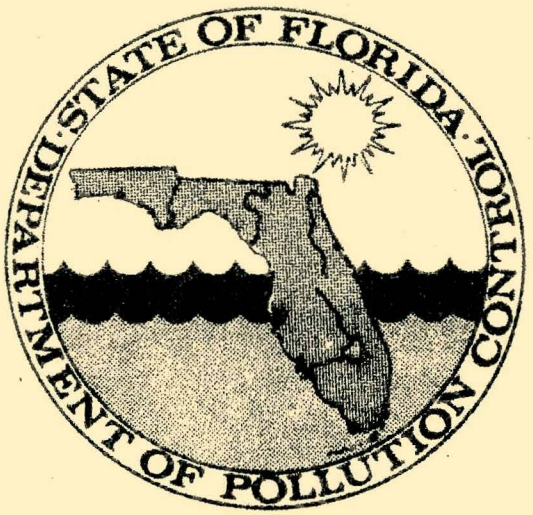
STATE OF FLORIDA
AIR IMPLEMENTATION PLAN



Florida Department of Pollution Control
Tallahassee, Florida
January, 1972

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL
SUITE 300, TALLAHASSEE BANK BUILDING
315 SOUTH CALHOUN STREET, TALLAHASSEE, FLORIDA 32301

VINCENT D. PATTON
EXECUTIVE DIRECTOR

DAVID H. LEVIN
CHAIRMAN

May 5, 1972

Mr. Tommie A. Gibbs,
Director, Air Programs Branch
Environmental Protection Agency
1421 Peachtree Street, Northeast
Atlanta, Georgia, 30309

Subject: Revisions to Air Plan

Dear Mr. Gibbs:

The attached materials are our revisions to various sections of the Air Plan submitted by the State of Florida, as requested in a letter dated April 10, 1972, from your office and subsequently in a meeting Messrs. Mauriello and Subramani had with your staff on April 17, 1972.

(1) CFR 51.11: A question was raised about the State not being able to enforce regulations during the suspension of authority of local programs if House Bill 3947 (copy enclosed), introduced during the 1972 Legislature, did not pass. The Bill, if passed, would have provided for correction of this deficiency. However, this deficiency can, at the present time, be remedied under the provisions of Chapter 403.182(5) by providing for State enforcement in the Board Order.

Attached also, is a copy of the letter from Attorney G. William Frick of EPA to our Mr. John Bottcher of the Attorney General's office on the same subject. You will note that the interpretation of the Florida Air and Water Pollution Control Act provides concurrent authority.

(2) CFR 51.14: Predicted emissions for hydrocarbons in the northeast and northwest regions, particularly in Duval and Escambia Counties have now been included in the Emission Inventory Summary. Please replace pages C-18 through C-21 and C-59 through C-62 of the submitted Plan with the enclosed corrected pages.

(3) CFR 51.15: Regarding the submission of compliance schedule (Note 3), please replace page 8 of the submitted Plan with the attached corrected page 8. Regarding the issuance of variances (Note 6), please replace page 9 of the Plan with the attached corrected page 9.

(4) CFR 51.16 and 51.17: Regarding Note 6A and Note 8, please replace page 276 with the attached corrected page 276. Discrepancy of ozone monitors in page 211 has been corrected to read three ozone monitors (Figure 68 of the Plan).

(5) CFR 51.20: Resources section has been changed and the projections are given in Appendix K format for each air quality control region, including the projections for each local program. Please replace the whole section with the attached new section.

(6) CFR 51.21: Specific responsibilities for each local agency have been outlined in the attached material. Also, included are letters of assurances to the bordering states of Alabama and Georgia.

(7) CFR 51.22: Test methods have been specified and this information has already been transmitted to your office in our letter of April 10, 1972. Enclosed is a copy of our adopted test methods.

(8) We found some typographical errors in Table XIV, pages 216 and 217, which have been corrected. Enclosed are the corrected pages 216 and 217 of the Plan.

If you have any questions or need additional information, please contact this office.

Sincerely,

Vincent D. Patton

Vincent D. Patton

VDP/spm

Enclosures

cc: C. G. Mauriello
D. H. Scott

3947

A bill to be entitled

An Act relating to pollution control, providing statewide enforcement jurisdiction for the department of pollution control; providing for state enforcement of stricter local laws; providing for violations of stricter local laws; providing for local enforcement; providing for cooperation; repealing sections 403.182(6) and 20.26(5), Florida Statutes; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Section 403.182, Florida Statutes, is amended by adding four new subsections to read:

403.182 Local pollution control programs.--

( ) Notwithstanding the existence of any local pollution control program, whether created by any county, municipality, combination thereof or a special law, the department shall have jurisdiction to enforce the provisions of this chapter and any rules, regulations and orders issued pursuant to this chapter, throughout the state; provided that

wherever rules, regulations or standards of a stricter or more stringent nature have been adopted by a local pollution control program, the department shall enforce the same in the applicable geographic area.

( ) It shall be a violation of Chapter 403, Florida Statutes, to violate or fail to comply with a rule, regulation or standard of a stricter or more stringent nature adopted by a local pollution control program and the same shall be punishable as provided by Section 403.161, Florida Statutes.

( ) Nothing in this act shall prevent any local pollution control program from enforcing its own rules, regulations or standards.

( ) Each local pollution control program shall cooperate with and shall assist the department in carrying out its powers, duties and functions.

Sections 403.182(6) and 20.26(5), Florida Statutes, are repealed.

Section 3. This act shall take effect October 1, 1972.

Where the Department and a local program institute separate lawsuits against the same party(s) for violations of a state or local pollution law, rule, or regulation arising out of the same act, the suits shall be consolidated where possible.

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF GENERAL COUNSEL
5600 Fishers Lane, Room 17B-41
Rockville, Maryland 20852

April 6, 1972

Mr. John Bottcher
Special Assistant Attorney General
The Capital
Tallahassee, Florida 33501

Dear Mr. Bottcher:

This will confirm our telephone conversation of April 5 regarding the State of Florida implementation plan. Specifically, I was concerned over the provisions of §403.182, Florida Statutes, which can be read to provide that an approved local pollution control program has exclusive authority within its jurisdiction unless the approval is terminated pursuant to procedures listed in that section. This would effectively preclude State enforcement which would violate the provisions of 40 C.F.R. 51.11(f).

However, it is my understanding that your office interprets the "Florida Air and Water Pollution Control Act" to provide the State Department of Pollution Control with concurrent authority. Therefore, should a local agency default in the enforcement of its regulations, the State Department may immediately enforce its own regulations. You recognize that the statute is not clear and that a court might make a contrary interpretation of the statute and preclude the State from enforcing without a hearing and appropriate termination of the approval of the local program. At the present time, it would be your opinion that the existence of local pollution control programs does not relieve the State of responsibility for carrying out the State implementation plan.

We also discussed the legal authority of the local programs. It is your opinion that because a program cannot be approved by the State Department of Pollution Control without having adequate authority to meet the requirements of the Air and Water Pollution Control Act and without having requirements compatible with those imposed by the State agency, the legal authority of the local programs is adequate. You have worked with the State Department of Pollution Control to determine that the local programs do have all the necessary requirements to properly implement their programs in the same manner as the State. Accordingly, you believe that the requirements of

40 C.F.R. 51.11(f) would be satisfied.

If this letter does not properly reflect your comments on this subject, would you please contact me as soon as possible. I appreciated your discussing the situation with me.

Sincerely,

G. William Frick

G. William Frick, Attorney
Air Quality and Radiation Division

April 10, 1972 - 7

Air Plan - 4

Mr. Gene Welsh
Environmental Protection Agency
50th Seventh Street, Northeast
Atlanta, Georgia, 30323

Dear Gene:

On April 5, 1972, the Board of the Department of Pollution Control adopted standard procedures to test and evaluate air pollution sources in the State of Florida.

Consider this letter as official notification. The procedures adopted are the same state procedures outlined in Technical Memorandum Number 5-2. These procedures are not the Environmental Protection Agency's procedures, but we do feel they are more restrictive.

It will be the intent of the staff of this Department to continually review these procedures, as well as the Environmental Protection Agency's methods, and modify the adopted procedures if technology and data warrants it.

Sincerely,

C. G. Mauriello, Director
Division of Operations

CGM/pm

cc: David H. Scott
Regional Engineers
Local Programs
Bureau Chiefs

GEORGIA DEPARTMENT OF PUBLIC HEALTH
47 TRINITY AVENUE SW ATLANTA, GEORGIA 30334
John H. Venable, M.D., Director Elton S. Osborne, Jr., M.D., Deputy Director

May 4, 1972

Mr. Vincent D. Patton
Executive Director
Department of Pollution Control
Suite 300
Tallahassee Bank Building
315 South Calhoun Street
Tallahassee, Florida 32304

Dear Mr. Patton:

I wish to extend to you a committment to furnish any and all cooperation and information which may be useful to your air quality control program. This shall apply to all areas under your jurisdiction which may be affected by conditions within the State of Georgia, either interstate or intrastate Air Quality Control Regions.

We propose to furnish you any information relating to construction of new plants or expansion of plants which will increase emissions to the atmosphere and possibly affect air quality in your state. Additionally, we will furnish you any updated emission inventories, air quality data, stack sampling information and emergency episode plans for specific sources as you may request or have the need for. We will refer complaints to your attention dealing with sources within your state which seem to be affecting Georgia, and pledge to you that we will act on such complaints referred to this office which affect air quality in the area under your jurisdiction.

In the past, we have had an excellent working relationship and have been able to exchange data on air quality measurements, emission inventory, sampling and other information which was mutually beneficial to us. We appreciate the fine relationship which exists between Georgia and Florida and feel that this cooperation will increase, and improve air quality in both our states in the ensuing years.

Sincerely,

Robert H. Collom

Robert H. Collom, Jr., Chief
Air Quality Control Section
Division of Environmental Protection
Department of Natural Resources

RHC:lb

Air & Water Pollution Control Commission

STATE OF MISSISSIPPI

Glen Wood, Jr.
EXECUTIVE DIRECTOR
POST OFFICE BOX 827 TELEPHONE 354-6783
SIXTH FLOOR ROBERT E. LEE BUILDING
JACKSON, MISSISSIPPI 39205

May 12, 1972

Mr. Vincent D. Patton, Executive Director
Department of Pollution Control
Suite 300
Tallahassee Bank Building
315 S.Calhoun Street
Tallahassee, Florida 32304

Dear Mr. Patton:

With respect to any interstate, or intrastate, air quality control region or portion, thereof, involving the States of Florida and Mississippi, this agency proposes to exchange available emission data as needed and requested should it become necessary for any program involving the achievement and/or maintenance of a national standard, or during emergencies.

Very truly yours,

Jack H. Curry, Chief
Division of Air Pollution

JHC:ks

STATE OF FLORIDA

OFFICE OF GOVERNOR REUBIN O'D. ASKEW

January 27, 1972

Mr. William D. Ruckelshaus, Administrator
Environmental Protection Agency
1626 K Street, Northwest
Washington, D. C. 20460

Attention: Mr. Gene B. Welsh

Dear Mr. Ruckelshaus:

Pursuant to Section 110 of the Clean Air Act, the Air Implementation Plan for the State of Florida is hereby forwarded for your evaluation and approval.

The plan was adopted by the Board of the Florida Department of Pollution Control on January 11, 1972, in compliance with Requirements for Preparation, Adoption, and Submittal of Implementation Plans, Volume 36, Number 158, Federal Register, and applicable state law, Chapter 403, Florida Statutes.

Florida has adopted ambient air standards equal to or more stringent than National Secondary Ambient Air Standards and Levels of Source Emission Limitations adequate to meet those ambient air requirements. In addition, the implementation, enforcement and maintenance of the standard is included in the plan which I believe will form the basis for an effective vigorous air program for Florida.

The deadline for meeting the source emission limitations, which will result in compliance with the ambient air standards, is July 1, 1975, with one exception. The exception is the nitrogen oxide ambient air standard for the two priority one regions, the Southeast and the West Central. Predictions of source control effectiveness and attainable schedules of control of nitrogen oxides indicate additional time will be required to meet the ambient standards in the two regions. Pursuant to paragraph 420.30, Volume 36, Number 158, Federal Register, we are attaching our application for an extension of time relative to the two subject regions.

We believe that this plan will produce ambient air conditions of excellent quality within the State of Florida and will support and enhance attainment of the similar air quality for Florida's neighboring states and the nation. Your favorable consideration of both the plan and the request for extension is sincerely solicited.

Sincerely,

Governor

ROA/fps

Enclosures

cc: Mr. William D. Ruckelshaus
Mr. Jack Ravan
Mr. David H. Levin
Mr. Vincent D. Patton

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL
SUITE 300, TALLAHASSEE BANK BUILDING
315 SOUTH CALHOUN STREET, TALLAHASSEE, FLORIDA 32301

VINCENT D. PATTON
EXECUTIVE DIRECTOR

DAVID H. LEVIN
CHAIRMAN

January 25, 1972

Honorable Reubin O'D. Askew
Governor of Florida
The Capitol
Tallahassee, Florida 32304

Dear Governor Askew:

The enclosed Air Implementation Plan for the State of Florida is respectfully submitted for your approval and submission to Mr. William D. Ruckelshaus, Administrator, Environmental Protection Agency. This plan was adopted pursuant to Section 110 of the Clean Air Act which requires submission by January 30, 1972.

Adoption of this plan by the Board of the Florida Department of Pollution Control on January 11, 1972, is in compliance with applicable federal and state laws and rules, specifically the Clean Air Act and rules promulgated in the Federal Register and Chapter 403, Florida Statutes.

Florida's plan included adoption of a new chapter of rules for the Department of Pollution Control, Chapter 17-2, Florida Administrative Code, Air Pollution, which was filed with the Secretary of State on January 14, 1972. Contents of the rule includes the setting of ambient air standards, source emission limiting standards and criteria, and action to be taken for prevention of air pollution episodes.

The Board has adopted the National Secondary Ambient Air Standards which will result in cleaner air than the National Primary Ambient Air Standards, which are the minimum requirement. The plan and rule provide for the implementation, enforcement, and maintenance of a program which will result in clean air for Florida. We believe the plan

is a well conceived, sound program for the State to pursue to obtain the goal--clean air. We respectfully urge submittal of the plan by January 30, 1972.

Sincerely yours

David H. Levin
Chairman

DHL:pgh

TABLE OF CONTENTS

STATE OF FLORIDA

Office of the Governor

THE CAPITOL
TALLAHASSEE 32304

REUBIN O'D. ASKEW
GOVERNOR

APPLICATION BY THE GOVERNOR OF FLORIDA

FOR TWO YEAR EXTENSION

Whereas the West Central (Tampa) and the Southeast (Miami) Intrastate Air Quality Control Regions were classified as Priority I Regions on Nitrogen Oxides and

Whereas the bulk of the nitrogen oxides emissions are contributed from mobile sources in these Regions, and

Whereas the degree of nitrogen oxides emission reduction necessary for the attainment and maintenance of the standard for nitrogen dioxide is greater than that which can be achieved by the application of the Federal Motor Vehicle Emission Standards promulgated under Section 202 of the Federal Clean Air Act, and

Whereas the reasonably available control technology applied to stationary sources of nitrogen dioxide is not sufficient to achieve the air quality standard, and

Whereas the institution of transportation control measures and development of mass transportation system will take more than three years,

Therefore, I, Reubin O'D. Askew, Governor of the State of Florida, do hereby request an extension of two years beyond 1975 to meet the standards on nitrogen dioxide in the West Central and Southeast Regions.

Reubin O'D. Askew
Governor

PUBLIC HEARINGS

Under Section 403.051, Florida Statutes and as required by Section 42 CFR 420.4, the contents of this plan were presented before the public after giving notice in the newspapers listed in the following page and to those on Department's mailing list, at those places and on those dates as contained in such notice, a copy of which is attached.

The hearing was reconvened on January 11, 1972 in Tallahassee, at which time this plan was approved and adopted by the Board of the Florida Department of Pollution Control.

FOR THE BOARD

Vincent D. Patton

Vincent D. Patton
Executive Director

VDP/wb

Following is a list of newspapers, that notices were sent to, and date of publication.

News Editor
Panama City Herald
123-25 W. 5th Street
Panama City, Florida 32401
Notice Published: November 5, 1971

New Editor
Today
P.O Box 1330
Cocoa, Florida 32922
Notice Published: November 6, 1971

News Editor
St. Petersburg Times
P.O. Box 1121
St. Petersburg, Florida 33731
Notice Published: November 4, 1971

Sarasota Herald-Tribune
801 South Tamiami Trail
Sarasota, Florida 33578
Notice Published: November 4, 1971

New Editor
Florida Times Union
Jacksonville, Florida 32201
Notice Published: November 5, 1971

News Editor
Orlando Sentinel
633 North Orange Avenue
Orlando, Florida 32801
Notice Published: NOvember 5, 1971

News Editor
Tampa Tribune
505 East Kennedy Boulevard
Tampa, Florida 33602
Notice Published: November 5, 1971

Clearwater Sun
301 South Myrtle Street
Clearwater, Florida 33517

Tallahassee Democrat
227 North Magnolia Drive
Tallahassee, Florida 32302
Att: City Editor
Notice Published: November 6, 1971

News Editor
Pompano Beach Sun-Sentinel
2501 N. Federal Highway
Pompano Beach, Florida 33061
Notice Published: November 5, 1971

News Editor
Ft. Lauderdale News
101 North New River Drive, East
Ft. Lauderdale, Florida 33302
Notice Published: November 5, 1971

The Miami Herald City Room
#1 Herald Plaza
Miami,Florida 33101
Att: Mike Toner
Notice Published: November 5, 1971

Hollywood Sun-Tatter
2028 Tyler Street
Hollywood, Florida 33020
Notice Published: November 4, 1971

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL
SUITE 300, TALLAHASSEE BANK BUILDING
315 SOUTH CALHOUN STREET, TALLAHASSEE, FLORIDA 32301

VINCENT D. PATTON
EXECUTIVE DIRECTOR

DAVID H. LEVIN
CHAIRMAN

November 2, 1971

NOTICE TO NEWSPAPERS

Under Section 403.051 (2), Florida Statutes, it is necessary to give thirty (30) days notice prior to the date and time of any hearing to be held for the purpose of modification of any rule or regulation. Hearings will be convened on December 6, 1971 in Fort Lauderdale, December 7, 1971 in Tampa, December 8, 1971 in Jacksonville and December 10, 1971 in Pensacola at 9:00 a.m., to hear evidence pertaining to the adoption of an Air Implementation Plan which will include the revision of Rule Chapter 17-2, Florida Administrative Code, to facilitate conformance with the requirements of the Federal Clean Air Act of 1970 for all air pollution sources.

Accordingly, we would appreciate your immediate publication of the attached Legal Notice and would appreciate thereafter, certification and affidavit of such publication to this office.

Please forward invoices of publication costs in triplicate to this office.

FOR THE BOARD

Vincent D. Patton

Vincent D. Patton

VDP/ms

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL
SUITE 300, TALLAHASSEE BANK BUILDING
315 SOUTH CALHOUN STREET, TALLAHASSEE, FLORIDA 32301

VINCENT D. PATTON
EXECUTIVE DIRECTOR

DAVID H. LEVIN
CHAIRMAN

November 2, 1971

NOTICE

TO WHOM IT MAY CONCERN:

Pursuant to Section 403.051, Florida Statutes, the State of Florida Department of Pollution Control, will conduct public hearings on December 6, 7, 8 and 10, 1971, for the purpose of the hearing of evidence pertaining to:

1. The adoption of an Air Implementation Plan which will include the revision of Rule Chapter 17-2, Florida Administrative Code, to facilitate conformance with the requirements of the Federal Clean Air Act of 1970 for all air pollution sources. Compliance with this act will be required by mid 1975 for existing pollution sources.

The hearings will be convened at 9:00 a.m. of December 6, 1971, in the Broward County Courthouse, Room 250, 201 S. E. 6th Street, Fort Lauderdale; on December 7, 1971, in the Curtis Hixon Convention Hall, Ybor Room, 600 Ashley Street, Tampa; on December 8, 1971, in the Prudential Insurance Company Auditorium, Prudential Insurance Company, 841 Prudential Drive, Jacksonville; and on December 10, 1971, in the Escambia County Health Department Auditorium, 2251 North Palafox Avenue, Pensacola.

1. Principal portions of the proposed plan will be available to the public from any one of the following Regional Offices of the Florida Department of Pollution Control: Northwest Region, 1384 Shoreline Drive, Gulf Breeze, 32561, Tel. 904-932-5324; West Central Region, P. O. Box 944, Winter Haven, 33881, Tel. 813-294-3287; Southwest Region, 3201 Golf Course Boulevard, Punta Gorda, 33950, Tel. 813-639-4967; Northeast Region, 4441 Emerson Street, Jacksonville, 32207, Tel. 904-396-6950; Central Region, 1017 N. Highland Avenue, Orlando, 32803, Tel. 305-425-4577; Southeast Region, Courthouse Square Building, Ft. Lauderdale, 33301, Tel. 305-524-5541.

ALL PERSONS INTERESTED and desiring to appear and be heard will be given an opportunity to do so at that time.

STATE OF FLORIDA
POLLUTION CONTROL BOARD

Vincent D Patton

Vincent D. Patton
Executive Director

VDP/ms

REVISIONS

In accordance with the 42 CFR 420.6 (Federal Register Volume 36, Number 158 dated August 14, 1971), this plan shall be revised from time to time, as may be necessary to take account of

(1) Revision of National ambient air quality standards

(2) The availability of improved or more expeditious methods of attaining these standards, and

(3) A finding by the Administrator that the plan is substantially inadequate to attain or maintain these standards.

REPORTS

The Florida Department of Pollution Control, upon approval of this plan by the Administrator of EPA, will submit to the Administrator of EPA through Atlanta Regional office, quarterly reports on the air quality. These reports will be for the full quarters beginning January 1, April 1, July 1, and October 1.

The Florida Department of Pollution Control, upon approval of this plan by the Administrator of EPA, will submit to the Administrator of EPA through Atlanta Regional office, semiannual reports on progress in carrying out any and all portions of the applicable plan. Such reports will be for the full semiannual period beginning January 1 and July 1.

Both the quarterly and semiannual reports will be submitted within 45 days after the end of each reporting period and in a manner prescribed by the Administrator of EPA.

Individually negotiated compliance schedules for sources emitting more than 25 tons per year of any pollutant for which there is a national standard, will be submitted to EPA by the due date of the first semiannual report.

RESPONSIBILITY

The State of Florida Department of Pollution Control, created by Section 20.26, Florida Statutes, as amended by Chapter 71-137, Laws of Florida 1971, is charged with the duty of pollution control, prevention and abatement in accordance with the Florida Pollution Control Act, Chapter 403, Florida Statutes. Under this statutory authority, the Florida Department of Pollution Control will be primarily responsible for enforcing this Air Implementation Plan throughout the state.

Variances from applicable rules and regulations will not be granted which will interfere with the attainment of national standards as contained in this plan.

SECTION I

Background

The atmosphere of Florida has generally been considered clean. This does not mean that there are not pollution problems in the State. Florida is one of the fastest growing states in the country. In the last two decades, Florida has witnessed a tremendous population growth (Table I and Figure 1). The State has added approximately two million residents in each decade during 1950 - 60 and 1960 - 70.

This trend in population growth is expected to continue in the coming decades also. Most of the increase in the population during the past two decades was in urban centers. The population projections in the next 20 years show that, in addition to currently dense counties, a major portion of the current sparsely populated counties will witness growth at a much greater rate.

The industrial activity has also experienced an unprecedented growth in the State[1]. Table II and Figure 2 give this information. As can be seen from this Table, in 1969, employment in manufacturing establishments rose to 329,100 workers. This was 6.0 percent higher than the previous year and 65.2 percent higher than in 1959.

TABLE I - Population Growth

Air Quality Control Region	1950 Population	1960 Population	1960 Percent Growth	1970 Population	1970 Percent Growth
Northeast	697,178	931,518	33.6	1,114,196	19.6
Northwest	295,274	422,918	43.2	496,959	17.5
West Central	633,147	1,128,621	78.3	1,491,570	32.2
Central	287,459	631,653	119.7	922,068	46.0
Southeast	766,870	1,632,979	112.9	2,415,327	47.9
Southwest	94,151	203,871	116.5	349,323	71.3
Total	2,774,079	4,951,560	78.5	6,789,443	37.1
Increase in Population		2,177,481		1,837,883	

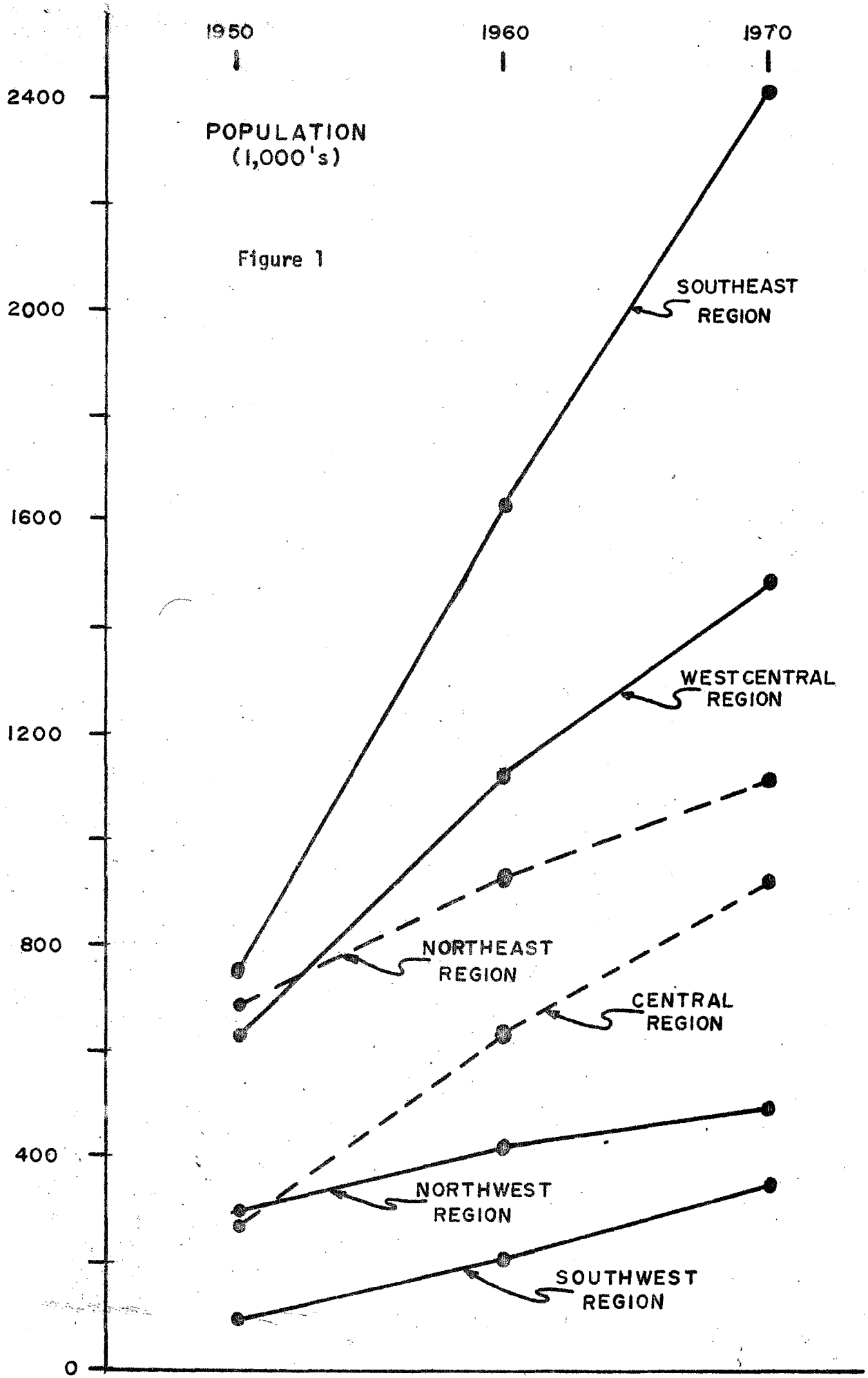

1950
1960
1970
2400
2000
1600
1200
800
400
0
POPULATION
(1,000's)
SOUTHEAST
REGION
WEST CENTRAL
REGION
NORTHEAST
REGION
CENTRAL
REGION
NORTHWEST
REGION
SOUTHWEST
REGION

Figure 1

TABLE II

TOTAL NONAGRICULTURAL EMPLOYMENT IN MANUFACTURING,

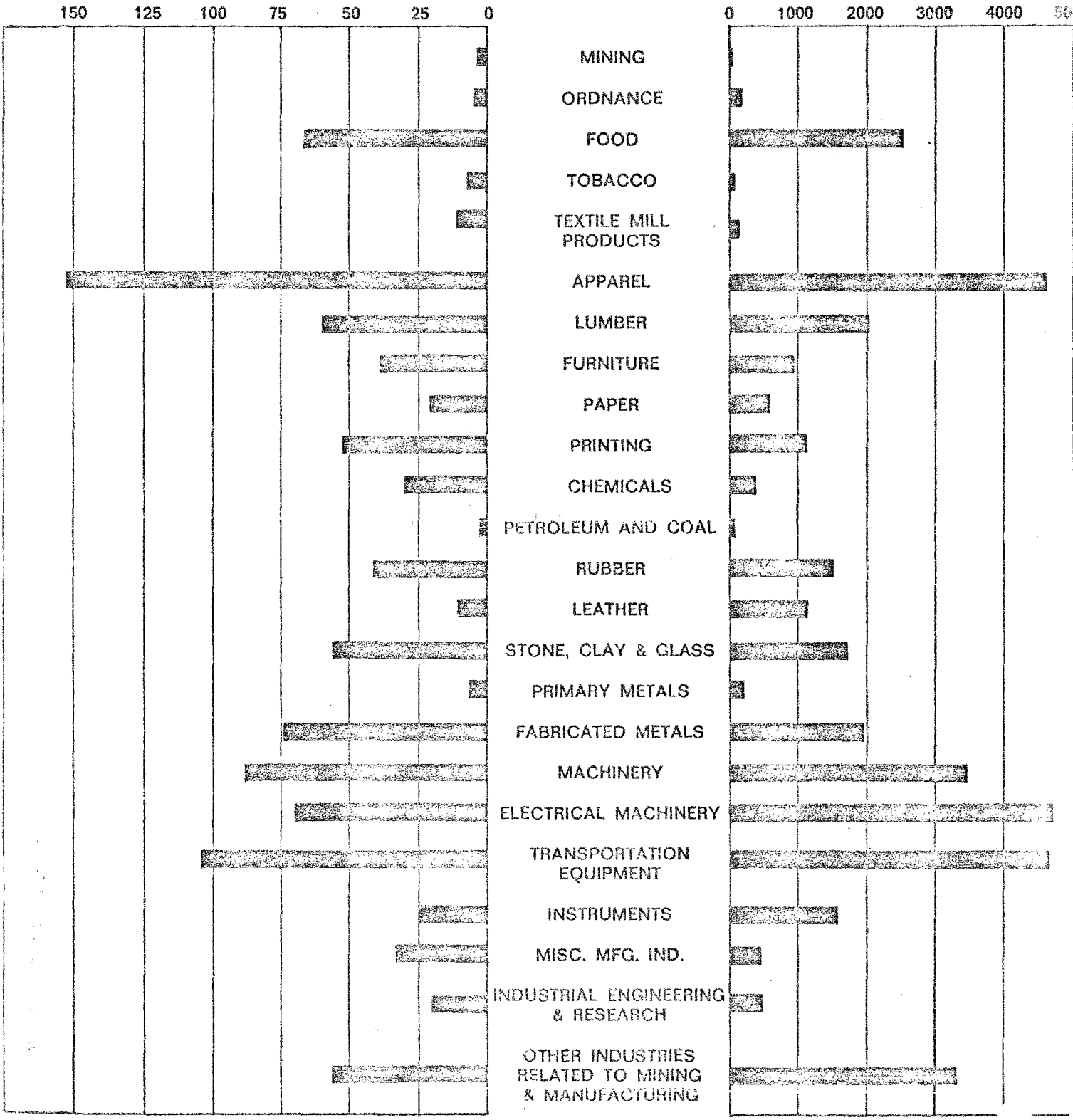
FLORIDA AND THE UNITED STATES

Year	Florida			United States		
	Total Nonagricultural Employment	Employment in Manufacturing		Total Nonagricultural Employment	Employment in Manufacturing	
		Number	% of Total		Number	% of Total
1959	1,273,000	199,200	15.6	53,313,000	16,675,000	31.3
1969	2,078,600	329,100	15.8	70,141,000	20,121,000	28.7
% Growth	63.3	65.2	--	31.6	20.7	--

(from Reference 1)

Figure 2 (from Reference 1)

FLORIDA'S NEW INDUSTRIAL PLANTS AND EXPECTED EMPLOYMENT, 1969, BY INDUSTRY



The main thrust of pollution burden assessment has been placed on automobiles and industries. The automobile population is directly relatable to population of the State and the automobile population is increasing at a steady rate of 6-8 percent per year in the State as evidenced from Table III and Table IV.

TABLE III - Motor Vehicle Registration Data-Statewide

Year	Number Registered	% Increase over previous year
1966	3,695,502	6.80
1967	3,973,178	7.52
1968	4,238,928	6.69
1969	4,590,259	8.29

TABLE IV - Selected Counties Motor Vehicle Registration Data

Duval:		
1966	273,442	-
1967	291,040	6.44
1968	303,292	4.21
1969	322,913	6.47
Dade:		
1966	633,927	-
1967	676,544	6.72
1968	738,079	8.50
1969	796,455	8.50

TABLE IV - Cont'd.

Broward		
1966	313,229	-
1967	353,150	12.74
1968	391,756	10.93
1969	444,339	13.42
Hillsborough		
1966	278,597	-
1967	294,924	5.86
1968	307,965	6.14
1969	324,271	5.29
Pinellas		
1966	291,021	-
1967	310,512	6.69
1968	322,446	3.84
1969	362,546	12.44

Even though Florida is not generally considered an industrial state, the climatological conditions and other resources available in the State are conducive to potential industrial growth in the future particularly in the "light industry" category. Present predominant manufacturing groups are somewhat diversified such as food products, wood products, chemicals, textiles, phosphate, hardware (electrical machinery, transportation equipment etc) and mineral products.

Florida has five major industrial categories that constitute the bulk of actual and potential air pollution problems. They are:

- electrical power generation
- phosphate fertilizer manufacturing
- pulp and paper production
- citrus and cattle feed processing
- sugar harvesting and processing

Figure 3 shows the location of all these major industries in the State. As can be seen, if we consider all these industries together, these industries are located throughout the State. If we consider them by individual categories, except for power generating facilities, these industries are located in separate areas of the State (Figures 4-8). Sugar industry is located in South Florida, phosphate and citrus industries in Central and pulp and paper industries are located in North Florida.

The major sources of pollution and their pollutant contribution are as follows:

Power Industry - Particulates, sulfur dioxide, nitrogen oxides, carbon monoxide

Pulp and Paper Industry - Particulates, odors, hydrogen sulfide, mercaptans, etc.

