectural coating, surface coating, dry cleaners, degreasers, asphalt paving, asphalt roofing, auto refinishing, graphic arts, and consumer/commercial solvent use. External combustion of fuels is the major area source for CO and NOx emissions.

4.1 Accounting for Point Source Emissions

When a point source inventory and an area source inventory estimate emissions from the same process, there is the possibility that emissions could be double counted. The basic equation to correct the area sources emissions as follow:

$$\text{Area Source Activity} = \text{Total Activity of Source Category} - \text{Sum of Point Source Activity}$$

In this inventory, possible double counting was examined. The detailed information of point sources as names of facilities and emissions data are included in another document.

Graphic Arts

Total VOC Emissions from Graphic Arts
 = Population of the County * 0.00065 tons VOC per capita
 = 921,482 * 0.00065 tons/person
 = 598.96 tons/year

According to Pinellas County Air Quality Division's database, there were 160.80 tons VOC emissions from permitted facilities in 2000.

Graphic Arts Area Sources VOC Emissions
 = Total emissions – Point Sources Emissions
 = 598.96 tons/year – 160.80 tons/year

= 438.17 tons/year

4.2 Rule Penetration

Rule penetration is the percentage of the area source category that is covered by an applicable regulation or is expected to be complying with that regulation. In this inventory specific regulations apply to the area source categories for open burning, architectural coating, and traffic marking. Rule penetration is calculated as:

$$\text{Rule Penetration} = \frac{\text{Uncontrolled Emissions Covered by Regulation}}{\text{Total Uncontrolled Emissions}} * 100$$

Examples of this adjustment are discussed below.

Open Burning

Open burning includes the burning of land clearing material, yard trash, and agricultural wastes. In Florida the open burning of yard waste is prohibited under Florida Administration Code Rule 62-256.700(2) in urbanized counties/areas where there is regular refuse service. Pinellas County ordinances prohibit the open burning of land clearing debris. In addition, most of the municipalities ban all kinds of open burning except campfires, bonfires, and fires for cooking.

EPA however has estimated the emissions from land clearing for Pinellas County based on open acres burned using assumed surrogates. These surrogates include housing start data, construction cost for non-residential structures, and roadway construction expenditures. Pinellas County is the most densely populated county in Florida (3,289 persons per square mile⁹), and undeveloped land is limited to less than 5% of the current land use plan. Much of the undeveloped land is dedicated to parks, conservation easements, etc. New housing starts do not always involve with land clearing operations, as some is done through demolition and renovation of exiting structures.

Pinellas County Air Quality Division performed a phone survey of 19 fire departments and Division of Forestry, Florida State Department of Agriculture. The results showed that most of the local fire departments do not allow any open burning. Agricultural burning is also regulated by the Division of Forestry. Only one fire department in the northern part of the county has issued six land clearing open burn permits during 2000 to 2001. Usually vegetation is cleared and hauled for mulching/recycling or taken to a landfill. As a result, Pinellas County Air Quality Division elected to use a rule penetration of 95% to adjust the final emissions for open burning.

$$\begin{aligned} &\text{VOC Emissions from Open Burning} \\ &= \text{EPA estimated emissions} * (1 - \text{Rule Penetration}) \\ &= 83.15 \text{ tons/year} * (1 - 0.95) \\ &= 4.2 \text{ tons/year} \end{aligned}$$

⁹ University of Florida, Bureau of Economic and Business Research, 2000.

Architectural Coating

According to the final rule in 40 CFR 59, National Volatile Organic Compound Emission Standards for Architectural Coatings, dated September 11, 1998, EPA has stated in the general preamble that 20 percent decrease in VOC emissions from architectural coating would be achieved. Manufacturers were to comply with this rule by no later than March 2000. FDEP has acknowledged the new standards and impact, and projected a 20 % reduction for year 2000 in the Tampa Bay area maintenance plan¹⁰. Thus the rule penetration for architectural coating is 20%.

$$\begin{aligned} & \text{VOC Emissions from Architectural Coating} \\ & = \text{Pinellas County Paint Usage} * \text{Emissions Factor for solvent based paint} * (1-0.2) \\ & \quad + \text{Pinellas County Paint Usage} * \text{Emissions Factor for water based paint} * (1-0.2) \\ & = 423085.6 \text{ gallons/year} * 3.87 \text{ lbs/gallon} / 2000 \text{ lbs/ton} * 0.8 \\ & \quad + 168677.2 \text{ gallons/year} * 0.74 \text{ lbs/gallon} / 2000 \text{ lbs/ton} * 0.8 \\ & = 654.9 \text{ tons/year} + 499.3 \text{ tons/year} \\ & = 1154.23 \text{ tons/year} \end{aligned}$$

4.3 Source Classification Codes

This inventory contains EPA's current listing of area source classification codes (SCCs) and their descriptions. These codes are used as a primary data element identifier in EPA's Factor Information and Retrieval database (FIRE) version 6.23. Some of the source categories have point source SCCs with 8 digits, while some of the area source categories have SCCs with 10 digits and are preceded by the letter A. Table 8 lists the SCCs for all the area sources inventoried in this report.

4.4 Ozone Season Emissions

The ozone season emissions for NO_x, VOC and CO can be calculated with two methods: 1) use actual emission data in the month of June, July and August; 2) convert annual emissions with EIIP suggested adjustment factors. The actual activity data for gasoline marketing, natural gas combustion, prescribed burning and non-agricultural pesticide application were available.

The typical seasonal emissions per day is calculated by dividing seasonal emissions with operating days in the season:

$$1. \text{ Typical Seasonal Emissions per day} = \frac{\text{Emissions per season}}{\text{Operating days/week} * \text{Operating weeks/season}},$$

Or using EPA suggested adjustment factors;

¹⁰ State of Florida Department of Environmental Protection Proposed Revision to State Implementation Plan Number 2000-02 Removal of Motor Vehicle Inspection Program Reduction Credits from the Tampa Bay Area Ozone Maintenance Plan, August 29, 2000.

$$2. \text{ Typical Seasonal Emissions per day} \\ = \frac{\text{Annual Emissions tons/year} * 2000 \text{ lbs/ton} * (\text{SAF}/0.25)}{\text{Days per week} * \text{Weeks per year}}$$

where

$$\text{SAF} = \text{Seasonal Activity Factor} = \left[\frac{\text{Peak Period Activity}}{\text{Annual Activity}} \right] * \left[\frac{\text{Months of Inventory Season}}{\text{Months of Peak Activity}} \right]$$

The recommended SAF, and days per week data are available in EIIP document, Volume III, Chapter 1, Table 1.4-3 Area Source Seasonal Activity Factors and Days per Week for the Peak Ozone and CO seasons.

Actual Emissions Method: Stage I VOC Emissions

The monthly gasoline throughputs for Pinellas County were available. The seasonal activity can be calculated as follows:

$$\begin{aligned} \text{Seasonal Activity} &= \text{Throughput in June} + \text{Throughput in July} + \text{Throughput in August} \\ &= (30,968.56 + 30,106.65 + 30,438.90) \times 1000 \text{ gallons} \\ &= 91,514.11 \times 1000 \text{ gallons} \end{aligned}$$

$$\begin{aligned} \text{Seasonal lbs/day} &= 91,514.11 \times 1000 \text{ gallons} * 0.3 \text{ lbs/1000 gallons} / (6 \text{ days/week} * 13 \text{ weeks}) \\ &= 352 \text{ lbs/day} \end{aligned}$$

Seasonal Adjustment Method: Residential Natural Gas Combustion

EIIP document suggests SAF = 0.15, for residential natural gas combustion.

$$\begin{aligned} \text{Seasonal NOx lbs/day} &= 57.21 \text{ tons/year} * 2000 \text{ lbs/ton} * (0.15/0.25) / 7 \text{ days/week} * 52 \text{ weeks} \\ &= 188.60 \text{ lbs/day} \end{aligned}$$

Table 8. Seasonal Activity Factors and Days in Week data for Area Sources Inventory

Major Source Category Name	Subcategory Source Name	SCC_CODE	Days in Week	SAF
AS: Aircraft Refueling	Aviation Gasoline	A2505000120	7	0.24
AS: Aircraft Refueling	Jet Fuel	A2275900000	7	0.24
AS: Architectural Coatings	Architectural Coatings - Solvent-based	A2401001000	5	0.27
AS: Architectural Coatings	Architectural Coatings - Water-based	A2401001000	5	0.27
AS: Asphalt Paving	Cutback Asphalt Paving	A2461021000	7	0.25
AS: Asphalt Paving	Emulsified Asphalt Paving	A2461022000	7	0.25
AS: Asphalt Roofing Kettles	Asphalt Roofing Kettles	A2461023000	5	0.25
AS: Auto Refinishing: SIC 7532	Auto Refinishing: SIC 7532	A2401005000	5	0.25
AS: Bioprocess	Bakeries	A2302050000	7	0.25
AS: Bioprocess	Breweries	A2302070001	4	0.25
AS: Bioprocess	Wineries	A2302070005	5	0.25
AS: Consumer and Commercial Solvent Use	All Adhesives and Sealants	A2460600000	7	0.25
AS: Consumer and Commercial Solvent Use	All Automotive Aftermarket Products	A2460400000	7	0.25
AS: Consumer and Commercial Solvent Use	All Coatings and Related Products	A2460500000	7	0.25
AS: Consumer and Commercial Solvent Use	All FIFRA Related Products	A2460800000	7	0.25
AS: Consumer and Commercial Solvent Use	All Household Products	A2460200000	7	0.25
AS: Consumer and Commercial Solvent Use	All Personal Care Products	A2460100000	7	0.25
AS: Consumer and Commercial Solvent Use	Miscellaneous Products (Not Otherwise Covered)	A2460900000	7	0.25
AS: Crematories	Animal Crematories	31502101	7	0.25
AS: Crematories	Human Crematories	31502101	7	0.25
AS: Dry Cleaners	Stoddard Solvent Dry Cleaners	A2420010370	5	0.25
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Distillate Oil	A2103004000	6	0.15
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Kerosene	A2103011000	6	0.25
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Residual Oil	A2103005000	6	0.15
AS: Fuel Oil and Kerosene Combustion	Industrial Usage Distillate Oil	A2102004000	6	0.25
AS: Fuel Oil and Kerosene Combustion	Industrial Usage Kerosene	A2102011000	6	0.25
AS: Fuel Oil and Kerosene Combustion	Industrial Usage Residual Oil	A2102005000	6	0.25

Major Source Category Name	Subcategory Source Name	SCC_CODE	Days in Week	SAF
AS: Fuel Oil and Kerosene Combustion	Residential Usage Distillate Oil	A2104004000	7	0.08
AS: Fuel Oil and Kerosene Combustion	Residential Usage Kerosene	A2104011000	7	0.08
AS: Gasoline Marketing	Fuel Delivery to Outlets - Stage I	40600302	6	0.25
AS: Gasoline Marketing	Fuel Delivery to Outlets - Stage I	40600306	6	0.25
AS: Gasoline Marketing	Gasoline Trucks in Transit	A2505000120	7	0.25
AS: Gasoline Marketing	Storage Tank Breathing	A2501060200	7	0.25
AS: Gasoline Marketing	Vehicle Refueling (Stage II)	40600401	7	0.25
AS: Graphic Arts	Graphic Arts	A2425000000	7	0.25
AS: Hospitals	Sterilization	31502001	7	0.25
AS: Industrial Surface Coatings	Appliances	A2401060000	5	0.25
AS: Industrial Surface Coatings	Electrical Insulation	A2401065000	5	0.25
AS: Industrial Surface Coatings	Factory Finished Wood	A2401015000	5	0.25
AS: Industrial Surface Coatings	Furniture and Fixtures	A2401020000	5	0.25
AS: Industrial Surface Coatings	High-Performance Maintenance Coatings	A2401100000	5	0.25
AS: Industrial Surface Coatings	Machinery and Equipment	A2401055000	5	0.25
AS: Industrial Surface Coatings	Marine Coating	A2401080000	5	0.25
AS: Industrial Surface Coatings	Metal Containers	A2401040000	5	0.25
AS: Industrial Surface Coatings	Miscellaneous Manufacturing	A2401090000	5	0.25
AS: Industrial Surface Coatings	Other Special Purpose Coatings	A2401200000	5	0.25
AS: Industrial Surface Coatings	Other Transportation Equipment	A2401075000	5	0.25
AS: Industrial Surface Coatings	Sheet, Strip, and Coil	A2401050000	5	0.25
AS: Marine Vessel Ballasting and Transit	Ballasting	40600253	7	0.25
AS: Marine Vessel Ballasting and Transit	Transit	40600254	7	0.25
AS: Marine Vessel Ballasting and Transit	Transit	40600257	7	0.25
AS: Miscellaneous Sources	All Catastrophic/Accidental Releases	A2830001000	7	0.25
AS: Miscellaneous Sources	Prescribed Burning	A2810015000	7	0.65
AS: Miscellaneous Sources	Structure Fire	A2810030000	7	0.2

Major Source Category Name	Subcategory Source Name	SCC_CODE	Days in Week	SAF
AS: Miscellaneous Sources	Vehicle Fire	A2810050000	7	0.25
AS: Miscellaneous Sources	Wildfires	A2810001000	7	0.25
AS: Natural Gas and LPG Combustion	Commercial/Institutional LPG Combustion	A2103007000	6	0.15
AS: Natural Gas and LPG Combustion	Commercial/Institutional Natural Gas Combustion	A2103006000	6	0.21
AS: Natural Gas and LPG Combustion	Industrial LPG Combustion	A2102007000	6	0.25
AS: Natural Gas and LPG Combustion	Industrial Natural Gas Combustion	A2102006001	6	0.25
AS: Natural Gas and LPG Combustion	Residential LPG Combustion	A2104007000	7	0.08
AS: Natural Gas and LPG Combustion	Residential Natural Gas Combustion	A2104006010	7	0.15
AS: Open Burning	Open Burning	A2610000500	7	0.25
AS: Pesticide Application	Agriculture Pesticides	A2461800000	6	0.33
AS: Pesticide Application	Nonagricultural Pesticides	A2461800000	5	0.77
AS: Polyester Resin Plastic Product Manufacture	Boat Manufacturing	30800721	5	0.25
AS: Polyester Resin Plastic Product Manufacture	Boat Manufacturing	30800723	5	0.25
AS: Polyester Resin Plastic Product Manufacture	Boat Manufacturing	30800724	5	0.25
AS: Polyester Resin Plastic Product Manufacture	Reinforced Plastics	30800721	5	0.25
AS: Polyester Resin Plastic Product Manufacture	Reinforced Plastics	30800723	5	0.25
AS: Polyester Resin Plastic Product Manufacture	Reinforced Plastics	30800724	5	0.25
AS: Public Owned Treatment Works	Industrial Wastewater	A2630020000	7	0.35
AS: Residential Wood Combustion	Residential Wood Combustion	A2104008001	7	0
AS: Solvent Cleaning	Automobile Repair	A2415065000	6	0.25
AS: Solvent Cleaning	Electronics	A2415030000	6	0.25
AS: Solvent Cleaning	Manufacturing	A2415045000	6	0.25
AS: Traffic Marking	Traffic Markings	A2401008000	5	0.33

(This page is intentionally left blank)

5.0 Non-Road Mobile Sources

Non-road mobile sources consist of transportation vehicles such as aircraft, locomotives, marine vessels, and non-road engines and equipment. The source categories contained in EPA's NONROAD Emissions Model include agricultural equipment, airport equipment, commercial equipment, construction and mining equipment, industrial equipment, lawn and garden equipment (commercial and residential), logging equipment, pleasure craft, railroad equipment, and recreational equipment.

5.1 Aircraft, Locomotives, and Commercial Vessels

FDEP has estimated locomotive emissions for Pinellas County for a statewide emissions inventory. The emissions calculation is based on CSX Transportation (CSXT) fuel consumption during the year 2000, and EPA emission factors¹¹. Passenger trains do not operate in Pinellas County and the commercial cargo carrier (CSXT) has only one (1) train per day.

There are two emissions sources for commercial vessels in Pinellas County: 1) City of St. Petersburg, and 2) the U.S. Coast Guard. During 2000, St. Petersburg did not report any emissions in AOR, and U.S. Coast Guard has 2000 air emissions survey for reporting purposes. All non-road mobile source emissions are summarized by subcategory in table 7.

Emissions from aircraft are calculated using an FAA computer model together with aircraft fleet data and landing and take-off (LTOs) information for each airport in the County. There are three commercial airports in Pinellas County: St. Pete/Clearwater International Airport, Clearwater Executive, and Albert Whitted Airport.

5.2 Small Non-Road Engines and Equipment

These emissions are estimated by using EPA's NONROAD Emission Model version 2.1, December 1998. There are eleven source classifications in the model output. The important input parameters are:

Fuel RVP (psi)	7.80
Fuel Oxygen weight %	0.00
Gasoline Sulfur %	0.03
Diesel Sulfur %	0.33
LPG/CNG Sulfur %	0.00
Minimum Temperature	69.80
Maximum Temperature	91.30
Average Ambient Temp	84.1
Altitude of Region	LOW

¹¹ EPA Technical Highlights, "Emission Factors for Locomotives", December 1997.

The output of the EPA Non-Road model is included in appendix D. A summary of these emissions is included in table 9 and the detailed non-road mobile source table in appendix D.

Table 9. 2000 Non-Road Mobile Source Emissions

2000 Update Non-Road Mobile Sources	VOC		CO		NOx	
	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual
Aircraft	345.45	69.51	6,065.15	1,156.04	303.34	69.36
Locomotives	20.00	3.65	60.00	10.95	520.00	94.90
Commercial Vessel	0.60	0.11	20.00	3.65	34.00	6.21
Engines & Equipment	38,780.00	5,994.68	560,960.00	83,263.22	47,520.00	6,198.16
NON-ROAD TOTAL	39,146.05	6,067.95	567,105.15	84,433.86	48,377.34	6,368.63

6.0 On-Road Mobile Sources

Emission estimates for on-road mobile sources were developed using an area-wide analysis of the annual average daily vehicle miles traveled (AADVMT) by highway vehicles in Pinellas County. The estimates of AADVMT for Pinellas County were compiled by the Florida Department of Transportation, using the Highway Performance Monitoring System (HPMS). Summertime emission factors were determined for national average travel speeds using EPA's MOBILE6 emission factor model. The input variables selected for MOBILE6 reflect the current summertime Reid vapor pressure (RVP) of gasoline (7.8) and no credit for the Federal Motor Vehicle Control Program (FMVCP).

On-road mobile sources constitute motor vehicles traveling on the County roadway network. The County is an urban area with urban highway classification for all major facilities and local roads as defined by the Federal Highway Administration (FHWA). A summary of these emissions is included in table 10.

Table 10. 2000 On-Road Mobile Source Emissions

2000 Update On-Road Mobile Sources	VOC		CO		NOx	
	Tpd Seasonal	Tpy Annual	Tpd Seasonal	Tpy Annual	Tpd Seasonal	Tpy Annual
LDGV	17.03	6,386.30	184.75	69,298.15	12.15	4,555.71
LDGT1	11.21	4,205.89	138.72	52,032.14	7.94	2,978.42
LDGT2	5.99	2,247.36	74.30	27,870.62	3.37	1,265.01
HDGV	1.75	657.49	24.60	9,228.42	3.93	1,474.81
LDDV	0.02	6.86	0.04	15.30	0.04	15.49
LDDT	0.03	12.30	0.06	21.43	0.06	21.71
HDDV	1.34	501.88	6.99	2,621.91	30.77	11,543.17
MC	0.29	110.03	2.13	800.65	0.14	52.07
ON-ROAD TOTAL	37.66	14,128.11	431.59	161,888.61	58.40	21,906.39

6.1 VMT Estimation

The activity factor used for estimating emissions of on-road mobile sources is the average daily vehicle miles traveled (ADVMT) for each roadway facility class. Annual travel data is obtained from the Florida Department of Transportation, HPMS Universal Report. This data is outlined in table 11. For the ozone season, the AADVMT is adjusted by a seasonal adjustment factor (SAF) to reflect the average daily vehicle miles traveled for typical ozone season day. The seasonal adjustment factor is an average of the HPMS weekly factors during the ozone season. In Pinellas County, the SAF is 1.037.¹² The national average default speed (19.6 mph) is assumed for emissions modeling of highway vehicles as contained in MOBILE6.

¹² Electronic mail from Richard McElveen, Florida Department of Environmental Protection, Tallahassee, Florida. August 14, 2002. Appendix D.

Table 11. Pinellas County 2000 HPMS Data

Facility Class	Rural	Large Urbanized	County Total
Interstate	0	2,032,853	2,032,853
Turnpike/Freeway	0	229,080	229,080
Other Principal Arterials	0	4,968,094	4,968,094
Minor Arterials	0	5,139,516	5,139,516
Urban/Major Collectors	0	3,175,895	3,175,895
Rural/Minor Collectors	0	0	0
Locals	148,830	3,932,448	4,081,278
Total	148,830	19,477,886	19,626,716

6.2 Emissions Estimation

The EPA MOBILE6 emissions factor model was used to determine emission factors in grams per mile (g/mi) for each vehicle type. The ADVMT was disaggregated according to vehicle type by multiplying the facility total by the MOBILE6 vehicle mix. Table 12 lists the vehicle types and mix for the 2000 analysis year. The MOBILE6 input data utilized national default deterioration rates, mileage accrual, and vehicle mix. Emission factors were determined for July 1st of the analysis year, with a RVP of 7.8 psi. Total exhaust emissions for nonmethane hydrocarbons, carbon monoxide, and oxides of nitrogen were computed.

The following is an example calculation for estimating on-road mobile source emissions:

Category: LDGV - Seasonal NOx emissions in tons per day (tpd)

$$LDGV_{ijs} = VMT_j / SF \times MIX_k \times ef_{ik}$$

where;

- LDGV_{ijs} / 2000 light-duty gasoline seasonal day NOx emissions from principle arterial roadways;
- VMT_j / ADVMT on facility type, j;
- SF / Seasonal Factor, 1.037;
- MIX_k / MOBILE6 vehicle mix for vehicle type, k, in 2000;
- ef_{ik} / MOBILE6 emission factor for facility type, j, and vehicle type, k.

Calculation: $LDGV_{ijs} = 4,968,094 \text{ (mi/day)} / 1.037 \times 0.4841 \times 1.207 \text{ (g/mi)} / 454 \text{ (g/lb)} / 2000 \text{ (lb/ton)}$

$$LDGV_{ijs} = 3.08 \text{ tpd of NOx}$$

Table 12. MOBILE6 Vehicle Type and Mix for 2000

Vehicle type	Description	Mix
LDGV	Light-duty Gasoline Vehicles	0.4841
LDGT12	Light-duty Gasoline Trucks (6,500 lbs. GVW)	0.2894
LDGT34	Light-duty Gasoline Trucks (6,500 lbs. GVW)	0.0996
HDGV	Heavy-duty Gasoline Vehicles (8,500 lbs. GVW)	0.0359
LDDV	Light-duty Diesel Vehicles	0.0011
LDDT	Light-duty Diesel Trucks	0.0016
HDDV	Heavy-duty Diesel Vehicles (8,500 lbs. GVW)	0.082
MC	Motorcycles	0.0063

Technical Appendix

APPENDIX A: STATIONARY POINT SOURCES

APPENDIX B: STATIONARY AREA SOURCES

APPENDIX C: NON-ROAD SOURCES

Appendix A:
Stationary Point Sources

2000 Point Sources	VOC		CO		NOx	
Category	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual
Storage, Transportation, and Marketing of VOL						
Oil & Gas Production	0.0	0.0	0.0	0.0	0.0	0.0
Natural Gas & Petro Processing	0.0	0.0	0.0	0.0	0.0	0.0
VOL Storage	0.0	0.0	0.0	0.0	0.0	0.0
Barge & Tanker Cleaning	0.0	0.0	0.0	0.0	0.0	0.0
Vessel Loading/unloading	0.0	0.0	0.0	0.0	0.0	0.0
Bulk Gasoline Plants	0.0	0.0	0.0	0.0	0.0	0.0
Service Station Loading (stage I)	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Refueling (stage II)	0.0	0.0	0.0	0.0	0.0	0.0
Underground Tank Breathing Losses	0.0	0.0	0.0	0.0	0.0	0.0
Tank Trucks in Transit	0.0	0.0	0.0	0.0	0.0	0.0
Aircraft Refueling						
Aviation Gas	0.0	0.0	0.0	0.0	0.0	0.0
Jet Fuel	0.0	0.0	0.0	0.0	0.0	0.0
Sub-total	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Process & Bioprocess						
Petroleum Refining	0.0	0.0	0.0	0.0	0.0	0.0
Organic Chemical Mfg.	0.0	0.0	0.0	0.0	0.0	0.0
SOCMI	0.0	0.0	0.0	0.0	0.0	0.0
Inorganic Chemical Mfg.	0.0	0.0	0.0	0.0	0.0	0.0
Bioprocesses (Fermenting & Veg. Oil)	0.0	0.0	0.0	0.0	0.0	0.0
Pharmaceutical Production	0.0	0.0	0.0	0.0	0.0	0.0
Plastic Product Mfg.	11.7	1.5	0.0	0.0	0.0	0.0
Tire & SBR Rubber Mfg.	0.0	0.0	0.0	0.0	0.0	0.0
Polymers, Resins & Synthetics	0.0	0.0	0.0	0.0	0.0	0.0
Iron & Steel Mfg. & Coke Ovens	0.0	0.0	0.0	0.0	0.0	0.0
Chemical Product Mfg.	0.0	0.0	0.0	0.0	0.0	0.0
Mineral Products	0.0	0.0	0.0	0.0	0.0	0.0
Other Industrial Processes	401.8	52.1	0.0	0.0	31.6	2.8
Miscellaneous						
Fiberglass Product Mfg.	910.5	137.5	0.0	0.0	0.0	0.0
Fiberglass Boat Mfg.	1254.5	175.2	0.0	0.0	0.0	0.0
Breweries	0.0	0.0	0.0	0.0	0.0	0.0
Bakeries	0.0	0.0	0.0	0.0	0.0	0.0
Sub-total	2578.5	366.3	0.0	0.0	31.6	2.8
Solvent Evaporation						
Degreasing	19.1	3.5	0.0	0.0	0.0	0.0
Dry Cleaning	0.0	0.0	0.0	0.0	0.0	0.0
Graphic Arts	1265.1	241.9	2.7	0.6	3.2	0.7
Asphalt Paving	41.0	4.7	73.6	8.9	154.0	19.9
Solvent Extraction	1.4	0.3			0.0	0.0
Other Solvent Use	1319.1	223.0	0.4	0.1	0.5	0.1
Pesticide Application	0.0	0.0			0.0	0.0
Sub-total	2645.7	473.3	76.7	9.5	157.7	20.7
Non-industrial Surface Coating						
Automobile Refinishing	0.0	0.0	0.0	0.0	0.0	0.0
Architectural Coatings	0.0	0.0	0.0	0.0	0.0	0.0

2000 Point Sources	VOC		CO		NOx	
Category	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual
Traffic Markings	0.0	0.0	0.0	0.0	0.0	0.0
Sub-total	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Surface Coating						
Large Appliances	0.0	0.0	0.0	0.0	0.0	0.0
Magnet Wire	0.0	0.0	0.0	0.0	0.0	0.0
Autos & Trucks	7.9	1.5	0.0	0.0	0.0	0.0
Cans	0.0	0.0	0.0	0.0	0.0	0.0
Metal Coils	315.8	55.2	156.1	15.2	1.0	1.5
Paper	1072.3	139.7	9.7	1.3	11.5	1.5
Fabric	0.0	0.0	0.0	0.0	0.0	0.0
Metal & Wood Furniture	0.0	0.0	0.0	0.0	0.0	0.0
Misc. Metal Parts	439.1	60.8	0.4	0.0	2.7	0.3
Flatwood Products	0.0	0.0	0.0	0.0	0.0	0.0
Plastic Products	20.1	6.6	0.0	0.0	0.0	0.0
Large Ships	0.0	0.0	0.0	0.0	0.0	0.0
Large Aircraft	0.0	0.0	0.0	0.0	0.0	0.0
Other Industrial Sources	301.7	27.4	113.8	10.1	0.0	0.0
Sub-total	2156.8	291.0	279.9	26.6	15.2	3.4
Waste Disposal						
Municipal Waste						
Combustion	94.5	17.3	400.1	73.0	7367.2	1344.5
Landfill	33.1	6.0	0.0	0.0	0.0	0.0
Hazardous Waste Treatment	0.0	0.0	0.0	0.0	0.0	0.0
POTW	0.0	0.0	0.0	0.0	0.0	0.0
PERC Adjustment						
Industrial Waste Treatment	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Boiler Co-firing	0.0	0.0	0.0	0.0	0.0	0.0
Other Waste Disposal	2.1	0.2	4.5	19.8	99.5	12.7
Sub-total	129.8	23.5	404.5	92.8	7466.7	1357.3
External Combustion of Fossil Fuels						
Utility Boilers	406.2	46.5	2582.6	392.0	18431.6	2051.7
Industrial Boilers	2.7	0.5	40.6	7.7	48.3	9.2
Comm/Instit/Residential Boilers	1.5	0.2	23.0	3.3	27.4	3.9
Residential/Commercial/Industrial Fuels	0.0	0.0	0.0	0.0	0.0	0.0
Other External Fuel Combustion	33.3	4.3	28.2	3.7	35.1	4.8
Liquefied Petroleum Gas (gallons)	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Oils (gallons)	0.0	0.0	0.0	0.0	0.0	0.0
Natural Gas (bill. cu. ft.)	0.0	0.0	0.0	0.0	0.0	0.0
Forest Fires	0.0	0.0	0.0	0.0	0.0	0.0
Slash/prescribed Burning	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Burning	0.0	0.0	0.0	0.0	0.0	0.0
Structure Fires	0.0	0.0	0.0	0.0	0.0	0.0
Catastrophic/accidental Releases	0.0	0.0	0.0	0.0	0.0	0.0
Sub-total	443.7	51.5	2674.4	406.8	18542.4	2069.6
Stationary Internal Combustion						
Reciprocating Engines	0.6	0.1	5.0	0.4	18.8	1.5
Gas Turbines	60.7	3.4	2066.5	113.6	27031.3	1409.3