Citrus Industry - Particulate and odors

Phosphate Industry - Particulates, sulfur dioxide, fluorides, ammonia and phosphorous pentoxide

Sugar Industry - Particulates

Mineral Industry - Particulates

Solid Waste Disposal - Particulates

Wood Processing Industry - Particulates, odors

Automobiles and Aircraft - Hydrocarbons, carbon monoxide, nitrogen oxides, particulates

MAJOR POINT SOURCES

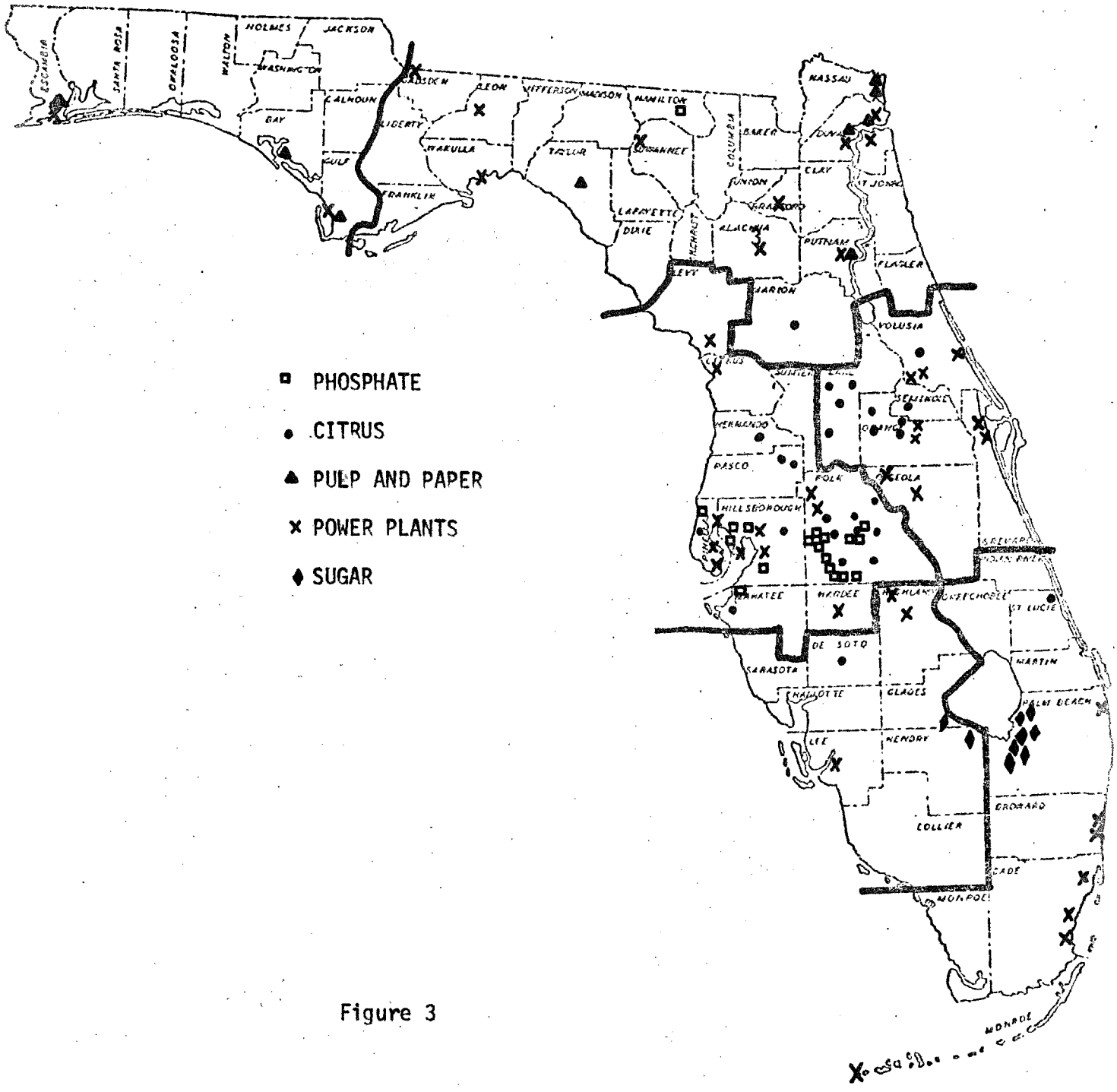


Figure 3

PHOSPHATE INDUSTRY

POINT SOURCES

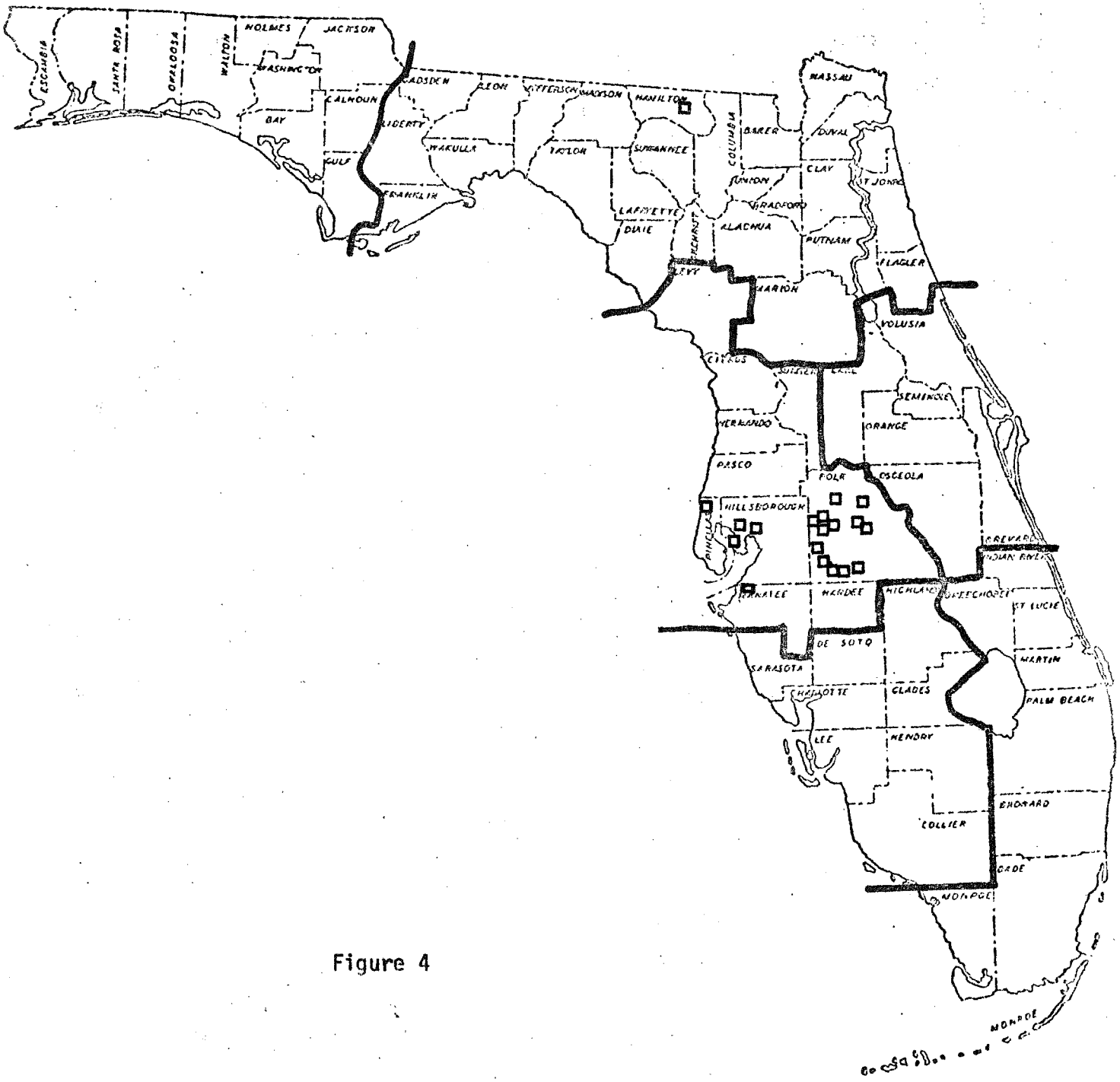


Figure 4

CITRUS INDUSTRY

POINT SOURCES

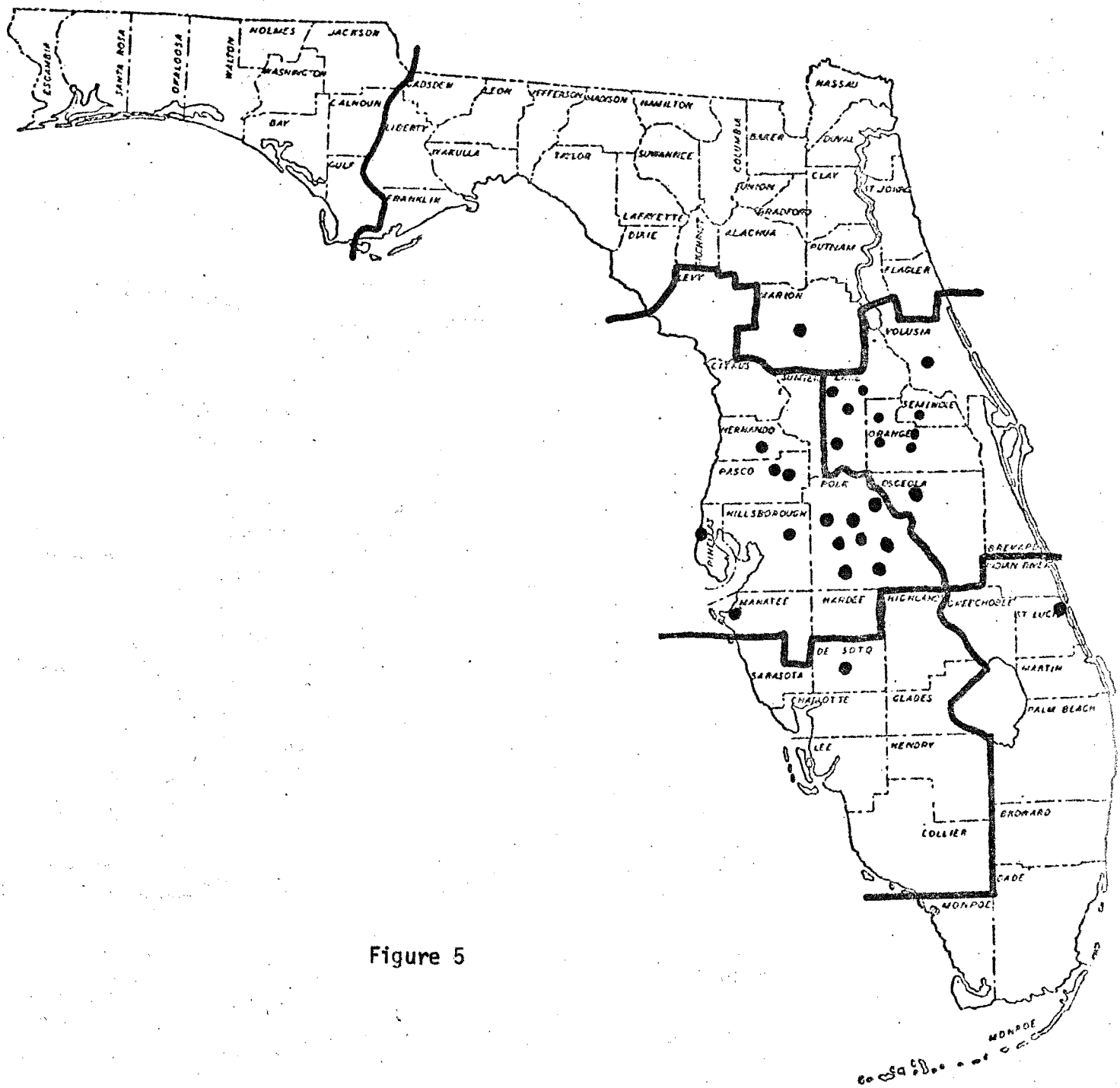


Figure 5

PULP AND PAPER
INDUSTRY

POINT SOURCES

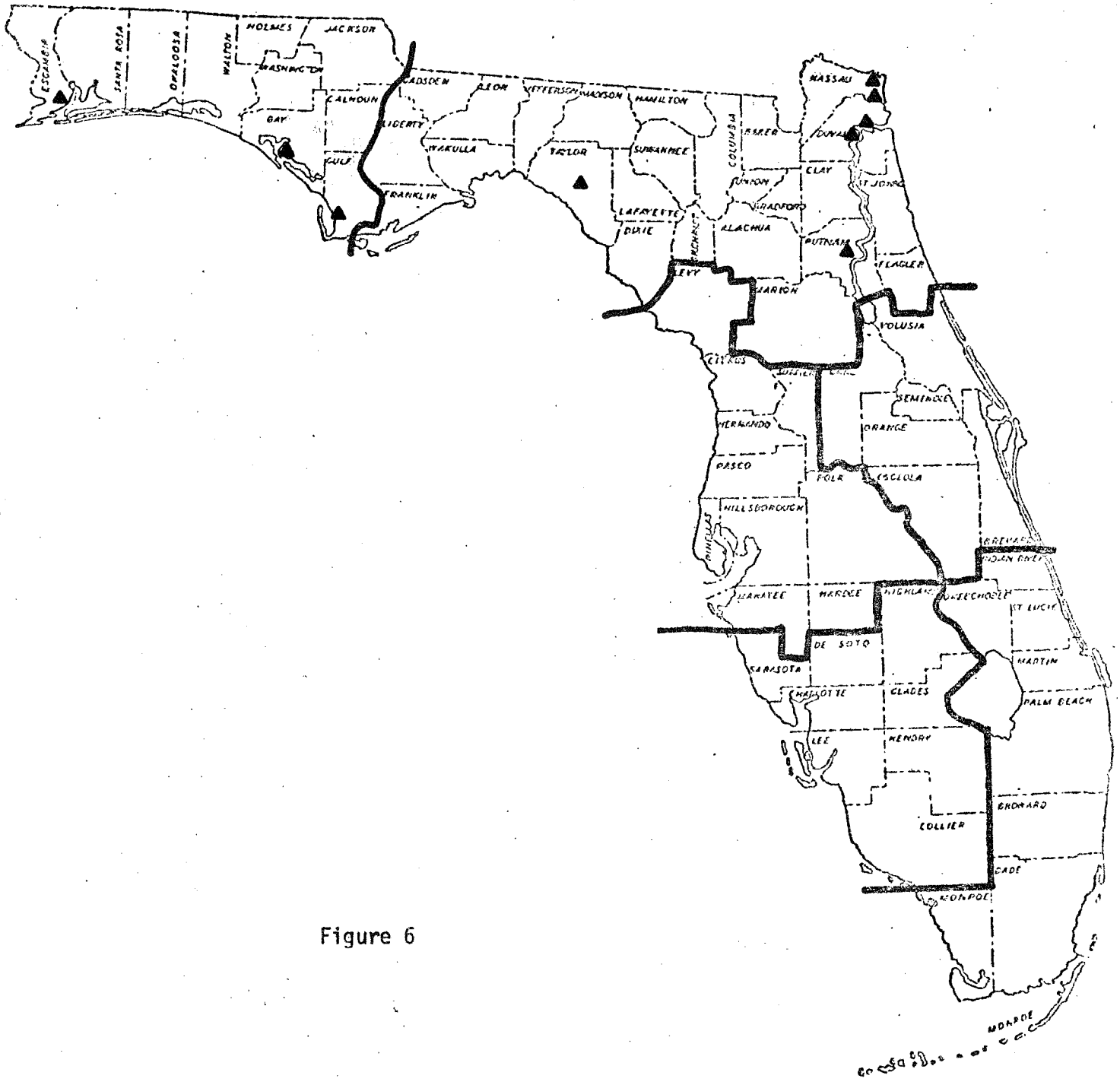


Figure 6

SUGAR INDUSTRY

POINT SOURCES

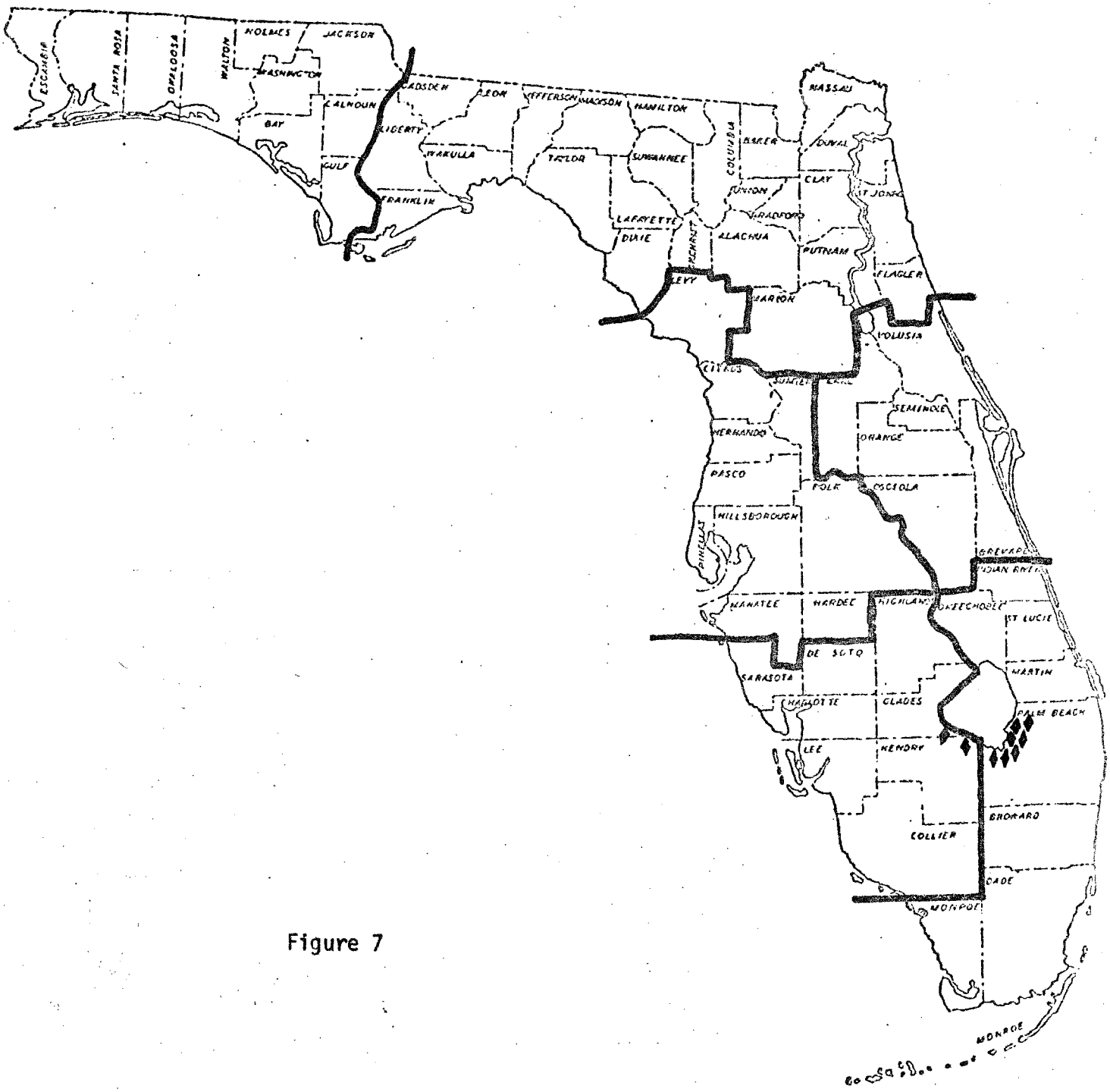


Figure 7

POWER PLANTS

POINT SOURCES

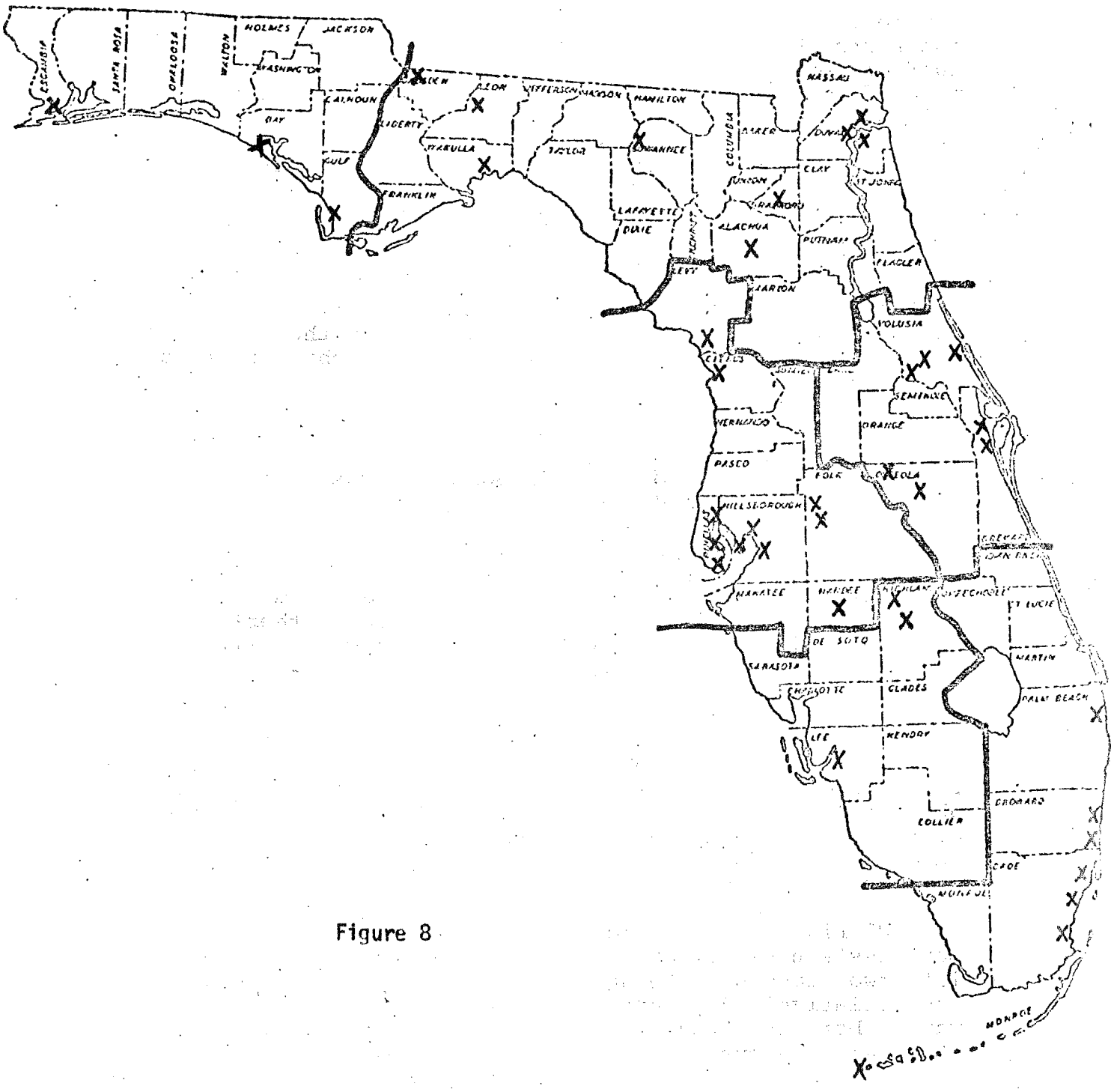


Figure 8

Climatography[2]

Florida, situated between latitudes 25° and 31° N., is largely a lowland peninsula comprising about 54,300 square miles of land area and is surrounded, except on the north, by the waters of the Atlantic Ocean and the Gulf of Mexico. No point in the State is more than 70 miles from salt water and the highest natural land is only 345 feet above sea level. Coastal areas are low and flat. The elevation of most of the interior ranges from 50 to 100 feet above sea level, though gentle hills in the interior of the peninsula and across the northern and western sections rise above 200 feet.

The climate is probably Florida's greatest natural resource. General climatic conditions range from a zone of transition between temperate and sub-tropical conditions in the extreme northern interior to the tropical conditions found on the Florida Keys. The chief factors of climatic control are:

- Latitude
- Proximity to the Atlantic Ocean and Gulf of Mexico
- Numerous inland lakes

Summers throughout the State are long, warm and relatively humid; winters are mild due to southerly latitude and relatively warm adjacent sea waters with periodic invasions of cool to occasionally cold air from the north.

Mean annual temperatures range from the upper 60's in the northern sections to the middle 70's on the southern mainland. Average summertime temperatures are about the same throughout the State, 81° to 82°F and the average minimum temperatures during the coolest months range from the middle 40's in the north to the middle 50's in the south.

Florida enjoys abundant rainfall. Except for the northwestern sections, the average year can be divided into two seasons - the so called "rainy season" and a long relatively dry season. Rainfall in Florida is quite varied both in annual amount and in seasonal distribution. The average annual rainfall ranges from 50 to 65 inches.

Prevailing winds over the southern peninsula are southeast and east. Over the remainder of the State, wind directions are influenced locally by convectional forces inland and the "land and sea breeze effect" near the coast. Consequently prevailing directions are somewhat erratic but, in general, follow a pattern of northerly in the winter and southerly in the summer. Figure 9 shows the annual wind roses for selected cities.

Because of the general pattern of terrain and the Trade Wind circulation, meteorological conditions that aggravate air pollution do not often occur at any place in Florida. Such instances are practically nil except the panhandle section of Florida (Figure 10). The air over the State is usually sufficiently unstable-a condition conducive to the development of cumulous clouds and thunderstorms to disperse pollutants to higher levels.

FREQUENCY OF WIND DIRECTION

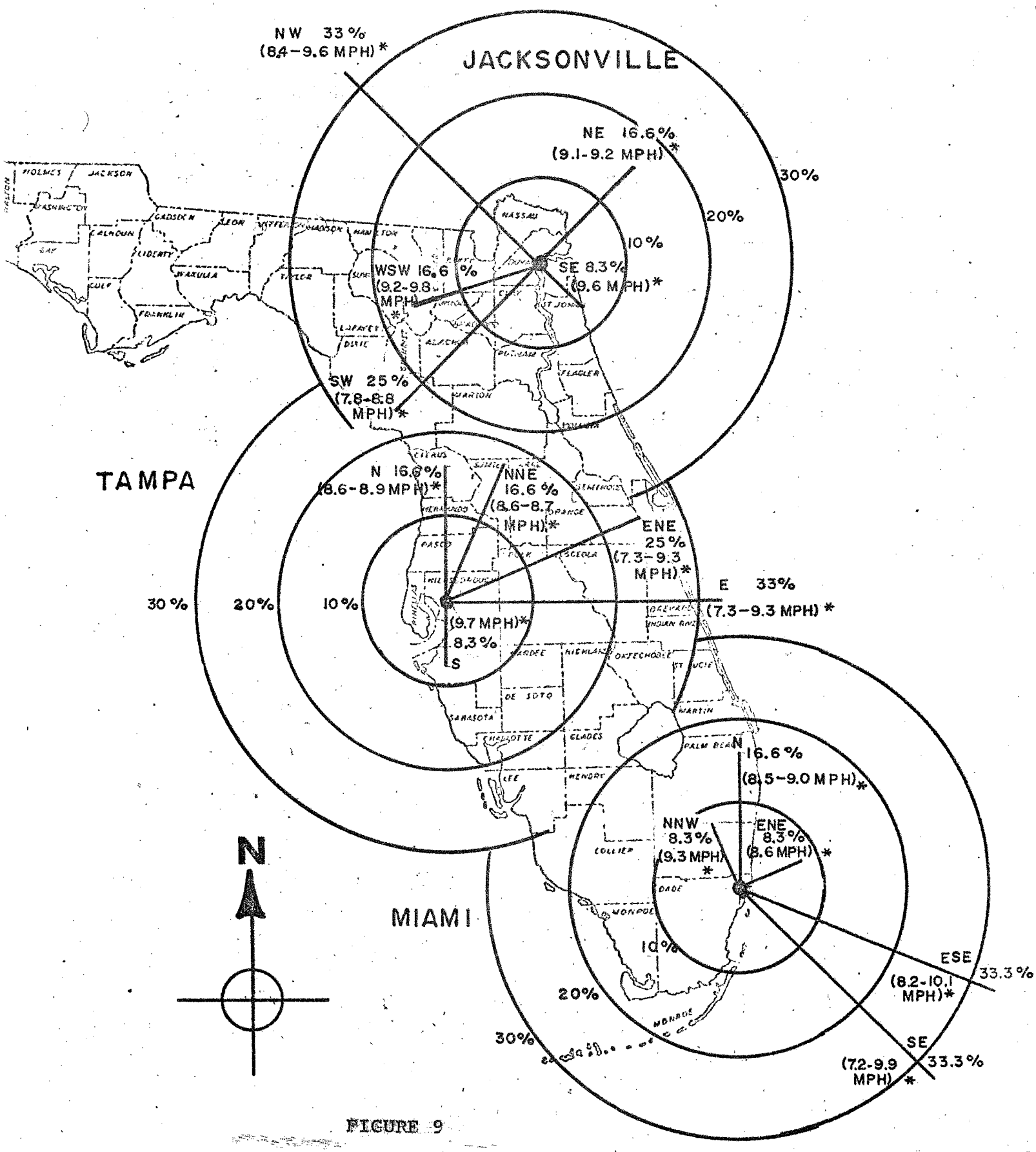


FIGURE 9

* Monthly Averages

FORECAST HIGH AIR POLLUTION POTENTIAL DAYS

39 EPISODES WEST

1 OCT. 1963 - 3 APRIL 1970

75 EPISODES EAST

1 AUG. 1960 - 3 APRIL 1970

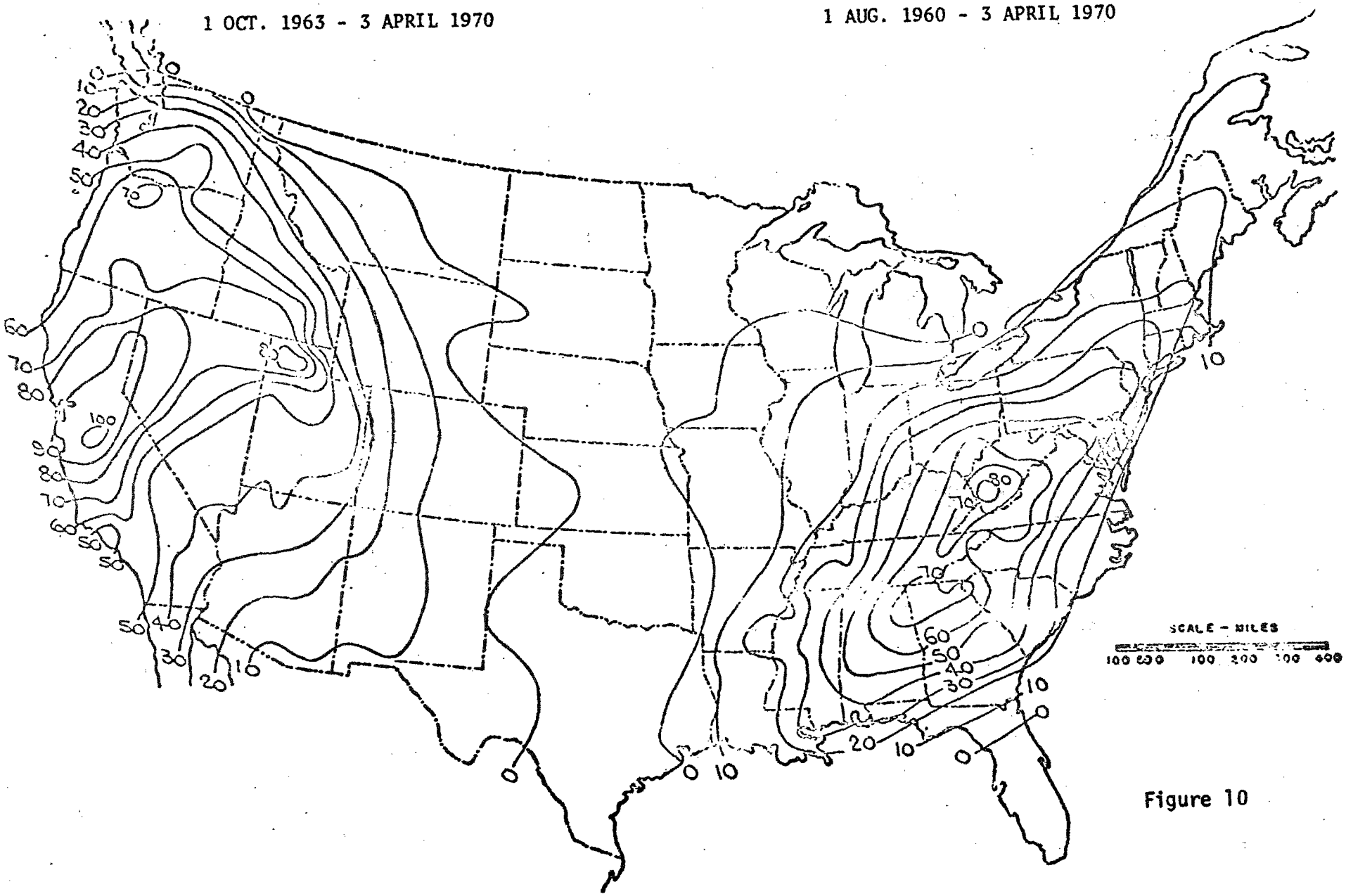


Figure 10

References

1. 1969 - Florida's New Industrial Plants,
State of Florida, Department of Commerce (1970).

2. Climates of the States - Florida,
Climatography of the United States No. 60-8
U. S. Department of Commerce (1967).

Section II

Plan Content and Requirements

In compliance with the requirements of the Federal Clean Air Act of 1970 and Federal Register Volume 36, Number 68, dated August 14, 1971 (Requirements for Preparation, Adoption and Submittal of Implementation Plans), each plan must contain adequate information on some important elements. A partial list of such important elements is:

* Legal Authority
* Control Strategy: General
* Control Strategy: Sulfur oxides and particulate matter
* Control Strategy: Carbon Monoxide, hydrocarbons, photochemical oxidants and nitrogen dioxide
* Rules and Regulations
* Compliance Schedule
* Air quality surveillance
* Source Surveillance
* Resources
* Intergovernmental cooperation
* Prevention of air pollution emergencies

Legal Authority:

Chapter 403, Florida Statutes, passed by the State Legislature in 1967 is the foundation of the entire pollution control program of the State of Florida. The conception and passage of Chapter 403 (copy enclosed in Appendix B) provides all the necessary legal authority to the Department of Pollution Control to carry out an effective pollution control and abatement program.

In the way of reviewing adequacy of a state's legal authority, the Environmental Protection Agency lists some fifteen (15) essential provisions. For the purpose of easy reference and interpretation, each of these fifteen essential provisions is listed below followed by appropriate sections of Chapter 403 which meets this provision.

Essential Provisions

1. Broad policy or definition of air pollution consistent with the Clean Air Act, as amended to protect and enhance air quality.

403.021 Legislative declaration; public policy. (1) The pollution of the air and waters of this state constitutes a menace to public health and welfare, creates public nuisances, is harmful to wildlife, fish and other aquatic life, and impairs domestic, agricultural, industrial, recreational, and other beneficial uses of air and water.

(2) It is declared to be the public policy of this state to conserve the waters of the state and to protect, maintain, and improve the quality thereof for public water supplies, for the propagation of wildlife, fish and other aquatic life, and for domestic, agricultural, industrial, recreational, and other beneficial uses, and to provide that no wastes be discharged into any waters of the state without first being given the degree of treatment necessary to protect the beneficial uses of such water.

(3) It is declared to be the public policy of this state and the purpose of this act to achieve and maintain such levels of air quality as will protect human health and safety, and to the greatest degree practicable, prevent injury to plant and animal life and property, foster the comfort and convenience of the people, promote the economic and social development of this state and facilitate the enjoyment of the natural attractions of this state.

(4) It is declared that local and regional air and water pollution control programs are to be supported to the extent practicable as

essential instruments to provide for a coordinated statewide program of air and water pollution prevention, abatement and control for the securing and maintenance of appropriate levels of air and water quality.

(5) It is hereby declared that the prevention, abatement and control of the pollution of the air and waters of this state are affected with a public interest, and the provisions of this act are enacted in the exercise of the police powers of this state for the purpose of protecting the health, peace, and safety, and general welfare of the people of this state.

403.031
(3) "Pollution" is the presence in the outdoor atmosphere or waters of the state of any one or more substances, contaminants, or noise in quantities which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property, or unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

2. Authority to adopt rules and regulations including emission limitation on all sources.

403.061 Department; powers and duties. The department shall have the power and the duty to control and prohibit pollution of air and water in accordance with the law and rules and regulations adopted and promulgated by it, and for this purpose to:

(1) Approve and promulgate current and long-range plans developed to provide for air and water quality control and pollution abatement.

(7) Adopt, modify and repeal rules and regulations to carry out the intent and purposes of this act. Any rules or regulations adopted pursuant to this act shall be consistent with provisions of federal law, if any relating to control of emissions from motor vehicles.

(8) Hold hearings relating to the adoption of rules to control or prohibit air and water pollution, including hearings upon complaints for violations.

(13) Establish ambient air quality and water quality standards for the state as a whole or for any part thereof, and also standards for the abatement of excessive and unnecessary noise and in cooperation with the Department of Transportation establish the maximum decibels of sound permissible from motor vehicles and trucks operating on the highways of Florida.

(26) Perform any other act necessary to control and promote air and water pollution, and to delegate any of its responsibilities, authority and powers, other than rule-making powers, to any state agency now or hereinafter established.

3. Authority to require information relevant to air pollution control including authority to require periodic reports of emission information.

403.061 Department; powers and duties
The department shall have the power and the duty to control and prohibit pollution of air and water in accordance with the law and rules and regulations adopted and promulgated by it, and for this purpose to:

(15) Require persons engaged in operations which may result in pollution, to file reports which may contain information relating to locations, size of outlet, height of outlet, rate and period of emission and composition and concentration of effluent and such other information as the department shall prescribe to be filed relative to pollution.

403.101 Classification and reporting.
(1) The department, by rule or regulations, may classify air and water contaminant sources, which in its judgment may cause or contribute to air or water pollution,

according to levels and types of emissions and other characteristics which relate to air or water pollution, and may require reporting for any such class or classes. Classifications made pursuant to this section may be for application to the state as a whole or to any designated area of the state, and shall be made with special reference to effects on health, economic, social and recreational factors, and physical effects on property.

(2) Any person operating or responsible for the operation of air or water contaminant sources of any class for which the rules and regulations of the department require reporting shall make reports containing information as may be required concerning location, size and height of contaminant outlets, processes employed, fuels used and the nature and time period or duration of emissions, and such other information as is relevant to air and water pollution and available or reasonably capable of being assembled.

403.111 Confidential Records.
Any information relating to secret processes, methods of manufacture or production which may be required, ascertained or discovered by inspection or investigation, shall not be disclosed in public hearings and shall be kept confidential by any member, officer or employee of the department. Provided that nothing herein shall be construed to prevent the use of such records in judicial proceedings in connection with the prosecution of violations of this act, when ordered to be produced by appropriate subpoena or by order of the court. No such subpoena or order of the court shall abridge or alter the rights or remedies of persons affected in the protection of trade secrets or secret processes, in the manner provided by law, and such persons affected may take any and all steps available by law to protect such trade secrets or processes.

4. Authority to provide that emission reports be available for public inspection.

> 119.01 Public records open to examination by citizens
> All state, county and municipal records shall at all times be open for a personal inspection of any citizen of Florida, and those in charge of such records shall not refuse this privilege to any citizen.

> 119.011 Definitions
> (1) "Public Records" shall mean all documents, papers, letters, maps, books, tapes, photographs, films, sound recordings or other material, regardless of physical form or characteristics, made or received pursuant to law or ordinance or in connection with the transaction of official business by any agency.
>
> (2) "Agency" shall mean any state, county or municipal officer, department, division, board, bureau, commission or other separate unit of government created or established by law.

5. Authority to require installation of equipment by owner or operator of stationary sources to monitor emissions and to conduct source tests.

The Department can order the installation of air sampling equipment and can require them by rule.

> 403.061
> (7) Adopt, modify and repeal rules and regulations to carry out the intent and purposes of this act. Any rules or regulations adopted pursuant to this act shall be consistent with provisions of federal law, if any, relating to control of emissions from motor vehicles.

> 403.061
> (10) Issue such orders as may be necessary to effectuate the control of air and water pollution and enforce the same by all

appropriate administrative and judicial proceedings.

6. Authority to prevent construction or modification of new sources including prior review of location and compliance with appropriate rules and regulations. (Basically a permit to construct system).

403.061
(18) Require that notice be given to it prior to the undertaking of the construction or installation or expansion of any new air or water contaminant sources. Within thirty days of its receipt of such notice, the department shall require, as a condition precedent to the construction or installation or expansion of such sources, the submission of plans, specifications, and such other information as it deems necessary in order to determine whether the proposed construction or installation will be in accord with applicable laws, rules and regulations. If within sixty days of the receipt of plans, specifications or other information required pursuant to this chapter, the department determines that the proposed construction or installation will not be in accord with the requirements of this act or applicable rules and regulations, it shall issue an order prohibiting the construction or installation. Failure of such an order to issue within the time prescribed herein shall be deemed a determination that the construction or installation may proceed; provided, that it is in accordance with plans, specifications or other information, if any, required to be submitted.

7. Authority to inspect emission sources.

403.091 Inspections.
Any duly authorized representative of the department may enter and inspect any property, premises or place, except a building which is used exclusively for a

private residence, on or at which an air or water contaminant source is located or is being constructed or installed at any reasonable time for the purpose of ascertaining the state of compliance with the law, or rules and regulations of the department. No person shall refuse immediate entry or access to any authorized representative of the department who requests entry for purposes of inspection, and who presents appropriate credentials; nor shall any person obstruct, hamper or interfere with any such inspection. If requested, the owner or operator of the premises shall receive a report setting forth all facts found which relate to compliance status.

8. Authority to test emission sources.
Covered in items 5 and 7 above.

9. Authority to issue appropriate orders to compel compliance with regulations.

403.121 Enforcement; procedure.
(1) If the department has reason to believe a violation of any provision of this act has occurred, it shall cause written notice to be served upon the alleged violator or violators. The notice shall specify the provision of the law, rule or regulation alleged to be violated, and the facts alleged to constitute a violation thereof, and may include an order that corrective action be taken within a reasonable time. No such order shall become effective except after reasonable notice and the order is served upon the person or persons named therein and a hearing held if requested within the time specified in the notice; except that injunctive relief may be sought as provided under Section 403.131.

(2) If, after hearing, the department finds that a violation or violations have occurred, it shall affirm or modify

its order previously issued, or issue an appropriate order or orders for the prevention, abatement or control of the emissions or pollution involved or for the taking of such other corrective action as may be appropriate. Any order issued prior to a hearing as a part of a notice provided in subsection (1) of this section, or any order issued after a hearing may prescribe the date by which the violation shall cease by fixing reasonable timetables for necessary action to prevent, abate or control the pollution. If after hearing on an order contained in a notice, the department finds that no violation is occurring, it shall rescind the order.

10. Provision for adequate civil or criminal penalties.

403.161 Prohibition, violation, penalty, intent

(1) It is unlawful for any person:

(a) To cause the pollution of any of the air or waters of this state in violation of any rules or regulations adopted by the department pursuant to this chapter; or

(b) To violate or fail to comply with any order of the department, including orders or rules fixing standards of air or water quality, or permits issued pursuant to its authority.

(2) Violation is punishable by a civil penalty of not more than $5,000 for the first offense and of not more than $5,000 for each offense thereafter. Each day during any portion of which such violation occurs constitutes a separate offense. Failure of any offender to apy any fine imposed under this section within a time set by the court when imposing said fine shall be evidence of an intent to continue to violate orders of the department and shall enable the court to enter an order for the offender to cease from doing business or carrying on operations within the state.

(3) It is the legislative intent that the civil and criminal penalties and fines imposed by the court be of such amount as to insure immediate and continued compliance with this act and rules or regulations pursuant thereto.

11. Provision for injunctive relief in the event other legal remedies fail to abate violations.

12. Authority to implement emergency action comparable to section 303 of the Clean Air Act, as amended.

403.131 Injunctive relief; emergency procedure
If preventive or corrective measures are not taken in accordance with any order of the department, if the department finds that a generalized condition of air or water pollution exists and that it creates an emergency requiring immediate action to protect human health or safety, or if the department finds that a generalized condition of air or water pollution exists and that it creates an emergency requiring immediate action to prevent harm to property or to animal, plant, or aquatic life, the department shall institute proceedings in a court of competent jurisdiction for injunctive relief to enforce this chapter or rules, regulations, or orders adopted pursuant hereto. Such injunctive relief may include both temporary and permanent injunctions.

13. Authority (to the extent necessary to achieve and maintain National air quality standards) to adopt land use and transportation control.

403.061
(11) Adopt a comprehensive program for the prevention, control, and abatement of pollution of the air and waters of the state, and from time to time review and modify such program as necessary.

14. Authority (to the extent necessary and practicable) for periodic inspection and testing of motor vehicles to enforce compliance with applicable emission standards.

403.061
(22) Make a continuing study of the effects of the emission of air contaminants from motor vehicles on the quality of the outdoor atmosphere of this state and the several parts thereof, and make recommendations to appropriate public and private bodies with respect thereto.

15. Authority as appropriate to regulate and coordinate local programs that are included in implementation plans.

403.182 Local pollution control programs
(1) Each county and municipality or any combination thereof may establish and administer a local pollution control program if it complies with this act. Local pollution control programs in existence on the effective date of this act shall not be ousted of jurisdiction if such local program complies with this act. All local pollution control programs, whether established before or after the effective date of this act, must:
(a) Be approved by the department as adequate to meet the requirements of this act and any applicable rules and regulations pursuant thereto.
(b) Provide by ordinance, regulation, or local law for requirements compatible with, or stricter or more extensive than those imposed by this act and regulations issued thereunder.
(c) Provide for the enforcement of such requirements by appropriate administrative and judicial process.
(d) Provide for administrative organization, staff, financial and other resources necessary to effectively and efficiently carry out its program.

(2) The department shall have the exclusive authority and power to require

and issue permits; provided, however, that the department may delegate its power and authority to local pollution control organizations if the department finds it necessary or desirable to do so.

(3) If the department finds that the location, character or extent of particular concentrations of population, contaminant sources, the geographic, topographic or meteorological considerations, or any combinations thereof, are such as to make impracticable the maintenance of appropriate levels of air and water quality without an areawide pollution control program, the department may determine the boundaries within which such program is necessary and require it as the only acceptable alternative to direct state administration.

(4) (a) If the department has reason to believe that a pollution control program in force pursuant to this section is inadequate to prevent and control pollution in the jurisdiction to which such program relates, or that such program is being administered in a manner inconsistent with the requirements of this act, the department shall, on due notice, conduct a hearing on the matter.
(b) If, after such hearing, the department determines that such program is inadequate to prevent and control pollution in the municipality, county, or municipalities or counties to which such program relates, or that such program is not accomplishing the purposes of this act, it shall require that necessary corrective measures be taken within a reasonable period of time, not to exceed ninety days.
(c) If the municipality, county, or municipalities or counties fail to take such necessary corrective action within the time required, the department shall administer within such municipality, county, or municipalities or counties all of the regulatory provisions of this act. Such pollution control program shall

supersede all municipal or county pollution laws, regulations, ordinances and requirements in the affected jurisdiction.
(d) If the department finds that the control of a particular class of contaminant source because of its complexity or magnitude is beyond the reasonable capability of the local pollution control authorities or may be more efficiently and economically performed at the state level, it may assume and retain jurisdiction over that class of contaminant source. Classifications pursuant to this paragraph may be either on the basis of the nature of the sources involved or on the basis of their relationship to the size of the communities in which they are located.

(5) Any municipality or county in which the department administers its pollution control program pursuant to subsection (4) of this section may with the approval of the department establish or resume a municipal or county pollution control program which meets the requirements of subsection (1) of this section.

(6) In exercising its power, duties and functions the department of air and water pollution control shall have no jurisdiction over local acts of a stricter or more stringent nature.

Other state agencies may be required to carry out a portion of the air quality control implementation plan pursuant to the requirement included in Chapter 403.081 and 403.061 (4).

403.081 Performance by other state agencies
All state agencies, including the division of health of the department of health and rehabilitative services, shall be available to the department to perform, at its direction, the duties

required of the department under this act.

403.061
(4) Secure necessary scientific, technical, research, administrative and operational services by inter-agency agreement, contract, or otherwise. All state agencies, upon direction of the department shall make these services and facilities available.

Control Strategy: General

Chapter 403, Florida Statutes, passed by the State Legislature in 1967, states:

> "It is declared to be the public policy of this State and the purpose of this act to achieve and maintain such levels of air quality as will protect human health and safety, and to the greatest degree practicable, prevent injury to plant and animal life and property, faster the comfort and convenience of the people, promote the economic and social development of this State and facilitate the enjoyment of the natural attractions of this State."

In line with the intent of the Legislature, the policy, direction and overall program of the Department of Pollution Control have been set forth in terms of:

(i) Objectives

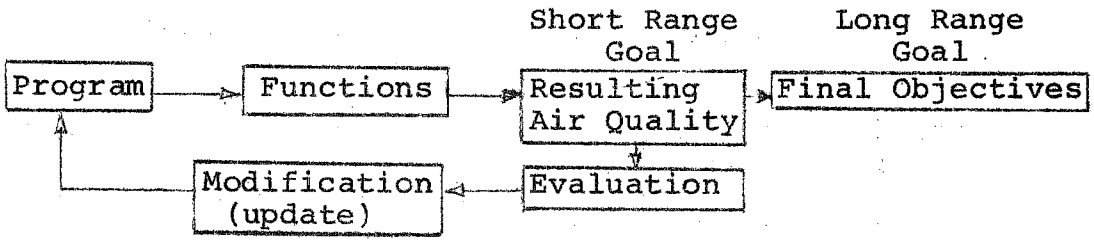
(ii) Programs to meet objectives

- short range

- long range

(iii) Functions

(iv) Review, Evaluation and Modification of Programs



The philosophy behind the State Legislature's intent in passing Chapter 403 and consequently the philosophy of the Department of Pollution Control is that all the regions within the State of Florida should have an air quality which is most beneficial to the whole population of Florida. Also it is the intent that this air quality be better and

the same throughout the State, irrespective of land use. The reason behind this philosophy is that the residential, commercial and industrial zones of urban and rural areas are all surrounded by the same air mass. (In effect it says that the public health and welfare shall be protected.) This is a very reasonable approach.

The final objective is the attainment and maintenance of a much better air quality throughout the State, an air quality that a fully developed control technology can sustain. The technology has not fully developed yet on all aspects of control. As a result, problems are encountered in trying to meet this final objective overnight or in a short period of time. Therefore the logical approach is to set the ultimate goal and to try to reach this goal in short term incremental steps. This is a sound control procedure and lends itself to escalation beyond interim goals until the basic desired air quality levels are obtained.

The interim air quality levels or goals may be set by different approaches. There have been differing views expressed on this subject by experts and Scientists engaged in the field of air pollution control; such as:

- Standards to be based upon public health and not upon cost
- Standards to be set on two criteria:
  - (i) protect public from undesirable effects
  - (ii) should not put unnecessary burden on the legitimate enterprise that emits the pollutant.
- Standards to be set based on technical, scientific and social considerations.

In passing the Air Quality Act of 1970, the federal government's philosophy is that all the States must meet as a minimum a certain ambient air quality which is promulgated as "Primary Standards" to be attained by mid 1975, in order to protect public health. The federal government also has promulgated "Secondary Standards" to be achieved within a reasonable time thereafter, which will protect public health and welfare.

It should be realized that the air pollution problem and the air quality in an area are unique for that area in many respects. Besides emission quantities, topography

and meteorology are two other important factors which have to be considered before setting air quality standards. In the absence of an actual air quality survey in all the counties throughout the State on the pollutants for which national standards have been set, the "Secondary" standards are chosen as the goal in Florida by mid 1975. These standards are being chosen based on the limited air quality information which is available for somewhat polluted areas in the State, the need for control and the availability of reasonable control technology to achieve such standards by mid 1975.

As mentioned earlier in this section these standards are short term goals to be achieved within this predetermined time period. The continuing air quality survey which will be instituted during this time period, the availability of further advanced control technology, socio-economic impact and the land use pattern will form the elements of a very realistic approach in evaluating and updating the control strategy (standards) after mid 1975 and in setting the final goals.

Control Strategy: Sulfur Oxides and Particulate Matter

In order to decide upon a desired set of emission standards which will achieve the Secondary Standard by 1975, accurate information on the present emissions and the resulting air quality must be known. An emission standard is a limit on the amount of pollutant emitted from a source. Unfortunately, there are no direct mathematical calculations that one can perform to relate ambient air quality with the emission limit. The ambient level of a pollutant depends on a number of modifying factors. In the absence of measured air quality data, one method of determining an emission limit is to assume all possible combinations of wind direction, wind velocity and atmospheric stability and to calculate the resulting maximum concentration from a source and then limit the emission from that source to the desired level. In case of multiple sources, this becomes much more difficult. Diffusion model computer programs have been developed which can be used to estimate air quality as a result of multiple sources. But such models have to be field tested because the calculations neither take into account either chemical or photochemical reaction among the pollutants nor the fallout or absorption of pollutants onto other objects.

Emission Inventory:

Where extensive information is available on air quality and emission load in an area, a straight "roll back" technique can be effectively used to calculate the needed reduction in emissions to achieve the desired air quality, because the topography is the same and the general meteorology can be assumed to be the same from year to year.

The Department of Pollution Control has a "Permit" system in operation which was instituted in 1970. By law, all the existing pollution sources as well as the potential ones (new sources) are required to have either an operation permit or construction permit issued by the Department. The permit applicant has to provide information on the present or expected emissions and the control equipment in use or planned to be used.

EMISSION INVENTORY

I. Explanation of Emission Inventory

The emission inventory presented in summary form is a compilation of various sources to obtain a comprehensive documentation of pollutant emissions. The usefulness of this information is unquestionable when developing a comprehensive air resource management plan. Control strategies, air quality modeling, ambient air monitoring and air resource planning are all dependent upon a quantitive and qualitative emissions inventory.

To develop an inventory, accurate data on the quantity and characteristics of emissions from numerous sources is required. The majority of this information was obtained from permit applications, which furnished such data as stack tested emissions. The permit system, which has been in operation 15 months, contains all major point sources in the State. Also, future emissions from major point sources were available from construction permit applications. The area source data was pieced together from a conglomeration of sources. The following paragraphs will outline the basis for area source emission data when information was obtained from sources other than permit applications.

Emissions data for stationary fuel conbustion, transportation and miscellaneous sources was obtained from the following sources. Where individual county data was unavailable the basis for breakdown is given.

1. Florida Petroleum Council furnished data on distillate and residual fuels other than No. 1 fuel oil. Only state-wide figures were available since no state agency records this data. The fuel values were listed according to use. The heating use was broken down using the following method.

$$TFC \times RDD \times P/\underset{(state)}{\Sigma P \times RDD} = \text{Region Fuel Consumption}$$

where; TFC = Total Fuel Consumption; RDD = Regional Degree Days;

P = Population of Region

$$\text{County Consumption} = \text{Region Consumption} \times \frac{\text{County Population}}{\text{Region Population}}$$

The industrial, electric utilities, railroad and other uses were either obtained separately or from permit applications.

2. The Florida Department of Agriculture and Consumer Services made available county sales of gasoline and Kerosene (No. 1 fuel oil). Commercial users were distinguished from residential users by assuming an average monthly summer consumption as a monthly commercial consumption.

3. The Florida Gas Transmission Company and United Gas Pipe Line Company furnished all natural gas consumption on a regional basis. County consumption was obtained on a population basis as described above.

4. Eglin AFB, Ellyson Field NAS, Cecil Field NAS, Mayport NAS, Jacksonville NAS, Homestead AFB, Patrick AFB, Tyndall AFB, McCoy AFB and McDill AFB all furnished aircraft data which included number of operations and type of aircraft. Appropriate emission factors were utilized to determine total emissions.

5. The number of Take-Offs and Landings for airports with FAA operated traffic control towers was

obtained from the FAA Air Traffic Activity Calendar Year 1970. Aircraft types and percentages were obtained by collaborating with FAA tower operators to develop representative statistics of the air traffic.

6. Seaboard Coastline Railroad and Florida East Coast Railroad furnished diesel fuel consumption data.

7. Florida Department of Revenue provided a statewide diesel fuel consumption figure. Diesel fuel consumption by county was calculated assuming diesel fuel sales in proportion with gasoline sales.

8. Information on acreage burned from forest fires and agricultural, silvicultural and landclearing purposes was obtained from the Florida Department of Agriculture and Consumer Services.

9. Local air pollution programs and DPC Regional Offices supplied necessary information on grove protection, vessels, minor point and area sources which was not available through the permit system or state agencies.

The information and data supplied by Federal establishment, state agencies, local programs, and industries is believed to be the latest and most accurate available. This information along with that obtained from permit applications combines to form the most complete emission inventory possible within the time table for the development of the Air Quality Implementation Plan.

The Emission Inventory Summary differs from the suggested in Appendix D format (Requirements for Preparation Adoption and Submittal of Implementation) in the following areas:

1. Emission from power plants were listed separately from fuel combustion so that comparisons can be more readily made between power plant emissions and other source categories and grand total emissions.

2. The category titled "combination" under Fuel Combustion and Power Plants includes sources which fire two or more fuels simultaneously or separately during the course of a year.

EMISSION FACTORS FOR AREA SOURCES

Emission factors utilized were obtained from Compilation of Air Pollutant Emission Factors by M. J. McGraw and R. L. Duprey, Preliminary Document, P.H.S. Publication 999-AP-42. Frequent reference to tables from that document is made in the following emission factor explanations.

1. Forest Fire Emissions

Composition of burned material is assumed 50% wood and 50% landscape refuse. 25 tons/acre is the approximate weight of material burned.

Pollutant	lb/ton of burned material
Particulate	17
Sulfur Oxide	Neg.
Carbon Monoxide	55
Hydrocarbons	12
Nitrogen Oxides	2

2. Agricultural, Silvicultural and Landclearing burning: Material is assured all agricultural refuse. Weight of material burned is estimated at 12.5 tons/acre. The agricultural Field Burning Emission Factors in Table 13 were used.

3. Fuel Combustion: Emission Factor:

Fuel Used	Table Utilized
a. Natural Gas	Table 6
b. Residual Oil	Table 5
c. Distillate Oil	Table 5

4. Transportation Sources	Emission Table Utilized
a. Gasoline	Table 14
b. Diesel	Table 15
C. Aircraft	Table 17
d. Railroad	Table 15
e. Gasoline Handling	Table 24
f. Vessels	Table 19

5. Table 23 was employed for hydrocarbon emission for most petroleum storage installations. However, since the diameter of tank was not readily available for floating roof storage tanks, an emission factor was developed utilizing the information in Table 23.

Floating Tank Emission Factor:

Capacity (gallons) x 120 lbs. HC/day/100 ft. dia. tank/

4614038 gallons/100 ft. dia. tank = 2.6007×10^{-5} lbs. HC/

Gallon capacity/day

Summary of Emission Inventory:

At this point, a brief discussion of the Emission Inventory compiled for various air quality control regions is in order. The results obtained from the emission inventory outline the contribution of each source category to the total quantity. Source categories which contribute a significant portion of a pollutant will logically be the first target for emission reduction for that air pollutant. Applicable rules and regulations can be established to decrease emissions from these sources which can produce a significant reduction of the total problem and a corresponding improvement of the air quality.

A. West Central Florida Air Quality Control Region.

1. Particulates: The total quantity of discharged particulates for 1970 was 70,074 tons with a significant portion (63%) coming from Polk and Hillsborough Counties. These counties are sites for many major industries, e.g. phosphate and citrus industries and power plants. Consequently particulate emissions are expected to be greater.

   The emission quantity distribution shown in Figure 11 demonstrates the relative contribution of each source category to the total. Process losses, the greatest contributor, result largely from phosphate and citrus industries. Relatively uncontrolable emission from miscellaneous area sources contribute significantly, 31.3%, to the regional total. Due to coal fired steam-electric power plants located in this region, the relative amount emitted from the power plant category is somewhat higher than in regions utilizing fuel oil as a primary fuel.

2. Sulfur Oxides - Sulfur Oxide emission from power plants dominate the inventory as shown in figure 12. However, significant contributions are made from process losses which are directly assignable to the sulfuric acid plants of the phosphate industry. These two source categories comprise 94.88% of the total emission with the remaining 5.12% coming from Transportation, Fuel Combustion, Solid Waste Disposal and Miscellaneous area sources.

3. Carbon Monoxide, Hydrocarbons and Nitrogen Dioxide. - The Carbon monoxide, hydrocarbon and nitrogen oxide emissions from transportation sources contribute as expected, a majority of the air contaminates as

shown in Figures 13-15. Miscellaneous area sources, more specifically forest fires and agricultural burning, add noticeable quantities of hydrocarbons and carbon monoxide whereas they contribute little to nitrogen oxide emissions due to the relatively low temperature burning. The combustion of fuels in steam electric power plants results in the generation of high temperatures. Consequently, nitrogen oxide emissions from power plants contribute significantly to the total nitrogen oxides emission as shown in figure 15.

B. Central Florida Air Quality Control Region

1. Particulate - Of the 15,228 tons of particulate pollutants discharged in this region a suprising 47.5% is contributed by miscellaneous area sources i.e., forest fires, agricultural silvicultural and land clearing burning. This percentage largely orginates from the agricultural dependence of this region and the requirement for land clearing and agricultural burning. As shown on Figure 16, process emissions also contribute significantly to the total emissions with citrus processing (i.e. drying) being the major sources in this category.

2. Sulfur Oxides - Power Plants comprise 90.05% of the total 38697 tons/yr sulfur oxide emissions. The remaining quantities are broken down in figure 17.

3. Carbon Monoxide, hydrocarbons and nitrogen oxides - Transporation sources comprise 95.0%, 92.82% and 58% of the total carbon monoxide, hydrocarbon and nitrogen oxide emissions respectively with the remaining source categories except for power plants contributing minor quantities. Figures 18-20 display the relative contribution of each source category to the total emissions.

C. Southwest Florida Air Quality Control Region

1. Particulate - The sugar industry's bagassee boilers are the largest single contributor of particulates. These bagasse boilers are virtually uncontrolled and emit large quantities of particulates when burning the cellulose by-product. Miscellaneous area sources constitute 41.75% of the total particulate emitted. This quantity is a result of agricultural dependence of this region. The remaining 7.64% comes from power plants, solid waste disposal, process emissions and transportation (Figure 21).

2. Sulfur Oxide - As shown in Figure 22, power plants dominate the sulfur oxide emissions in the Southwest Region. The remaining percentages from various categories are also given in figure 22.

3. Carbon Monoxide, Hydrocarbons, Nitrogen Oxides - The percentages contributed by transportation for carbon monoxide hydrocarbons, and nitrogen oxides are relatively the same as shown in figures 23, 24 and 25. Miscellaneous area sources contribute significantly to carbon monoxide and hydrocarbons. Power Plants, like in most regions, add significantly to nitrogen oxide emissions.

D. Southeast Air Quanlity Control Region

1. Particulates - The total quantity of particulates is distributed relatively evenly throughout the categories. Process emissions is the largest category with 28.27% (Figure 26), followed by transportation. The large quantity contributed by particulates from Transportation is due to the large automobile and truck population in the Southeast. Fuel combustion which contributes 19.85% of the total particulates, is largely from uncontrolled Bagasse boilers of the raw sugar industry. A significant portion is also from miscellaneous area sources.

2. Sulfur Oxide - The need for power generation due to the large Southeast Region population shows the large quantity of sulfur oxides emitted (113,258 tons/yr) from natural gas and oil fired electric power utilities. The remaining percentages are shown in Figure 27.

3. Carbon Monoxide, Hydrocarbons and Nitrogen Oxides - The quantity of carbon monoxide emitted in the Southeast Region is the largest amount of any region in Florida. Due to the vast automobile population in urbanized south Florida, 97.5% of a total 1,419,901 tons/yr is from transportation sources. Remaining percentages are given in Figure 28. The percentages contributed by transportation of hydrocarbons and nitrogen oxides dominate these categories for the same reason as carbon monoxide. Figures 30 and 29 shown the relative quantities and percentages of nitrogen oxides and hydrocarbons.

E. Northwest Florida Interstate Air Quality Control Region

1. Particulates - The Florida portion of the Pensacola-Mobile-Pascagola Interstate A.Q.C.R. contributes 49,737.19 tons/yr to the region. Figure 31 shows the relative contribution of each source category to this total. The process emissions category is the major source category contributor with the pulp and paper industries making up most of this quantity. Pulp and paper industries also contribute a large percentage to the fuel combustion category.

2. Sulfur Oxides - It is suprisingly evident, as seen in figure 32, that power plants do not contribute a majority of emissions. Fuel combustion which is usually a very much smaller contributer constitutes a majority (37.93%) of the total sulfur dioxide emission. This is a direct result of the pulp and paper industry requiring large amounts of steam for processing. The process emission category is a significant contributor with a large portion of this total coming from sulfur recovery plants at crude oil production sites.

3. Carbon Monoxide, Hydrocarbons and Nitrogen Oxides Transportation sources are the majority contributor of these three pollutants as seen in figures 33, 34 and 35. Contributions of other source categories are also shown in these figures.

   Percentages shown in Figures 33, 34 and 35 are values generally expected, with the exception of nitrogen oxide from fuel combustion. This value is somewhat higher due to emissions from the pulp and paper industry.

F. Jacksonville - Brunswick Interstate Air Quality Control Region - Florida Portion

1. Particulates - As shown in Figure 36 the process emission category constitutes 51.35% of the particulates for the Florida portion of the Jacksonville-Brunswich Interstate Air Quality Control Region. The primary process emission sources are from the pulp and paper industry which have plants located in Duval, Nassau, Putnam and Taylor counties. Miscellaneous area sources which contribute significantly (26.02%), are a result of the agricultural dependence of this region and the forest fire frequency.

   The remaining relative percentages are shown in Figure 36

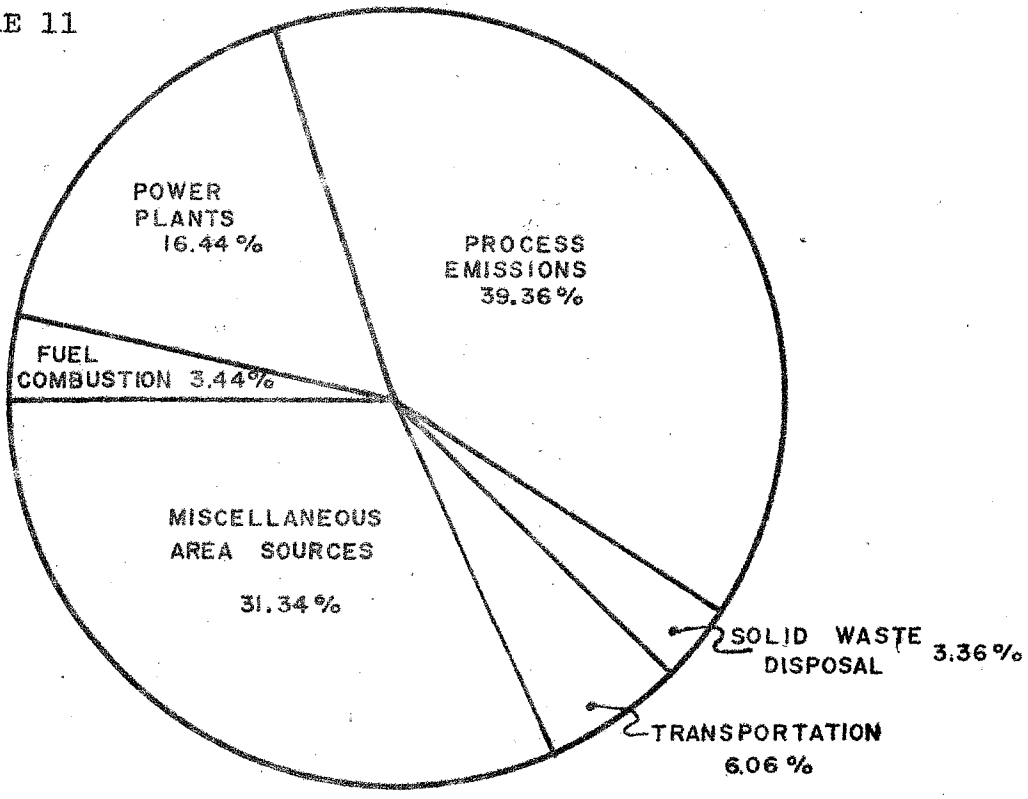
2. Sulfur Oxides - The power plant source category is the major contributor of the 90,599 ton/yr. of sulfur oxides emitted in the Florida portion of the Jacksonville-Brunswick A.Q.C.R. However, the relative contribution, 44.64%, is not consistent with values obtained from the other regions. A close inspection of the inventory shows that the pulp and paper industry contributes large quantities of sulfur oxides from their industrail boilers and other plant processes. The pie diagram (Figure 37) shows the relative contribution of each source category to the total.

3. Carbon Monoxide, Hydrocarbon and Nitrogen Oxide. The relative contribution of each source category is consistent with values obtained in other regions. The transportation source category is the major contributor of carbon monoxide, hydrocarbons and nitrogen oxides. Nitrogen oxides emissions from power plants is significant for reasons described earlier. Figures 38, 39 and 40 show the category breakdown of these three pollutants.