2000 Point Sources	VOC		CO		NOx	
Category	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual
Sub-total	61.3	3.4	2071.5	114.1	27050.1	1410.8
Total Stationary Point Sources	8015.7	1209.2	5507.1	649.7	53263.8	4864.5

Pinellas County 2000 Point Source CO Emissions

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day
External Fuel Combustion										
Comm./Inst./Residual Boiler	Baycare Services, Inc.	0288 002	10200602	84	Million Cubic Feet Burned	0.04	1.00	14.50	0.61	3.31
Comm./Inst./Residual Boiler	Baycare Services, Inc.	0288 001	10200602	84	Million Cubic Feet Burned	0.04	1.00	14.50	0.61	3.31
Comm./Inst./Residual Boiler	Life-Like Products, LLC.	0214 002	10200602	84	Million Cubic Feet Burned	0.14	1.00	34.02	1.43	11.34
Comm./Inst./Residual Boiler	Morton Plant Mease Health Care	0091 007	10200603	84	Million Cubic Feet Burned	0.06	1.00	15.68	0.66	5.04
Comm./Inst./Residual Boiler Total									3.31	23.00
External Fuel Combustion										
Industrial Boiler	Florida Power Corporation	0011 004	10200502	0	1000 Gallons Burned		1.00	0.00	0.00	0.00
Industrial Boiler	Florida Power Corporation	0011 004	10200602	84	Million Cubic Feet Burned	0.04	1.00	21.49	0.90	3.28
Industrial Boiler	Morton Plant Mease Health Care	0091 006	10200602	84	Million Cubic Feet Burned	0.15	1.00	54.05	2.27	12.43
Industrial Boiler	Morton Plant Mease Health Care	0091 005	10200602	84	Million Cubic Feet Burned	0.07	1.00	27.03	1.14	6.22
Industrial Boiler	RP Scherer	0112 007	10300602	84	Million Cubic Feet Burned	0.11	1.00	40.70	1.71	9.32
Industrial Boiler	RP Scherer	0112 006	10300602	84	Million Cubic Feet Burned	0.11	1.00	40.70	1.71	9.32
Industrial Boiler Total									7.73	40.57
External Fuel Combustion										
Other External Fuel Combust.	Cox Target Media, Inc.	0240 001	39000699	84	Million Cubic Feet Burned	0.02	1.00	8.95	0.38	2.06
Other External Fuel Combust.	Heath and Company, LLC	0157 005	40201001	84	Million Cubic Feet Burned	0.01	1.00	2.83	0.12	0.65
Other External Fuel Combust.	HOWCO Environmental Services	0153 003	10500213	2.1	1000 Gallons Burned	0.11	1.00	39.56	0.04	0.23
Other External Fuel Combust.	Metal Culverts, Inc.	0127 001	30990001	5	1000 Gallons Burned	0.00	1.00	6.89	0.02	0.00
Other External Fuel Combust.	Metal Industries, Inc.	0114 001	30490023	84	Million Cubic Feet Burned	0.22	1.00	56.37	2.37	18.60
Other External Fuel Combust.	Schneller, Inc., Florida Division	0118 003	39990013	84	Million Cubic Feet Burned	0.08	1.00	19.29	0.81	6.72
Other External Fuel Combust. Total									3.73	28.25
External Fuel Combustion										
Utility Boiler	Florida Power Corporation	0011 001	10100501	5	1000 Gallons Burned	0.25	1.00	46.62	0.12	1.26

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day
Cutback Asphalt	APAC - Florida, Inc. - Florida Division	0004 001	30500258	0.036	TON HOT MIX ASPHALT PRODUCED	384.54	1.00	115918.00	2.09	13.84
Cutback Asphalt	R.E. Purcell Construction Co., Inc.	0026 001	30590001	5	1000 Gallons Burned	0.12	1.00	43.06	0.11	0.58
Cutback Asphalt	R.E. Purcell Construction Co., Inc.	0026 001	30500258	0.036	TON HOT MIX ASPHALT PRODUCED	884.00	1.00	207132.00	3.73	31.82
Cutback Asphalt	Suncoast Paving, Inc.	0044 001	30500252	0.069	TON HOT MIX ASPHALT PRODUCED	395.95	1.00	85790.00	2.96	27.32
Cutback Asphalt Total									8.88	73.56
Other Solvent Use										
Graphic Arts	Interprint, Inc.	0180 001	40201001	0.0392	Million Cubic Feet Burned	0.01	1.00	4.73	0.00	0.00
Graphic Arts	MC Graphics, Inc.	0218 003	39000699	84	Million Cubic Feet Burned	0.03	1.00	13.34	0.56	2.71
Graphic Arts Total									0.56	2.71
Other Solvent Use										
Other Solvent Use	Angelo's Aggregate Materials LTD.	0262 002	20200401	0	1000 Gallons Burned	0.00	1.00	0.00	0.00	0.00
Other Solvent Use	Essilor of America, Inc.	0098 005	30990013	84	Million Cubic Feet Burned	0.00	1.00	1.79	0.08	0.41
Other Solvent Use Total									0.08	0.41
Stationary Internal Combustion										
Gas Turbine	Florida Power Corporation	0012 007	20100101	0.4587	1000 Gallons Burned	0.37	1.00	42.42	0.01	0.17
Gas Turbine	Florida Power Corporation	0012 005	20100101	0.4587	1000 Gallons Burned	0.72	1.00	38.22	0.01	0.33
Gas Turbine	Florida Power Corporation	0013 001	20100101	0.459	1000 Gallons Burned	30.66	1.00	3383.14	0.78	14.07
Gas Turbine	Florida Power Corporation	0013 004	20100101	0.4587	1000 Gallons Burned	35.22	1.00	3522.37	0.81	16.16
Gas Turbine	Florida Power Corporation	0013 003	20100101	0.4587	1000 Gallons Burned	26.93	1.00	2742.10	0.63	12.35
Gas Turbine	Florida Power Corporation	0013 002	20100101	0.4587	1000 Gallons Burned	26.83	1.00	2639.20	0.61	12.31
Gas Turbine	Florida Power Corporation	0012 006	20100101	0.4587	1000 Gallons Burned	0.31	1.00	42.00	0.01	0.14
Gas Turbine	Florida Power Corporation	0012 004	20100101	0.4587	1000 Gallons Burned	0.68	1.00	39.48	0.01	0.31
Gas Turbine	Florida Power Corporation	0011 008	20100101	0.4587	1000 Gallons Burned	0.88	1.00	128.31	0.03	0.40
Gas Turbine	Florida Power Corporation	0011 006	20100101	0.4567	1000 Gallons Burned	0.21	1.00	337.72	0.08	0.09
Gas Turbine	Florida Power Corporation	0011 005	20100101	0.4587	1000 Gallons Burned	17.37	1.00	1543.63	0.35	7.97
Gas Turbine	Florida Power Corporation	0011 007	20100101	0.4587	1000 Gallons Burned	17.33	1.00	1576.39	0.36	7.95

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day
Gas Turbine	Florida Power Corporation	0011 006	20100201	83.64	Million Cubic Feet Burned	6.06	1.00	677.69	28.34	507.19
Gas Turbine	Florida Power Corporation	0011 008	20100201	83.64	Million Cubic Feet Burned	3.79	1.00	594.61	24.87	316.58
Gas Turbine	Florida Power Corporation	0012 004	20100201	84.706	Million Cubic Feet Burned	2.75	1.00	159.98	6.78	233.20
Gas Turbine	Florida Power Corporation	0012 005	20100201	84.624	Million Cubic Feet Burned	2.89	1.00	154.38	6.53	244.53
Gas Turbine	Florida Power Corporation	0012 006	20100201	84.624	Million Cubic Feet Burned	4.06	1.00	553.60	23.42	343.55
Gas Turbine	Florida Power Corporation	0012 007	20100201	84.624	Million Cubic Feet Burned	4.13	1.00	473.37	20.03	349.23
Gas Turbine Total									113.65	2066.52
Stationary Internal Combustion										
Reciprocating Engine	Sonny Glasbrenner, Inc.	5048 002	20200401	116	1000 Gallons Burned	0.04	1.00	7.03	0.41	4.99
Reciprocating Engine Total									0.41	4.99
Waste Disposal										
Municipal Waste-Combustion	Pinellas County Resource Recovery	0117 001	50100105	0.2087816	TONS BURNED	754.21	1.00	275286.00	28.74	157.46
Municipal Waste-Combustion	Pinellas County Resource Recovery	0117 002	50100105	0.1897898	TONS BURNED	753.24	1.00	274935.00	26.09	142.96
Municipal Waste-Combustion	Pinellas County Resource Recovery	0117 003	50100105	0.1275493	TONS BURNED	781.44	1.00	285224.00	18.19	99.67
Municipal Waste-Combustion Total									73.02	400.09
Waste Disposal										
Other Waste Disposal	Bayfront Medical Center	0095 002	50200505	0.0954	TONS WASTE BURNED	5.50	1.00	1518.10	0.07	0.52
Other Waste Disposal	Medico Environmental Services, Incorporated	0210 001	50200505	0.0087146	TONS WASTE BURNED	19.39	1.00	3460.10	0.02	0.17
Other Waste Disposal	Sonny Glasbrenner, Inc.	0147 001	50300106	44	Tons Burned	0.00	1.00	865.50	19.04	0.00
Other Waste Disposal	Sonny Glasbrenner, Inc.	0147 003	20200401	116	1000 Gallons Burned	0.03	1.00	6.78	0.39	3.76
Other Waste Disposal	Trademark Metals Recycling, LLC	0061 003	20200401	116	1000 Gallons Burned	0.00	1.00	5.12	0.30	0.00
Other Waste Disposal Total									19.82	4.45
Point Sources CO Grand Total									649.74	5507.10

Pinellas County 2000 Point Source NOx Emissions

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day
External Fuel Combustion										
Comm./Inst./Residual Boiler	Baycare Services, Inc.	0288 002	10200602	100	Million Cubic Feet Burned	0.04	1.00	14.50	0.73	3.94
Comm./Inst./Residual Boiler	Baycare Services, Inc.	0288 001	10200602	100	Million Cubic Feet Burned	0.04	1.00	14.50	0.73	3.94
Comm./Inst./Residual Boiler	Life-Like Products, LLC.	0214 002	10200602	100	Million Cubic Feet Burned	0.14	1.00	34.02	1.70	13.50
Comm./Inst./Residual Boiler	Morton Plant Mease Health Care	0091 007	10200603	100	Million Cubic Feet Burned	0.06	1.00	15.68	0.78	6.00
Comm./Inst./Residual Boiler Total									3.94	27.38
External Fuel Combustion										
Industrial Boiler	Florida Power Corporation	0011 004	10200602	100	Million Cubic Feet Burned	0.04	1.00	21.49	1.07	3.90
Industrial Boiler	Florida Power Corporation	0011 004	10200502	0	1000 Gallons Burned		1.00	0.00	0.00	0.00
Industrial Boiler	Morton Plant Mease Health Care	0091 006	10200602	100	Million Cubic Feet Burned	0.15	1.00	54.05	2.70	14.80
Industrial Boiler	Morton Plant Mease Health Care	0091 005	10200602	100	Million Cubic Feet Burned	0.07	1.00	27.03	1.35	7.40
Industrial Boiler	RP Scherer	0112 006	10300602	100	Million Cubic Feet Burned	0.11	1.00	40.70	2.04	11.10
Industrial Boiler	RP Scherer	0112 007	10300602	100	Million Cubic Feet Burned	0.11	1.00	40.70	2.04	11.10
Industrial Boiler Total									9.20	48.30
External Fuel Combustion										
Other External Fuel Combust.	Cox Target Media, Inc.	0240 001	39000699	100	Million Cubic Feet Burned	0.02	1.00	8.95	0.45	2.45
Other External Fuel Combust.	Heath and Company, LLC	0157 005	40201001	100	Million Cubic Feet Burned	0.01	1.00	2.83	0.14	0.77
Other External Fuel Combust.	HOWCO Environmental Services	0153 003	10500213	16	1000 Gallons Burned	0.11	1.00	39.56	0.32	1.73
Other External Fuel Combust.	Metal Culverts, Inc.	0127 001	30990001	20	1000 Gallons Burned	0.00	1.00	6.89	0.07	0.00
Other External Fuel Combust.	Metal Industries, Inc.	0114 001	30490023	100	Million Cubic Feet Burned	0.22	1.00	56.37	2.82	22.14
Other External Fuel Combust.	Schneller, Inc., Florida Division	0118 003	39990013	100	Million Cubic Feet Burned	0.08	1.00	19.29	0.96	8.00
Other External Fuel Combust. Total									4.76	35.09
External Fuel Combustion										
Utility Boiler	Florida Power Corporation	0011 001	10100501	24	1000 Gallons Burned	0.25	1.00	46.62	0.56	6.03
Utility Boiler	Florida Power Corporation	0011 002	10100404	32	1000 Gallons Burned	140.46	1.00	28716.24	459.46	4494.72

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day
Utility Boiler	Florida Power Corporation	0011 002	10101302	19	1000 Gallons Burned	9.58	1.00	1958.32	18.60	182.00
Utility Boiler	Florida Power Corporation	0011 001	10101302	19	1000 Gallons Burned	10.56	1.00	1958.32	18.60	200.67
Utility Boiler	Florida Power Corporation	0011 003	10100604	170	Million Cubic Feet Burned	4.41	1.00	1190.27	101.17	750.26
Utility Boiler	Florida Power Corporation	0011 003	10101302	19	1000 Gallons Burned	3.40	1.00	1958.32	18.60	64.60
Utility Boiler	Florida Power Corporation	0011 003	10100404	32	1000 Gallons Burned	188.52	1.00	50844.36	813.51	6032.77
Utility Boiler	Florida Power Corporation	0012 003	10100401		1000 Gallons Burned		1.00	0.00	0.00	0.00
Utility Boiler	Florida Power Corporation	0011 001	10100401	47	1000 Gallons Burned	142.57	1.00	26433.96	621.20	6700.56
Utility Boiler Total									2051.71	18431.60
Industrial Processes										
Other Industrial Process	City of Largo, Wastewater Management Division	0060 001	50100506	1.04	Tons Dry Sludge Burned	12.72	1.00	2247.00	1.17	13.23
Other Industrial Process	City of Largo, Wastewater Management Division	0060 001	39000699	100	Million Cubic Feet Burned	0.18	1.00	32.51	1.63	18.40
Other Industrial Process Total									2.79	31.63
Industrial Surface Coating										
Metal Coils	Cooper Coating Company, LLC	0132 002	30990013		Million Cubic Feet Burned		1.00	0.00	0.00	0.00
Metal Coils	Cooper Coating Company, LLC	0132 001	30990013	100	Million Cubic Feet Burned	0.01	1.00	30.50	1.53	1.04
Metal Coils Total									1.53	1.04
Industrial Surface Coating										
Misc. Metal Products	J.T. Walker Industries, Incorporated	0140 006	40201004	14	1000 Gallons Burned	0.19	1.00	49.05	0.34	2.70
Misc. Metal Products Total									0.34	2.70
Industrial Surface Coating										
Paper	Film Technologies, Inc	0119 001	39000699	100	Million Cubic Feet Burned	0.07	1.00	18.32	0.92	7.00
Paper	Film Technologies, Inc	0119 002	39000699	100	Million Cubic Feet Burned	0.05	1.00	11.71	0.59	4.50
Paper Total									1.50	11.50
Other Solvent Use										
Cutback Asphalt	APAC - Florida, Inc. - Florida Division	0004 001	30500258	0.075	TON HOT MIX ASPHALT PRODUCED	384.54	1.00	115918.00	4.35	28.84
Cutback Asphalt	R.E. Purcell Construction Co., Inc.	0026 001	30590001	24	1000 Gallons Burned	0.12	1.00	43.06	0.52	2.76

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day
Cutback Asphalt	R.E. Purcell Construction Co., Inc.	0026 001	30500258	0.075	TON HOT MIX ASPHALT PRODUCED	884.00	1.00	207132.00	7.77	66.30
Cutback Asphalt	Suncoast Paving, Inc.	0044 001	30500252	0.17	TON HOT MIX ASPHALT PRODUCED	329.96	1.00	85790.00	7.29	56.09
Cutback Asphalt Total									19.92	153.99
Other Solvent Use										
Graphic Arts	Interprint, Inc.	0180 001	40201001	0.0921	Million Cubic Feet Burned	0.01	1.00	4.73	0.00	0.00
Graphic Arts	MC Graphics, Inc.	0218 003	39000699	100	Million Cubic Feet Burned	0.03	1.00	13.34	0.67	3.23
Graphic Arts Total									0.67	3.23
Other Solvent Use										
Other Solvent Use	Angelo's Aggregate Materials LTD.	0262 002	20200401	0	1000 Gallons Burned	0.00	1.00	0.00	0.00	0.00
Other Solvent Use	Essilor of America, Inc.	0098 005	30990013	100	Million Cubic Feet Burned	0.00	1.00	1.79	0.09	0.49
Other Solvent Use Total									0.09	0.49
Stationary Internal Combustion										
Gas Turbine	Florida Power Corporation	0012 007	20100101	122.32	1000 Gallons Burned	0.37	1.00	42.42	2.59	45.23
Gas Turbine	Florida Power Corporation	0011 006	20100201	326.4	Million Cubic Feet Burned	6.06	1.00	677.69	110.60	1979.29
Gas Turbine	Florida Power Corporation	0011 008	20100201	326.4	Million Cubic Feet Burned	3.79	1.00	594.61	97.04	1235.75
Gas Turbine	Florida Power Corporation	0012 004	20100201	326.4	Million Cubic Feet Burned	2.75	1.00	159.98	26.11	898.58
Gas Turbine	Florida Power Corporation	0012 005	20100201	330.24	Million Cubic Feet Burned	2.89	1.00	154.38	25.49	954.26
Gas Turbine	Florida Power Corporation	0012 006	20100201	330.24	Million Cubic Feet Burned	4.06	1.00	553.60	91.41	1340.68
Gas Turbine	Florida Power Corporation	0012 007	20100201	330.24	Million Cubic Feet Burned	4.13	1.00	473.37	78.16	1362.83
Gas Turbine	Florida Power Corporation	0011 007	20100101	122	1000 Gallons Burned	17.33	1.00	1576.39	96.16	2114.14
Gas Turbine	Florida Power Corporation	0013 002	20100101	122.32	1000 Gallons Burned	26.83	1.00	2639.20	161.41	3282.08
Gas Turbine	Florida Power Corporation	0011 005	20100101	122.32	1000 Gallons Burned	17.37	1.00	1543.63	94.41	2124.70
Gas Turbine	Florida Power Corporation	0011 006	20100101	122.32	1000 Gallons Burned	0.21	1.00	337.72	20.65	25.32
Gas Turbine	Florida Power Corporation	0012 004	20100101	122.32	1000 Gallons Burned	0.68	1.00	39.48	2.41	83.06
Gas Turbine	Florida Power Corporation	0012 005	20100101	122.32	1000 Gallons Burned	0.72	1.00	38.22	2.34	87.46

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day
Gas Turbine	Florida Power Corporation	0013 001	20100101	122.32	1000 Gallons Burned	30.66	1.00	3383.14	206.91	3750.29
Gas Turbine	Florida Power Corporation	0011 008	20100101	122.32	1000 Gallons Burned	0.88	1.00	128.31	7.85	107.15
Gas Turbine	Florida Power Corporation	0013 003	20100101	122.32	1000 Gallons Burned	26.93	1.00	2742.10	167.71	3294.24
Gas Turbine	Florida Power Corporation	0013 004	20100101	122.32	1000 Gallons Burned	35.22	1.00	3522.37	215.43	4308.56
Gas Turbine	Florida Power Corporation	0012 006	20100101	122.32	1000 Gallons Burned	0.31	1.00	42.00	2.57	37.67
Gas Turbine Total									1409.26	27031.29
Stationary Internal Combustion										
Reciprocating Engine	Sonny Glasbrenner, Inc.	5048 002	20200401	438	1000 Gallons Burned	0.04	1.00	7.03	1.54	18.83
Reciprocating Engine Total									1.54	18.83
Waste Disposal										
Municipal Waste-Combustion	Pinellas County Resource Recovery	0117 002	50100105	3.3486845	TONS BURNED	753.25	1.00	274935.00	460.34	2522.40
Municipal Waste-Combustion	Pinellas County Resource Recovery	0117 001	50100105	3.3693214	TONS BURNED	754.21	1.00	275286.00	463.76	2541.17
Municipal Waste-Combustion	Pinellas County Resource Recovery	0117 003	50100105	2.9479629	TONS BURNED	781.44	1.00	285224.00	420.41	2303.64
Municipal Waste-Combustion Total									1344.51	7367.21
Waste Disposal										
Other Waste Disposal	Bayfront Medical Center	0095 002	50200505	2.96	TONS WASTE BURNED	5.50	1.00	1518.10	2.25	16.28
Other Waste Disposal	Medico Environmental Services, Incorporated	0210 001	50200505	3.56	TONS WASTE BURNED	19.39	1.00	3460.10	6.16	69.02
Other Waste Disposal	Sonny Glasbrenner, Inc.	0147 001	50300106	4	Tons Burned	0.00	1.00	865.50	1.73	0.00
Other Waste Disposal	Sonny Glasbrenner, Inc.	0147 003	20200401	438	1000 Gallons Burned	0.03	1.00	6.78	1.48	14.19
Other Waste Disposal	Trademark Metals Recycling, LLC	0061 003	20200401	438	1000 Gallons Burned	0.00	1.00	5.12	1.12	0.00
Other Waste Disposal Total									12.74	99.49
Point Sources NOx Grand Total									4864.50	53263.78

Pinellas County 2000 Point Source VOC Emissions

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Control Efficiency	Rule Effectiveness
External Fuel Combustion												
Comm./Inst./Residual Boiler	Baycare Services, Inc.	0288 002	10200602	5.5	Million Cubic Feet Burned	0.04	1.00	14.50	0.04	0.22	0	0.8
Comm./Inst./Residual Boiler	Baycare Services, Inc.	0288 001	10200602	5.5	Million Cubic Feet Burned	0.04	1.00	14.50	0.04	0.22	0	0.8
Comm./Inst./Residual Boiler	Life-Like Products, LLC.	0214 002	10200602	5.5	Million Cubic Feet Burned	0.14	1.00	34.02	0.09	0.74	0	0.8
Comm./Inst./Residual Boiler	Morton Plant Mease Health Care	0091 007	10200603	5.5	Million Cubic Feet Burned	0.06	1.00	15.68	0.04	0.33	0	0.8
Comm./Inst./Residual Boiler Total									0.22	1.51		
External Fuel Combustion												
Industrial Boiler	Florida Power Corporation	0011 004	10200602	5.5	Million Cubic Feet Burned	0.04	1.00	21.49	0.06	0.21	0	0.8
Industrial Boiler	Florida Power Corporation	0011 004	10200502	0	1000 Gallons Burned		1.00	0.00	0.00	0.00	0	0.8
Industrial Boiler	Morton Plant Mease Health Care	0091 006	10200602	5.5	Million Cubic Feet Burned	0.15	1.00	54.05	0.15	0.81	0	0.8
Industrial Boiler	Morton Plant Mease Health Care	0091 005	10200602	5.5	Million Cubic Feet Burned	0.07	1.00	27.03	0.07	0.41	0	0.8
Industrial Boiler	RP Scherer	0112 006	10300602	5.5	Million Cubic Feet Burned	0.11	1.00	40.70	0.11	0.61	0	0.8
Industrial Boiler	RP Scherer	0112 007	10300602	5.5	Million Cubic Feet Burned	0.11	1.00	40.70	0.11	0.61	0	0.8
Industrial Boiler Total									0.51	2.66		
External Fuel Combustion												
Other External Fuel Combust.	Cox Target Media, Inc.	0240 001	39000699	5.5	Million Cubic Feet Burned	0.02	1.00	8.95	0.02	0.13	0	0.8
Other External Fuel Combust.	Heath and Company, LLC	0157 005	40201001	5.5	Million Cubic Feet Burned	0.01	1.00	2.83	0.01	0.04	0	0.8
Other External Fuel Combust.	Metal Culverts, Inc.	0127 001	30990001	0.2	1000 Gallons Burned	0.00	1.00	6.89	0.00	0.00	0	0.8
Other External Fuel Combust.	Metal Culverts, Inc.	0127 002	30901604	10.6	Tons Coating Material Melted	0.00	1.00	11.55	0.06	0.00	0	0.8
Other External Fuel Combust.	Metal Industries, Inc.	0114 001	30490023	5.5	Million Cubic Feet Burned	0.22	1.00	56.37	0.16	1.22	0	0.8
Other External Fuel Combust.	Metal Industries, Inc.	0114 007	40202201	0	Tons Solvent in Coating	0.00	1.00	0.00	0.00	0.00	0	0.8

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Control Efficiency	Rule Effectiveness
Metal Coils	Cooper Coating Company, LLC	0132 001	30990013	5.5	Million Cubic Feet Burned	0.01	1.00	30.50	0.08	0.06	0	0.8
Metal Coils	Cooper Coating Company, LLC	0132 002	30990013		Million Cubic Feet Burned		1.00	0.00	0.00	0.00	0	0.8
Metal Coils	Cooper Coating Company, LLC	0132 002	40201801		Tons Solvent in Coating		1.00	0.00	0.00	0.00	0	0.8
Metal Coils	Cooper Coating Company, LLC	0132 001	40201801	6	Tons Solvent in Coating	0.78	1.00	272.08	55.07	315.74	0.997	0.8
Metal Coils Total									55.15	315.80		
Industrial Surface Coating												
Misc. Metal Products	Allen Industries	0186 001	40202501	2000	Tons Solvent in Coating	0.01	1.00	3.51	3.51	24.40	0	0.8
Misc. Metal Products	Baxter Healthcare Corporation	0137 001	40202501	2000	Tons Solvent in Coating	0.00	1.00	0.26	0.26	2.00	0	0.8
Misc. Metal Products	Big C Steel, Inc.	0190 001	40202501	2000	Tons Solvent in Coating	0.01	1.00	2.37	2.37	18.20	0	0.8
Misc. Metal Products	City of St. Petersburg	0407 001	40202399	2000	Tons Solvent in Coating	0.00	0.00	0.00	0.00	0.00	0	0.8
Misc. Metal Products	Coastal Steel Construction, Inc.	0155 001	40202502	2000	Tons Solvent in Coating	0.00	1.00	0.00	0.00	0.00	0	0.8
Misc. Metal Products	Coastal Steel Construction, Inc.	0155 001	40202501	2000	Tons Solvent in Coating	0.01	1.00	3.12	3.12	20.00	0	0.8
Misc. Metal Products	J.T. Walker Industries, Incorporated	0140 006	40201004	0.5	1000 Gallons Burned	0.19	1.00	49.05	0.01	0.10	0	0.8
Misc. Metal Products	J.T. Walker Industries, Incorporated	0140 006	40200110	1.592	Gallons of Coating	19.95	1.00	5081.00	4.04	31.76	0	0.8
Misc. Metal Products	Metal Industries, Inc.	0138 002	40200110	1.5137931	Gallons of Coating	3.16	1.00	609.00	0.46	4.78	0	0.8
Misc. Metal Products	Metal Industries, Inc.	0138 003	40200110	3.54	Gallons of Coating	0.00	1.00	2.20	0.00	0.00	0	0.8
Misc. Metal Products	Modtech, Inc.	0263 002	40202199	2000	Tons Solvent in Coating	0.00	1.00	0.41	0.41	2.92	0	0.8
Misc. Metal Products	Modtech, Inc.	0263 003	40202199	2000	Tons Solvent in Coating	0.02	1.00	5.87	5.87	41.80	0	0.8
Misc. Metal Products	Modtech, Inc.	0263 001	40202501	2000	Tons Solvent in Coating	0.01	1.00	2.43	2.43	17.30	0	0.8
Misc. Metal Products	Modtech, Inc.	0263 004	40200710	4.39	Gallons of Coating	27.47	1.00	8029.19	17.62	120.59	0	0.8
Misc. Metal Products	Modtech, Inc.	0263 005	40200710	4.53	Gallons of Coating	14.34	1.00	4191.08	9.49	64.96	0	0.8
Misc. Metal Products	Seminole Machine & Welding	0215 001	40202501	2000	Tons Solvent in Coating	0.02	1.00	6.38	6.38	49.00	0	0.8
Misc. Metal Products	Seminole Machine & Welding	0215 001	40202502	2000	Tons Solvent in Coating	0.00	1.00	0.32	0.32	2.43	0	0.8
Misc. Metal Products	United Steel Works, Inc.	0156 001	40202501	2000	Tons Solvent in Coating	0.02	1.00	4.22	4.22	36.57	0	0.8