WEST CENTRAL REGION

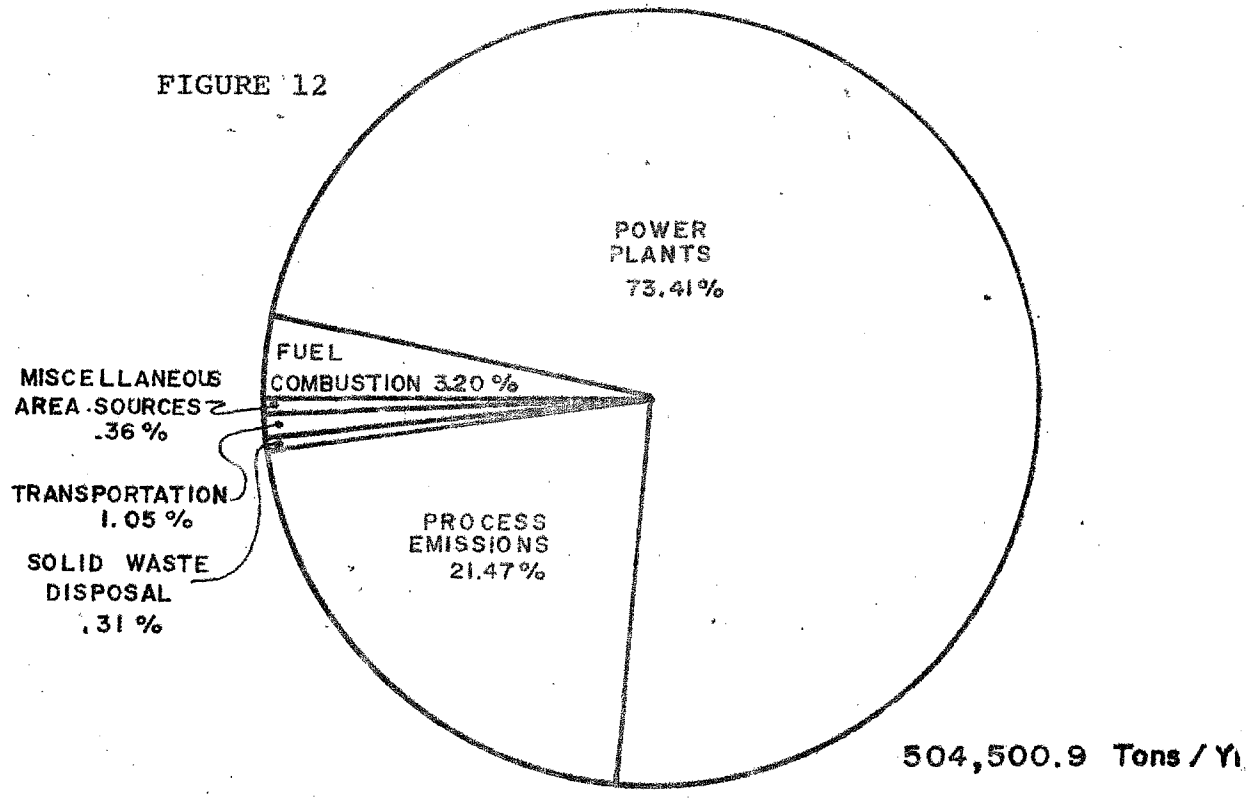
PARTICULATE

FIGURE 11



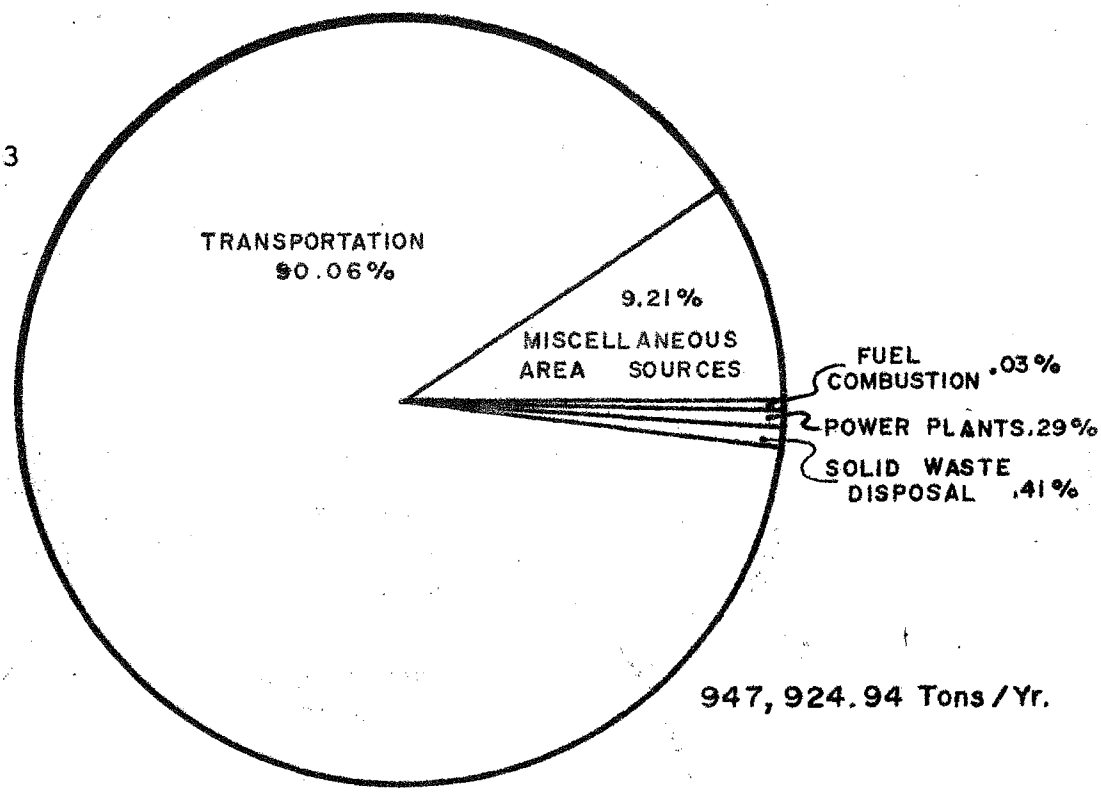
SULFUR OXIDES

FIGURE 12



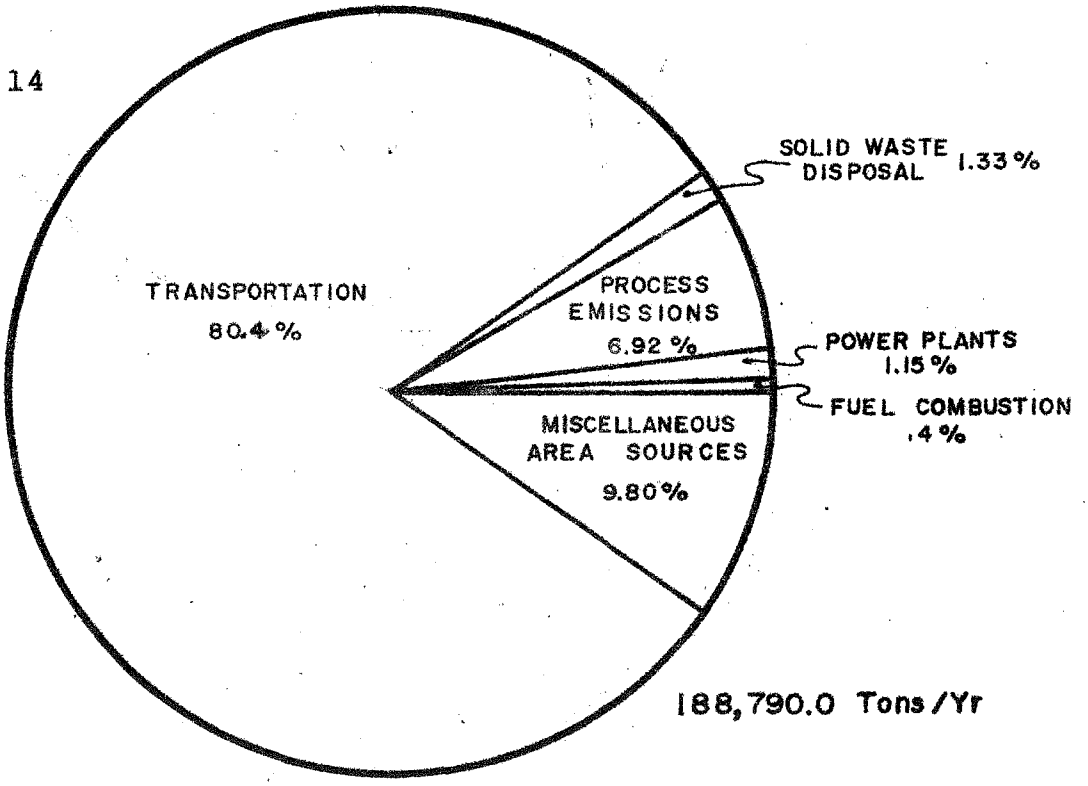
CARBON MONOXIDE

FIGURE 13



HYDROCARBON

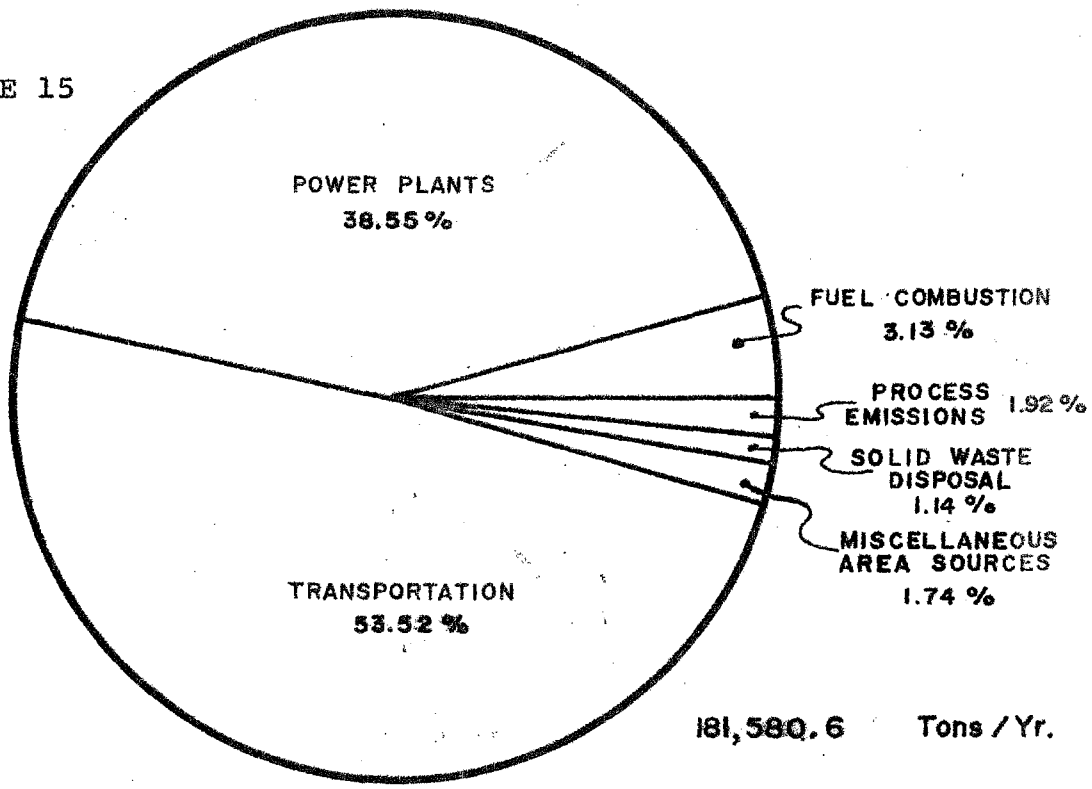
FIGURE 14



WEST CENTRAL REGION

NITROGEN OXIDES

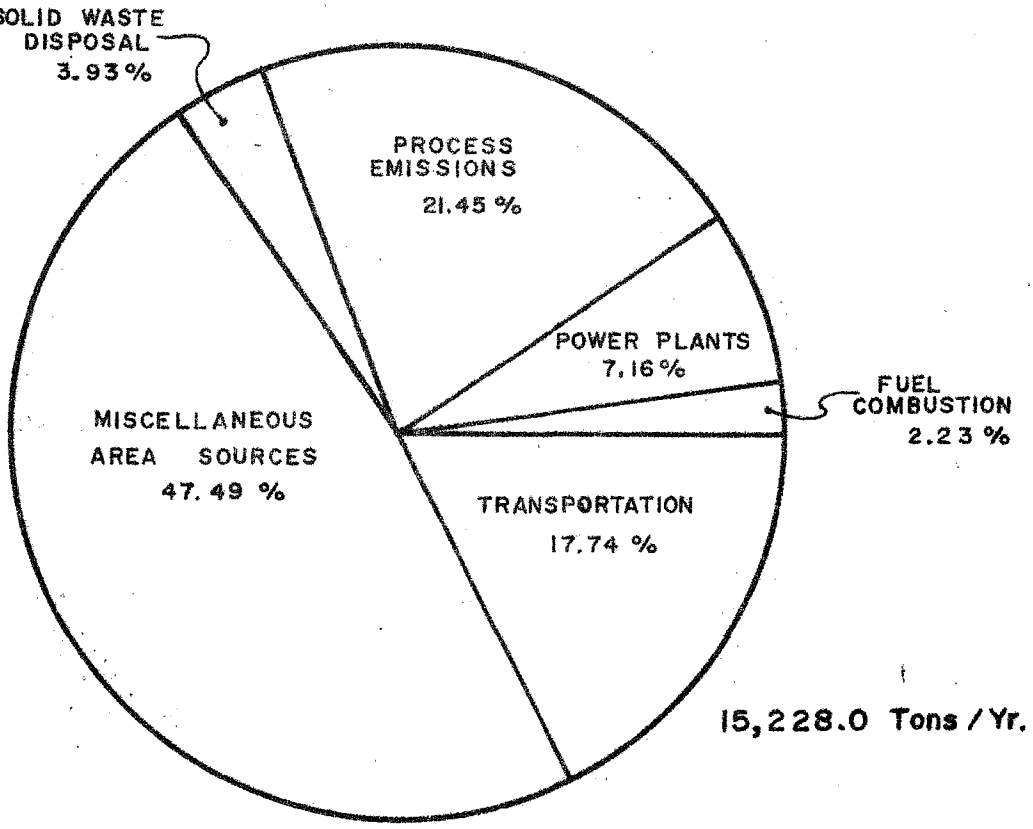
FIGURE 15



CENTRAL REGION

PARTICULATE

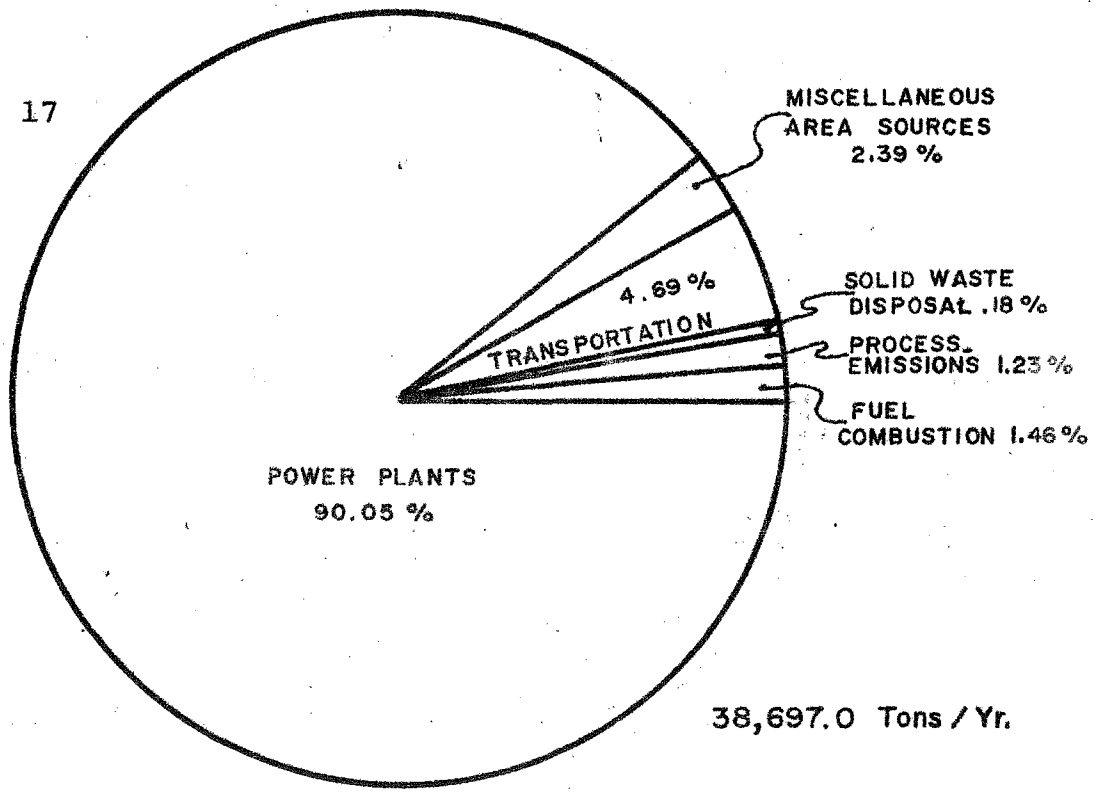
FIGURE 16



15,228.0 Tons / Yr.

SULFUR OXIDES

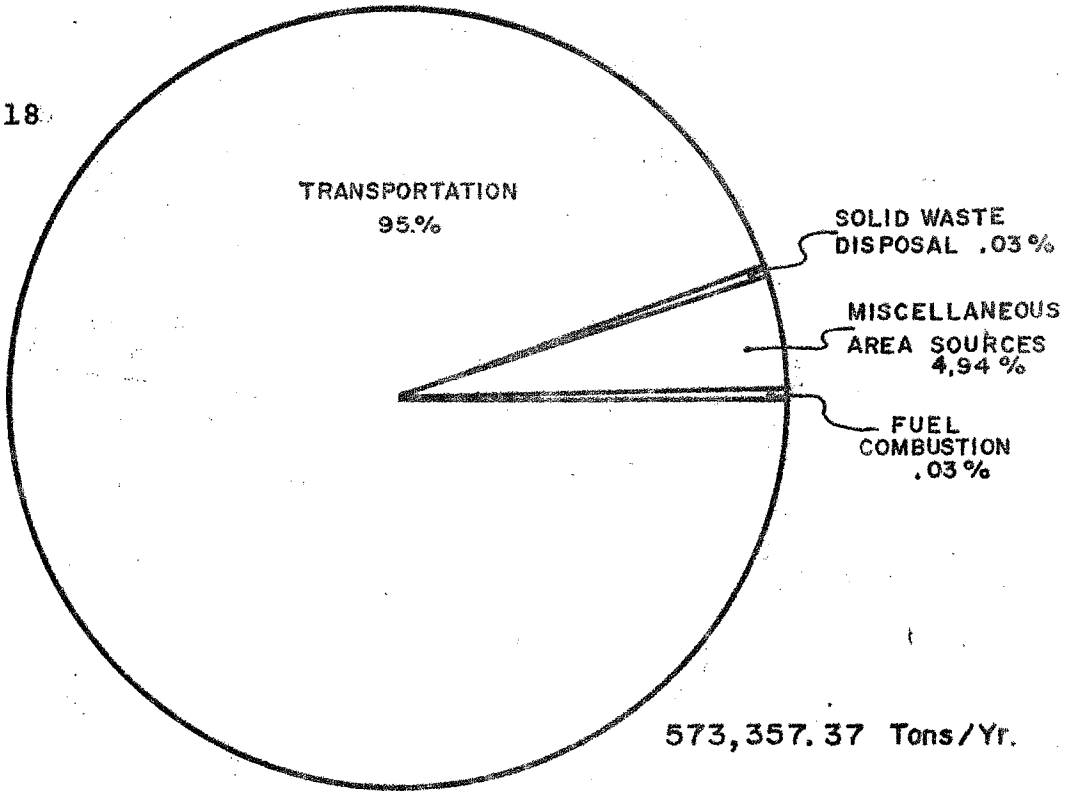
FIGURE 17



38,697.0 Tons / Yr.

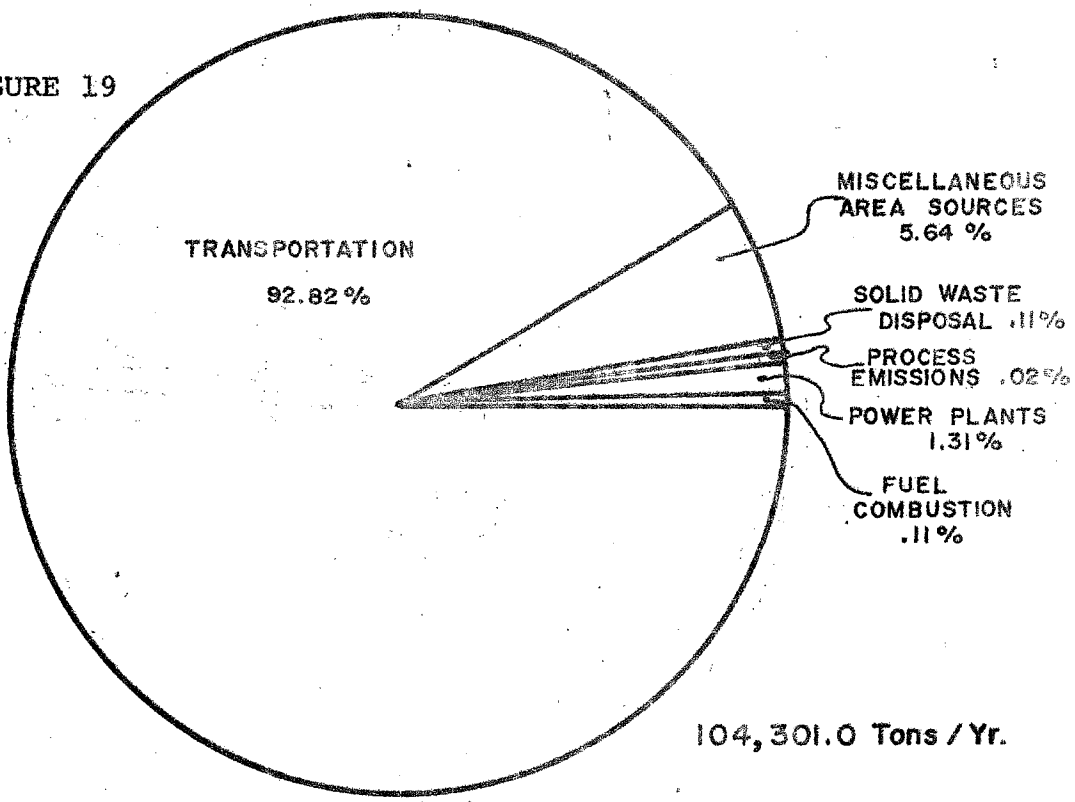
CARBON MONOXIDE

FIGURE 18



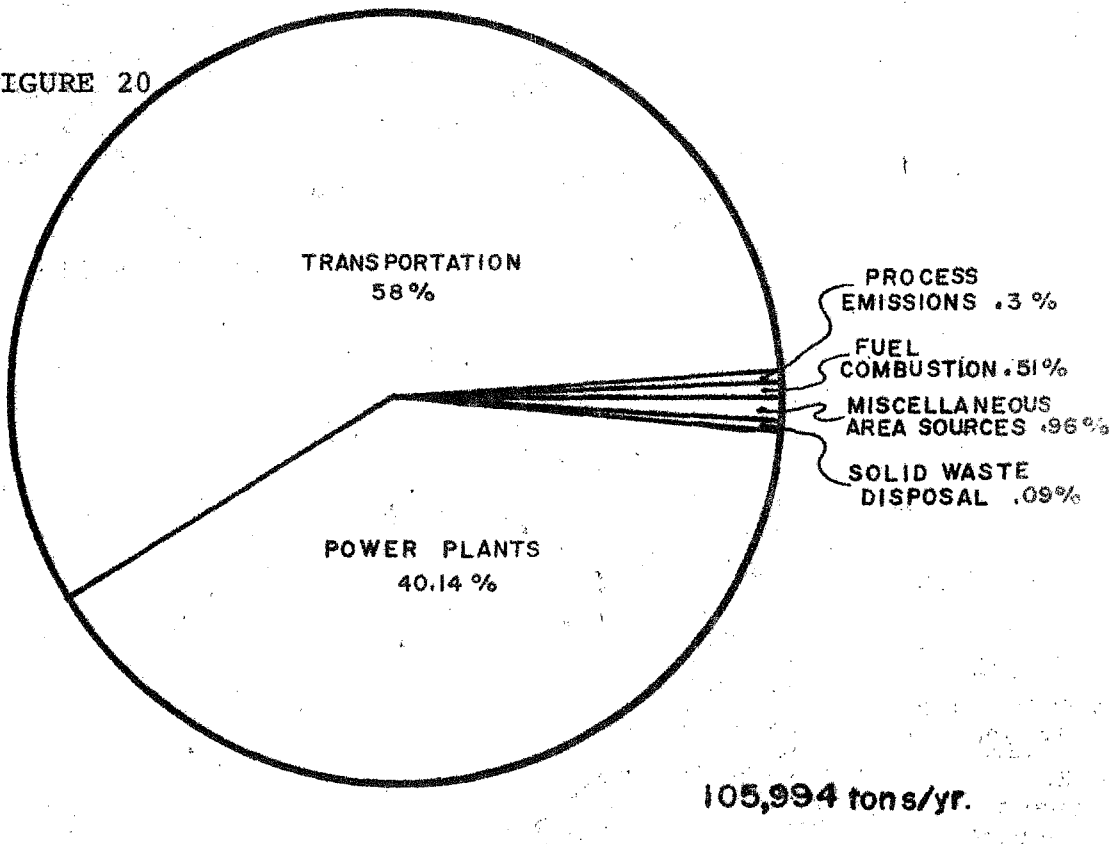
HYDROCARBONS

FIGURE 19



NITROGEN OXIDES

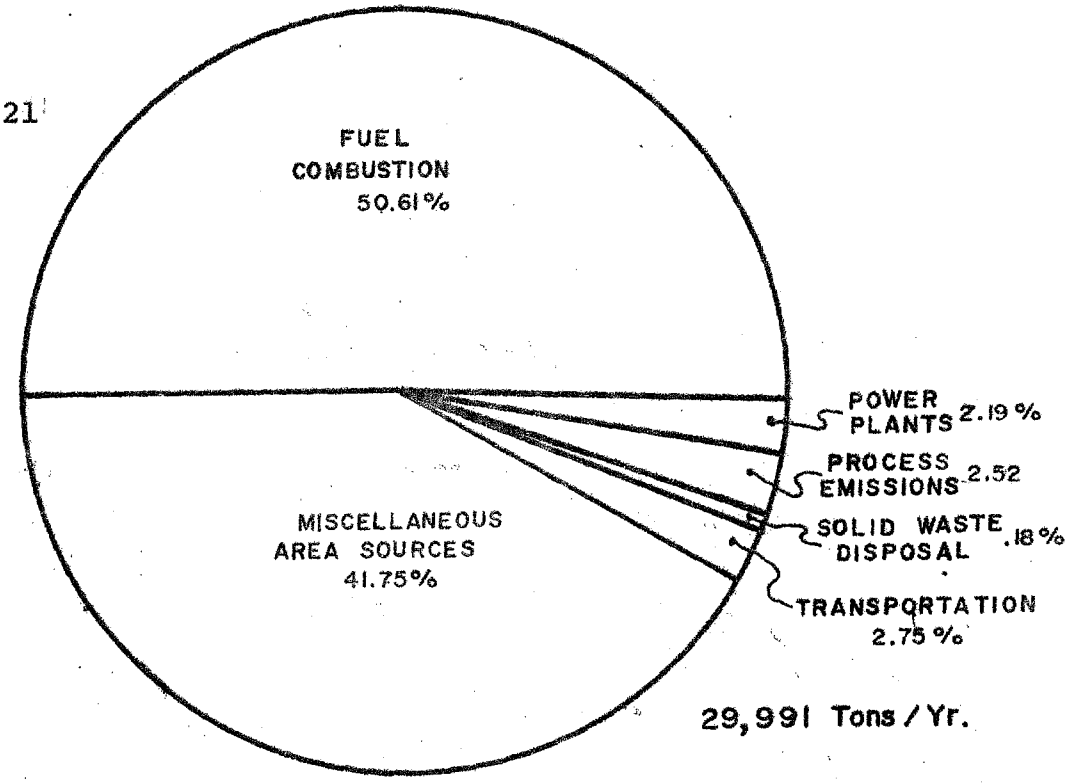
FIGURE 20



SOUTHWEST REGION

PARTICULATE

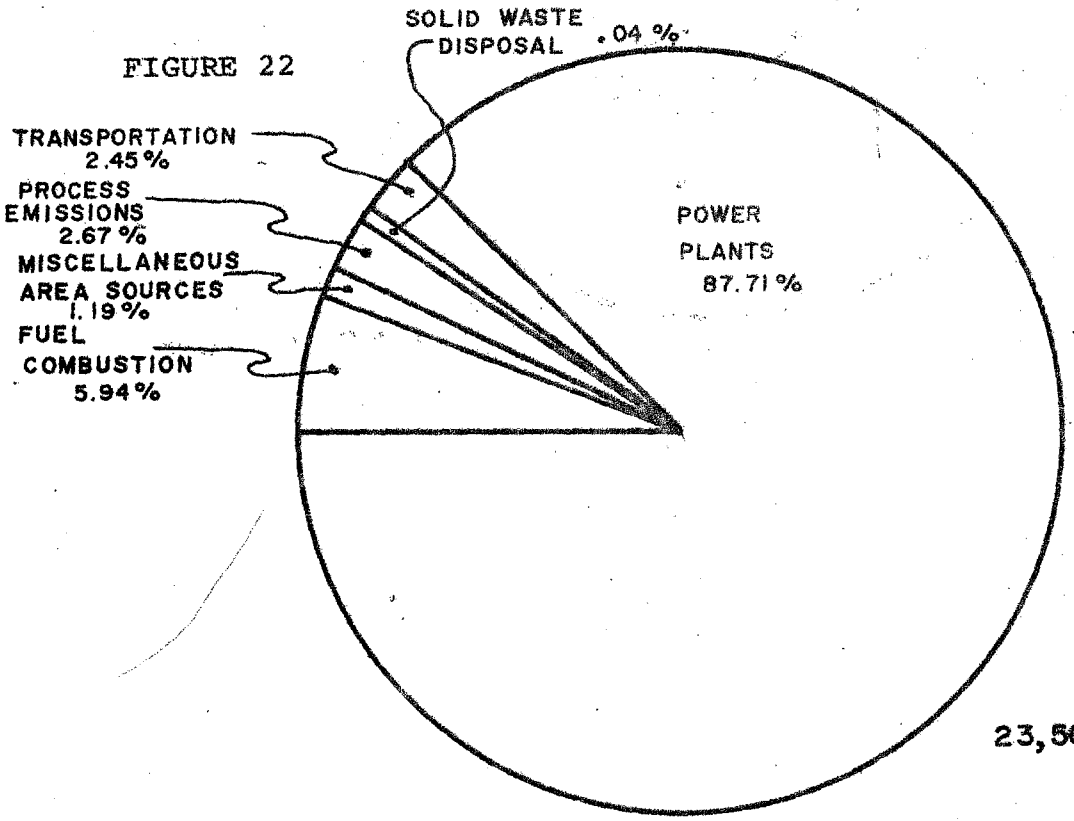
FIGURE 21



29,991 Tons / Yr.

SULFUR OXIDES

FIGURE 22

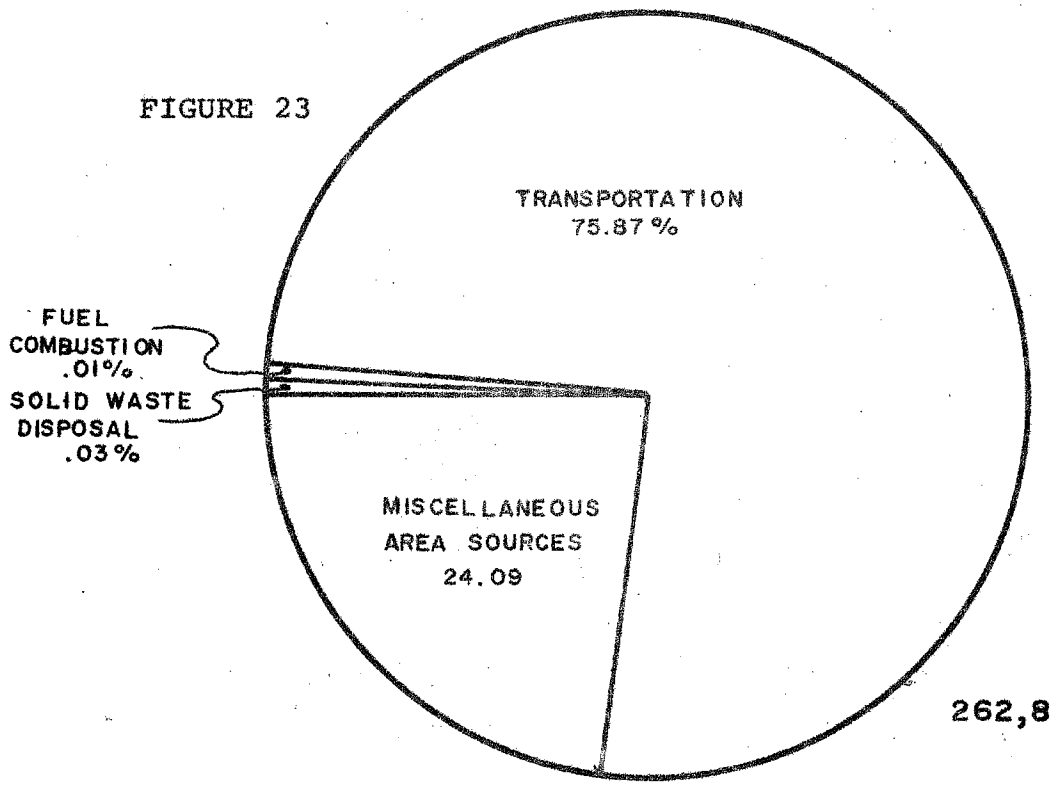


23,560.16 Tons / Yr.

SOUTHWEST REGION

CARBON MONOXIDE

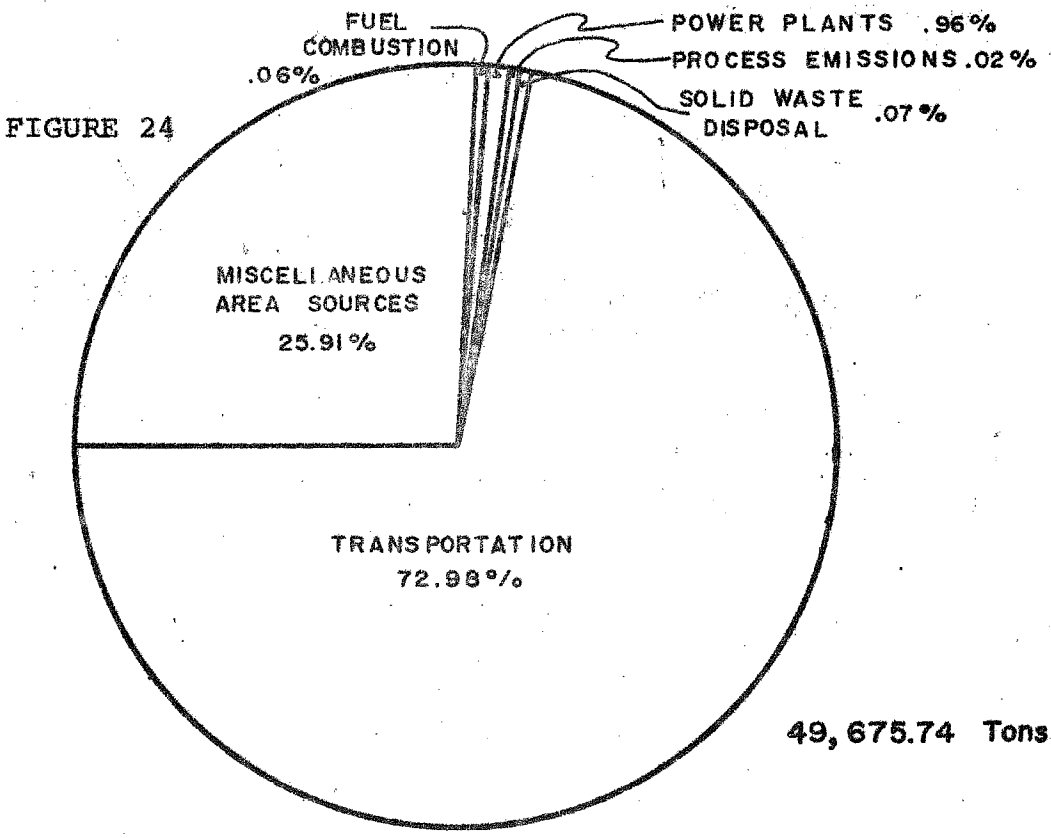
FIGURE 23



262,884.29 Tons / Yr.

HYDROCARBON

FIGURE 24



49,675.74 Tons / Yr.

SOUTHWEST REGION

NITROGEN OXIDES

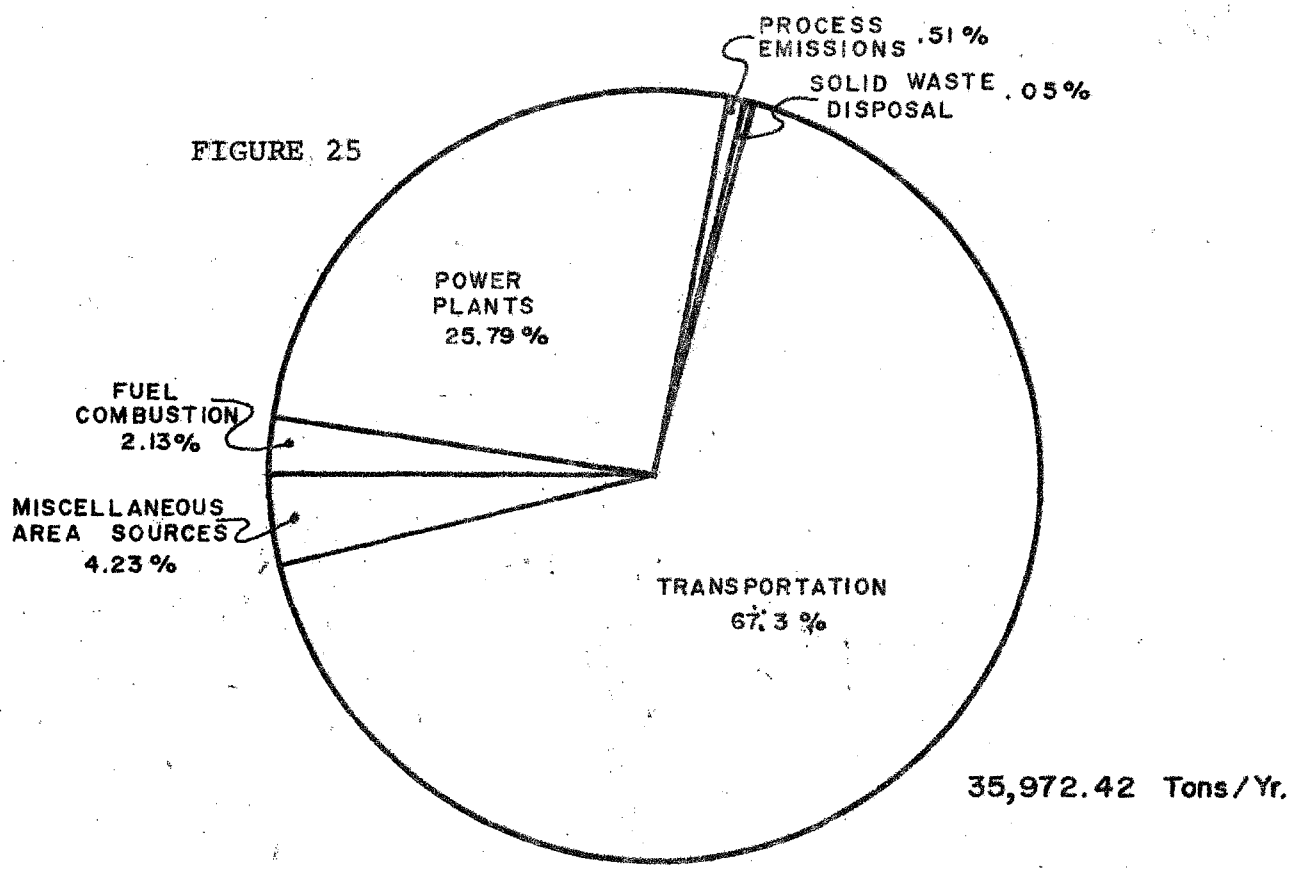
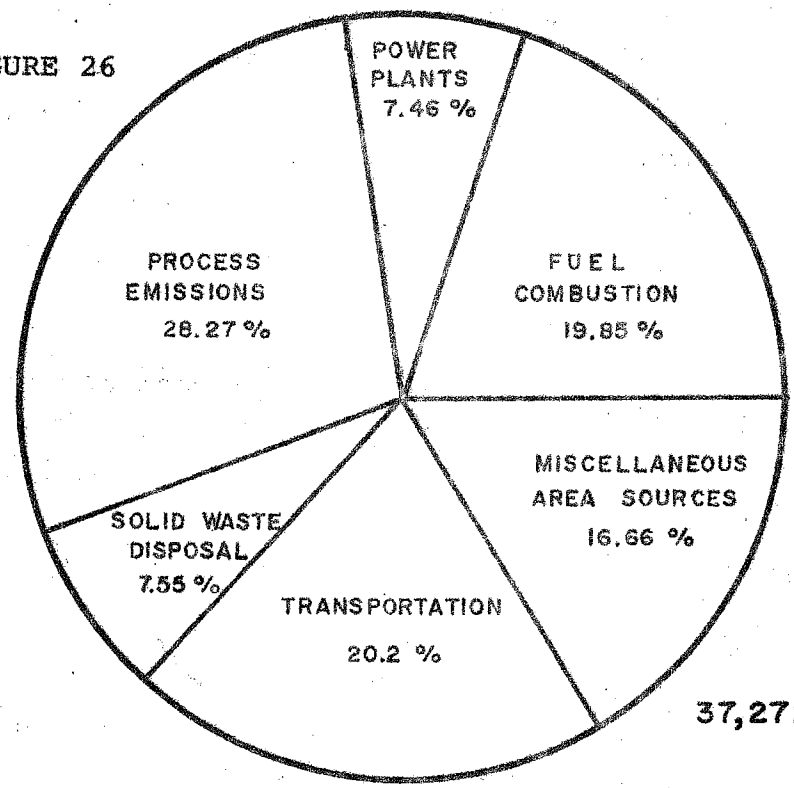


FIGURE 25

SOUTHEAST REGION

PARTICULATE

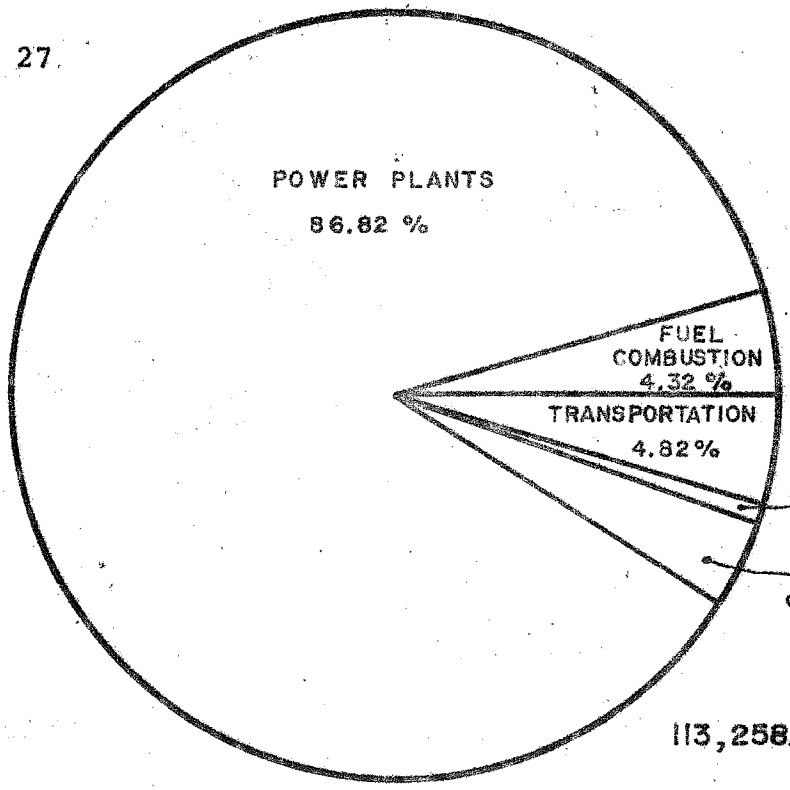
FIGURE 26



37,272.41 Tons / Yr.

SULFUR OXIDES

FIGURE 27

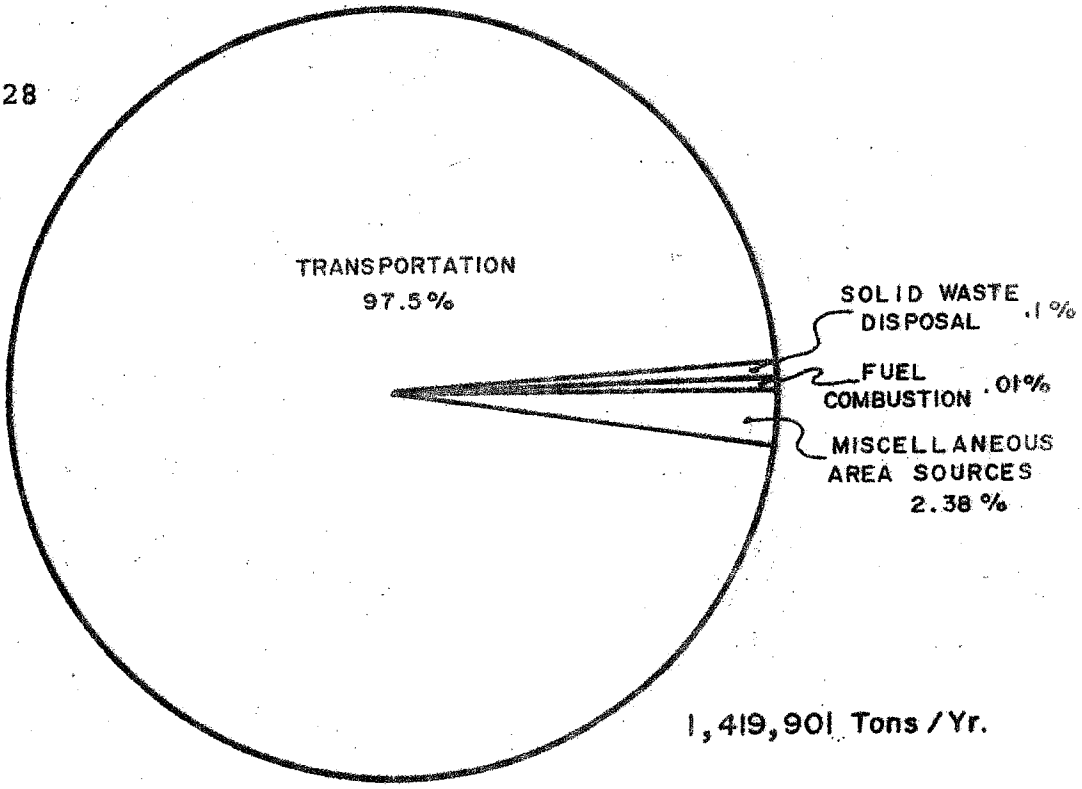


113,258.0 Tons / Yr.