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Control Efficiency	Rule Effectiveness
Misc. Metal Products	United Steel Works, Inc.	0156 001	40202502	2000	Tons Solvent in Coating	0.00	1.00	0.28	0.28	2.30	0	0.8
Misc. Metal Products Total									60.81	439.12		
Industrial Surface Coating												
Other Ind.Surface Coating	Heath and Company, LLC	0157 004	40201105	2000	Tons Solvent in Coating	0.00	1.00	0.01	0.01	3.34	0	0.8
Other Ind.Surface Coating	Heath and Company, LLC	0157 002	40202201	2000	Tons Solvent in Coating	0.00	1.00	0.52	0.52	3.32	0	0.8
Other Ind.Surface Coating	Heath and Company, LLC	0157 001	40202502	2000	Tons Solvent in Coating	0.00	1.00	0.43	0.43	2.76	0	0.8
Other Ind.Surface Coating	Heath and Company, LLC	0157 003	40202502	2000	Tons Solvent in Coating	0.00	1.00	0.39	0.39	2.50	0	0.8
Other Ind.Surface Coating	Heath and Company, LLC	0157 001	40200501	2000	Tons Coating Mix Applied	0.01	1.00	2.71	2.71	17.38	0	0.8
Other Ind.Surface Coating	Heath and Company, LLC	0157 003	40200501	2000	Tons Coating Mix Applied	0.00	1.00	0.31	0.31	1.98	0	0.8
Other Ind.Surface Coating	Heath and Company, LLC	0157 004	40201115	2000	Tons of Fabric	0.01	1.00	0.05	0.05	16.66	0	0.8
Other Ind.Surface Coating	Raytheon E-Systems	0361 001	40200110	0	Gallons of Coating	0.00	1.00	0.00	0.00	0.00	0	0.8
Other Ind.Surface Coating	Schneller, Inc., Florida Division	0118 004	40500510	2000	Tons Solvent Added	0.04	1.00	1.50	1.50	79.00	0	0.8
Other Ind.Surface Coating	Schneller, Inc., Florida Division	0118 002	40500599	2000	Tons Solvent Added	0.01	1.00	2.28	2.28	15.80	0	0.8
Other Ind.Surface Coating	Schneller, Inc., Florida Division	0118 003	40201101	58	Tons Solvent in Coating	0.36	1.00	85.82	19.16	158.92	0.971	0.8
Other Ind.Surface Coating Total									27.36	301.66		
Industrial Surface Coating												
Paper	Film Technologies, Inc	0119 002	40201399	144.4	Tons Solvent in Coating	0.82	1.00	214.00	55.16	422.73	0.9278	0.8
Paper	Film Technologies, Inc	0119 001	40201399	129.4	Tons Solvent in Coating	1.29	1.00	335.60	84.49	649.54	0.9353	0.8
Paper Total									139.65	1072.27		
Industrial Surface Coating												
Plastic Products	AAR Corporation	0200 001	40202201	1438	Tons Solvent in Coating	0.00	1.00	0.16	0.12	0.00	0	0.8
Plastic Products	AAR Corporation	0200 001	40202205	486.7	Tons Solvent in Coating	0.00	1.00	14.67	3.57	0.00	0	0.8
Plastic Products	Allen Industries	0186 003	40202501	2000	Tons Solvent in Coating	0.00	1.00	0.10	0.10	0.67	0	0.8
Plastic Products	Allen Industries	0186 002	40202201	2000	Tons Solvent in Coating	0.01	1.00	2.79	2.79	19.40	0	0.8
Plastic Products Total									6.57	20.07		
Miscellaneous												
Fiberglass Boat Manufacturer	Catalina Yachts, Morgan Division	0223 001	30800722	960	Tons Coating Applied	0.37	0.35	108.93	18.30	124.89	0	0.8

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Control Efficiency	Rule Effectiveness
Fiberglass Boat Manufacturer	Catalina Yachts, Morgan Division	0223 001	30800703	2000	Tons Solvent	0.68	0.34	159.90	54.54	466.62	0	0.8
Fiberglass Boat Manufacturer	Catalina Yachts, Morgan Division	0223 001	30800721	960	Tons Coating Applied	0.09	0.35	27.23	4.57	31.21	0	0.8
Fiberglass Boat Manufacturer	Catalina Yachts, Morgan Division	0223 001	30800724	220	TONS COATING APPLIED	1.40	0.35	376.82	14.51	107.80	0	0.8
Fiberglass Boat Manufacturer	Catalina Yachts, Morgan Division	0223 001	30800723	220	Tons Coating Applied	0.75	0.35	202.90	7.81	57.75	0	0.8
Fiberglass Boat Manufacturer	Endeavour Catamaran Corporation	0380 001	30800722	859.9	Tons Coating Applied	0.05	0.27	12.07	1.42	10.89	0	0.8
Fiberglass Boat Manufacturer	Endeavour Catamaran Corporation	0380 001	30800724	400	TONS COATING APPLIED	0.06	0.42	16.71	1.40	10.80	0	0.8
Fiberglass Boat Manufacturer	Endeavour Catamaran Corporation	0380 001	30800723	240	Tons Coating Applied	0.26	0.42	66.83	3.37	25.91	0	0.8
Fiberglass Boat Manufacturer	Intrepid Powerboats, Inc.	0212 002	30800721	2000	Tons Coating Applied	0.04	0.04	12.04	0.47	2.89	0	0.8
Fiberglass Boat Manufacturer	Intrepid Powerboats, Inc.	0212 002	30800721	940.5	Tons Coating Applied	0.04	0.34	12.04	1.90	11.66	0	0.8
Fiberglass Boat Manufacturer	Intrepid Powerboats, Inc.	0212 002	30800703	2000	Tons Solvent	0.02	0.37	5.10	1.86	11.68	0	0.8
Fiberglass Boat Manufacturer	Intrepid Powerboats, Inc.	0212 002	30800723	230.2	Tons Coating Applied	0.91	0.40	279.60	12.89	83.88	0	0.8
Fiberglass Boat Manufacturer	Stamas Yacht, Inc.	0226 001	30800723	220	Tons Coating Applied	0.05	0.37	15.48	0.63	4.05	0	0.8
Fiberglass Boat Manufacturer	Stamas Yacht, Inc.	0226 001	30800722	2000	Tons Coating Applied	0.12	0.13	33.36	4.35	31.30	0	0.8
Fiberglass Boat Manufacturer	Stamas Yacht, Inc.	0226 001	30800722	809.5	Tons Coating Applied	0.12	0.23	33.36	3.16	22.75	0	0.8
Fiberglass Boat Manufacturer	Stamas Yacht, Inc.	0226 001	30800703	2000	Tons Solvent	0.04	0.03	11.29	0.35	2.46	0	0.8
Fiberglass Boat Manufacturer	Stamas Yacht, Inc.	0226 001	30800703	2000	Tons Solvent	0.04	0.28	11.29	3.15	22.35	0	0.8
Fiberglass Boat Manufacturer	Stamas Yacht, Inc.	0226 001	30800724	355	TONS COATING APPLIED	0.05	0.38	16.37	1.09	6.67	0	0.8
Fiberglass Boat Manufacturer	Stamas Yacht, Inc.	0226 001	30800724	220.4	TONS COATING APPLIED	0.46	0.38	146.56	6.15	38.61	0	0.8
Fiberglass Boat Manufacturer	Traditional Watercraft, Inc.	0224 001	30800722	476.68	Tons Coating Applied	0.09	1.00	34.23	8.16	42.90	0	0.8
Fiberglass Boat Manufacturer	Traditional Watercraft, Inc.	0224 001	30800703	2000	Tons Solvent	0.06	0.42	23.29	9.88	54.28	0	0.8
Fiberglass Boat Manufacturer	Traditional Watercraft, Inc.	0224 001	30800723	220	Tons Coating Applied	0.89	0.37	324.43	13.11	71.92	0	0.8
Fiberglass Boat Manufacturer	Traditional Watercraft, Inc.	0224 001	30800723	2000	Tons Coating Applied	0.89	0.00	324.43	0.05	0.27	0	0.8
Fiberglass Boat Manufacturer	Traditional Watercraft, Inc.	0224 001	30800724	310.9	TONS COATING APPLIED	0.11	0.32	41.71	2.07	10.93	0	0.8
Fiberglass Boat Manufacturer Total									175.19	1254.47		
Miscellaneous												
Fiberglass Product Mfgr.	Blue Hawaiian Fiberglass Pools	0162 001	30800722	2000	Tons Coating Applied	0.34	0.05	108.48	5.42	34.11	0	0.8

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Control Efficiency	Rule Effectiveness
Fiberglass Product Mfgr.	Blue Hawaiian Fiberglass Pools	0162 001	30800722	953.5	Tons Coating Applied	0.34	0.35	108.48	17.84	112.21	0	0.8
Fiberglass Product Mfgr.	Blue Hawaiian Fiberglass Pools	0162 001	30800703	2000	Tons Solvent	0.02	1.00	5.00	5.00	31.40	0	0.8
Fiberglass Product Mfgr.	Blue Hawaiian Fiberglass Pools	0162 001	30800723	223.1	Tons Coating Applied	2.15	0.38	531.94	22.58	182.56	0	0.8
Fiberglass Product Mfgr.	Blue Hawaiian Fiberglass Pools	0162 001	30800724	227	TONS COATING APPLIED	0.35	0.42	112.50	5.36	33.66	0	0.8
Fiberglass Product Mfgr.	Hydro Spa	0429 001	30800704		Tons Adhesive		1.00		0.00	0.00	0	0.8
Fiberglass Product Mfgr.	Hydro Spa	0429 001	30800703	2000	Tons Solvent	0.01	0.21	3.90	0.81	5.03	0	0.8
Fiberglass Product Mfgr.	Hydro Spa	0429 001	30800703	2000	Tons Solvent	0.05	0.25	28.35	7.09	25.30	0	0.8
Fiberglass Product Mfgr.	Hydro Spa	0429 001	30800703	2000	Tons Solvent	0.01	0.56	4.20	2.35	5.59	0	0.8
Fiberglass Product Mfgr.	Hydro Spa	0429 001	30800724	675	TONS COATING APPLIED	0.72	0.45	237.83	36.12	218.70	0	0.8
Fiberglass Product Mfgr.	Quality Acrylic Baths of Clearwater, Inc.	0433 001	30800703	13.945	Tons Solvent	0.23	1.00	61.07	0.43	3.23	0	0.8
Fiberglass Product Mfgr.	Quality Acrylic Baths of Clearwater, Inc.	0433 001	30800724	740	TONS COATING APPLIED	0.23	0.49	61.07	11.06	83.80	0	0.8
Fiberglass Product Mfgr.	Shakespeare Products Group	0366 001	30800720	254.9	Tons Produced	1.10	0.33	319.30	13.55	93.37	0	0.8
Fiberglass Product Mfgr.	Shakespeare Products Group	0366 002	40202201	2000	Tons Solvent in Coating	0.08	0.22	21.08	4.68	34.63	0	0.8
Fiberglass Product Mfgr.	Spa Manufacturing, Inc.	0430 001	30800703		Tons Solvent		1.00		0.00	0.00	0	0.8
Fiberglass Product Mfgr.	Spaulding Craft, Inc.	0465 001	30800722	938	Tons Coating Applied	0.07	0.32	11.79	1.77	21.01	0	0.8
Fiberglass Product Mfgr.	Spaulding Craft, Inc.	0465 001	30800703	2000	Tons Solvent	0.01	0.42	1.20	0.50	4.20	0	0.8
Fiberglass Product Mfgr.	Spaulding Craft, Inc.	0465 001	30800724	300	TONS COATING APPLIED	0.19	0.38	52.10	2.97	21.66	0	0.8
Fiberglass Product Mfgr. Total									137.54	910.46		
Other Solvent Use												
Cutback Asphalt	R.E. Purcell Construction Co., Inc.	0026 001	30500258	0.032	TON HOT MIX ASPHALT PRODUCED	884.00	1.00	207132.00	3.31	28.29	0	0.8
Cutback Asphalt	R.E. Purcell Construction Co., Inc.	0026 001	30590001	0.556	1000 Gallons Burned	0.12	1.00	43.06	0.01	0.06	0	0.8
Cutback Asphalt	Suncoast Paving, Inc.	0044 001	30500201	0.032	Tons Produced	395.95	1.00	85790.00	1.37	12.67	0	0.8
Cutback Asphalt Total									4.70	41.02		
Other Solvent Use												
Degreasing	Honeywell, Inc.	0019 002	40100299	2077.33	TONS MAKE-UP SOLVENT USED	0.00	1.00	0.06	0.06	0.33	0	0.8
Degreasing	Lockheed Martin Corporation	0174 001	40100298	2000	Tons Make-Up Solvent Used	0.01	1.00	3.30	3.30	17.94	0	0.8
Degreasing	Raytheon E-Systems	0361 002	40100217	0.083	Sq. Ft. Surface Area X Hours Operated	10.10	1.00	2636.00	0.11	0.84	0	0.8
Degreasing Total									3.47	19.11		
Other Solvent Use												

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Control Efficiency	Rule Effectiveness
Graphic Arts	Better Business Forms, Inc.	0264 001	40500413	2000	Tons Solvent Used	0.03	1.00	9.57	9.57	50.00	0	0.8
Graphic Arts	Better Business Forms, Inc.	0264 001	40500411	2000	Tons Solvent in Ink	0.00	1.00	1.02	1.02	5.32	0	0.8
Graphic Arts	Cox Target Media, Inc.	0240 003	40500401		Tons Ink		1.00		0.00	0.00	0	0.8
Graphic Arts	Cox Target Media, Inc.	0240 001	40500401	60.16	Tons Ink	0.21	0.40	76.50	5.63	30.86	0.9624	0.8
Graphic Arts	Cox Target Media, Inc.	0240 004	40500401	48	Tons Ink	0.20	1.00	55.00	8.08	58.74	0.9624	0.8
Graphic Arts	Cox Target Media, Inc.	0240 002	40500411	60.16	Tons Solvent in Ink	0.19	1.00	76.50	13.95	69.30	0.962	0.8
Graphic Arts	Cox Target Media, Inc.	0240 002	40588801	3734.9398	Process-Unit/Year	0.02	1.00	7.47	13.95	82.17	0	0.8
Graphic Arts	Cox Target Media, Inc.	0240 001	40588801	3722.0238	Process-Unit/Year	0.01	1.00	3.36	37.91	216.65	0.962	0.8
Graphic Arts	Cox Target Media, Inc.	0240 004	40588801	2000	Process-Unit/Year	0.01	1.00	1.82	1.82	10.11	0	0.8
Graphic Arts	Eva-Tone, Inc.	0158 001	40500401	166.6667	Tons Ink	0.03	1.00	8.88	0.74	5.27	0	0.8
Graphic Arts	Eva-Tone, Inc.	0158 001	40500305	216.49049	Tons Solvent Added	0.09	1.00	23.65	2.56	19.25	0	0.8
Graphic Arts	Eva-Tone, Inc.	0158 001	30800703	367.43923	Tons Solvent	0.05	1.00	17.69	3.25	17.20	0	0.8
Graphic Arts	GSP Marketing Technologies, Inc.	0463 001	40100399	2000	Tons Solvent Consumed	0.00	1.00	24.00	24.00	7.69	0	0.8
Graphic Arts	GSP Marketing Technologies, Inc.	0463 002	40100399	0	Tons Solvent Consumed	0.00	1.00	0.00	0.00	0.00	0	0.8
Graphic Arts	Hit Promotional Products	0313 001	40588801	2000	Process-Unit/Year	0.03	1.00	8.82	8.82	69.40	0	0.8
Graphic Arts	Interprint, Inc.	0180 001	40500401	744.255	Tons Ink	0.11	1.00	39.97	14.87	80.83	0	0.8
Graphic Arts	Interprint, Inc.	0180 001	40500413	1130.57	Tons Solvent Used	0.02	1.00	6.96	3.93	21.38	0	0.8
Graphic Arts	MC Graphics, Inc.	0218 001	40500401	74	Tons Ink	0.14	1.00	48.67	11.17	65.67	0.963	0.8
Graphic Arts	MC Graphics, Inc.	0218 002	40500401	50	Tons Ink	0.25	1.00	97.45	21.44	108.24	0.975	0.8
Graphic Arts	MC Graphics, Inc.	0218 003	40588801	294.3	Process-Unit/Year	0.04	1.00	17.46	2.57	12.42	0	0.8
Graphic Arts	MC Graphics, Inc.	0218 003	39000699	5.5	Million Cubic Feet Burned	0.03	1.00	13.34	0.04	0.18	0	0.8
Graphic Arts	Times Publishing Company	0077 001	40500401	1.59	Tons Ink	2.60	1.00	956.48	0.76	4.13	0	0.8
Graphic Arts	Times Publishing Company	0077 004	40202599	272.84	Tons Solvent in Coating	0.04	1.00	15.98	2.18	11.84	0	0.8
Graphic Arts	Times Publishing Company	0077 004	49099999	359.7	Tons Solvent Consumed	0.11	1.00	41.14	7.40	40.29	0	0.8
Graphic Arts	Times Publishing Company	0077 001	49099999	534.2	Tons Solvent Consumed	0.39	1.00	142.83	38.15	207.27	0	0.8
Graphic Arts	Trader Publishing Company	0441 001	40500305	1746.3256	Tons Solvent Added	0.01	1.00	2.15	1.88	10.29	0	0.8
Graphic Arts	Trader Publishing Company	0441 001	40500203	1998.4459	Tons Solvent Added	0.01	1.00	2.96	2.96	16.21	0	0.8
Graphic Arts	Trader Publishing Company	0441 001	40500401	5.6942165	Tons Ink	0.42	1.00	152.33	0.43	2.38	0	0.8
Graphic Arts	Trader Publishing Company	0441 001	40500411	338	Tons Solvent in Ink	0.02	1.00	2.15	2.80	42.02	0.971	0.8
Graphic Arts Total									241.89	1265.08		
Other Solvent Use												
Other Solvent Use	Angelo's Aggregate Materials LTD.	0262 002	20200401	0	1000 Gallons Burned	0.00	1.00	0.00	0.00	0.00	0	0.8
Other Solvent Use	Dyco Paints, Inc.	0254 001	30101401	29.98	Tons Paint Produced	1.60	1.00	422.22	6.33	47.97	0	0.8

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Control Efficiency	Rule Effectiveness
Other Solvent Use	Essilor of America, Inc.	0098 001	40100302	2000	Tons Solvent Consumed	0.12	1.00	44.43	44.43	241.40	0	0.8
Other Solvent Use	Essilor of America, Inc.	0098 004	40100302	395.9596	Tons Solvent Consumed	0.00	1.00	0.99	0.20	1.07	0	0.8
Other Solvent Use	Essilor of America, Inc.	0098 005	30990013	5.5	Million Cubic Feet Burned	0.00	1.00	1.79	0.00	0.03	0	0.8
Other Solvent Use	Florida Metal Stamping, Inc.	0416 002	40200110	2000	Gallons of Coating	0.02	1.00	4.90	4.90	37.60	0	0.8
Other Solvent Use	Honeywell, Inc.	0019 002	40100399	1000.38	Tons Solvent Consumed	0.02	1.00	7.80	3.90	21.20	0	0.8
Other Solvent Use	Jabil Circuit Company	0278 001	40100299	1859.4211	TONS MAKE-UP SOLVENT USED	0.15	1.00	54.91	51.05	277.46	0	0.8
Other Solvent Use	Maxxim Medical	0197 001	31502001	20.01	Tons Ethylene Oxide Consumed	0.15	1.00	54.08	11.25	61.14	0.99	0.8
Other Solvent Use	Paragon Machine	0356 001	40202501	2000	Tons Solvent in Coating	0.00	1.00	0.25	0.25	2.40	0	0.8
Other Solvent Use	Raytheon Company	0447 001	31399999	1531.9	Tons Processed	0.02	1.00	4.70	3.60	23.74	0	0.8
Other Solvent Use	Raytheon Company	0447 002	40100217	0.15	Sq. Ft. Surface Area X Hours Operated	73.30	1.00	19054.00	1.43	11.00	0	0.8
Other Solvent Use	Raytheon E-Systems	0361 003	40188898	614.3	Gallons	0.01	1.00	1.40	0.43	3.30	0	0.8
Other Solvent Use	RP Scherer	0112 009	40100399	0	Tons Solvent Consumed	0.00	1.00	0.00	0.00	0.00	0	0.8
Other Solvent Use	RP Scherer	0112 004	10201401	4.97	Million Cubic Feet Burned	0.00	1.00	1.61	0.00	0.02	0	0.8
Other Solvent Use	RP Scherer	0112 003	40100301	0	Tons Solvent Consumed	0.00	1.00	0.00	0.00	0.00	0	0.8
Other Solvent Use	RP Scherer	0112 005	40100301	2000	Tons Solvent Consumed	0.00	1.00	1.63	1.63	8.86	0	0.8
Other Solvent Use	RP Scherer	0112 003	40100307	0	TONS SOLVENT CONSUMED	0.00	1.00	0.00	0.00	0.00	0	0.8
Other Solvent Use	RP Scherer	0112 005	40100307	1308.5	TONS SOLVENT CONSUMED	0.05	1.00	18.80	12.30	66.86	0	0.8
Other Solvent Use	RP Scherer	0112 004	40100399	2000	Tons Solvent Consumed	0.00	1.00	0.52	0.52	2.86	0	0.8
Other Solvent Use	RP Scherer	0112 005	40100399	2000	Tons Solvent Consumed	0.02	1.00	6.60	6.60	36.00	0	0.8
Other Solvent Use	RP Scherer	0112 003	40100399	0	Tons Solvent Consumed	0.00	1.00	0.00	0.00	0.00	0	0.8
Other Solvent Use	RP Scherer	0112 004	40700810	0	1000 Gallons Throughput	0.02	1.00	8.25	0.00	0.00	0	0.8
Other Solvent Use	RP Scherer	0112 001	40100251	6.2	Gallons Solvent Consumed	4.22	1.00	1554.00	4.82	26.16	0	0.8
Other Solvent Use	RP Scherer	0112 008	30203203	0	TONS OF MATERIAL	0.00	1.00	0.00	0.00	0.00	0	0.8
Other Solvent Use	Transitions Optical, Inc.	0209 003	39999998	1.474	1000 Parts Produced	4.58	1.00	1686.26	1.24	6.75	0	0.8
Other Solvent Use	Transitions Optical, Inc.	0209 006	39999998	0	1000 Parts	0.00	1.00	0.00	0.00	0.00	0	0.8

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Control Efficiency	Rule Effectiveness
					Produced							
Other Solvent Use	Transitions Optical, Inc.	0209 004	39999998	0.32	1000 Parts Produced	4.35	1.00	1606.60	0.26	1.39	0	0.8
Other Solvent Use	Transitions Optical, Inc.	0209 001	39999998	2.226	1000 Parts Produced	42.50	1.00	11073.50	12.32	94.61	0	0.8
Other Solvent Use	Transitions Optical, Inc.	0209 005	39999998	0	1000 Parts Produced	0.00	1.00	0.00	0.00	0.00	0	0.8
Other Solvent Use	TWC of Florida, Inc.	0150 002	40188898	1879.2491	Gallons	0.18	1.00	59.13	55.56	347.25	0	0.8
Other Solvent Use Total									223.03	1319.08		
Other Solvent Use												
Solvent Extraction Process	HOWCO Environmental Services	0153 001	49000599	0.0419603	Tons Solvent Stripped	5.11	1.00	1863.67	0.04	0.21	0	0.8
Solvent Extraction Process	HOWCO Environmental Services	0153 001	49000599	0.0083639	Tons Solvent Stripped	5.04	1.00	1841.26	0.01	0.04	0	0.8
Solvent Extraction Process	U.S. Department of Energy	0220 002	49000599	0.0464282	Tons Solvent Stripped	24.08	1.00	8861.00	0.21	1.12	0	0.8
Solvent Extraction Process Total									0.25	1.37		
Stationary Internal Combustion												
Gas Turbine	Florida Power Corporation	0013 004	20100101	0.05699	1000 Gallons Burned	35.22	1.00	3522.37	0.10	2.01	0	0.8
Gas Turbine	Florida Power Corporation	0013 003	20100101	0.05699	1000 Gallons Burned	26.93	1.00	2742.10	0.08	1.53	0	0.8
Gas Turbine	Florida Power Corporation	0012 004	20100201	2.14	Million Cubic Feet Burned	2.75	1.00	159.98	0.17	5.89	0	0.8
Gas Turbine	Florida Power Corporation	0012 007	20100201	2.1672	Million Cubic Feet Burned	4.13	1.00	473.37	0.51	8.94	0	0.8
Gas Turbine	Florida Power Corporation	0012 005	20100201	2.167	Million Cubic Feet Burned	2.89	1.00	154.38	0.17	6.26	0	0.8
Gas Turbine	Florida Power Corporation	0011 008	20100201	2.142	Million Cubic Feet Burned	3.79	1.00	594.61	0.64	8.11	0	0.8
Gas Turbine	Florida Power Corporation	0011 006	20100201	2.142	Million Cubic Feet Burned	6.06	1.00	677.69	0.73	12.99	0	0.8
Gas Turbine	Florida Power Corporation	0012 006	20100201	2.1672	Million Cubic Feet Burned	4.06	1.00	553.60	0.60	8.80	0	0.8
Gas Turbine	Florida Power Corporation	0013 002	20100101	0.05699	1000 Gallons Burned	26.83	1.00	2639.20	0.08	1.53	0	0.8
Gas Turbine	Florida Power Corporation	0011 006	20100101	0.5699	1000 Gallons Burned	0.21	1.00	337.72	0.10	0.12	0	0.8
Gas Turbine	Florida Power Corporation	0013 001	20100101	0.05699	1000 Gallons Burned	30.66	1.00	3383.14	0.10	1.75	0	0.8
Gas Turbine	Florida Power Corporation	0012 006	20100101	0.05699	1000 Gallons Burned	0.31	1.00	42.00	0.00	0.02	0	0.8
Gas Turbine	Florida Power Corporation	0012 005	20100101	0.05699	1000 Gallons Burned	0.72	1.00	38.22	0.00	0.04	0	0.8
Gas Turbine	Florida Power Corporation	0011 008	20100101	0.556	1000 Gallons Burned	0.88	1.00	128.31	0.04	0.49	0	0.8

Src_desc	Name	ARMS#	SCC_CODE	Emission Factor	EF Unit	O3 Process Rate	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Control Efficiency	Rule Effectiveness
Gas Turbine	Florida Power Corporation	0012 004	20100101	0.05699	1000 Gallons Burned	0.68	1.00	39.48	0.00	0.04	0	0.8
Gas Turbine	Florida Power Corporation	0011 005	20100101	0.05699	1000 Gallons Burned	20.48	1.00	1543.63	0.04	1.17	0	0.8
Gas Turbine	Florida Power Corporation	0011 007	20100101	0.05699	1000 Gallons Burned	17.33	1.00	1576.39	0.04	0.99	0	0.8
Gas Turbine	Florida Power Corporation	0012 007	20100101	0.00041	1000 Gallons Burned	0.37	1.00	42.42	0.00	0.00	0	0.8
Gas Turbine Total									3.39	60.67		
Stationary Internal Combustion												
Reciprocating Engine	Sonny Glasbrenner, Inc.	5048 002	20200401	13.7	1000 Gallons Burned	0.04	1.00	7.03	0.05	0.59	0	0.8
Reciprocating Engine Total									0.05	0.59		
Waste Disposal												
Municipal Waste-Combustion	Pinellas County Resource Recovery	0117 001	50100105	0.0205608	TONS BURNED	754.21	1.00	275286.00	2.83	15.51	0	0.8
Municipal Waste-Combustion	Pinellas County Resource Recovery	0117 003	50100105	0.0211408	TONS BURNED	781.44	1.00	285224.00	3.01	16.52	0	0.8
Municipal Waste-Combustion	Pinellas County Resource Recovery	0117 002	50100105	0.083	TONS BURNED	753.25	1.00	274935.00	11.41	62.52	0	0.8
Municipal Waste-Combustion Total									17.25	94.55		
Waste Disposal												
Municipal Waste-Landfill	Pinellas County Resource Recovery	0117 009	50200602	2000	Acres of Landfill	0.04	0.39	15.50	6.05	33.12	0	0.8
Municipal Waste-Landfill Total									6.05	33.12		
Waste Disposal												
Other Waste Disposal	Bayfront Medical Center	0095 002	50200505	0.14	TONS WASTE BURNED	5.50	1.00	1518.10	0.11	0.77	0	0.8
Other Waste Disposal	Medico Environmental Services, Incorporated	0210 001	50200505	0.0471	TONS WASTE BURNED	19.39	1.00	3460.10	0.08	0.91	0	0.8
Other Waste Disposal	Sonny Glasbrenner, Inc.	0147 003	20200401	13.7	1000 Gallons Burned	0.03	1.00	6.78	0.05	0.44	0	0.8
Other Waste Disposal Total									0.23	2.13		
Point Sources VOC Grand Total									1209.15	8015.68		