SOUTHEAST REGION

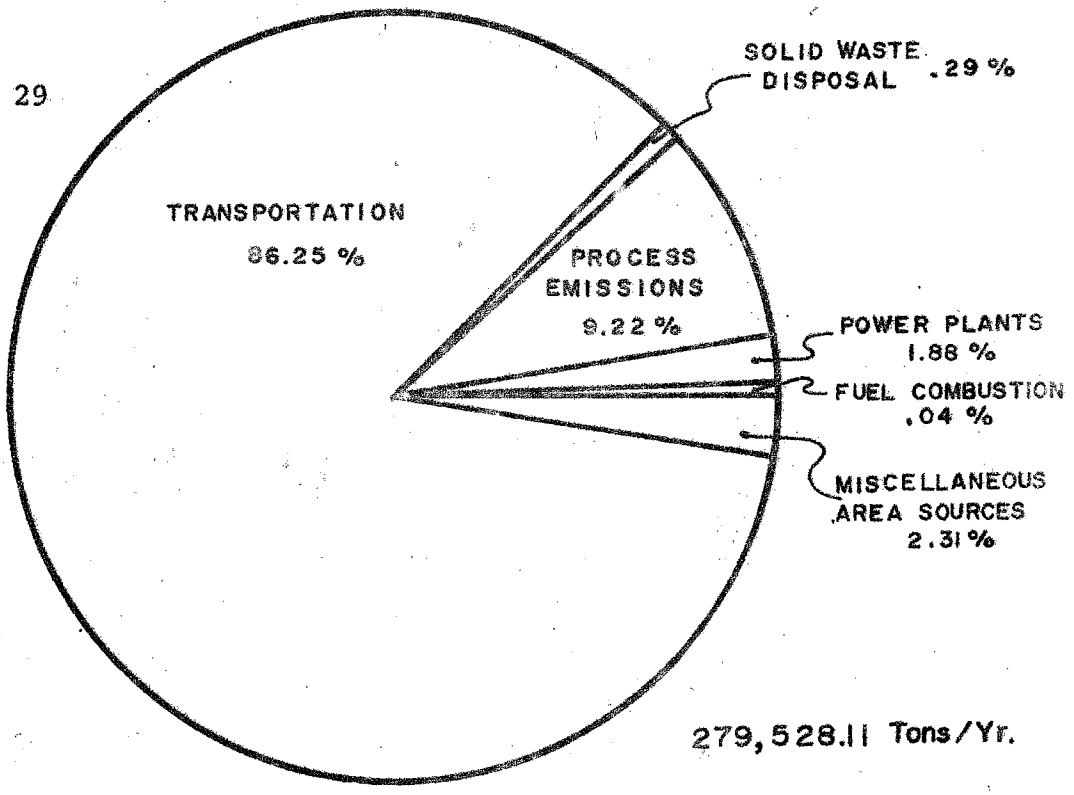
CARBON MONOXIDE

FIGURE 28



HYDROCARBONS

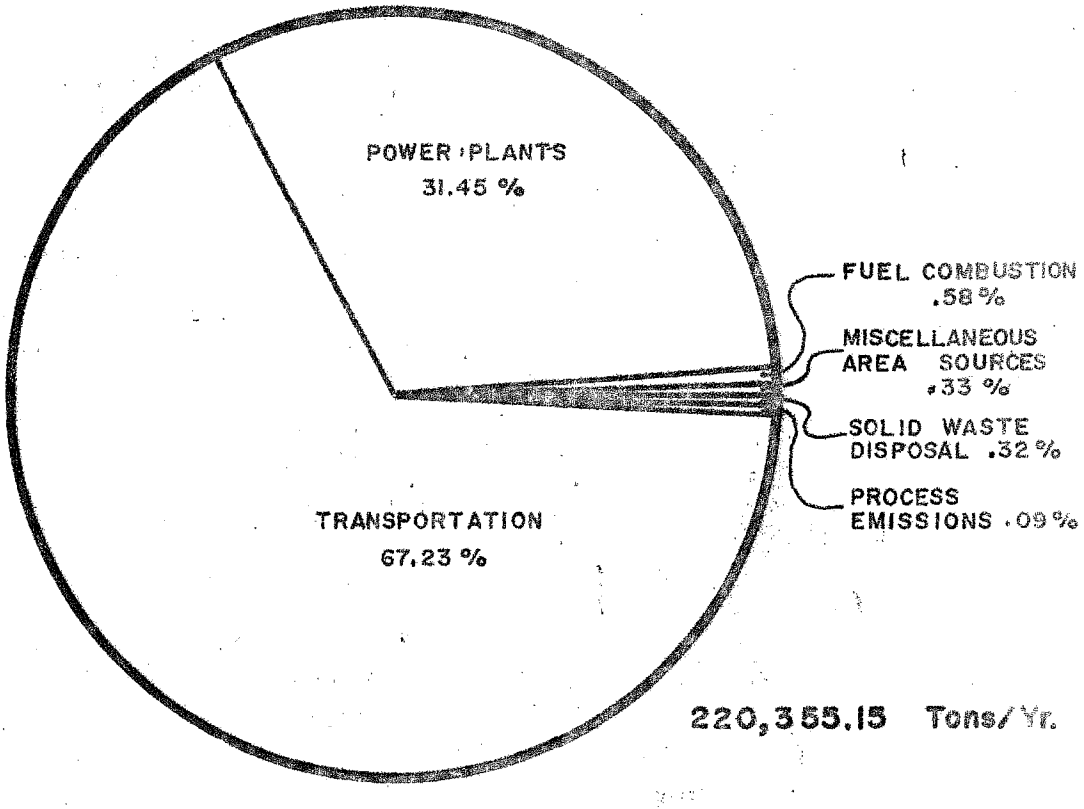
FIGURE 29



SOUTHEAST REGION

NITROGEN OXIDES

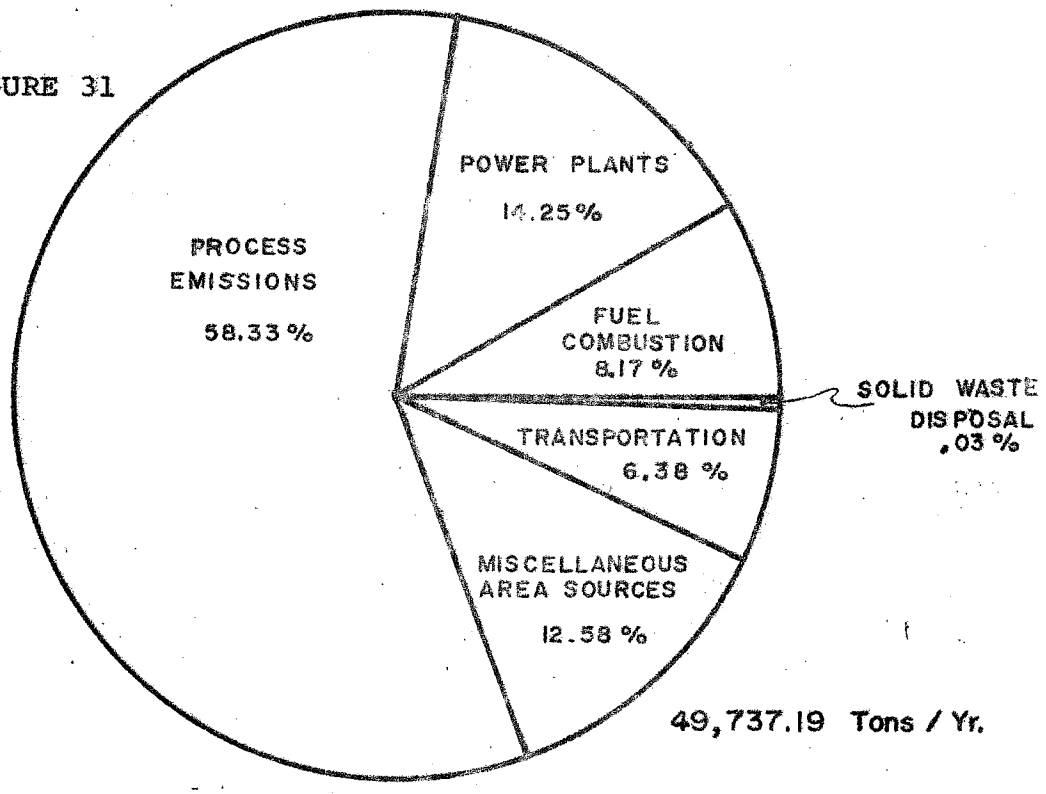
FIGURE 30



NORTHWEST REGION

PARTICULATE

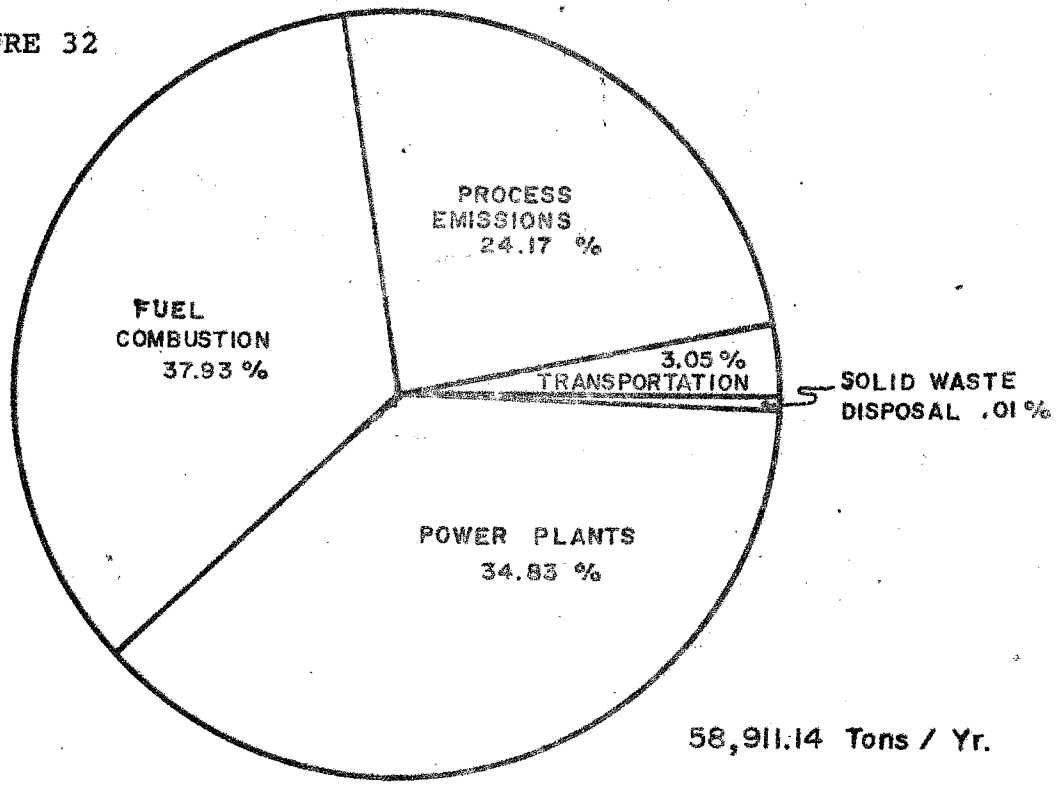
FIGURE 31



49,737.19 Tons / Yr.

SULFUR OXIDES

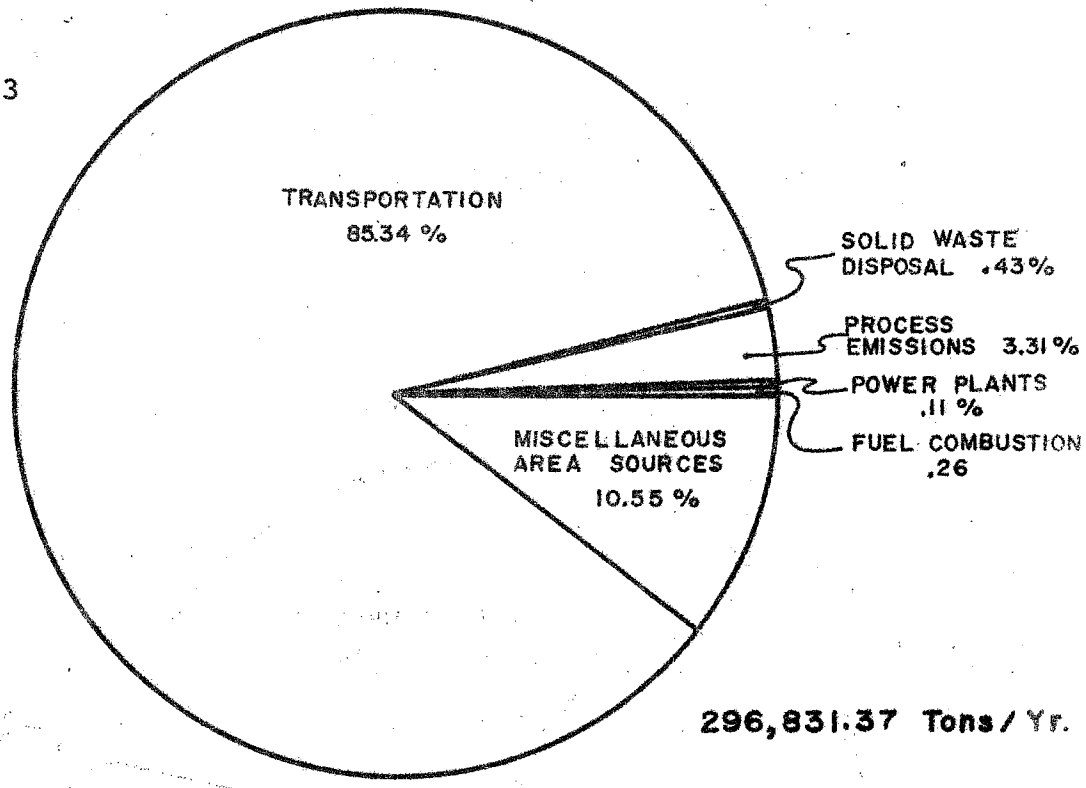
FIGURE 32



58,911.14 Tons / Yr.

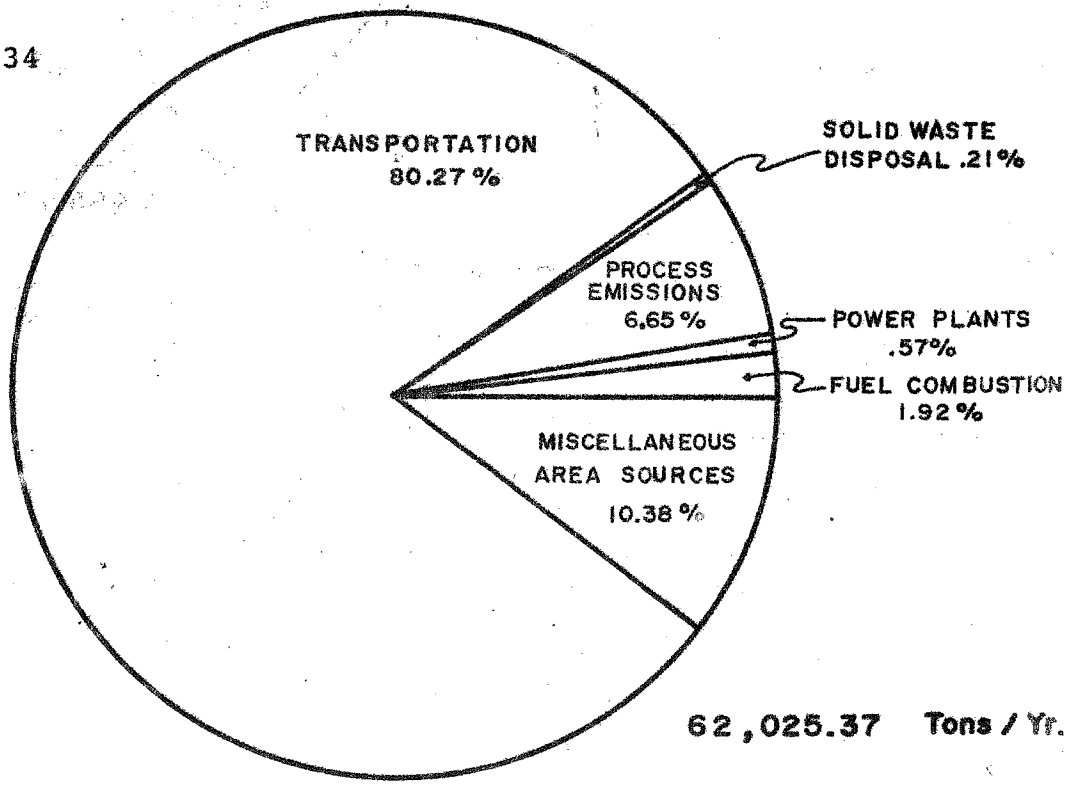
CARBON MONOXIDE

FIGURE 33



HYDRO CARBONS

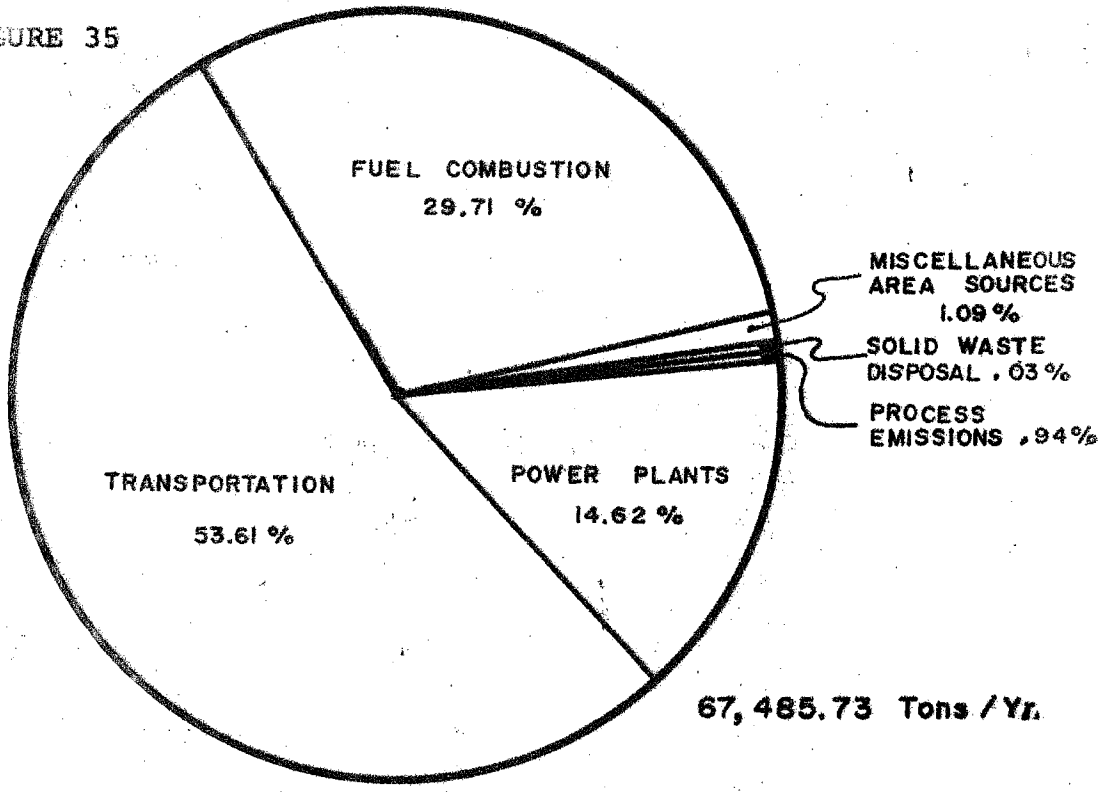
FIGURE 34



NORTHWEST REGION

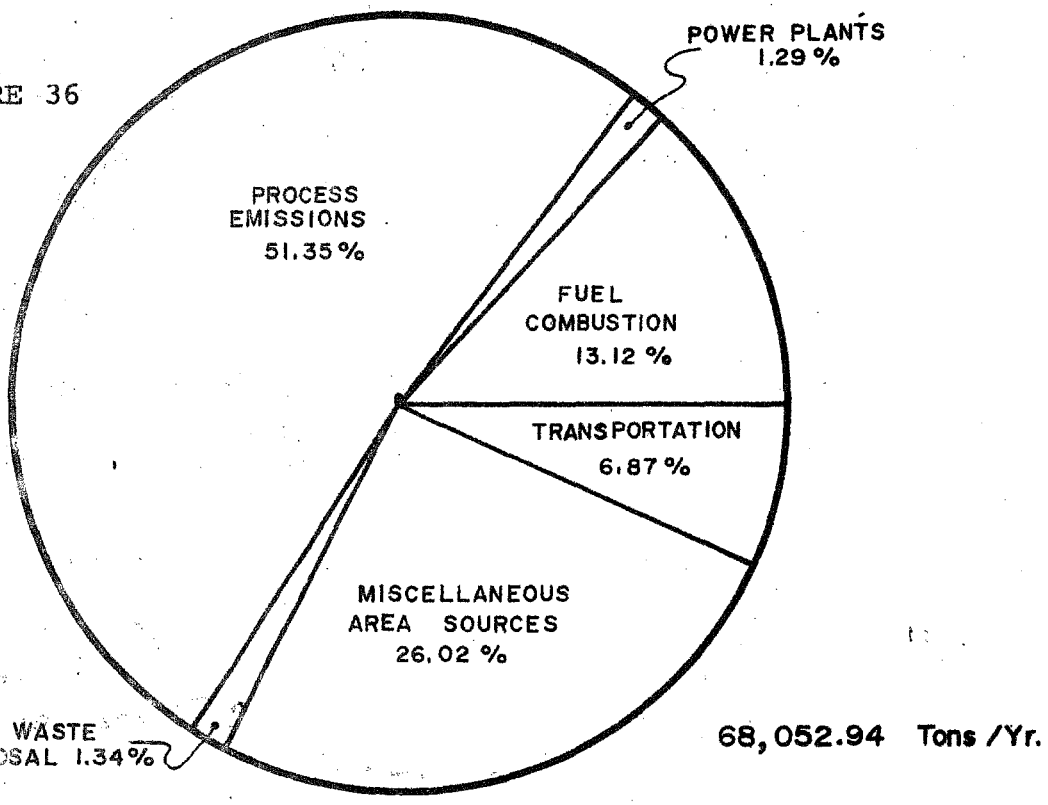
NITROGEN OXIDES

FIGURE 35



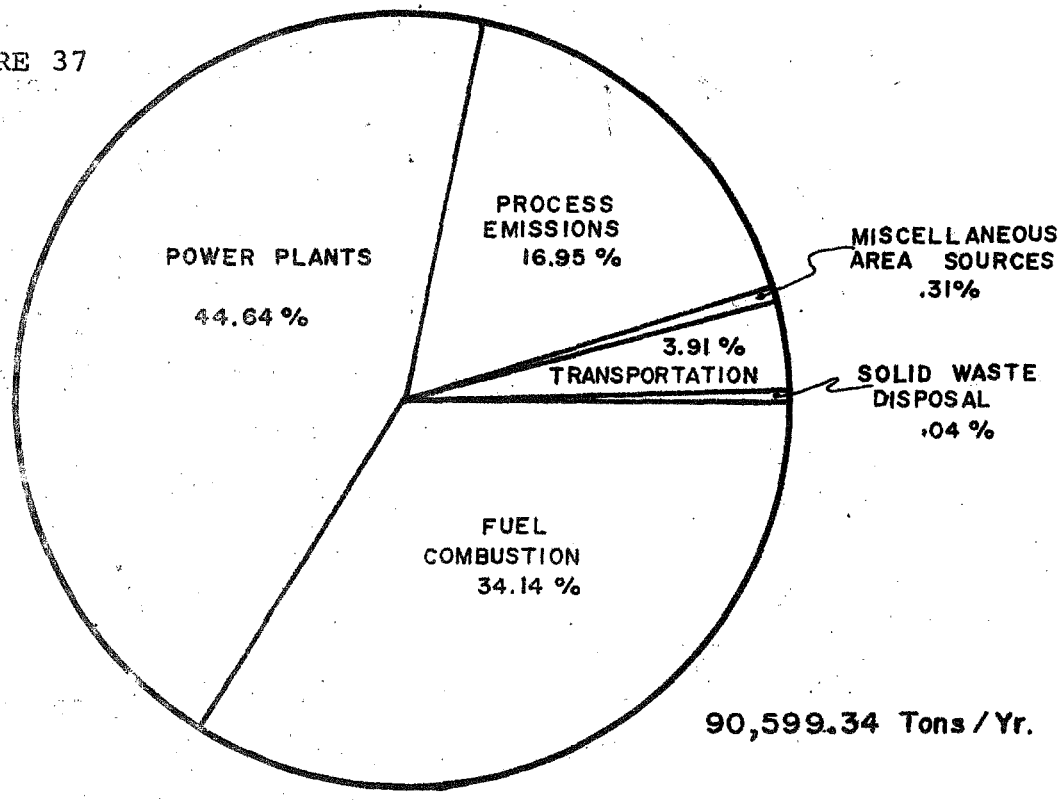
PARTICULATE

FIGURE 36



SULFUR OXIDES

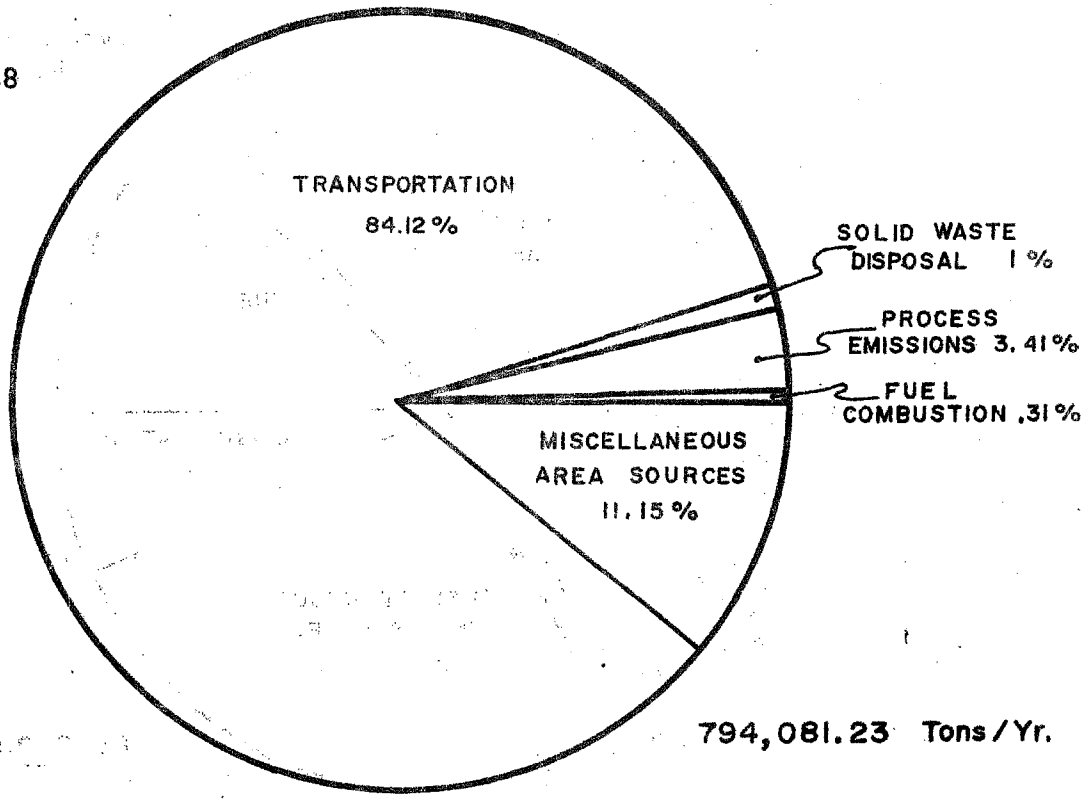
FIGURE 37



NORTHEAST REGION

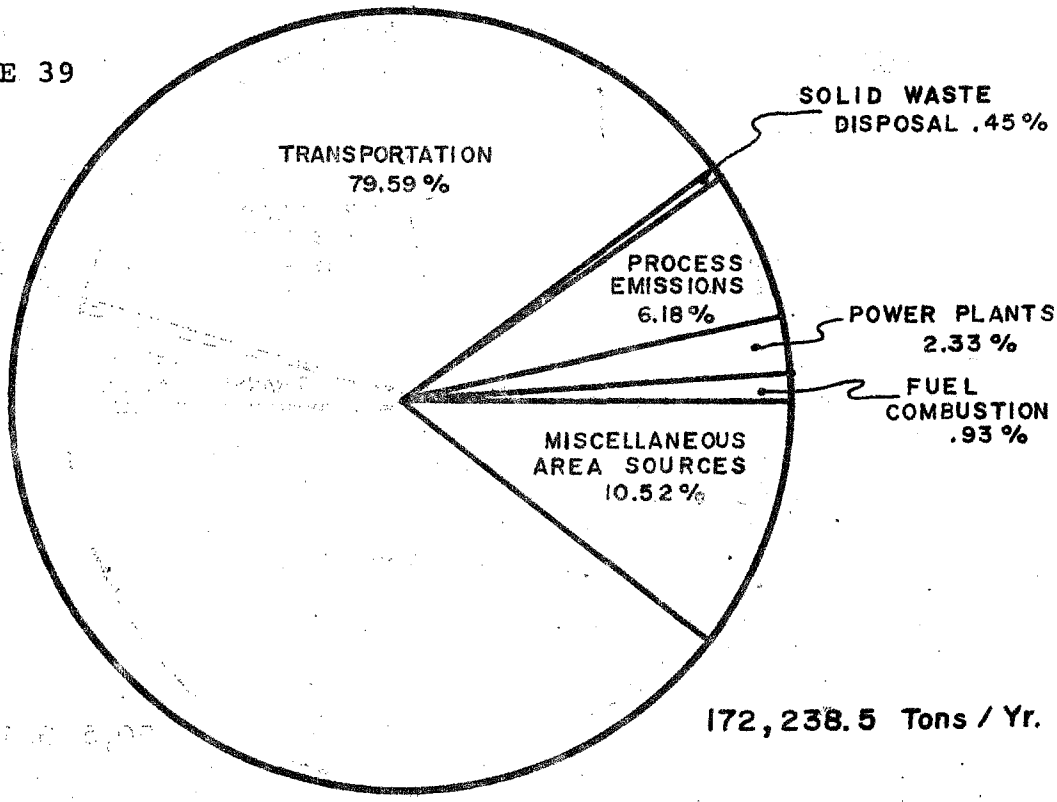
CARBON MONOXIDE

FIGURE 38



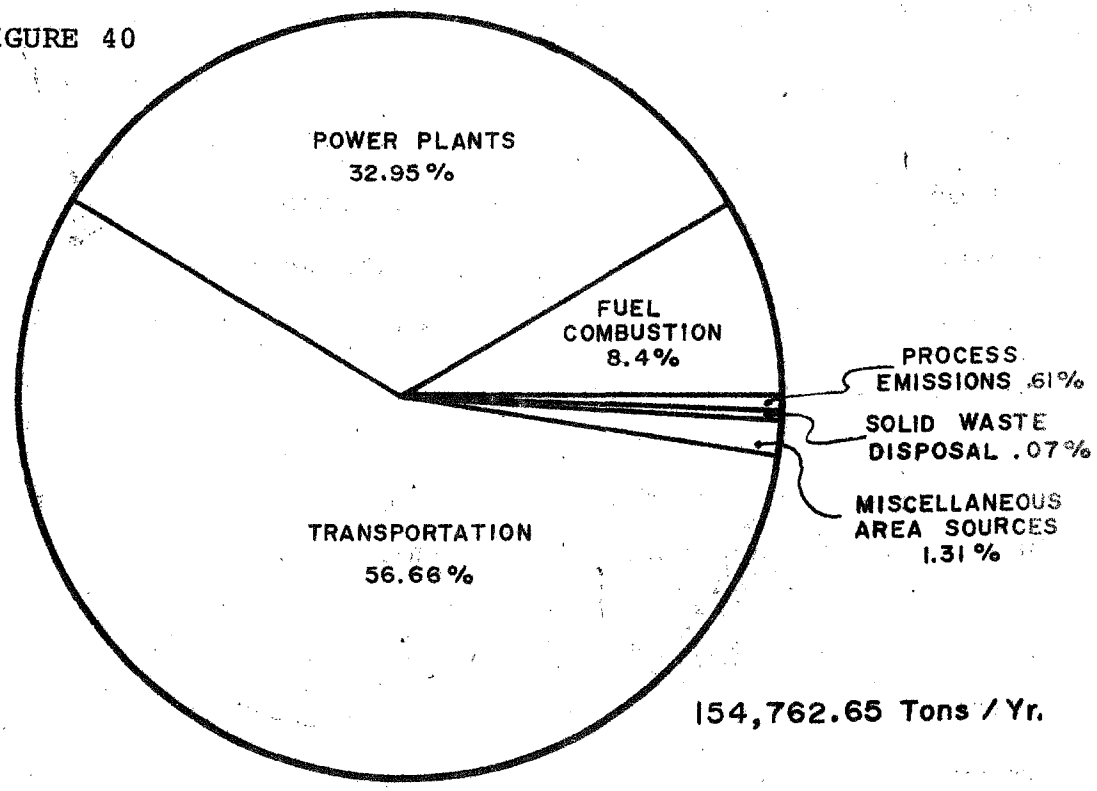
HYDRO CARBONS

FIGURE 39



NITROGEN OXIDES

FIGURE 40



Region Priority Classification

Under the requirements of the Clean Air Act of 1967, the State has been divided into six air quality control regions (Figure 41), four of which are intrastate and two interstate air quality control regions.

I. Northwest Interstate Region - Counties

Florida

Bay	Jackson
Calhoun	Okaloosa
Escambia	Santa Rosa
Gulf	Walton
Holmes	Washington

Alabama

Baldwin	Escambia	Mobile

Mississippi

Adams	Franklin
Amite	Forrest
Clairborne	George
Clark	Harrison
Copiah	Hancock
Covington	Hinds
Jackson	Pearl River
Jasper	Perry
Jefferson	Pike

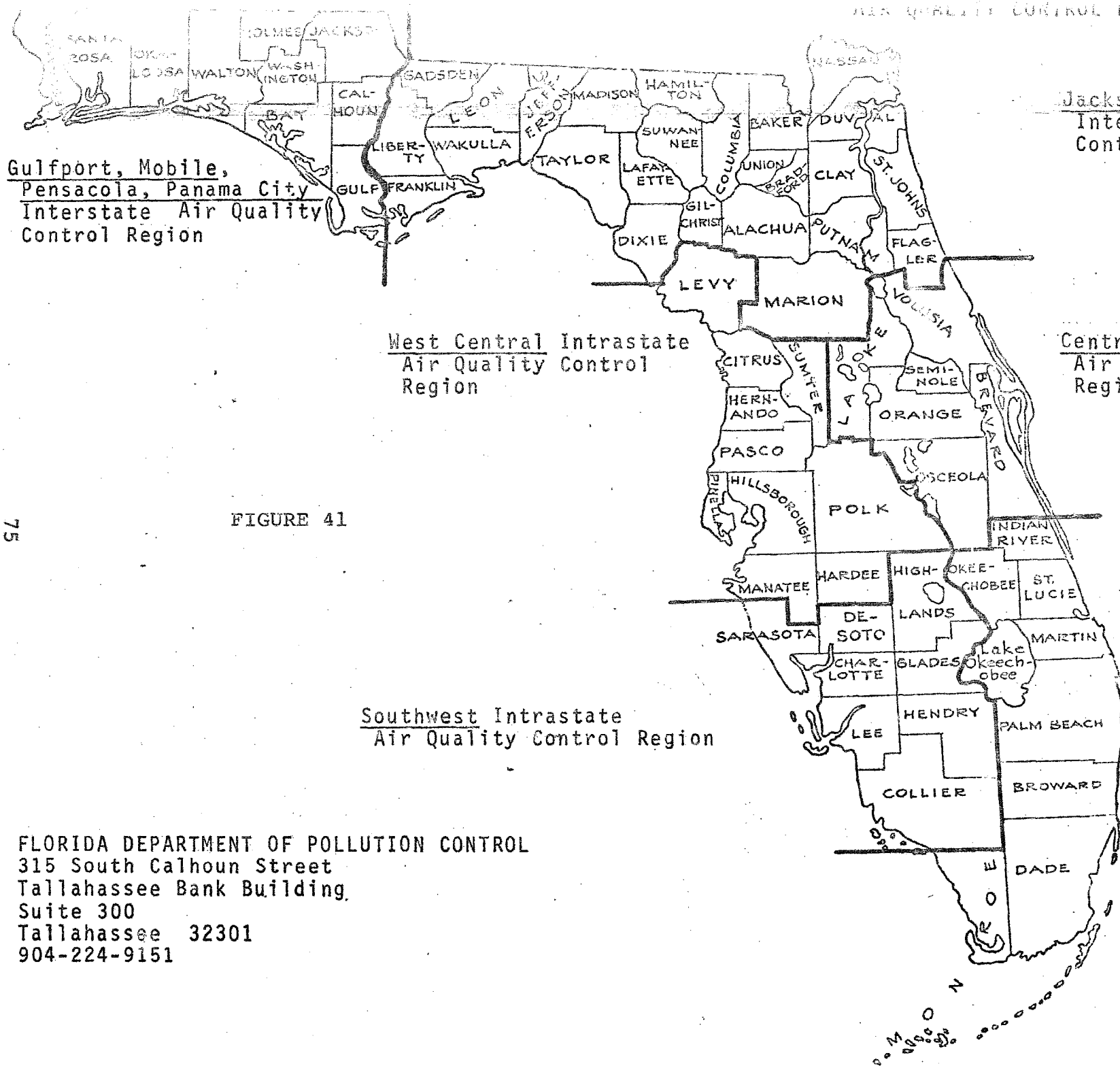


FIGURE 41

FLORIDA DEPARTMENT OF POLLUTION CONTROL
315 South Calhoun Street
Tallahassee Bank Building
Suite 300
Tallahassee 32301
904-224-9151

Mississippi (Cont'd.)

Jefferson Davis	Rankin
Jones	Scott
Lamar	Simpson
Lauderdale	Smith
Lawrence	Stone
Lincoln	Walthal
Madison	Warren
Marion	Wayne
Newton	Wilkinson

II. Northeast Interstate Regions - Counties

Florida

Alachua	Jefferson
Baker	Lafayette
Bradford	Leon
Clay	Liberty
Columbia	Madison
Dixie	Marion
Duval	Nassau
Flagler	Putnam
Franklin	St. Johns

Florida (Cont'd.)

Gadsden
Gilchrist
Hamilton
Suwannee
Taylor
Union
Wakulla

Georgia

Appling
Atkinson
Bacon
Brantley
Camden
Charlton
Clinch
Coffee
Glynn
Long
McIntosh
Pierce
Ware
Wayne

III. West Central Intrastate Region - Counties

Citrus
Hardee
Hernando
Hillsborough
Levy
Manatee
Pasco
Pinellas
Polk
Sumter

IV. Central Intrastate Region - Counties

Brevard	Osceola
Lake	Seminole
Orange	Volusia

V. Southwest Intrastate Region - Counties

Charlotte	Hendry
Collier	Highland
DeSota	Lee
Glades	Sarasota

VI. Southeast Intrastate Region - Counties

Broward	Monroe
Dade	Okeechobee
Indian River	Palm Beach
Martin	St. Lucie

Air Quality and Priority Classiffcation

Air quality regions throughout the country have been designated based on pollution load, population, meteorological conditions and in some cases based on political boundaries and growth factors also. Pursuant to promulgation of national ambient air quality standards, priority classifications were assigned to these air quality control regions based on either best existing or estimated air quality in each region

The priority classification system is solely for categorizing the regions on a relative basis and to select an example region in order to select a suitable control strategy. For sulfur dioxide and particulate matter, each region is to be classified into one of three categories, defined as Priority I, Priority II or Priority III. The ambient concentration limits, expressed as micrograms per cubic meter or parts per million by volume which define the classification system for particulate matter and sulfur oxides are shown in the following page.

Pollutant	Priority*		
	I	II	III
Sulfur Oxides:	Greater than (ug/m^3)	From-To (ug/m^3)	Less than (ug/m^3)
Annual Arithmetic Mean	100 (0.04 ppm)	60-100 (0.02-0.04 ppm)	60 (0.02 ppm)
24 hr. Maximum	455 (0.17)	260-455 (0.10-0.17 ppm)	260 (0.10 ppm)
3 hr. Maximum	- - - - - -	>1300-1300 (0.50 ppm)	1300 (0.50 ppm)

Particulate Matter

Annual Geometric Mean	95	60-95	60
24 hr. Maximum	325	150-325	150

* The more restrictive classification to be chosen for priority classification.

Measurements of statewide ambient concentrations of most of the pollutants for which there are national standards are scarce in the State. Particulate measurements are being made periodically throughout the State in 13 locations which constitute the Florida Air Surveillance Network. National Air Surveillance Network (NASN) maintains five stations in the State, which measure suspended particulate matter, sulfur dioxide and nitrogen oxides. A summary of 1970 air quality data collected at these stations belonging to both these Networks in Florida are given in Figure 42 and Tables V and VI.

AIR QUALITY DATA SUMMARY - FLORIDA AIR SURVEILLANCE NETWORK

TABLE V

Station	Sampling Internal	Start Date	End Date	Number of Samples	Maximum	Std. Dev.	Annual Geo. Mean ug/m^3	Geo. Std. Dev.
Apalachicola	12 mo.	1/2/70	12/14/70	25	121.9	25.9	54.8	1.55
Jacksonville	11 mo.	1/20/70	11/13/70	22	104.7	15.5	55.2	1.28
Miami	12 mo.	1/2/70	12/14/70	25	111.7	18.1	55.4	1.36
Orlando	12 mo.	1/9/70	12/21/70	23	144.6	22.9	72.7	1.31
Palatka	12 mo.	1/2/70	12/14/70	26	127.6	20.0	55.9	1.37
Panama City	12 mo.	1/8/70	12/14/70	12	261.5	53.2	66.9	1.47
Pensacola	12 mo.	1/2/70	12/14/70	18	187.9	38.0	65.4	1.57
St. Petersburg	12 mo.	1/2/70	12/14/70	26	91.7	18.1	50.8	1.46
Tampa	12 mo.	1/10/70	12/17/70	24	188.7	38.2	79.0	1.49
Titusville	12 mo.	1/9/70	12/14/70	26	78.3	13.3	43.5	1.45
W. Palm Beach	12 mo.	1/2/70	12/14/70	25	157.1	24.3	54.6	1.92
Winter Haven	12 mo.	1/2/70	12/14/70	25	111.4	21.9	49.9	1.52
Zolfo Springs	12 mo.	1/29/70	12/14/70	24	65.3	11.6	29.0	1.34

SUSPENDED PARTICULATE

1970

MICROGRAMS PER CUBIC METER

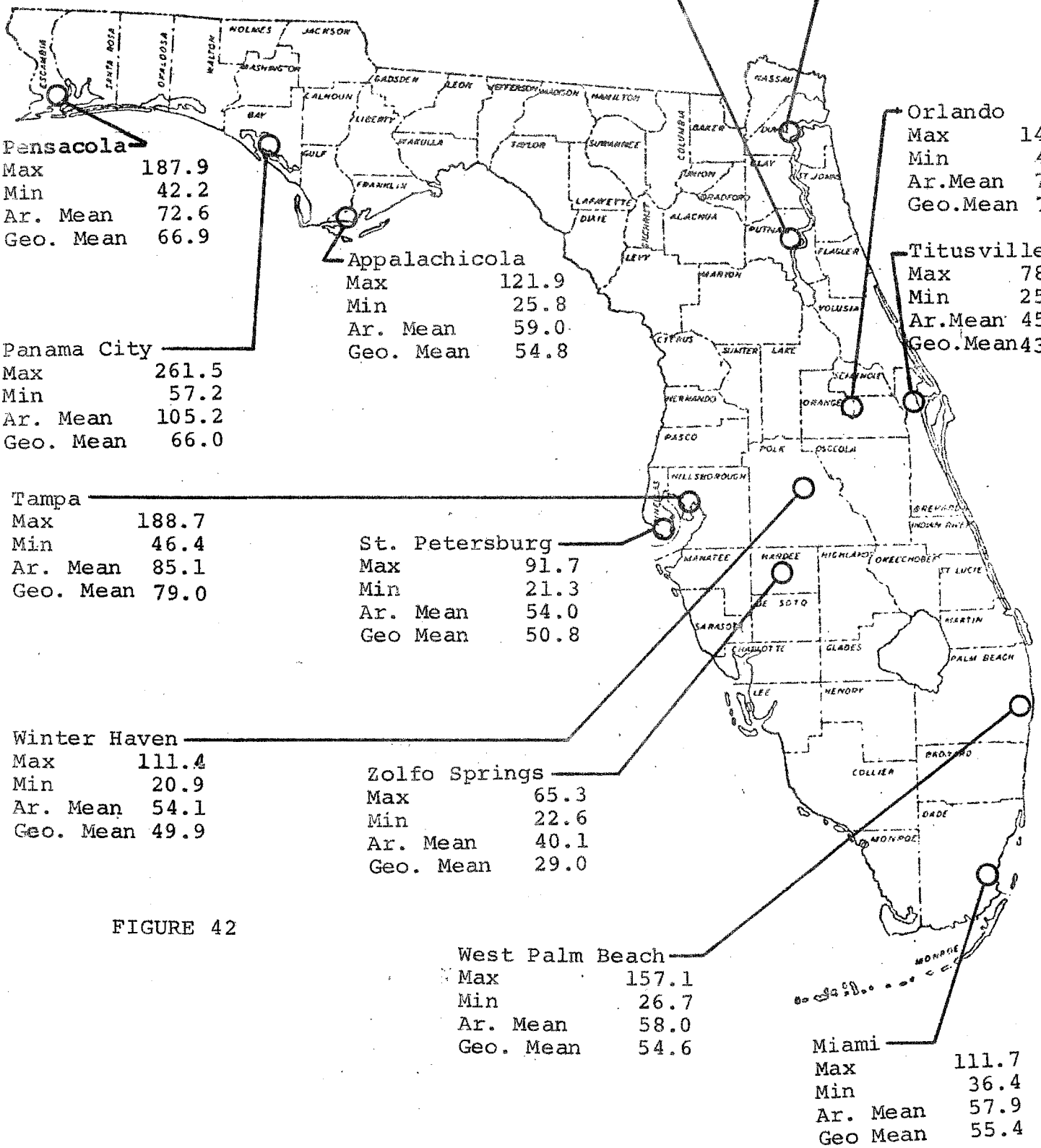


FIGURE 42

TABLE VI

NATIONAL AIR SURVEILLANCE NETWORK - 1970

Particulate (ug/m^3)

Station	Sampling Interval	Start Date	End Date	# of Samples	Maximum	Std. Dev.	Annual Geo. Mean	Geo. Std. Dev.
Hardee Co.	12 months	1/2/70	12/14/70	26	49	9.14	32.1	1.34
Jacksonville	12 months	1/9/70	12/27/70	26	114	15.5	67.0	1.23
Miami	12 months	1/2/70	12/15/70	25	117	21.8	69.5	1.40
St. Petersburgh	12 months	1/2/70	12/14/70	24	137	24.1	42.6	1.50
Tampa	12 months	1/2/70	12/15/70	26	167	35.6	86.9	1.52

TABLE VI cont'd.

NATIONAL AIR SURVEILLANCE NETWORK - 1970

SO_2 (ug/m3)

Station	Sampling Interval	Start Date	End Date	# of Samples	Maximum	Std. Dev.	Annual Arithmetic Mean
Hardee Co. (Zolfo Springs)	6 months	7/4/70	12/14/70	13	14	4.99	3.4
Jacksonville	12 months	1/9/70	12/27/70	20	62	15.2	11.6
Miami	12 months	1/2/70	12/15/70	26	20	5.5	5.7
Tampa	12 months	1/2/70	12/15/70	26	92	21.9	16.5
St. Petersburg	12 months	1/2/70	12/14/70	26	96	22.5	16.6

If these data alone are considered for priority classification, then the priority classification of the various regions should be as follows for sulfur oxides and particulate matter.

Region	Priority Classificatipn		
	Particulate		Sulfur Dioxide
	State Network	NASN	NASN
Northwest	II	-	-
Northeast	III	II	III
West Central	II	II	III
Central	II	-	-
Southwest	-	-	-
Southeast	II	II	-

For the purpose of designating priority classifications to these various regions, extensiveness and adequacy of the available ambient data were considered where they were available. In the absence of such data, available data from the local programs and an overall estimated air quality were the basis of priority classification. The local pollution control programs in Dade, Hillsborough and Duval counties have been carrying out a somewhat more extensive ambient air monitoring for selected pollutants in their respective jurisdictions. A Summary of such data on particulates and sulfur dioxide made available from these local programs are included in Table VII and the locations of these sampling sites in Tampa and Jacksonville are shown in Figures 43 and 44.

Dade County Air Quality - 1970

Suspended Particulate Matter - 9 locations*

Average Maximum 101.1 ug/m^3

Average 62.8 ug/m^3

*Description of locations where the samples were collected were not provided.

SO_2 - 1 Station*

Average	0.002 ppm
Maximum	0.013 ppm

*Description of location not provided

TABLE VII

AIR QUALITY DATA SUMMARY-TAMPA

PARTICULATE MATTER (ug/m^3)

	UTM Location (10^3 Meters)	Sampling Interval	Start Date	End Date	# of Samples	Maximum 24 hrs	Std. Dev.	Annual Geo. Mean	Geo. Std. Dev.
1)	17-357.3-3092.3	12 Months	1-1-70	12-30-70	26	167.0	34.89	86.9	1.52
2)	17-352.9-3091.3	12 Months	1-1-70	12-30-70	26	235.9	49.95	95.1	1.57
5)	17-363.4-3102.7	12 Months	1-1-70	12-30-70	26	117.7	25.58	55.0	1.56
6)	17-364.9-3093.1	12 Months	1-1-70	12-30-70	26	197.4	37.48	90.0	1.46
7)	17-374.5-3091.4	12 Months	1-1-70	12-30-70	26	78.7	15.65	43.0	1.44
8)	17-389.7-3099.6	12 Months	1-1-70	12-30-70	26	188.1	36.32	61.0	1.71
9)	17-358.8-3066.8	12 Months	1-1-70	12-30-70	22	98.3	18.59	49.5	1.5
15)	17-351.5-3090.2	12 Months	1-1-70	12-30-70	26	288.7	53.27	63.1	1.85
29)	17-354.9-3079.5	12 Months	1-1-70	12-30-70	26	128.3	21.74	46.3	1.46
30)	17-356.8-3092.1	12 Months	1-1-70	12-30-70	26	188.7	37.42	79.0	1.45
47)	17-344.8-3112.6	12 Months	1-1-70	12-30-70	26	72.7	17.26	31.1	1.63
49)	17-356.5-3114.3	12 Months	1-1-70	12-30-70	26	133.5	25.6	39.9	1.70

TABLE VII cont'd.

Particulate (con't.) ug/m^3 AIR QUALITY DATA SUMMARY - TAMPA

UTM Location (10 Meters)	Sampling Interval	Start Date	End Date	# of Sampling	Maximum 24 Hours	Std. Dev.	Annual Geo. Means	Geo. Std. Dev.
50) 17-368.3-3066.3	12 months	1-1-70	12-30-70	22	68.7	13.15	33.3	1.43
51) 17-350.1-3095.1	12 months	1-1-70	12-30-70	26	114.5	22.36	60.0	1.46
54) 17-366.2-3076.8	12 months	1-1-70	12-30-70	18	81.7	12.92	49.5	1.32
55) 17-365.4-3085.6	12 months	1-1-70	12-30-70	26	74.9	16.17	38.0	1.50
63) 17-357.0-3090.0	12 months	1-1-70	12-30-70	26	234.5	50.05	104.3	1.63

TABLE VII cont'd.

AIR QUALITY DATA SUMMARY - TAMPA

SULFUR DIOXIDE - ppb

UTM Location (km)	Sampling Interval (months)	Start Date	End Date	# of Samples	Max. 24 Hours	Annual Arith. Mean	Std. Dev.	Geo. Std. Dev.
1) 17-357.3-3092.3	12	1-1-70	12-30-70	26	35.0	7.0	8.54	69.57
29) 17-354.9-3079.5	12	1-1-70	12-30-70	135	66.3	8.75	11.68	2.36
31) 17-396-3114	12	1-1-70	12-30-70	358	40.0	3.5	5.53	44.89
55) 17-365.4-3085.6	12	1-1-70	12-30-70	157	66.0	7.5	9.41	3.20
63) 17-357.0-3090.0	12	1-1-70	12-30-70	131	239.8	18.11	26.41	18.49

TABLE VII cont'd.

AIR QUALITY DATA SUMMARY-JACKSONVILLE

PARTICULATE MATTER ug/m^3

	UTM Location (thousand meters)	Sampling Interval	Start Date	End Date	Number of Samples	Maximum 24 hrs (ug/m^3)	Std. Dev.	Annual Geo. Mean. (ug/m^3)	Geo. Std. Dev.
1.	17-442.44-3354.91 (Arlington River Dr)	12 Months	1-1-70	12-29-70	127	366	64.1	54.8	2.54
2.	17-442.53-3358.65 (Peeler Rd)	11 Months	2-1-70	12-29-70	123	164	23.9	41.9	2.33
3.	17-438.17-3354.5 (T.V. Tower)	12 Months	1-1-70	12-29-70	137	484	75.6	87.8	1.63
4.	17-436.55-3355.25 (Hemming Park)	12 Months	1-1-70	12-29-70	129	132	21.0	51.2	1.22
5.	17-436.42-3356.66 (Laboratory)	12 Months	1-1-70	12-29-70	126	230	38.5	55.3	1.59
6.	17-430.45-3354.67 (Hunt Street)	12 Months	1-1-70	12-29-70	127	356	34.8	51.9	1.25
7.	17-434.65-3354.6 (Forest Street)	12 Months	1-1-70	12-29-70	131	459	79.5	156.9	1.45
8.	17-438.92-3358.22 (Kooker Park)	12 Months	1-1-70	12-29-70	136	199	36.1	61.8	1.67
9.	17-439.6-3367.49 (San Mateo)	12 Months	1-1-70	12-29-70	128	128	19.1	39.9	1.56

AIR QUALITY DATA SUMMARY - JACKSONVILLE

SULFUR DIOXIDE

TABLE VII cont'd.

UTM Location (10^3 Meters)	Sampling Interval	Start Date	End Date	Number of Samples	Maximum 24 hrs ppb	Annual Arith. Mean ppb	Std. Dev.	Geo. Std. Dev.
17-442.44-3354.91 (Arlington River Dr.)	12 Months	1-1-70	12-29-70	127	18	2.2	3.80	2.69
17-442.53-3358.65 (Peeler Rd)	11 Months	2-1-70	12-29-70	137	67	6.9	10.9	3.27
17-438.17-3354.5 (T.V. Tower)	12 Months	1-1-70	12-29-70	127	29	4.5	7.2	3.12
17-436.55-3355.15 (Hemming Park)	12 Months	1-1-70	12-29-70	132	133	11.1	19.1	3.45
17-436.42-3356.66 (Laboratory)	12 Months	1-1-70	12-29-70	125	58	7.2	12.28	3.38
17-430.45-3354.67 (Hunt St)	12 Months	1-1-70	12-29-70	124	134	4.3	15.5	3.56
17-434.65-3354.6 (Forest St)	12 Months	1-1-70	12-29-70	130	97	6.8	14.4	3.28
17-438.92-3358.22 (Kooker Park)	12 Months	1-1-70	12-29-70	135	54	6.7	9.2	2.83
17-439.6-3367.49 (San Mateo)	12 Months	1-1-70	12-29-70	133	164	4.4	15.1	2.9

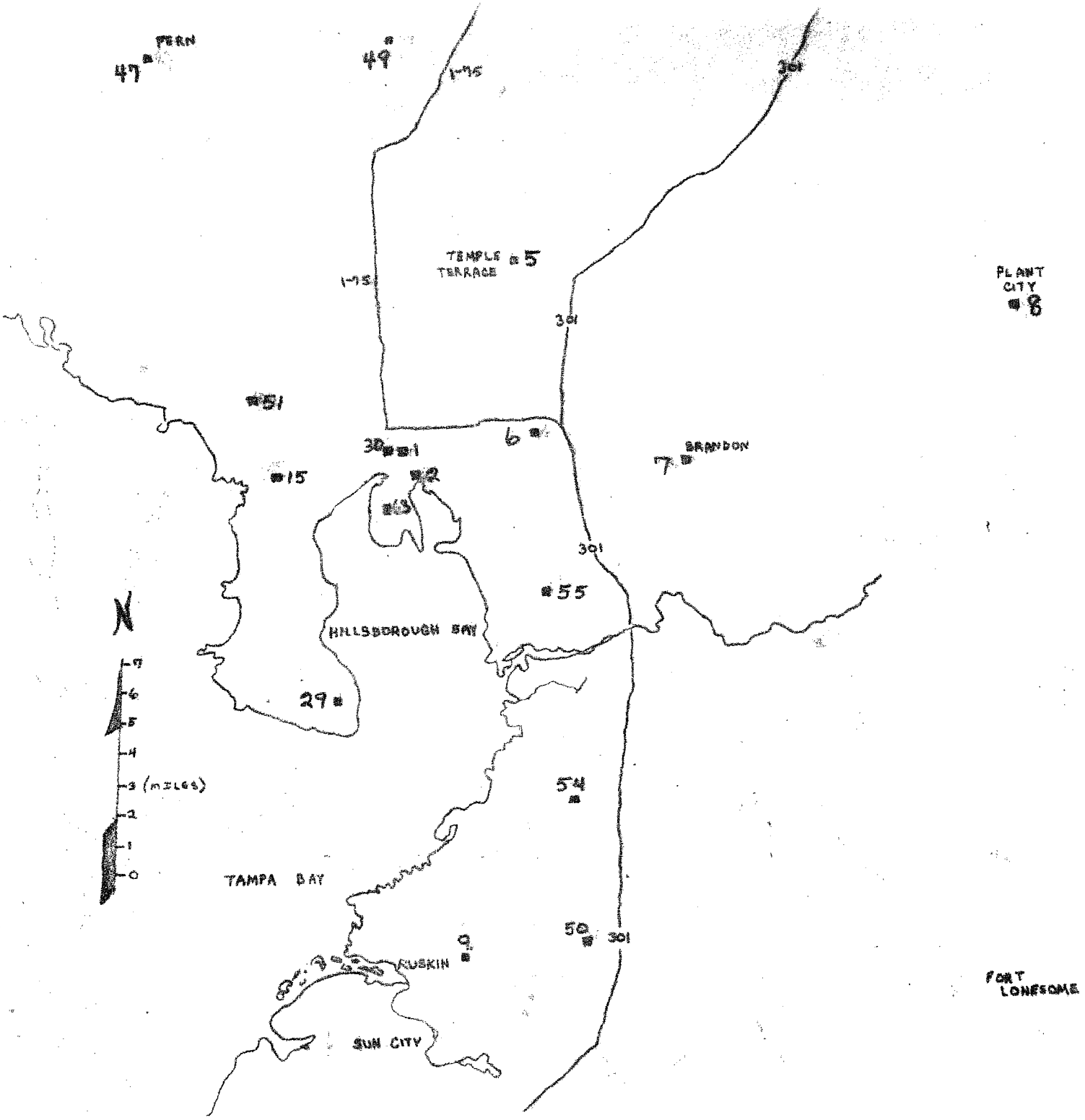


Figure 43

AIR POLLUTION SAMPLING STATIONS
1969-1970

SUSPENDED PARTICULATES

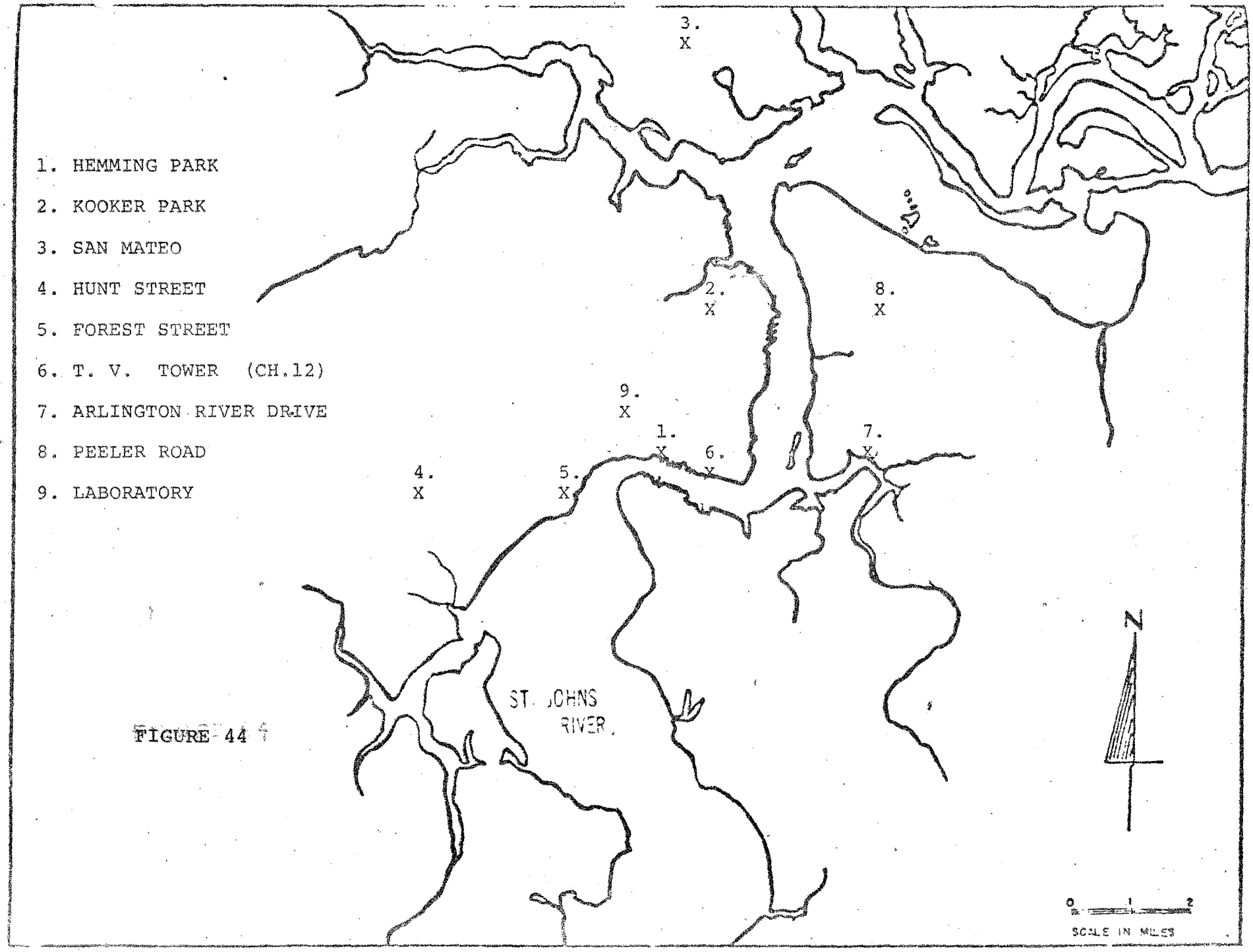


FIGURE 44

AMBIENT AIR SAMPLING STATIONS

For the purpose of developing the Implementation Plan based on an example region, the priority classification of the six air quality control regions were as follows for particulate matter and sulfur dioxide.

Region Priority Classification - Particulate and Sulfur Dioxide

Region	Particulate	Sulfur Dioxide	Remarks
Northwest	I*	I*	*Because Alabama portion is I
Northeast	I	II	
West Central	I	I	Example Region
Central	II	III	
Southwest	III	III	
Southeast	II	III	

The example region for the control of particulate matter and sulfur dioxide was decided upon the West Central Region because of the total quantity of pollution load, maximum ambient level concentrations encountered, the need for control of major sources and the magnitude of applicability of control strategy which can be followed throughout the State and which will result in an overall statewide reduction in pollution load as well as enhancement of air quality throughout the State.

Priority Classification - Carbon Monoxide, Nitrogen Oxides Hydrocarbons and Photochemical Oxidants

Similar to particulate matter and sulfur dioxide, the priority classification for carbon monoxide, nitrogen oxides and photochemical oxidants is to be based on ambient air concentrations. Major sources of carbon monoxide, hydrocarbons and nitrogen oxides are the automobiles the population of which is ever increasing. Hydrocarbons and nitrogen oxides emitted into the air react in sunlight and produce photochemical pollutants (smog). The triggering compound for photochemical smog is the production of photochemical oxidants (about 90 percent of which is ozone) and presence of large amounts of hydrocarbons and nitrogen oxides. The severity of photochemical products formation then is directly relatable to the following:

* Quantity of hydrocarbons emitted
* Quantity of nitrogen oxides emitted
* Intensity and duration of sunlight

The more of the combination of the above pollutants and sunlight, the more is the likelihood of photochemical reaction products reaching higher ambient concentrations. Photochemical oxidant (mainly ozone) which is an intermediate product, is, in addition to nitrogen oxides and hydrocarbons, an indicator of the magnitude of this type of air pollution.

The ambient concentrations of these pollutants during the months of July-September were the basis for priority classifications. In general, these are the months when the solar insolation is high in the northern hemisphere. The gasoline consumption is also generally high during these months. In Florida, this nationwide trend is exhibited only in two regions, namely in northeast and northwest regions (Figures 45 and 46). In the other four regions, this trend is hot exhibited mainly because of high tourist influx during winter and spring months. However, because of higher solar insolation during summer months, the net build up of concentrations of these pollutants is most likely to be higher.

A special summer study measurements of carbon monoxide,

nitrogen oxides and photochemical oxidants were carried out by the Environmental Protection Agency during the months July through September in 1971 in Jacksonville, Tampa and Miami.

A summary of the maximum and expected average concentrations are given below (see Appendix A for individual values based on one hour, eight hours and twenty-four hours basis).

SEE CHART ON FOLLOWING PAGE

AIR QUALITY DATA SUMMARY - TAMPA

NITROGEN DIOXIDE

UTM Location	Sampling Interval (Months)	Start Date	End Date	# of Samples	Arith. Mean	Std. Dev.	Geo. Std. Dev.	Est. Annual Arith. Mean
17-357.53-3092.47 1105 E. Kennedy	3.0	7-5-71	9-30-71	25.0	139.0	3.76	1.37	131.0
17-357.53-3092.47	12	1-26-70	12-16-70	26.0	132	59.1	1.50	NA

PHOTOCHEMICAL OXIDANTS-ppm

UTM Location (km)	Sampling Interval (Months)	Start Date	End Date	# of Samples	Max. 1 hr.	Arith. Mean	Std. Dev.	Geo. Std. Dev.
17-351.8-3095.1	3	7-7-71	9-30-71	1919	0.07	0.015	0.01	3.73

CARBON MONOXIDE -- ppm

UTM Location	Sampling Interval	Start Date	End Date	# of Samples	Max 1 Hour	Max. 8hr	Arith. Mean	Std. Dev.	Geo. Std. Dev.
17-357.0-3092.17	5	5-6-71	9-30-71	3255.0	14	6.75	2.01	1.45	1.90

AIR QUALITY DATA SUMMARY - JACKSONVILLE

CARBON MONOXIDE (1) 1 Hour Samples (2) 8 Hour Running Averages

(ppm)

	UTM Location (10^3 Meters)	Sampling Interval	Start Date	End Date	# of Samples	Maximum 1 Hour	Maximum 8 Hour	Arith. Mean	Std. Dev.	Geo. Std. Dev.
(1)	17-436.55-3355.25	3 Months	6-29-71	9-30-71	1345	21.5		1.9	2.03	18.9
(2)	"	"	"	"	1169		8.6	2.5	1.49	2.4

PHOTOCHEMICAL OXIDANTS - ppm

UTM Location	Sampling Interval	Start Date	End Date	# of Samples	Max. 1 Hr.	Arith. Mean	Std Dev.	Geo Std. Dev.
17-438.96-3361.3	3 Months	7-3-71	9-30-71	2044	0.1	0.018	0.01	3.19

NITROGEN OXIDES ug/m^3

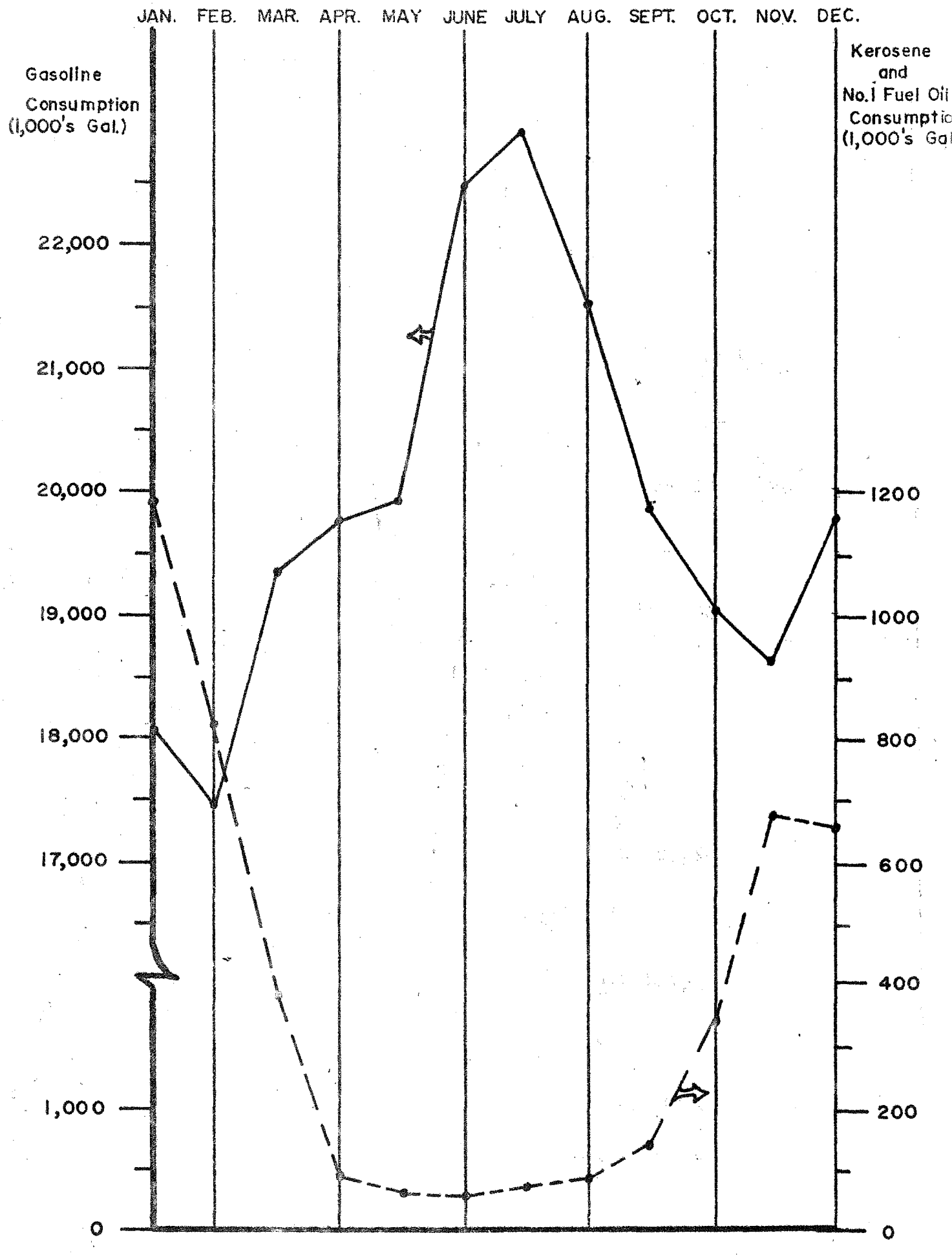
UTM Location (10^3 Meters)	Sampling Interval (Months)	Start Date	End Date	# of Samples	Arith. Mean	Std. Dev.	Geo. Std. Dev.	Est. Annual Arith Mean
(1217 N. Pearl St)	3.0	7-5-71	9-30-71	26	94.0	34.4	1.50	96.0
	12.0	1-9-71	12-27-70	19	73	35.8	1.76	NA

AIR QUALITY DATA SUMMARY -- MIAMI

NITROGEN DIOXIDE ug/m^3

UTM Location (1000's meters)	Sampling Interval (months)	Start Date	End Date	# of Samples	Arith Mean	Std. Dev.	Geo. Std. Dev.	Est. Annual Arith Mean
864 N.W. 23 St.								
17-579.13-2853.4	3.0	7-7-71	9-30-71	28	140	92.1	1.52	132.0
17-579.13-2853.4	12.0	1-2-70	12-15-70	26	132	50.3	1.53	NA

FIGURE 45



NORTHWEST REGION

FIGURE 46

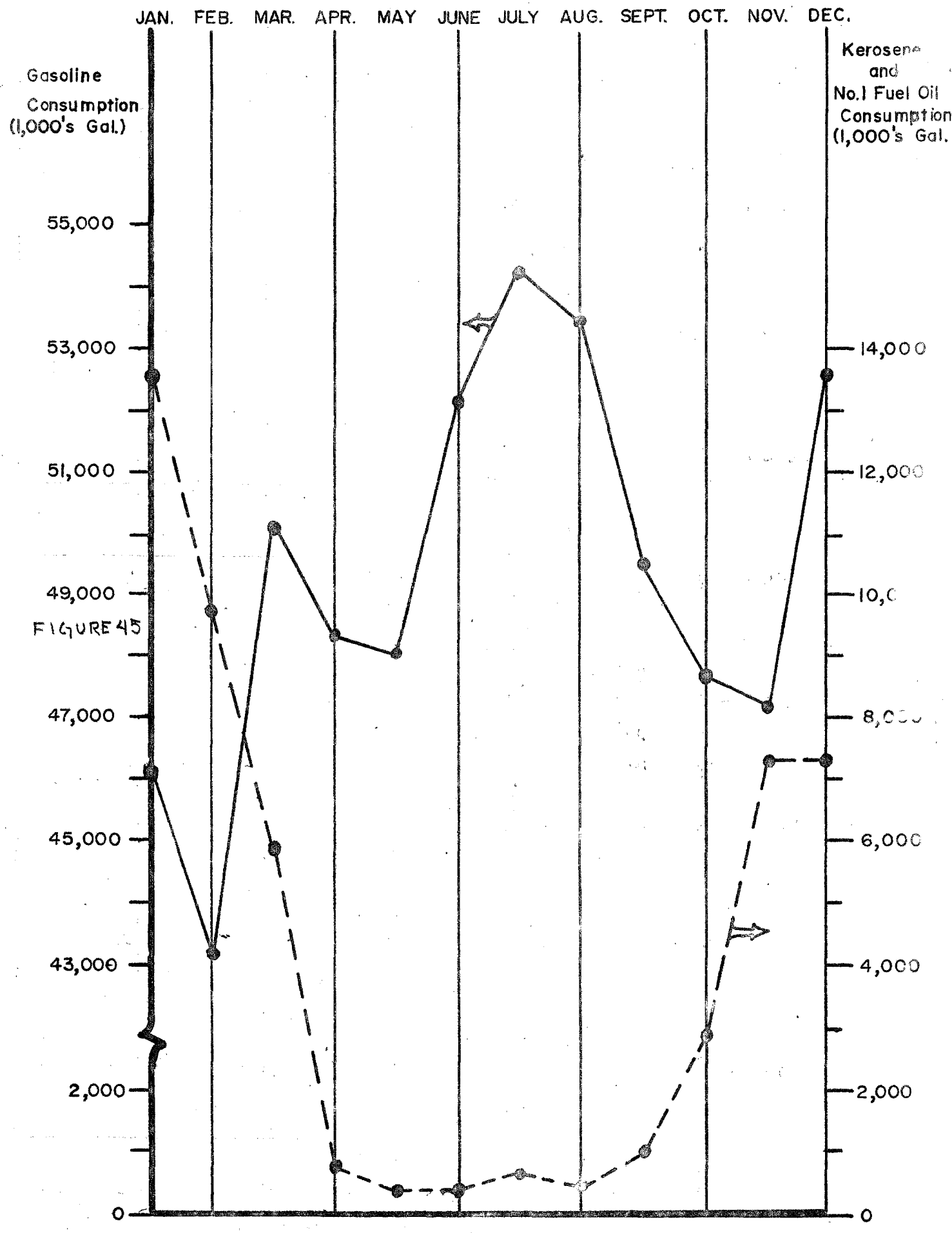
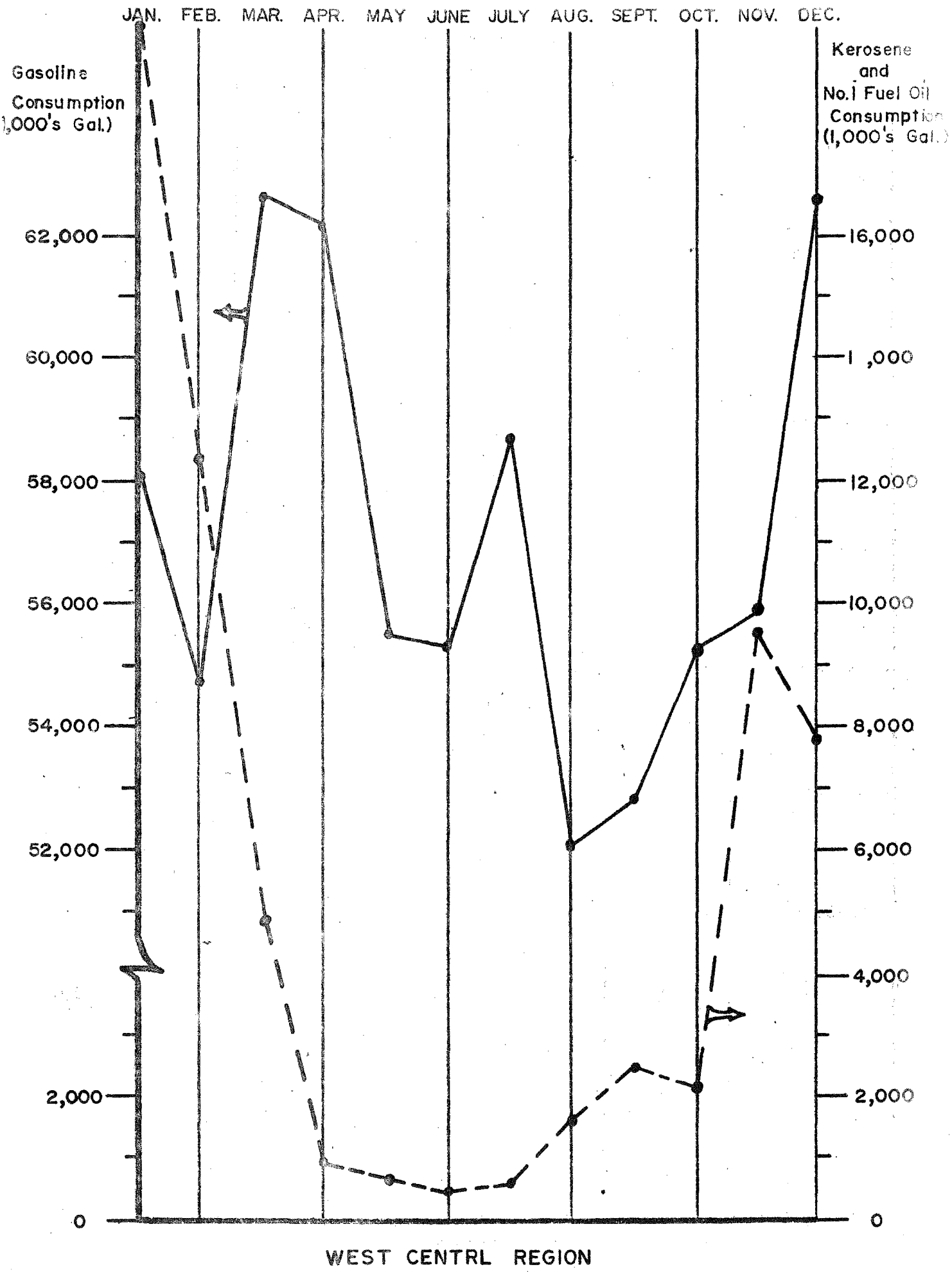