Appendix B:
Stationary Area Sources

2000 Area Sources Category	VOC		CO		NOx	
	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual
Storage, Transportation, and Marketing of VOL						
Vessel Loading/unloading	0.0	0.0	0.0	0.0	0.0	0.0
Bulk Gasoline Plants	0.0	0.0	0.0	0.0	0.0	0.0
Marine Vessel Ballasting and Transit	1.2	0.2	0.0	0.0	0.0	0.0
Service Station Loading (stage I)	353.3	55.1	0.0	0.0	0.0	0.0
Vehicle Refueling (stage II)	6528.6	1188.2	0.0	0.0	0.0	0.0
Underground Tank Breathing Losses	1007.5	183.4	0.0	0.0	0.0	0.0
Tank Trucks in Transit	75.6	13.8	0.0	0.0	0.0	0.0
Aircraft Refueling						
Aviation Gas	30.0	5.7	0.0	0.0	0.0	0.0
Jet Fuel	0.9	0.2	0.0	0.0	0.0	0.0
Sub-total	7996.9	1446.5	0.0	0.0	0.0	0.0
Industrial Process & Bioprocess						
Breweries	0.0	0.0	0.0	0.0	0.0	0.0
Wineries	0.0	0.0	0.0	0.0	0.0	0.0
Bakeries	802.5	146.1	0.0	0.0	0.0	0.0
Hospital Sterilization	20.4	3.7	0.0	0.0	0.0	0.0
Polyester Resin Plastic Product Manufacturing						
Sub-total	999.8	172.8	0.0	0.0	0.0	0.0
Solvent Evaporation						
Degreasing/Solvent Cleaning	11757.1	1834.1	0.0	0.0	0.0	0.0
Dry Cleaning	411.9	53.6	0.0	0.0	0.0	0.0
Graphic Arts	2407.5	438.2	0.0	0.0	0.0	0.0
Asphalt Paving	96.0	17.5	0.0	0.0	0.0	0.0
Asphalt Roofing Kettles	48.8	6.3	0.0	0.0	0.0	0.0
Other Solvent Use/Consumer & Commercial	19847.3	3612.2	0.0	0.0	0.0	0.0
Pesticide Application	221.1	12.4	0.0	0.0	0.0	0.0
Sub-total	34789.6	5974.2	0.0	0.0	0.0	0.0
Non-industrial Surface Coating						
Automobile Refinishing	1479.1	192.3	0.0	0.0	0.0	0.0
Architectural Coatings	9588.9	1154.2	0.0	0.0	0.0	0.0
Traffic Markings	411.4	40.5	0.0	0.0	0.0	0.0
Sub-total	11479.4	1387.0	0.0	0.0	0.0	0.0
Industrial Surface Coating						
Other Industrial Sources	18146.6	2359.1	0.0	0.0	0.0	0.0
Waste Disposal						
POTW	126.8	16.5	0.0	0.0	0.0	0.0
Open Burning/Land Clearing	22.8	4.2	332.9	60.6	9.8	1.8
Crematories	1.6	0.3	1.2	0.2	13.5	2.5
Sub-total	151.2	20.9	334.1	60.8	23.3	4.2
External Combustion of Fossil Fuels						
Residential/Commercial/Industrial Fuels						
Liquefied Petroleum Gas (gallons)	9.2	2.8	73.5	16.6	463.0	109.8
Fuel Oils (gallons)	62.8	10.8	79.0	22.2	2738.0	466.2
Natural Gas (bill. cu. ft.)	233.1	39.5	3471.5	576.5	4225.8	714.6
Residential Wood Combustion	0.0	134.1	0.0	147.9	0.0	1.5
Forest Fires	16.1	2.9	117.7	21.4	3.4	0.6
Slash/prescribed Burning	33.4	2.3	1000.6	70.0	19.9	1.4
Agricultural Burning	0.0	0.0	0.0	0.0	0.0	0.0
Structure Fires	12.2	2.8	66.6	15.1	1.6	0.4
Vehicle Fire	26.6	4.8	103.9	18.9	3.3	0.6
Catastrophic/accidental Releases	0.4	0.1	0.0	0.0	0.0	0.0

2000 Area Sources	VOC		CO		NOx	
Category	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual
Sub-total	393.8	200.1	4912.7	888.8	7454.9	1295.0
Total Stationary Area Sources	73957.3	11560.6	5246.8	949.6	7478.2	1299.3

Pinellas County 2000 Area Source CO Emissions

Major Category	Subcategory	SCC_CODE	Emission Factor	EF UNITS	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Days in week	SAF	
AS: Crematories	Human Crematories	31502101	0.000485	Lb/Each/Body	1	921482	0.22	1.23	7	0.25	
AS: Crematories Total								0.22	1.23		
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Distillate Oil	A2103004000	5	Lb/1000 Gallons/Distillate Oil	1	7410	18.53	71.25	6	0.15	
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Kerosene	a2103011000	5	Lb/1000 Gallons/Kerosene	1	83	0.21	1.33	6	0.25	
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Residual Oil	A2103005000	5	Lb/1000 Gallons/Residual Oil	1	56.76912	0.14	0.55	6	0.15	
AS: Fuel Oil and Kerosene Combustion	Residential Usage Distillate Oil	A2104004000	5	Lb/1000 Gallons/Distillate Oil	1	719	1.80	3.16	7	0.08	
AS: Fuel Oil and Kerosene Combustion	Residential Usage Kerosene	A2104011000	5	Lb/1000 Gallons/Kerosene	1	627	1.57	2.76	7	0.08	
AS: Fuel Oil and Kerosene Combustion Total								22.24	79.04		
AS: Miscellaneous Sources	Prescribed Burning	A2810015000	300	Lb/Tons/Waste	1	288	43.20	617.14	7	0.65	
AS: Miscellaneous Sources	Prescribed Burning	A2810015000	200	Lb/Tons/Waste	1	268.4	26.84	383.43	7	0.65	
AS: Miscellaneous Sources	Structure Fire	A2810030000	60	Lb/Each/Fire	1	504.85	15.15	66.57	7	0.2	
AS: Miscellaneous Sources	Vehicle Fire	A2810050000	125	Lb/Each/Fire	1	302.5	18.91	103.88	7	0.25	
AS: Miscellaneous Sources	Wildfires	A2810001000	140	Lb/Acres/Land	1	306	21.42	117.69	7	0.25	
AS: Miscellaneous Sources Total								125.51	1288.72		
AS: Natural Gas and LPG Combustion	Commercial/Institutional LPG Combustion	A2103007000	1.9	Lb/1000 Gallons/Liquefied Petroleum Gas (LPG)	1	2296.21	2.18	8.39	6	0.15	
AS: Natural Gas and LPG Combustion	Commercial/Institutional Natural Gas Combustion	A2103006000	84	Lb/Million Cubic Feet/Natural Gas	1	3448.51	144.84	779.89	6	0.21	
AS: Natural Gas and LPG Combustion	Industrial LPG Combustion	A2102007000	3.2	Lb/1000 Gallons/Liquefied Petroleum Gas (LPG)	1	5350.0002	8.56	54.87	6	0.25	
AS: Natural Gas and LPG Combustion	Industrial Natural Gas Combustion	A2102006001	84	Lb/Million Cubic Feet/Natural Gas	1	9699.2	407.37	2611.32	6	0.25	
AS: Natural Gas and LPG Combustion	Residential LPG Combustion	A2104007000	1.9	Lb/1000 Gallons/Liquefied Petroleum Gas (LPG)	1	6124.4867	5.82	10.23	7	0.08	
AS: Natural Gas and LPG Combustion	Residential Natural Gas Combustion	A2104006010	40	Lb/Million Cubic Feet/Natural Gas	1	1217.2574	24.35	80.26	7	0.15	
AS: Natural Gas and LPG Combustion Total								593.11	3544.97		
AS: Open Burning	Open Burning	A2610000500	169	Lb/Tons/Material	1	716.92	60.58	332.86	7	0.25	
AS: Open Burning Total								60.58	332.86		
AS: Residential Wood Combustion	Residential Wood Combustion	A2104008001	252.6	Lb/Tons/Wood	1	1171.02	147.90	0.00	7	0	
AS: Residential Wood Combustion Total								147.90	0.00		
Stationary Area Sources CO Grand Total								949.56	5246.81		

Pinellas County 2000 Area Source NOx Emissions

Major Category	Subcategory	SCC_CODE	Emission Factor	EF UNITS	Pollutant Fraction	Process Rate	Tons/year	lbs/day	Days in week	SAF
AS: Crematories	Animal Crematories	31502101	0.000632	Lb/Each/Body	1	921482	0.29	1.60	7	0.25
AS: Crematories	Human Crematories	31502101	0.004686	Lb/Each/Body	1	921482	2.16	11.86	7	0.25
AS: Crematories Total							2.45	13.46		
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Distillate Oil	A2103004000	20	Lb/1000 Gallons/Distillate Oil	1	7410	74.10	285.00	6	0.15
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Kerosene	a2103011000	20	Lb/1000 Gallons/Kerosene	1	83	0.83	5.32	6	0.25
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Residual Oil	A2103005000	55	Lb/1000 Gallons/Residual Oil	1	56.76912	1.56	6.00	6	0.15
AS: Fuel Oil and Kerosene Combustion	Industrial Usage Distillate Oil	A2102004000	20	Lb/1000 Gallons/Distillate Oil	1	3084	30.84	197.69	6	0.25
AS: Fuel Oil and Kerosene Combustion	Industrial Usage Kerosene	A2102011000	20	Lb/1000 Gallons/Kerosene	1	236	2.36	15.13	6	0.25
AS: Fuel Oil and Kerosene Combustion	Industrial Usage Residual Oil	A2102005000	55	Lb/1000 Gallons/Residual Oil	1	12523	344.38	2207.58	6	0.25
AS: Fuel Oil and Kerosene Combustion	Residential Usage Distillate Oil	A2104004000	18	Lb/1000 Gallons/Distillate Oil	1	719	6.47	11.38	7	0.08
AS: Fuel Oil and Kerosene Combustion	Residential Usage Kerosene	A2104011000	18	Lb/1000 Gallons/Kerosene	1	627	5.64	9.92	7	0.08
AS: Fuel Oil and Kerosene Combustion Total							466.19	2738.02		
AS: Miscellaneous Sources	Prescribed Burning	A2810015000	5	Lb/Tons/Waste	1	268.4	0.67	9.59	7	0.65
AS: Miscellaneous Sources	Prescribed Burning	A2810015000	5	Lb/Tons/Waste	1	288	0.72	10.29	7	0.65
AS: Miscellaneous Sources	Structure Fire	A2810030000	1.4	Lb/Each/Fire	1	504.85	0.35	1.55	7	0.2
AS: Miscellaneous Sources	Vehicle Fire	A2810050000	4	Lb/Each/Fire	1	302.5	0.61	3.32	7	0.25
AS: Miscellaneous Sources	Wildfires	A2810001000	4	Lb/Acres/Land	1	306	0.61	3.36	7	0.25
AS: Miscellaneous Sources Total							2.96	28.11		
AS: Natural Gas and LPG Combustion	Commercial/Institutional LPG Combustion	A2103007000	14	Lb/1000 Gallons/Liquefied Petroleum Gas (LPG)	1	2296.21	16.07	61.82	6	0.15
AS: Natural Gas and LPG Combustion	Commercial/Institutional Natural Gas Combustion	A2103006000	100	Lb/Million Cubic Feet/Natural Gas	1	3448.51	172.43	928.45	6	0.21
AS: Natural Gas and LPG Combustion	Industrial LPG Combustion	A2102007000	19	Lb/1000 Gallons/Liquefied Petroleum Gas (LPG)	1	5350	50.83	325.80	6	0.25
AS: Natural Gas and LPG Combustion	Industrial Natural Gas Combustion	A2102006001	100	Lb/Million Cubic Feet/Natural Gas	1	9699.2	484.96	3108.72	6	0.25
AS: Natural Gas and LPG Combustion	Residential LPG Combustion	A2104007000	14	Lb/1000 Gallons/Liquefied Petroleum Gas (LPG)	1	6124.487	42.87	75.38	7	0.08
AS: Natural Gas and LPG Combustion	Residential Natural Gas Combustion	A2104006010	94	Lb/Million Cubic Feet/Natural Gas	1	1217.257	57.21	188.61	7	0.15
AS: Natural Gas and LPG Combustion Total							824.37	4688.77		

Major Category	Subcategory	SCC_CODE	Emission Factor	EF UNITS	Pollutant Fraction	Process Rate	Tons/year	lbs/day	Days in week	SAF
AS: Open Burning	Open Burning	A2610000500	5	Lb/Tons/Material	1	716.92	1.79	9.85	7	0.25
AS: Open Burning Total							1.79	9.85		
AS: Residential Wood Combustion	Residential Wood Combustion	A2104008001	2.6	Lb/Tons/Wood	1	1171.02	1.52	0.00	7	0
AS: Residential Wood Combustion Total							1.52	0.00		
Stationary Area Sources NOx Grand Total							1299.28	7478.22		

Pinellas County 2000 Area Source VOC Emissions

Major Category	Subcategory	SCC_CODE	Emission Factor	EF UNITS	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Days/week	SAF
AS: Aircraft Refueling	Aviation Gasoline	A2505000120	11.8185	Lb/1000 Gallons/Gasoline	1	963.69	5.69	30.04	7	0.24
AS: Aircraft Refueling	Jet Fuel	A2275900000	0.065176	Lb/1000 Gallons/Fuel	1	4945.48	0.16	0.85	7	0.24
AS: Aircraft Refueling Total							5.86	30.89		
AS: Architectural Coatings	Architectural Coatings - Solvent-based	A2401001000	3.87	Lb/Each-Year/Person	0.8	423086	654.94	5441.01	5	0.27
AS: Architectural Coatings	Architectural Coatings - Water-based	A2401001000	0.74	Lb/Each-Year/Person	0.8	1686773	499.28	4147.90	5	0.27
AS: Architectural Coatings Total							1154.22	9588.91		
AS: Asphalt Paving	Cutback Asphalt Paving	A2461021000	0.4093	Lb/Tons/Solvents: All	1	21512	4.40	24.19	7	0.25
AS: Asphalt Paving	Emulsified Asphalt Paving	A2461022000	0.2132	Lb/Tons/Solvents: All	1	122521	13.06	71.76	7	0.25
AS: Asphalt Paving Total							17.46	95.95		
AS: Asphalt Roofing Kettles	Asphalt Roofing Kettles	A2461023000	6.2	Lb/Tons/Solvents: All	1	2045.24	6.34	48.77	5	0.25
AS: Asphalt Roofing Kettles Total							6.34	48.77		
AS: Auto Refinishing: SIC 7532	Auto Refinishing: SIC 7532	A2401005000	760	Lb/Each-Year/Person	1	506	192.28	1479.08	5	0.25
AS: Auto Refinishing: SIC 7532 Total							192.28	1479.08		
AS: Bioprocess	Bakeries	A2302050000	0.317	Lb/Tons/Product	1	921482	146.05	802.50	7	0.25
AS: Bioprocess	Breweries	A2302070001	43.264	Lb/Tons/Product	1	0.17	0.00	0.04	4	0.25
AS: Bioprocess	Wineries	A2302070005	4.6263	Lb/Tons/Product	1	2.39	0.01	0.04	5	0.25
AS: Bioprocess Total							146.06	802.58		
AS: Consumer and Commercial Solvent Use	All Adhesives and Sealants	A2460600000	0.57	Lb/Tons/Solvent	1	921482	262.62	1442.98	7	0.25
AS: Consumer and Commercial Solvent Use	All Automotive Aftermarket Products	A2460400000	1.36	Lb/Tons/Solvent	1	921482	626.61	3442.90	7	0.25
AS: Consumer and Commercial Solvent Use	All Coatings and Related Products	A2460500000	0.95	Lb/Tons/Solvent	1	921482	437.70	2404.97	7	0.25
AS: Consumer and Commercial Solvent Use	All FIFRA Related Products	A2460800000	1.78	Lb/Tons/Solvent	1	921482	820.12	4506.15	7	0.25
AS: Consumer and Commercial Solvent Use	All Household Products	A2460200000	0.79	Lb/Tons/Solvent	1	921482	363.99	1999.92	7	0.25
AS: Consumer and Commercial Solvent Use	All Personal Care Products	A2460100000	2.32	Lb/Tons/Solvent	1	921482	1068.92	5873.18	7	0.25
AS: Consumer and Commercial Solvent Use	Miscellaneous Products (Not Otherwise Covered)	A2460900000	0.07	Lb/Tons/Solvent	1	921482	32.25	177.21	7	0.25
AS: Consumer and Commercial Solvent Use Total							3612.21	19847.30		
AS: Crematories	Human Crematories	31502101	0.000613	Lb/Each/Body	1	921482	0.28	1.55	7	0.25
AS: Crematories Total							0.28	1.55		
AS: Dry Cleaners	Stoddard Solvent Dry Cleaners	a2420010370	1800	Lb/Tons/Special Naphthas	1	59.5	53.55	411.92	5	0.25
AS: Dry Cleaners Total							53.55	411.92		
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Distillate Oil	A2103004000	0.556	Lb/1000 Gallons/Distillate Oil	1	7410	2.06	7.92	6	0.15
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Kerosene	a2103011000	0.556	Lb/1000 Gallons/Kerosene	1	83	0.02	0.15	6	0.25
AS: Fuel Oil and Kerosene Combustion	Commercial/Institutional Usage Residual Oil	A2103005000	1.605	Lb/1000 Gallons/Residual Oil	1	56.7691	0.05	0.18	6	0.15