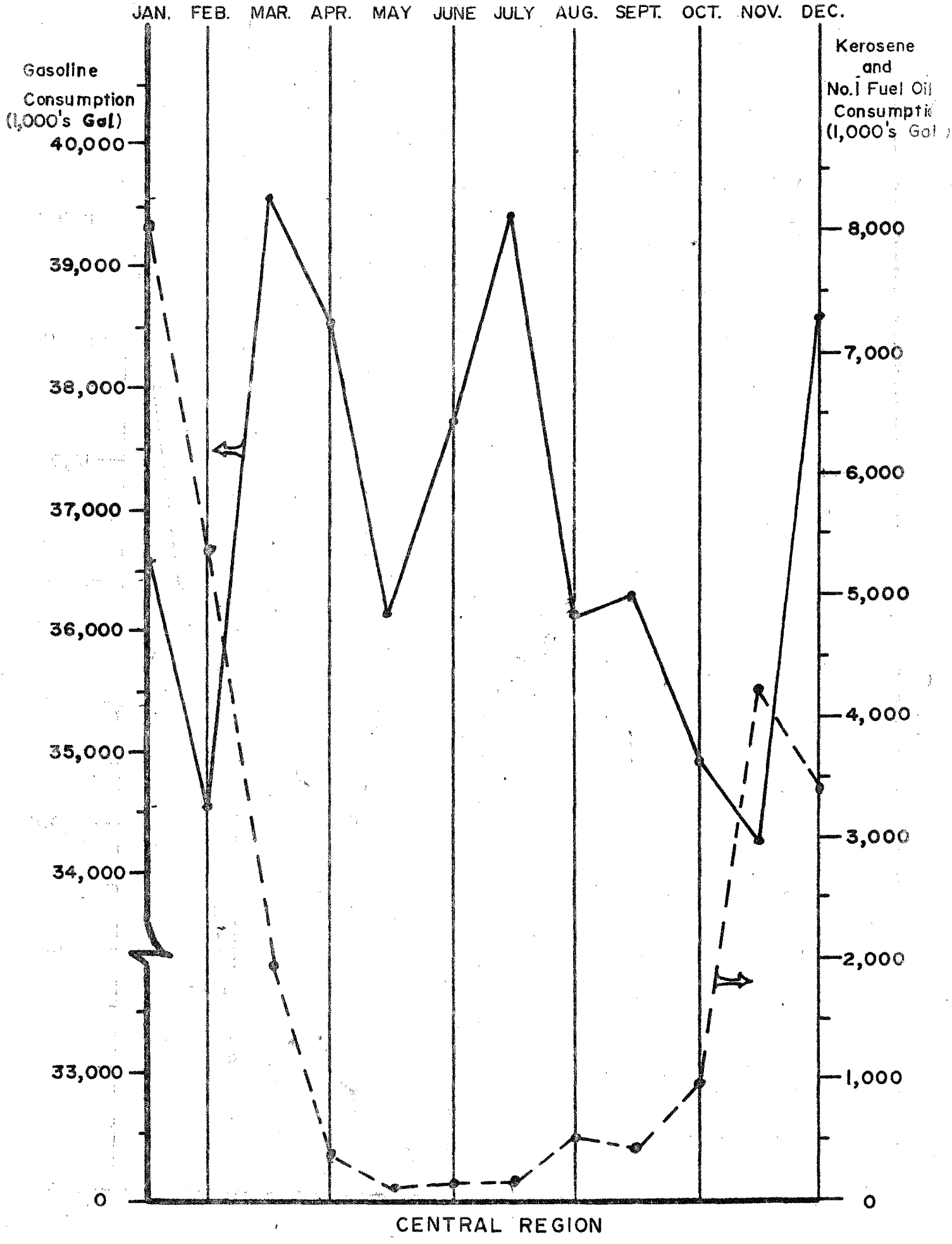
FIGURE 45

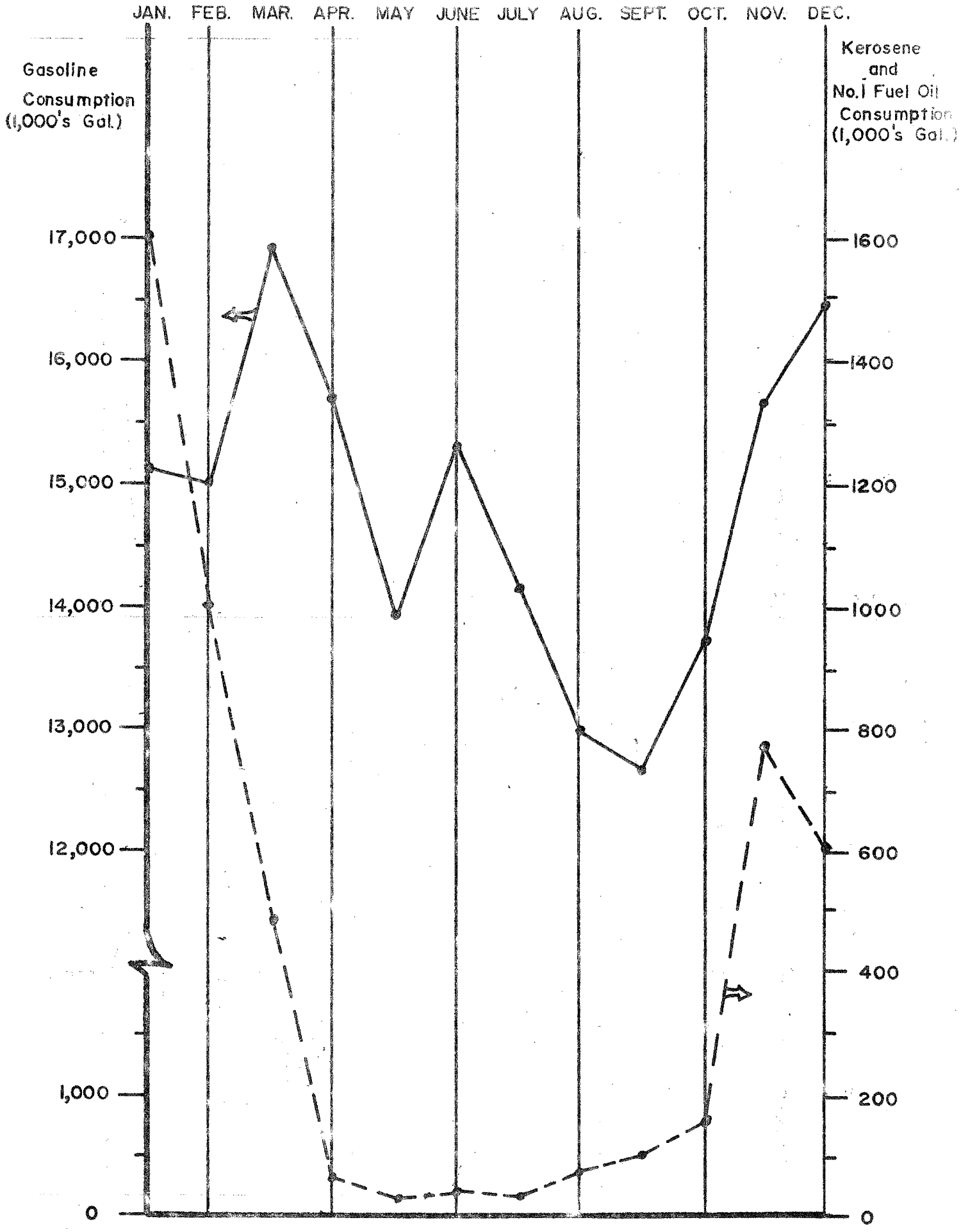
NORTHEAST REGION



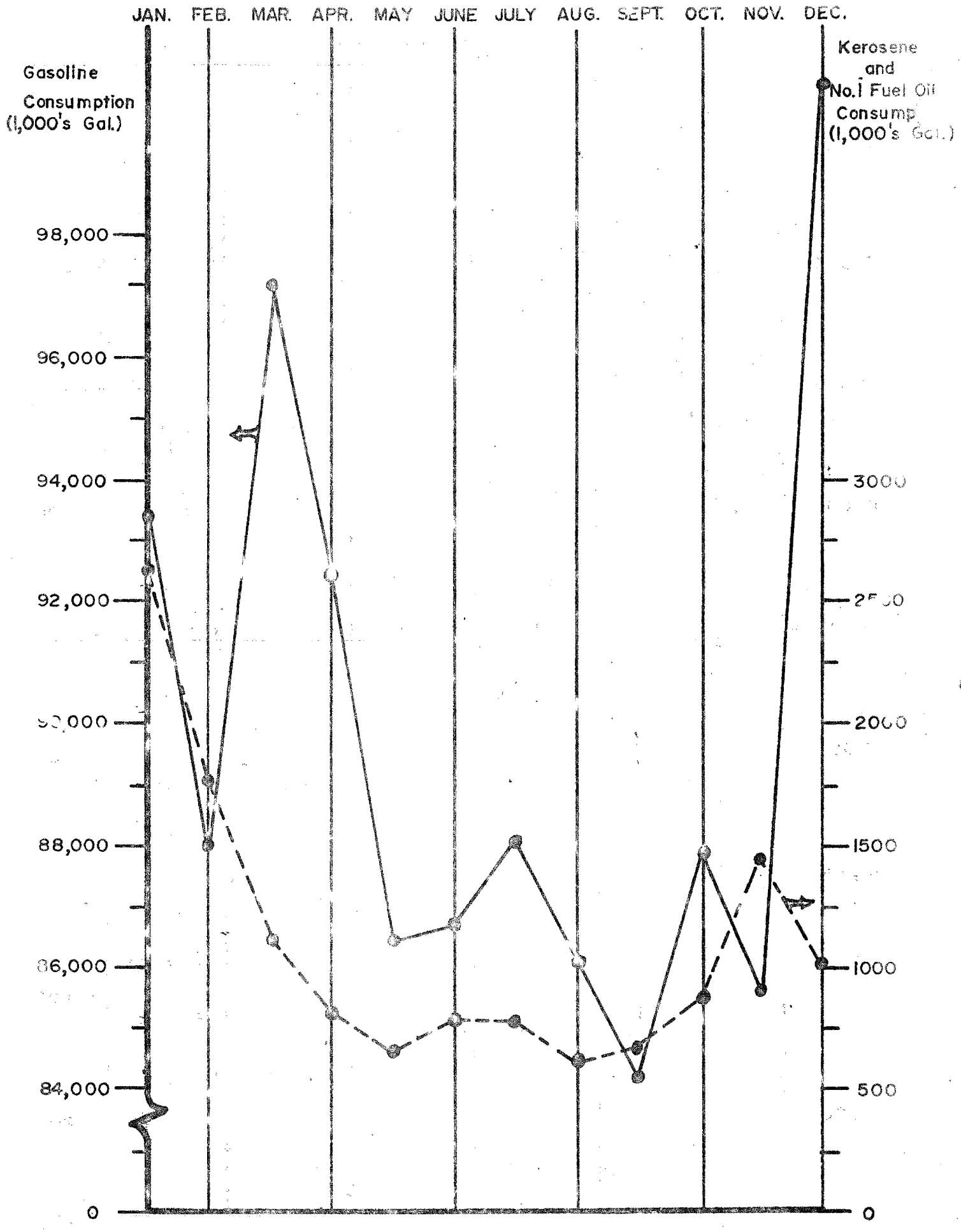
WEST CENTRL REGION

FIGURE 48


JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.
Gasoline
Consumption
(1,000's Gal)
40,000
39,000
38,000
37,000
36,000
35,000
34,000
33,000
0
Kerosene
and
No.1 Fuel Oil
Consumptic
(1,000's Gal
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
CENTRAL REGION



SOUTHWEST REGION



SOUTHEAST REGION

While the priority classification for particulate and sulfur dioxide is divided into three categories, that for carbon monoxide, nitrogen oxides and photochemical oxidants is divided only into two categories, the reason being that there is only one ambient air quality standard promulgated by EPA for these pollutants. These classifications are defined as Priority I or Priority III based on the air quality that was determined during the July-September 1971 period and according to the following criterion:

Pollutant	Priority	
	I	III
	Equal to or greater than	Less than
Carbon Monoxide:		
1 hour maximum	55mg/m^3 (48 ppm)	55mg/m^3 (48 ppm)
8 hour maximum	14mg/m^3 (12 ppm)	
Nitrogen Dioxide:		
24 hour average	110ug/m^3 (0.06 ppm)	110ug/m^3 (0.06 ppm)
Photochemical Oxidants:		
1 hour maximum	195ug/m^3 (0.10 ppm)	195ug/m^3 (0.10 ppm)

Based on this criterion and air quality measurements shown above, the priority classification of various regions for these pollutants is as shown below.

	Priority Classification			
Region	Carbon Monoxide	Nitrogen Dioxide	Photochemical Oxidants	Hydro carbons*
Northwest	III	III	I	I
Northeast	III	III	I	I
West Central	III	I	III	III
Central	III	III	III	III
Southwest	III	III	III	III
Southeast	III	I	III	III

*Classification with respect to hydrocarbons is the same as classification with respect to photochemical oxidants.

OVERALL PRIORITY CLASSIFICATION

Region	Particulate	Sulfur Dioxide	Carbon Monoxide	Nitrogen Dioxide	Photochemical Oxidants	Hydrocarbons
Northwest	I*	I*	III	III	I	I
Northeast	I	II	III	III	I	I
West Central	I	I	III	I	III	III
Central	II	III	III	III	III	III
Southwest	III	III	III	III	III	III
Southeast	II	III	III	I	III	III

*Priority I because Alabama Portion is I

Example Regions:

Particulate - West Central Region
Sulfur Dioxide - West Central Region
Nitrogen Dioxide - West Central, Northeast and Southeast Region
Oxidants - Northeast

Example Region - Particulate

Before proceeding to select an example region and design emission rules and regulations, the concept of an example region should be understood. For analysis purposes, let us assume two counties, County A and County B adjoining each other. Let us assume to start with that there are no industries whatsoever in either county. The atmospheric dust loading is, for all practical purposes, from uncontrollable natural emissions such as pollen. Depending on wind direction, net interchange between the counties involves the same natural dust load which is uncontrollable. If these two counties are located in the same atmospheric region, the background dust load will tend to be the same in both counties.

As a second step, let us assume that County A has become industrialized whereas County B remains same. County A now contains sources which are natural and man made. It is obvious that County B, even though it does not have any man made sources within its boundaries, will experience a higher dust level composed partly of its natural sources and partly of "intrusion" from County A. If the wind direction changes, County A is subjected to some intrusion from County B even though County B has "uncontrollable" dust load within its boundaries. As a result, County A will experience a higher dust level which is made up of (i) natural dust emission, (ii) dust from the present emission within its boundaries and (iii) dust from the past emission which has travelled to County B and back to County A again.

As a third step, let us assume that both County A and County B are industrialized but County A is more industrialized than County B. Applying the foregoing dust level theory, County B will experience dust level intrusion to a greater degree from County A and County A will experience intrusion to a lesser degree from County B. No matter how hard these counties try to keep their emissions at a minimum, there is going to be an exchange of man made dust between the counties from either side.

In order to keep the dust level closer to natural conditions in both counties, it is obvious that County A has to do a better job of 'cleaning up' than County B. The amount of "clean up" will have to be reflected in total reduced emissions which will, in turn, reflect in reduced ambient concentrations of dust or any other pollutant.

The concept of example region selection is based on the worst air quality region. By designing rules and regulations which will meet the ambient air quality standard and applying those rules and regulations to other regions will only result in a better air quality in those other regions.

The example region for particulate matter is the West Central region which comprises Citrus, Hardee, Hernando, Hillsborough, Levy, Manatee, Pasco, Pinellas, Polk and Sumter counties. The total annual particulate emission for the region, as accounted from the permit applications is 70,075 tons, of which 20,125 tons are from Hillsborough County and 24,053 tons from Polk County. Of the ten counties in the region, Hillsborough County has recorded higher ambient concentrations (see section on priority classification); for ready reference, data summary on stations which recorded higher concentrations in Hillsborough County are given on the following page with their locations shown in Figure 51 and major industries located in Tampa and Hillsborough County in Figures 52 and 53 with company name listed in Table VIII.

This data summary based on 1970 air quality measurements in Hillsborough County and the emission inventory accounted for from permit applications indicated a discrepancy in the total emissions. Obviously there were some additional emissions which perhaps occurred intermittently but not accounted for in the emission inventory. A field investigation revealed that there were additional emissions from phosphate loading terminal facility, from the start up and closing down of some industrial operations such as in Florida Steel Company and Florida Portland Cement Company and from upset conditions that often occur in power plants during summer months due to frequent peaking conditions. Figures 54 through 57 show some of this additional emission. Consequently, the following is the breakdown of the total estimated annual particulate emission in Hillsborough County.

Source		Tons/yr.
1. Transportation		2232.9
2. Fuel Burning		1054.4
3. Miscellaneous Sources		
Forest Fires	1282.7	
Agricultural Fires	262.2	
Grove Protection	2001.0	
	3545.9	3545.9

AIR QUALITY DATA SUMMARY - TAMPA

PARTICULATE MATTER (ug/m^3)

UTM Location (10^3 Meters)	Sampling Interval	Start Date	End Date	# of Samples	Maximum 24 hrs	Std. Dev.	Annual Geo. Mean	Geo. Std. Dev.
) 17-357.3-3092.3	13 months	1-1-70	12-30-70	26	167.0	34.89	86.9	1.52
) 17-352.9-3091.3	12 months	1-1-70	12-30-70	26	235.9	49.95	95.1	1.57
) 17-364.9-3093.1	12 months	1-1-70	12-30-70	26	197.4	37.48	90.0	1.46
0) 17-356.8-3092.1	12 months	1-1-70	12-30-70	26	188.7	37.42	79.0	1.45
3) 17-357.0-3090.0	12 months	1-1-70	12-30-70	26	234.5	50.05	104.3	1.63

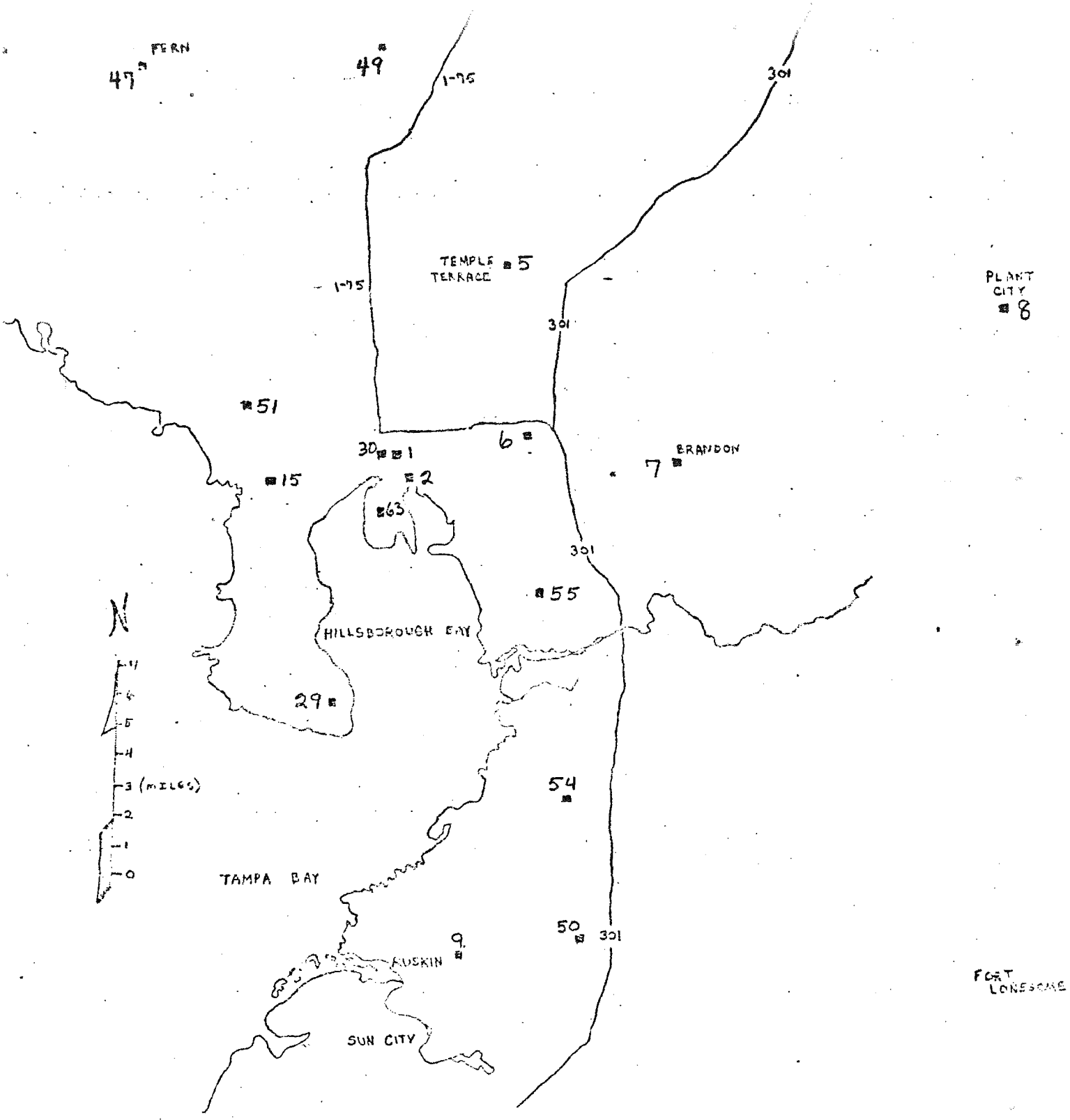
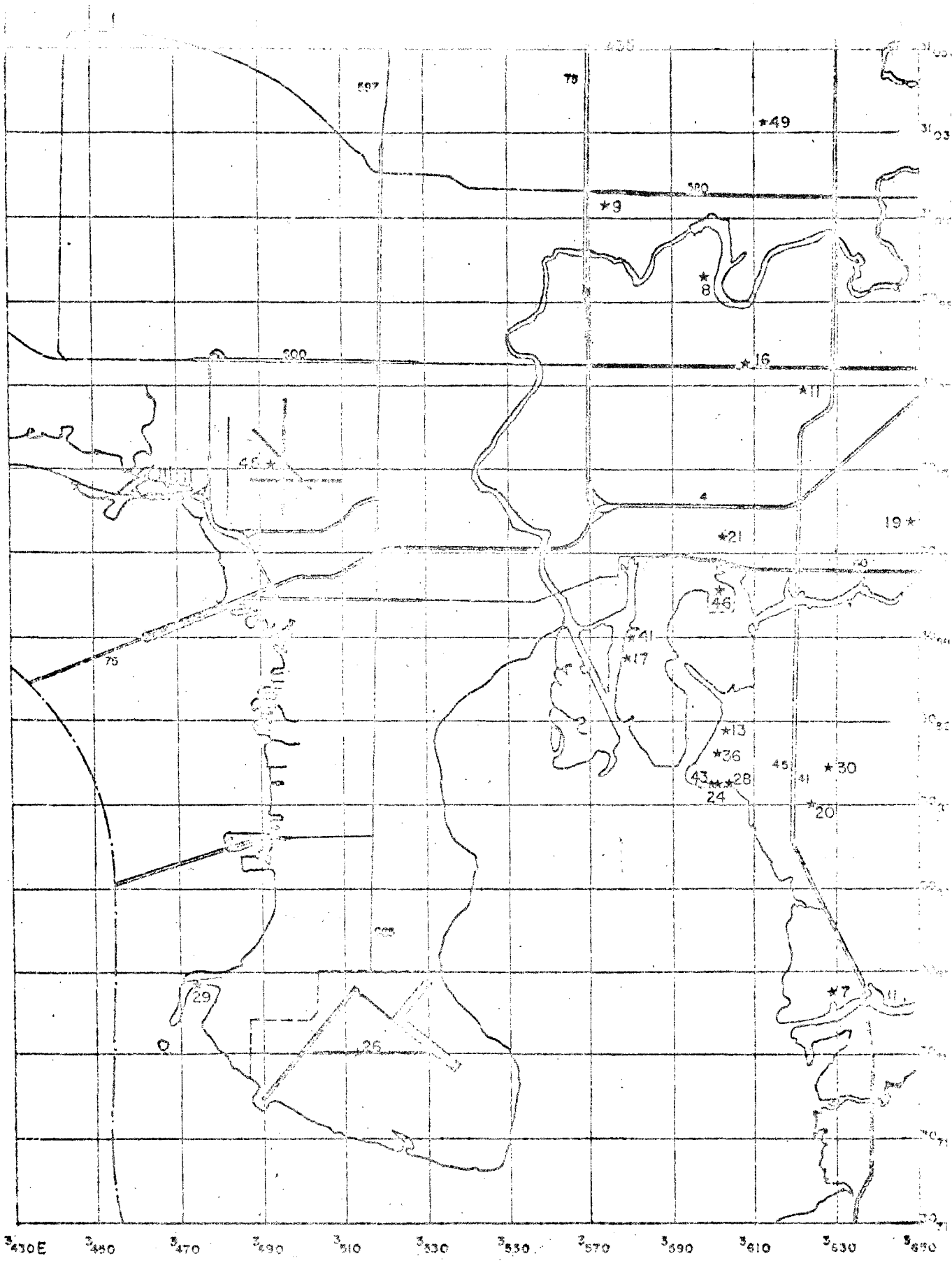


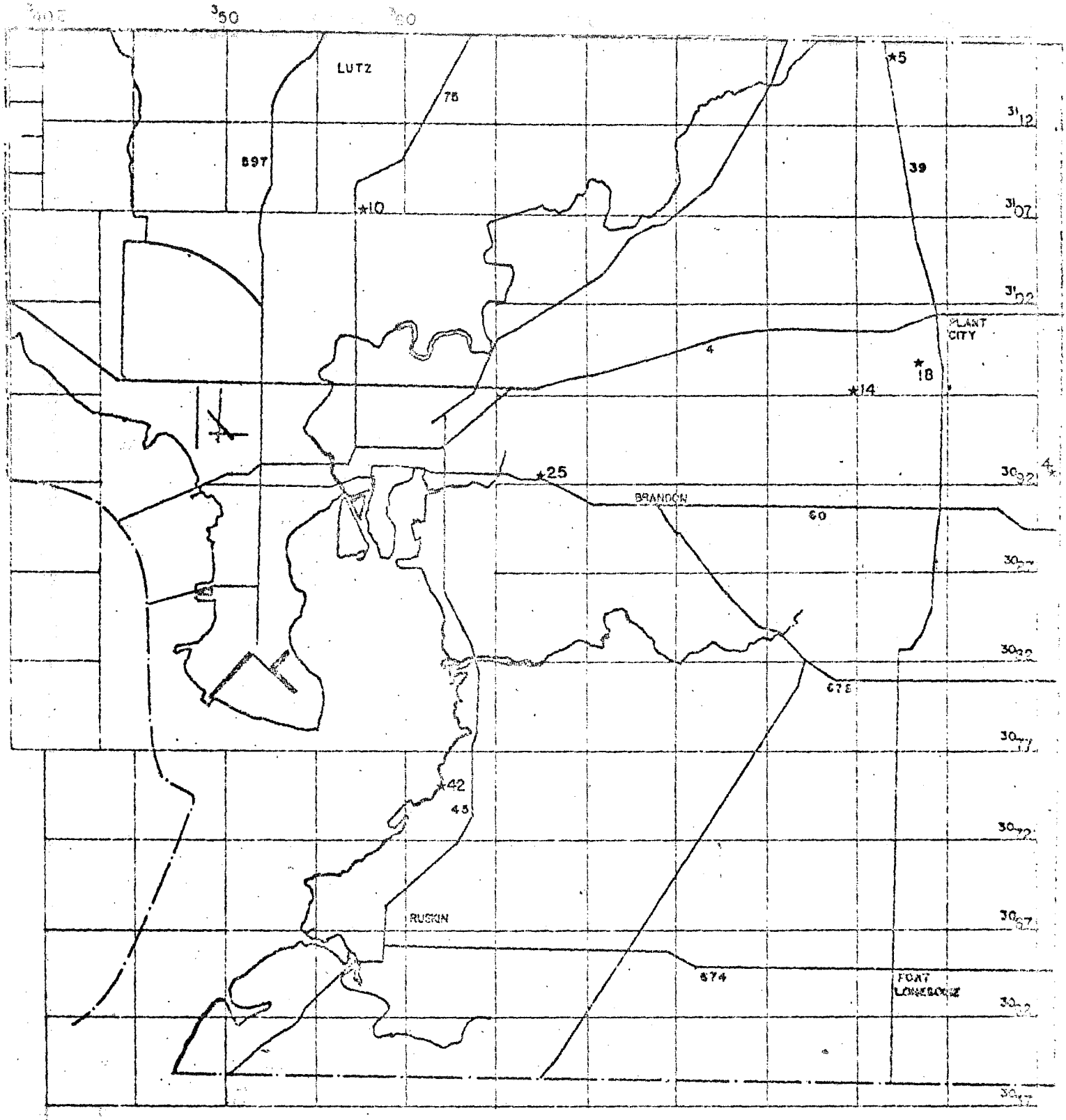
Figure 51

AIR POLLUTION SAMPLING STATIONS
1969-1970

SUSPENDED PARTICULATES



Point Sources
Suspended Particulates
Tampa
Figure 52



Hillsborough County
Particulate
Point Sources
Figure 53

TABLE VIII

HILLSBOROUGH COUNTY

POINT SOURCES

Map Code Number	Name of Source	UTM Grid	Particulates	SO_2
1	American Can Co.	58.95-92.85		
2	American Lacquer & Solvents	59.35-97.75		
3	American Oil	57.95-90.15		0
4	The Borden Co. (Plant City)	96.18-93.00	0	
5	Central Phosphates, Inc.(SA)	87.00-116.00	X0	X0
6	Chevron Asphalt	58.40-92.38		0
7	Cities Service Co.	62.95-82.50	0	X
8	City of Tampa Waterworks	59.71-99.62	0	0
9	Concrete Products Co.	57.43-101.43	X	
10	Cone Brothers Contracting (12th Street)	57.73-107.29	X	0
11	Cone Brothers Contracting (Osborne)	62.19-96.93	X	0
12	Continental Can	60.85-93.15		
13	Eastern Associated Terminals	60.27-88.83	X	
14	Edgar Plastic Kaolin, Co.	84.80-97.28	X	
15	Edwards Hospital	50.38-96.49		0
16	Feeds for Florida	60.85-97.46	X	
17	Florida Portland Cement	57.89-90.61	X	00
18	Florida SIP	88.25-98.92	X	0
19	Florida Steel Corp.	64.81-93.80	X	
20	GAF Corporation	62.40-87.00	X	
21	Grace & Co., W.R.	60.25-93.35	X	
22	Harris Paint Co.	58.45-92.78		
23	Humble Oil	61.87-86.90		
24	International Mineral Corp.	60.20-87.30	X	
25	Kaiser Agricultural Chemicals	67.32-92.60	X	
26	MacDill AFB	51.25-81.00	0	0
27	Mary Carter Industries, Inc.	50.80-103.06		
28	Mineral Aggregates, Inc.	60.45-87.45	X	
29	National Gypsum (both)	47.45-82.48	X	
30	Nitram, Inc.	62.80-87.90	X	X
31	Oak Park Cleaners	59.98-94.38		0
32	Peter O'Knight Airport	57.30-88.36		0
33	Plant City Airport	85.90-97.57		
34	Reynolds Metals Co.	60.63-103.33		
35	Robbins Lumber	57.54-105.03	X	
36	Seaboard Coastline R.R.	60.12-88.25	X	
37	Standard Oil Co.	48.59-82.60		0
38	Sugar Rose Canning Co.	89.75-99.51		0
39	Sulfur Terminal	57.78-89.92		0
40	Swift & Co.	52.65-86.81		0
41	Tampa Electric (Hooker's Pt.)	58.00-91.00	0	0
42	Tampa Electric (Big Bend)	61.95-75.00	0	0
43	Tampa Electric (Gannon)	60.00-87.55	0	0
44	Tampa General Hospital	56.45-90.98		0
45	Tampa International Airport	49.32-95.12	0	0
46	Tampa Incinerator	60.19-92.21	X	X
47	Tampa Sand & Material	57.28-91.69		0
48	Texaco Terminal	58.32-91.81		0
49	Thatcher Glass	61.23-103.34	X	
50	Union 76	58.09-89.24		0
51	University of South Fla.	60.85-105.04		
52	Weyerhauser Co.	60.52-94.78		0

X Process Loss 0 Fuel Use

Source			Tons/yr.
4.	Solid Waste Disposal:		
	Incineration	1769.0	
	Open burning	383.0	
	Area Sources	58.0	
		2210.0	2210.0
5.	Process Emissions		5273.0
*6.	Power Plants:		
	TECO Gannon	9276.3	
	TECO Big Bend	1980.0	
	TECO Hooker's Point	214.2	
		11,470.5	11,470.5
*7.	Unaccounted (Fugitive Dust):		
	Florida Steel Corporation		7,500
	Florida Portland Cement Co.		3,000
	Ship Loading Terminal (Port of Tampa)		7,000
	TOTAL EMISSIONS		43,286.7 Tons/yr.

* See Explanation below:

Explanation

Item 6: Gannon Power Plant Operation-1970:

Unit	Part./day,lbs.	Days/yr	Emission/yr tons
#1	4990	311.57	777.36
#2	5330	329.31	877.62
#3	3170	297.19	471.04
#4	3040	334.90	509.10
#5	2380	338.52	402.84
#6	50,700**	246.09	6238.30
			9276.26

** Unit operating at a much lower efficiency.

Item 7: Unaccounted Dust - Explanation

(i) Florida Steel Corporation:-

Estimated emission from building openings, etc. - 7,500 tons/yr.

Item #7 continued:

Explanation:

Material balance (figures from permit application)

a) Raw material utilized - 580 tons/day of scrap metal

b) Products - 550 tons/day of steel billets

c) Particulates collected in control equipment - 11,300 lbs/day

d) Material emitted through stacks - 1,250 lbs/day

e) Unaccounted material
a-b-c-d = 47,450 lbs/day

After observing the Florida Steel Corporation plant during operation (Figure 54), it was determined that the unaccounted material escapes when metal is being charged. The building enclosing the operation has many openings and large doors which are kept open thus allowing large quantities of dust to escape. It was estimated that 15-20% of the unaccounted material was settleable within the plant boundaries. The remainder is discharged as fugitive dust which constitutes approximately 7,500 tons/yr.