Major Category	Subcategory	SCC_CODE	Emission Factor	EF UNITS	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Days/week	SAF	
AS: Fuel Oil and Kerosene Combustion	Industrial Usage Distillate Oil	A2102004000	0.252	Lb/1000 Gallons/Distillate Oil	1	3084	0.39	2.49	6	0.25	
AS: Fuel Oil and Kerosene Combustion	Industrial Usage Kerosene	A2102011000	0.252	Lb/1000 Gallons/Kerosene	1	236	0.03	0.19	6	0.25	
AS: Fuel Oil and Kerosene Combustion	Industrial Usage Residual Oil	A2102005000	1.28	Lb/1000 Gallons/Residual Oil	1	12523	8.01	51.38	6	0.25	
AS: Fuel Oil and Kerosene Combustion	Residential Usage Distillate Oil	A2104004000	0.713	Lb/1000 Gallons/Distillate Oil	1	719	0.26	0.45	7	0.08	
AS: Fuel Oil and Kerosene Combustion Total							10.82	62.75			
AS: Gasoline Marketing	Fuel Delivery to Outlets - Stage I	40600302	7.3	Lb/1000 Gallons/Gasoline	1	28.5	0.10	0.67	6	0.25	
AS: Gasoline Marketing	Fuel Delivery to Outlets - Stage I	40600306	0.3	Lb/1000 Gallons/Gasoline	1	366700	55.01	352.60	6	0.25	
AS: Gasoline Marketing	Gasoline Trucks in Transit	A2505000120	0.074998	Lb/1000 Gallons/Gasoline	1	366729	13.75	75.56	7	0.25	
AS: Gasoline Marketing	Storage Tank Breathing	A2501060200	1	Lb/1000 Gallons/Gasoline	1	366729	183.36	1007.50	7	0.25	
AS: Gasoline Marketing	Vehicle Refueling (Stage II)	40600401	6.48	Lb/1000 Gallons/Gasoline	1	366729	1188.20	6528.58	7	0.25	
AS: Gasoline Marketing Total							1440.43	7964.90			
AS: Graphic Arts	Graphic Arts	A2425000000	0.951004	Lb/Tons/Solvents: All	1	921482	438.17	2407.51	7	0.25	
AS: Graphic Arts Total							438.17	2407.51			
AS: Hospitals	Sterilization	31502001	2000	Lb/Tons/Ethylene Oxide	1	3.72	3.72	20.44	7	0.25	
AS: Hospitals Total							3.72	20.44			
AS: Industrial Surface Coatings	Appliances	A2401060000	463	Lb/Tons/Solvents: All	1	119	27.55	211.91	5	0.25	
AS: Industrial Surface Coatings	Electrical Insulation	A2401065000	290	Lb/Tons/Solvents: All	1	327	47.42	364.73	5	0.25	
AS: Industrial Surface Coatings	Factory Finished Wood	A2401015000	131	Lb/Tons/Solvents: All	1	1090	71.40	549.19	5	0.25	
AS: Industrial Surface Coatings	Furniture and Fixtures	A2401020000	944	Lb/Tons/Solvents: All	1	1923	907.66	6981.97	5	0.25	
AS: Industrial Surface Coatings	High-Performance Maintenance Coatings	A2401100000	0.8	Lb/Tons/Solvents: All	1	878499	351.40	2703.07	5	0.25	
AS: Industrial Surface Coatings	Machinery and Equipment	A2401055000	77	Lb/Tons/Solvents: All	1	4671	179.83	1383.33	5	0.25	
AS: Industrial Surface Coatings	Marine Coating	A2401080000	308	Lb/Tons/Solvents: All	1	875	134.75	1036.54	5	0.25	
AS: Industrial Surface Coatings	Metal Containers	A2401040000	6029	Lb/Tons/Solvents: All	1	0	0.00	0.00	5	0.25	
AS: Industrial Surface Coatings	Miscellaneous Manufacturing	A2401090000	0.6	Lb/Tons/Solvents: All	1	608166	182.45	1403.46	5	0.25	
AS: Industrial Surface Coatings	Other Special Purpose Coatings	A2401200000	0.8	Lb/Tons/Solvents: All	1	765749	306.30	2356.15	5	0.25	
AS: Industrial Surface Coatings	Other Transportation Equipment	A2401075000	35	Lb/Tons/Solvents: All	1	1191	20.84	160.33	5	0.25	
AS: Industrial Surface Coatings	Sheet, Strip, and Coil	A2401050000	2877	Lb/Tons/Solvents: All	1	90	129.47	995.88	5	0.25	
AS: Industrial Surface Coatings Total							2359.05	18146.57			
AS: Marine Vessel Ballasting and Transit	Ballasting	40600253	0.05214	Lb/1000 Gallon-Years/Total Cargo Capacity	1	3098.59	0.08	0.44	7	0.25	
AS: Marine Vessel Ballasting and Transit	Ballasting	40600253	0.000572	Lb/1000 Gallon-Years/Total Cargo Capacity	1	411139	0.12	0.65	7	0.25	
AS: Marine Vessel Ballasting and Transit	Transit	40600254	0.00003	Lb/1000 Gallons/Crude Oil	1	411139	0.01	0.03	7	0.25	
AS: Marine Vessel Ballasting and Transit	Transit	40600257	0.005	Lb/1000 Gallons/Distillate Oil	1	3098.59	0.01	0.04	7	0.25	
AS: Marine Vessel Ballasting and Transit Total							0.21	1.17			
AS: Miscellaneous Sources	All Catastrophic/Accidental Releases	A2830001000	0.06257	Lb/Tons/Material	1	2593	0.08	0.45	7	0.25	
AS: Miscellaneous Sources	Prescribed Burning	A2810015000	8.4	Lb/Tons/Waste	1	268.4	1.13	16.10	7	0.65	
AS: Miscellaneous Sources	Prescribed Burning	A2810015000	8.4	Lb/Tons/Waste	1	288	1.21	17.28	7	0.65	
AS: Miscellaneous Sources	Structure Fire	A2810030000	11	Lb/Each/Fire	1	504.85	2.78	12.21	7	0.2	

Major Category	Subcategory	SCC_CODE	Emission Factor	EF UNITS	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Days/week	SAF
AS: Miscellaneous Sources	Vehicle Fire	A2810050000	32	Lb/Each/Fire	1	302.5	4.84	26.59	7	0.25
AS: Miscellaneous Sources	Wildfires	A2810001000	19.2	Lb/Acres/Land	1	306	2.94	16.14	7	0.25
AS: Miscellaneous Sources Total							12.97	88.77		
AS: Natural Gas and LPG Combustion	Commercial/Institutional LPG Combustion	A2103007000	0.5	Lb/1000 Gallons/Liquefied Petroleum Gas (LPG)	1	2296.21	0.57	2.21	6	0.15
AS: Natural Gas and LPG Combustion	Commercial/Institutional Natural Gas Combustion	A2103006000	5.5	Lb/Million Cubic Feet/Natural Gas	1	3448.51	9.48	51.06	6	0.21
AS: Natural Gas and LPG Combustion	Industrial LPG Combustion	A2102007000	0.25	Lb/1000 Gallons/Liquefied Petroleum Gas (LPG)	1	5350	0.67	4.29	6	0.25
AS: Natural Gas and LPG Combustion	Industrial Natural Gas Combustion	A2102006001	5.5	Lb/Million Cubic Feet/Natural Gas	1	9699.2	26.67	170.98	6	0.25
AS: Natural Gas and LPG Combustion	Residential LPG Combustion	A2104007000	0.5	Lb/1000 Gallons/Liquefied Petroleum Gas (LPG)	1	6124.49	1.53	2.69	7	0.08
AS: Natural Gas and LPG Combustion	Residential Natural Gas Combustion	A2104006010	5.5	Lb/Million Cubic Feet/Natural Gas	1	1217.26	3.35	11.04	7	0.15
AS: Natural Gas and LPG Combustion Total							42.28	242.27		
AS: Open Burning	Open Burning	A2610000500	11.6	Lb/Tons/Material	1	716.92	4.16	22.85	7	0.25
AS: Open Burning Total							4.16	22.85		
AS: Pesticide Application	Agriculture Pesticides	A2461800000	180.588	Kg/Hectare-Years/Area Pesticide Applied	1	34	3.07	25.98	6	0.33
AS: Pesticide Application	Agriculture Pesticides	A2461800000	150	Kg/Hectare-Years/Area Pesticide Applied	1	4	0.30	2.54	6	0.33
AS: Pesticide Application	Agriculture Pesticides	A2461800000	228.333	Kg/Hectare-Years/Area Pesticide Applied	1	12	1.37	11.59	6	0.33
AS: Pesticide Application	Nonagricultural Pesticides	A2461800000	3.164175	Kg/Hectare-Years/Area Pesticide Applied	1	4109.46	6.50	154.04	5	0.77
AS: Pesticide Application	Nonagricultural Pesticides	A2461800000	7.49	Kg/Hectare-Years/Area Pesticide Applied	1	303.92	1.14	26.97	5	0.77
AS: Pesticide Application Total							12.38	221.11		
AS: Polyester Resin Plastic Product Manufacturing	Boat Manufacturing	30800721	997.1	Lb/Ton/Coating Applied	0.3686	42.051	7.73	59.44	5	0.25
AS: Polyester Resin Plastic Product Manufacturing	Boat Manufacturing	30800723	227.1	Lb per Ton Coating Applied	0.3943	18.2402	0.82	6.28	5	0.25
AS: Polyester Resin Plastic Product Manufacturing	Boat Manufacturing	30800724	374.3	Lb per Ton Resin Applied	0.3943	164.162	12.11	93.18	5	0.25
AS: Polyester Resin Plastic Product Manufacturing	Reinforced Plastics	30800721	924	Lb/Ton/Coating Applied	0.31	4.1095	0.59	4.53	5	0.25
AS: Polyester Resin Plastic Product Manufacturing	Reinforced Plastics	30800723	283.3	Lb per Ton Coating Applied	0.3675	2.17455	0.11	0.87	5	0.25
AS: Polyester Resin Plastic Product Manufacturing	Reinforced Plastics	30800724	450	Lb per Ton Resin Applied	0.3675	19.571	1.62	12.45	5	0.25
AS: Polyester Resin Plastic Product Manufacturing Total							22.98	176.76		
AS: Public Owned Treatment Works	Industrial Wastewater	A2630020000	0.00011	Lb/Million Gallons/Wastewater	1	3E+08	16.48	126.76	7	0.35
AS: Public Owned Treatment Works Total							16.48	126.76		

Major Category	Subcategory	SCC_CODE	Emission Factor	EF UNITS	Pollutant Fraction	Process Rate	Tons/year	Lbs/day	Days/week	SAF
AS: Residential Wood Combustion	Residential Wood Combustion	A2104008001	229	Lb/Tons/Wood	1	1171.02	134.08	0.00	7	0
AS: Residential Wood Combustion Total							134.08	0.00		
AS: Solvent Cleaning	Automobile Repair	A2415065000	270	Lb/Tons/Solvents: All	1	10383	1401.71	8985.29	6	0.25
AS: Solvent Cleaning	Electronics	A2415030000	29	Lb/Tons/Solvents: All	1	7036.99	102.04	654.08	6	0.25
AS: Solvent Cleaning	Manufacturing	A2415045000	24	Lb/Tons/Solvents: All	1	27530.3	330.36	2117.71	6	0.25
AS: Solvent Cleaning Total							1834.10	11757.08		
AS: Traffic Marking	Traffic Markings	A2401008000	0.72	Lb/Tons/Solvents: All	1	112560	40.52	411.45	5	0.33
AS: Traffic Marking Total							40.52	411.45		
Stationary Area Sources VOC Grand Total							11560.62	73957.33		

Appendix C:
Non-Road Mobile Sources

2000 Non Road Sources Category	VOC		CO		NOx	
	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual	lbs/day Seasonal	Tpy Annual
Non-Road Transportation						
Aircraft						
Albert Whitted Airport	61.21	11.54	1638.5	315.05	11.6	2.1
Clearwater Executive	20.57	3.95	627.4	120.52	3.4	0.7
St. Pete/Clearwater						
Military	75.3	15.1	115.4	23.1	45.9	9.2
Non-military	188.3	38.9	3683.8	697.3	242.4	57.4
Aircraft total	345.4	69.5	6065.1	1156.0	303.3	69.4
Locomotive	20.0	3.7	60.0	11.0	520.0	94.9
Commercial Vessels	0.6	0.1	20.0	3.7	34.0	6.2
Sub-total	366.0	73.3	6145.1	1170.6	857.3	170.5
Non-Road Engines & Equipment						
Sub-total	38780.0	5994.7	560960.0	83263.2	47520.0	6198.2
Total Non-Road Mobile Sources	39146.0	6067.9	567105.1	84433.9	48377.3	6368.6