(ii) Ship Loading Terminal - Port of Tampa:

(a) 1970 Dry Phosphate Loading - 12,734,914 tons
At 0.05% (or 1 lb/ton) of fugitive
dust emission $= (12{,}734{,}914)\left(\frac{1}{2000}\right)$
$= 6369$ tons

(b) 1970 Grain Loading
At 0.01%, fugitive
dust emission $= (154{,}228)\left(\frac{0.2}{2000}\right)$
$= 15$ tons

(c) Milortanite Loading - 81,000 tons
At 10#/ton, fugitive
dust emission $= (81{,}000)\left(\frac{10}{2000}\right)$
$= 405$ tons

(d) Miscellaneous emissions = 211 tons (estimated)

Total (a) + (b) + (c) + (d) = 7,000 tons

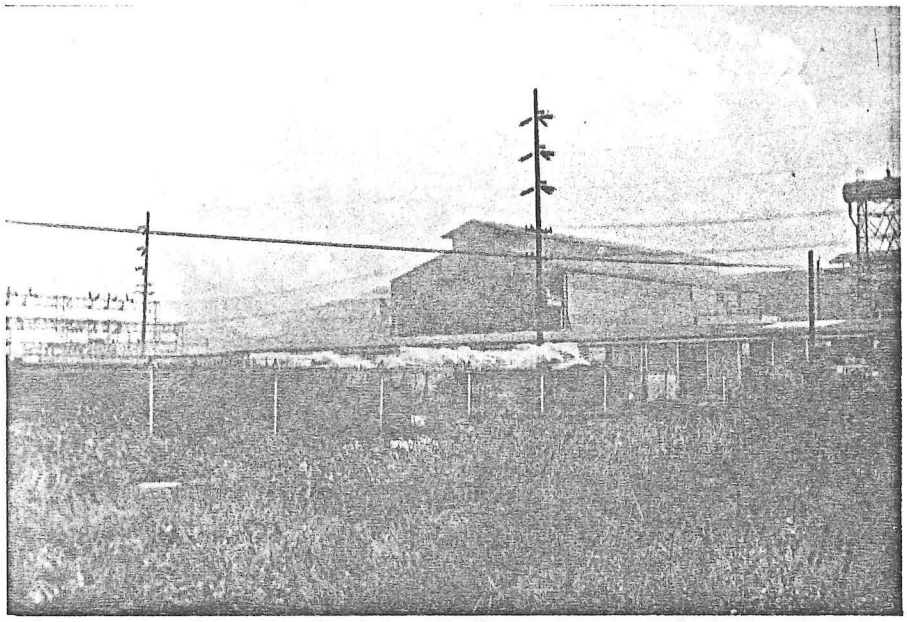


FIGURE 54 — FLORIDA STEEL CORPORATION
NOTE: ORANGE IRON DUST

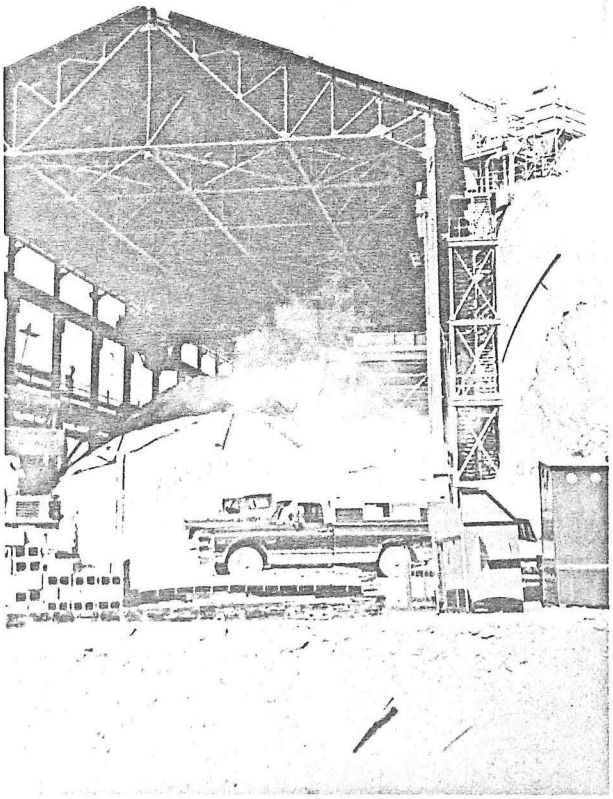


FIGURE 55 —
FLORIDA PORTLAND CEMENT

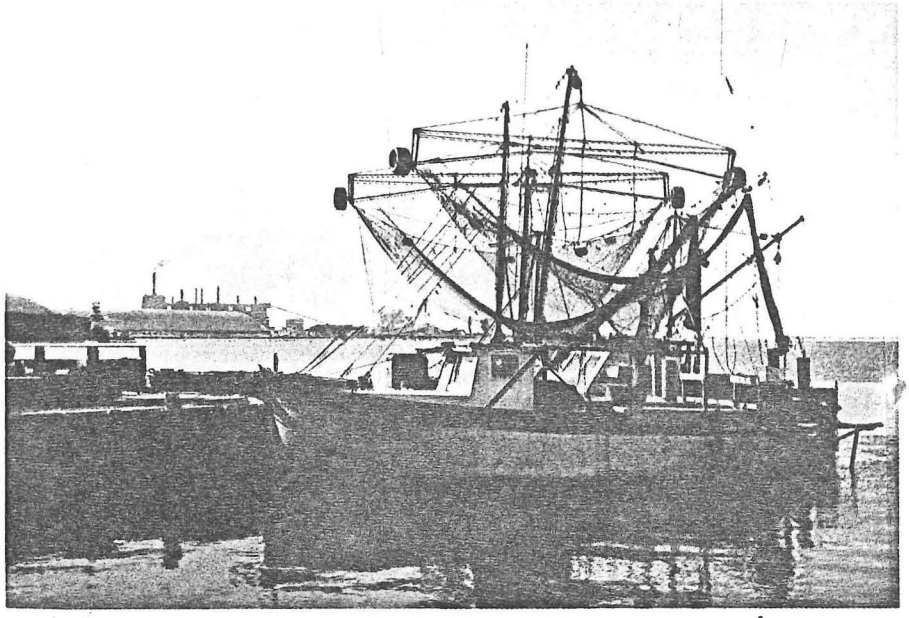


FIGURE 56 — TECO'S GANNON STATION, DURING UPSET (BACKGROUND)

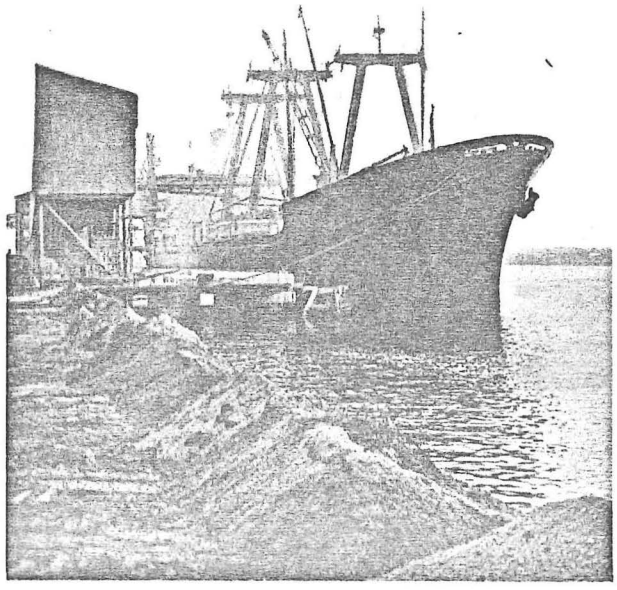


FIGURE 57 —
I.M.C. SHIP LOADING
TERMINAL

(iii) Florida Portland Cement Co:

Emission quantities reported in Permit applications account for only trace quantities from such operations as bulk loading, conveyor systems, finish mills and packing operation. Upon visit and observations at these operations, the dust emissions were believed to be much more than trace, as reported. An estimate of these emissions is given below:

(a) Production capacity - approximately 3368 tons/day

Assume 0.25% emission from above combined operations - Estimated emission

= (3368) (330) (0.0025)

= 2800 tons/yr.

(b) Emissions from cold start up (estimated)=200 tons/yr.

Total (a) + (b) = 3000 tons/yr.

Particulate Control Strategy:

As can be seen from the emission inventory, unaccounted fugitive dust emission accounts for a major portion of the emission, 40.4 percent (17,500 tons/year) followed by power plants with 26.5 percent contribution (11,470 tons/year). Process emissions account for the third biggest share with 12.2 percent in emissions. Miscellaneous sources emit 8.2%, approximately two-thirds of which are from grove protection. Transportation and solid waste incineration come in next with each category contributing approximately 5.2 percent to the total and fuel burning comes in last with 2.4 percent contribution.

Of these emissions, the contribution from the miscellaneous sources and solid waste disposal is expected to decrease significantly with the adoption of new rules on open burning and citrus grove heating and with intended change in the allowable grain loading to 0.1 grain instead of 0.2 grains as presently allowed for incinerators.

Attention was centered on the three major categories in control strategy testing. A total of 11 control strategies was tested in the Strategy Testing exercise. These are:

A. Fugitive (unaccounted) Dust:

Strategy 1: 70 percent reduction in the fugitive dust emission with appropriate rules.

Strategy 2: 80 percent reduction in the fugitive dust emission with appropriate rules.

Strategy 3: 90 percent reduction in the fugitive dust emission with appropriate rules.

B. Power Plants

Strategy 4: Limit power plant emissions to 0.3 lb. per million BTU heat input per hour.

Strategy 5: Limit power plant emission to 0.2 lb. per million BTU heat input per hour.

Strategy 6: Limit power plant emission to 0.15 lb. per million BTU heat input per hour.

Strategy 7: Limit power plant emission to 0.10 lb. per million BTU heat input per hour.

Strategy 8: Limit power plant emission to 0.05 lb. per million BTU heat input per hour.

It should be noted at this point that in the proposed "Standards of Performance for New Sources" released by EPA in August 1971 (Federal Register, Vol 36, No. 159, dated August 14, 1971), the proposed emission limit for fossil fuel fired steam generators of a capacity more than 250 million BTU heat input per hour is 0.2 lbs. of particulate matter per million BTU heat input per hour. Efficient electrostatic precipitators are presently available in the market to achieve such an emission limit. In the case of power plants in Hillsborough County, some existing power plants already have better controls. The emissions as reported by the Company in their permit applications vary from as low as 0.013 lbs. and for most of their oil fired units at 0.041 lbs. per million BTU heat input per hour. Because a significant portion of total particulate emission (excluding the 'upset' condition) is from these power plants and because of the need for further emission reduction in Hillsborough county, strategy calculations were performed respectively at 0.3, 0.2, 0.15, 0.10 and 0.05 lbs per million BTU heat input per hour.

C. Process Emissions

Strategy 9: Application of proposed EPA process weight table on all industrial sources.

Strategy 10: Limit exhaust grain loading to 0.08 grains per standard cubic foot.

Strategy 11: Limit exhaust grain loading to 0.05 grains per standard cubic foot.

With these 11 specific control strategies developed, a total of 45 (=3x5x3) separate combinations of control strategies can be performed. Following is the summary of the 11 main control strategy testing exercise.

Strategy No.	Emission Reduction, Tons/yr.	Emission Reduction Percent Total
1 only	12,250	28.3
2 only	14,000	32.3
3 only	15,750	36.4
4 only	*5661.2 + 72.5=5733.7	13.2
5 only	*5661.2 + 774.2=6435.5	14.9
6 only	*5661.2 + 1166.9=6828.2	15.8
7 only	*5661.2 + 1746.9=7408.1	17.1
8 only	*5661.2 + 3346.0=9007.2	20.8
9 only	1006.3	2.3
10 only	927.8	2.1
11 only	1364.3	3.2

*Excessive emission not accounted for in permit application -

It should be mentioned that in calculating these emission reductions, if a source is presently operating at less emission than the control strategy in question would allow, that source was assumed to continue to operate at the same emission level and thus was excluded in calculations. This procedure was followed consistently in all these calculations.

Combination of control stretegy numbers 3,7 and 9 was selected as the control strategy to be applied to bring about the desired emission reduction.

(a) It is very obvious that strict controls should be exercised on fugitive dust emission since fugitive dust sources are the biggest contributors to the total emission. Selection of Control Strategy No. 3, (90% reduction) still allows 10 percent emission which is considered very reasonable.

A decrease of 90% will be accomplished by applying the fugitive particulate restriction in Chapter 17-2 F.A.C. Some equipment which could be installed to reduce fugititve dust loading are:

(1) Enclosed conveying systems with ventilation through a control device such as a bag-house.

(2) Enclosed material transfer points with control equipment.

(3) Enclosed storage silos or building with ventilation through a control device.

(4) Open storage piles are not allowed.

(5) Buildings in which dusty operations occur must be properly ventilated through a control device with NO openings where particulates may escape.

(b) The second biggest contributor to particulate emission is the power plants. As the attached table (Table IX) will show, many units presently are operating at less than 0.1 lbs. per million BTU heat input per hour. There is no reason why all the units could not operate around this emission limit with installation and proper maintenance of control equipment. In view of this, therefore, Control Strategy No. 7 is considered very reasonable.

It is also apparent from Table IX that TECO's Gannon Station - Unit #6 is operating around 1 lb. of particulates per million BTU heat input. Preliminary results of recent stack sampling tests were obtained from a TECO representative to determine this figure. Collector efficiencies of Unit #6 were reported to range from 85.7% to 94.9% where the efficiency reported in the permit application was 98.5%. Company representatives indicate that the presently existing electrostatic precipitator will be replaced before mid 1975. The resulting emissions

Source	Operation (Days/yr)	Type of fuel used	Quantity of fuel (Daily)	Heat Input capacity mill.BTU/hr.	Present Emissions lbs/day	Present Emissions tons/yr	Allowable Emissions, lbs/million BTU 0.3lbs/	0.25lbs/	0.2lbs/	0.15lbs/	0.1lbs/	0.05lbs/
TECO Hookers Point Unit 1	199	#6 fuel oil	123,700 lb.	95.0	123.6	12.3	681.0	567.0	454.0	340.5	227.0	113.5
TECO Hookers Point Unit 2	202	#6 fuel oil	129,700 lb.	103.0	134.7	13.6	744.0	620.0	496.0	372.0	248.0	124.0
TECO Hookers Point Unit 3	290	#6 fuel oil	255,000 lb.	195.0	215.9	31.3	1407.0	1172.5	938.0	703.5	469.0	234.5
TECO Hookers Point Unit 4	292	#6 fuel oil	265,000 lb.	203.0	223.3	32.6	1458.0	1215.0	972.0	729.0	486.0	243.0
TECO Hookers Point Unit 5	348	#6 fuel oil	383,000 lb.	293.0	334.5	58.2	2109.0	1757.5	1406.0	1054.5	703.0	351.5
TECO Hookers Point Unit 6	361	#6 fuel oil	616,000 lb.	472.0	511.4	92.3	3396.0	2830.0	2264.0	1698.0	1132.0	566.0
TECO Big Bend Unit #1	365	Coal	5745,000 lb.	2713.0	13,200	1980.0	19,530.0	16,275	13,020.0	9765.0	6510.0	3255.0
TECO Gannon Station Unit 1	311.57	Coal	1,770000 lb.	837.5	4990.0	777.36	6030.0	5025.0	4020.0	3015.0	2010.0	1005.0
TECO Gannon Station Unit 2	329.31	Coal	1847000 lb.	875.0	5330.0	877.62	6300.0	5250.0	4200.0	3150.0	2100.0	1050.0
TECO Gannon Station Unit 3	297.19	Coal	2690000 lb.	1275.0	3170.0	471.04	9180.0	7650.0	6120.0	4590.0	3060.0	1530.0
TECO Gannon Station Unit 4	334.9	Coal	2900000 lb.	1371.0	3040.0	509.1	9870.0	8225.0	6580.0	4935.0	3290.0	1645.0
TECO Gannon Station Unit 5	338.52	Coal	3630000 lb.	1721.0	2380.0	402.84	12,390.0	10325.0	8260.4	6195.0	4130.0	2065.0
TECO Gannon Station Unit 6	246.09	Coal	4440000 lb.	2104.0	50,700.0	6238.3	15,150.0	12625.0	10100.0	7575.0	5050.0	2525.0

TABLE IX

decrease will be approximately 5000 tons/yr. The remaining excessive emissions reduction will be accomplished by improved maintenance and surveillance.

(c) Proposed EPA Process Weight Table is based on the availability of "reasonable control technolology". This Process Weight Table when compared with the Existing Process Weight Table in Chapter 17-2, Florida Administrative Code, allows emissions of a lesser value for a unit rate capacity which is less than 400,000 lbs. per hour. However, for unit rate capacity of 400,000 lbs. per hour and above, this table allows an increased emission. Even though the net reduction by the application of this EPA Process Weight Table is only 2.3 percent in Hillsborough County, application of this Table throughout the state will bring about a much needed emission reduction in other counties. Compliance with this Table is certainly possible with the advancement of control technology which is presently available.

With the selection of Control Strategy No. 3, 7, and 9 and with the expected emission reduction with the adoption in 1971 of regulations on Open Burning and Citrus Grove Heating and with the expected emission reduction from transportation sources and incinerators, the net emission reduction achieved is 63.3 percent.

		Estimated
(i)	Emission Reduction from Transportation Sources	= 746 tons/yr.
(ii)	Emission Reduction from Incinerators	= 885 tons/yr.
(iii)	Emission Reduction from Open Burning	= 200 tons/yr.
(iv)	Emission Reduction from Citrus Grove Heating	= 1500 tons/yr.
		3,331 tons/yr.
		or 7.7% of total
	Control Strategy No. 3	36.4% of total

Control Strategy No.7	17.1% of total
Control Strategy No.9	2.3% of total
	63.5%

Based on the 1970 air quality data in Hillsborough County, the needed emission reduction is

$$\frac{104.3-60}{104.3-29} = 58.8 \text{ percent}$$

where

104.3 ug/m^3 is the maximum geometric mean value

60.0 ug/m^3 is the air quality standard

29.0 ug/m^3 is the rural background geometric mean value in Hardee County (West Central Region)

As for emission growth from newly added sources in Hillsborough County, it was determined from construction permits that Tampa Electric Co. is building a second unit at their Big Bend site. The following calculations show the result of this addition..

TECO - Big Bend #2 Unit:

Construction permit issued September 1, 1970

To Complete April 1, 1973

Bituminous coal at the rate of 338,900 lbs/hour

Heat Value = 13,100 BTU/lb. (26.2×10^6 BTU/ton)

Total heat input capacity = (13,100)(338,900)

= 4440 million BTU/hour

Assume: 24 hours/day and 350 days/year operation

Allowed Particulate Emission from this facility

$$= (4440)\ (0.1)\ (24)\ (350)\ \left(\frac{1}{2000}\right)$$

= 1865 tons/yr.

Total Particulate Emissions for Hillsborough County =

43287 $\frac{\text{tons}}{\text{yr.}}$

Strategy 7:	Emission Reduction not accounting for Big Bend #2 Unit	=	7408 tons/yr or 17.1% Reduction
Strategy 7:	Net Emission Reduction accounting for Big Bend #2 Unit	=	5543 tons/yr. or 12.8% Reduction
Strategy 3:	Emission Reduction	=	36.4
Strategy 7:	Emission Reduction	=	12.8
Strategy 9:	Emission Reduction	=	2.3
			51.5%

Emission Reduction from Transportation, Incinerators, Open Burning, and Citrus Grove Heating	=	7.7%
Total Expected Reduction	=	59.2%
Needed Emission Reduction	=	58.8%
Cushion		0.4%

It would appear that no new sources could be added. However, this assumption is derived from the roll back technique applied to the whole county as outlined above, and therefore cannot be ascertained with certainty since each source may not affect the whole county. Therefore, an air quality diffusion modeling exercise is planned for this county since such a study will enable determination

of a zone of influence of each source. Until such time that this is done, it is planned to write the rules governing the addition of new sources in such a way that will allow the addition of a new source upon the evidence that such source will not cause the ambient level to exceed the standard at any time (see section on rules and regulations). Also, the Florida Department of Pollution Control Board has adopted a no-growth policy until diffusion studies can be done and determined otherwise.

Dade, Broward and Palm Beach Counties:

The proposed ambient air quality standard on particulate matter for Dade, Broward and Palm Beach Counties is:

Annual Geometric Mean	50 ug/m^3
Maximum 24 hour concentration	180 ug/m^3

Of the total annual particulate emission of 37,241 tons from the Southeast Region, 30,403 tons (81.6%) are from these three counties. The breakdown of this 30,403 tons are as follows:

	Tons/yr.	Percent
Fuel Combustion	7375	24.3
Power Plants	2721	9.0
Process Emissions	9822	32.3
Solid Waste Disposal	2788	9.2
Transportation	7067	23.2
Miscellaneous Sources	628	2.0
	30,403	100.0

Power plants and process emissions which account for 41.3% of the total will be reduced significantly with the particulate regulations derived from the control strategy testing exercise. Emissions from transportation and solid waste disposal which account for 32.4 percent is also expected to decrease significantly with the anticipated reduction of automobile particulate emission and with the proposed emission limit of 0.1 grain instead of presently allowed 0.2 grains per standard cubic foot for incinerators. Fuel combustion accounts for 24.3% of the total. Almost all of which (23.7% of total) is

from uncontrolled sugar cane processing bagasse boilers. Applying the applicable regulations for steam generators would have the approximate reduction of 90%+ for these sources and thus bring about a significant reduction in total emissions.

The total anticipated reduction in emissions will be more than sufficient to keep the air quality at the above levels.

CONTROL STRATEGY - PARTICULATE POLK COUNTY

As seen from the emissions inventory, Polk County is the second largest contributor of particulates in the West Central Florida A.Q.C.R. Of the 24053.58 tons/yr. of particulates, a large portion is emitted from sources which are subject to control. These sources include phosphate rock driers, citrus peel driers and grove protection fires.

Applying the control strategies chosen for Hillsborough County, the following % reduction in emissions ie expected.

1. Process Emission Reduction

$$\% \text{ reduction} = \frac{\text{Quantity of Emissions reduced} \times 100\%}{\text{Total Present Emissions}}$$

$$= \frac{11{,}010.6 \times 100\%}{24053.58} = 45.7\%$$

2. Reduction from power plant is not expected since they are presently performing at better than 0.1 lbs. particulate/million BTU input.

3. The estimated emission reduction expected from grove protection fires, incinerators, and transportational sources is 8.6%.

   a. % reduction from grove protection

$$\frac{2577.0-644.25}{24053.6} \times 100\% = 8.04\%$$

b. % reduction from transportation

$$\frac{113.4}{24053.6} \times 100\% = 0.5\%$$

c. % reduction from incinerators

$$\frac{15}{24053.6} \times 100\% = 0.06\%$$

The total expected emission reduction achieved in Polk County is 54.38%.

Sulfur Dioxide Control Strategy:

The example region for sulfur dioxide is the West Central Region and again Hillsborough County. Total annual sulfur dioxide emission from all ten counties in the region accounted for 504,500 tons in 1970 of which 314,173 tons are from Hillsborough County and 75,051 tons from Polk County. A breakdown of the total emissions into various source categories is given below for Hillsborough County.

Source Category	Tons/yr.	Percent
Power Plants	277,493	88.32
Process Losses	22,437	7.14
Fuel Combustion	8,191	2.61
Transportation	3,542	1.13
Solid Waste Disposal	1,537	0.49
Miscellaneous Sources	972	0.31
TOTAL	314,173	100.00

Hillsborough County has recorded higher ambient concentrations of sulfur dioxide than the remaining counties in the region. A data summary of stations which recorded higher concentrations are given in Table VII with their locations shown in Figure 58 and major industries located in Tampa and Hillsborough County in Figures 59 and 60 with point source names listed in Table X.

AIR QUALITY DATA SUMMARY - TAMPA

SULFUR DIOXIDE - ppb

UTM Location (km)	Sampling Interval (months)	Start Date	End Date	# of Samples	Max. 24 Hours	Annual Arith. Mean	Std. Dev.	Geo. Std. Dev.
1) 17-357.3-3092.3	12	1-1-70	12-30-70	26	35.0	7.0	8.54	69.57
29) 17-354.9-3079.5	12	1-1-70	12-30-70	135	66.3	8.75	11.68	2.36
31) 17-396-3114	12	1-1-70	12-30-70	358	40.0	3.5	5.53	44.89
55) 17-365.4-3085.6	12	1-1-70	12-30-70	157	66.0	7.5	9.41	3.20
63) 17-357.0-3090.0	12	1-1-70	12-30-70	131	239.8	18.11	26.41	18.49

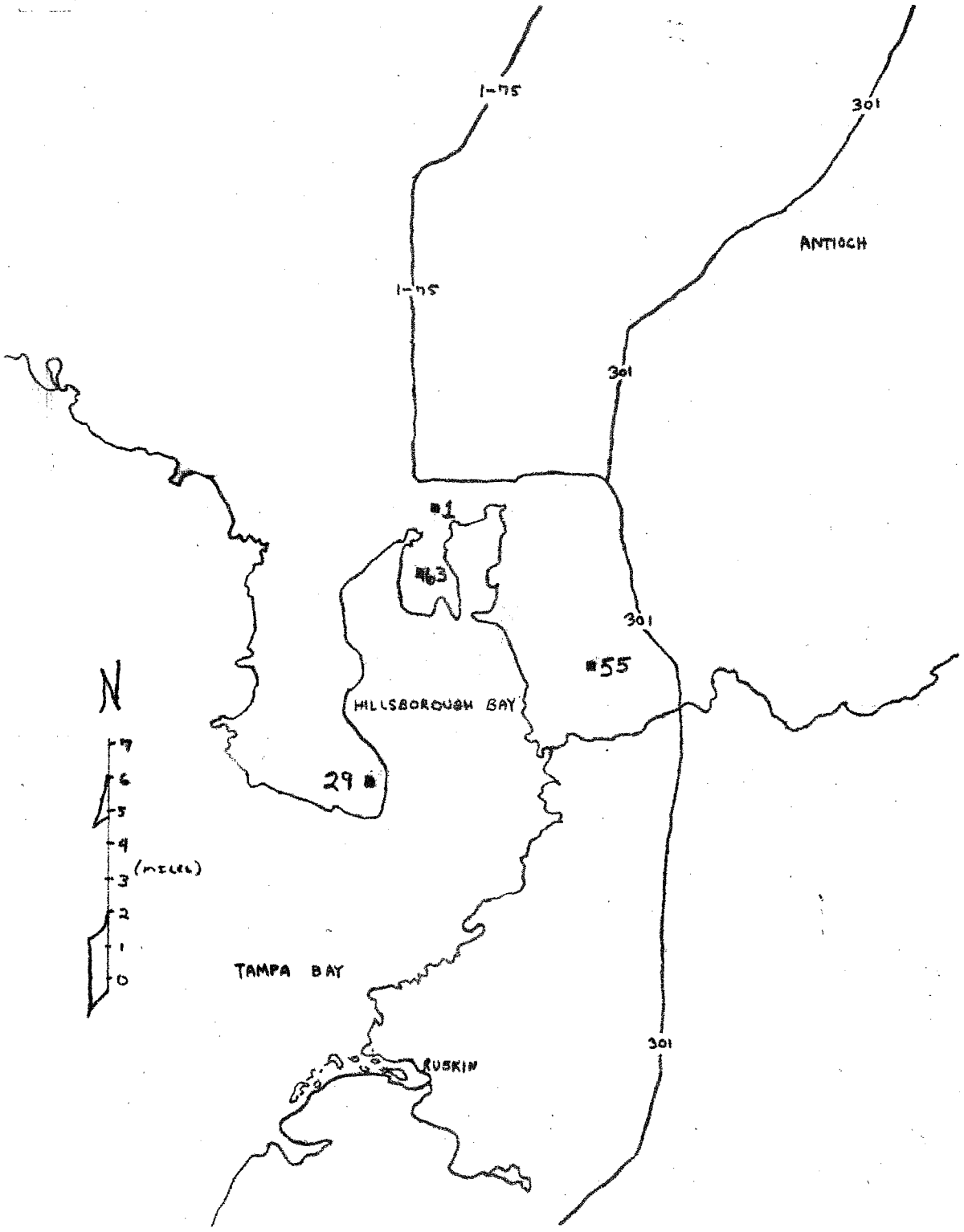
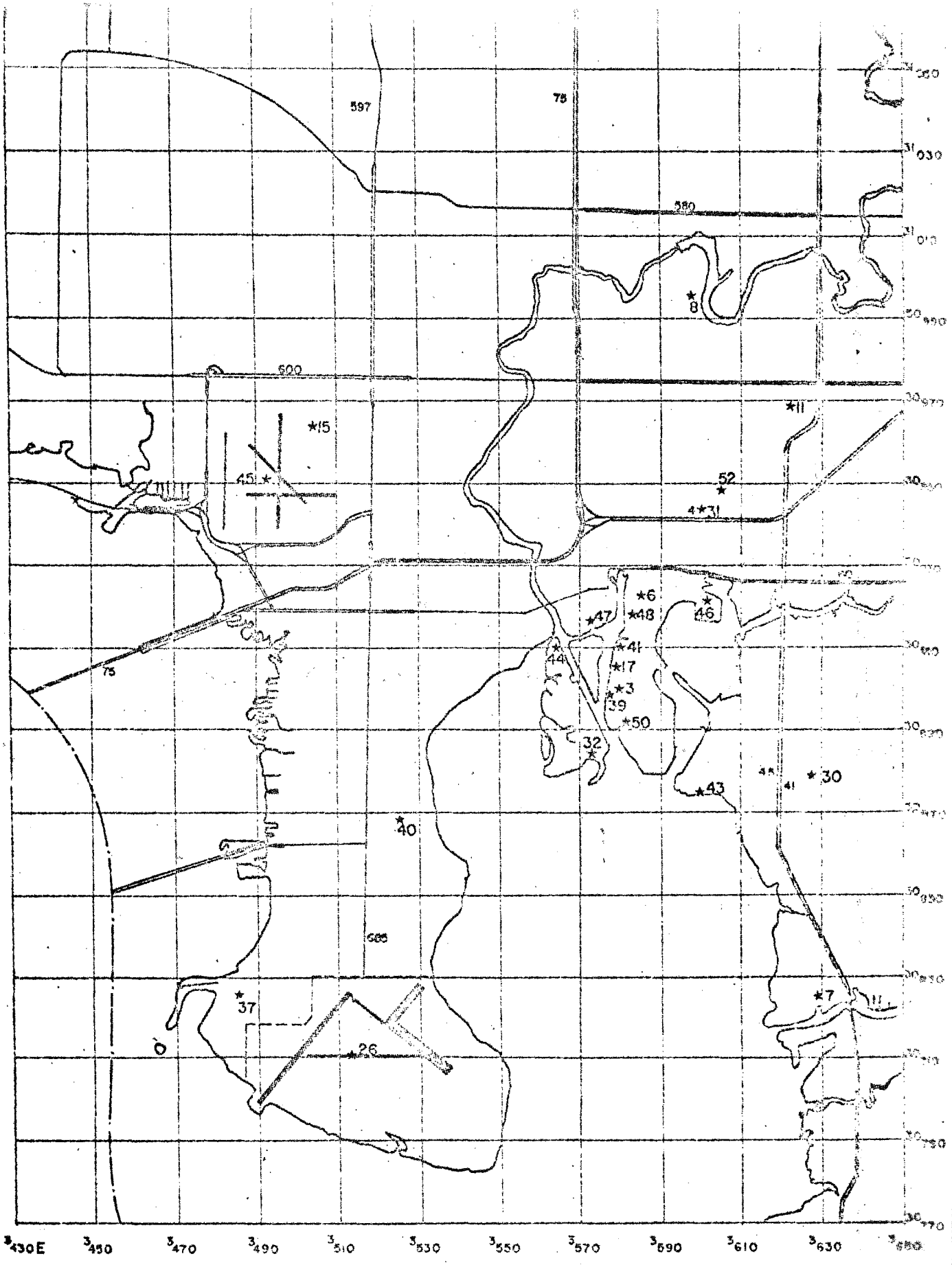


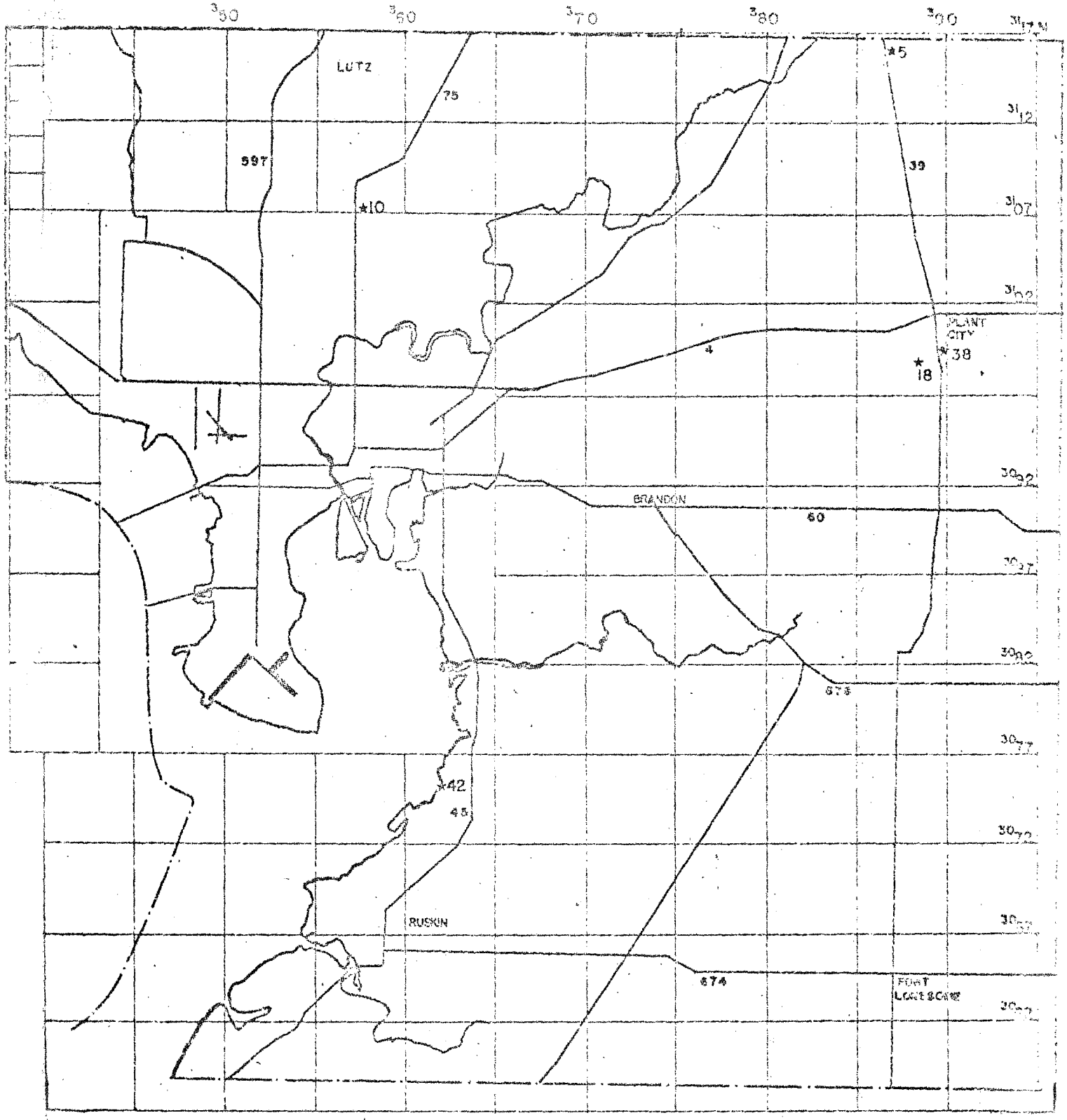
Figure 58

AIR POLLUTION SAMPLING STATIONS
1969-1970

SO_2 - WEST GAEKE



SO_2 Point Sources
Tampa
134



Hillsborough County
SO_2 Point Sources
Figure 60

TABLE X

HILLSBOROUGH COUNTY

POINT SOURCES

Map Code Number	Name of Source	UTM Grid	Particulates	SO_2
1	American Can Co.	58.95-92.85		
2	American Lacquer & Solvents	59.35-97.75		
3	American Oil	57.95-90.15		0
4	The Borden Co. (Plant City)	96.18-93.00	0	
5	Central Phosphates, Inc.(SA)	87.00-116.00	X0	X0
6	Chevron Asphalt	58.40-92.38		0
7	Cities Service Co.	62.95-82.50	0	X
8	City of Tampa Waterworks	59.71-99.62	0	0
9	Concrete Products Co.	57.43-101.43	X	
10	Cone Brothers Contracting (12th Street)	57.73-107.29	X	0
11	Cone Brothers Contracting (Osborne)	62.19-96.93	X	0
12	Continental Can	60.85-93.15		
13	Eastern Associated Terminals	60.27-88.83	X	
14	Edgar Plastic Kaolin, Co.	84.80-97.28	X	
15	Edwards Hospital	50.38-96.49		0
16	Feeds for Florida	60.85-97.46	X	
17	Florida Portland Cement	57.89-90.61	X	00
18	Florida SIP	88.25-98.92	X	0
19	Florida Steel Corp.	64.81-93.80	X	
20	GAF Corporation	62.40-87.00	X	
21	Grace & Co., W.R.	60.25-93.35	X	
22	Harris Paint Co.	58.45-92.78		
23	Humble Oil	61.87-86.90		
24	International Mineral Corp.	60.20-87.30	X	
25	Kaiser Agricultural Chemicals	67.32-92.60	X	
26	MacDill AFB	51.25-81.00	0	0
27	Mary Carter Industries, Inc.	50.80-103.06		
28	Mineral Aggregates, Inc.	60.45-87.45	X	
29	National Gypsum (both)	47.45-82.48	X	
30	Nitram, Inc.	62.80-87.90	X	X
21	Oak Park Cleaners	59.98-94.38		0
23	Peter O'Knight Airport	57.30-88.36		0
33	Plant City Airport	85.90-97.57		
34	Reynolds Metals Co.	60.63-103.33		
35	Robbins Lumber	57.54-105.03	X	
36	Seaboard Coastline R.R.	60.12-88.25	X	
37	Standard Oil Co.	48.59-82.60		0
38	Sugar Rose Canning Co.	89.75-99.51		0
39	Sulfur Terminal	57.78-89.92		0
40	Swift & Co.	52.65-86.81		0
41	Tampa Electric (Hooker's Pt.)	58.00-91.00	0	0
42	Tampa Electric (Big Bend)	61.95-75.00	0	0
43	Tampa Electric (Gannon)	60.00-87.55	0	0
44	Tampa General Hospital	56.45-90.98		0
45	Tampa International Airport	49.32-95.12	0	0
46	Tampa Incinerator	60.19-92.21	X	X
47	Tampa Sand & Material	57.28-91.69		0
48	Texaco Terminal	58.32-91.81		0
49	Thatcher Glass	61.23-103.34	X	
50	Union 76	58.09-89.24		0
51	University of South Fla.	60.85-105.04		
52	Weyerhauser Co.	60.52-94.78		0

X Process Loss 0 Fuel Use

In developing the control strategy for emission reduction in Hillsborough County, attention was centered on two major categories, namely power plants and sulfuric acid processes, since these two categories account for better than 95 percent of the total emissions. A total of 8 control strategies was tested in the Strategy Testing exercise, five on power plants and three on sulfuric acid processes giving a total of 15 different combinations. The eight control strategies are:

A. Power Plants:

Strategy 1: Limit sulfur dioxide emission to 2.0 lbs per million BTU heat input per hour on all power plants.

Strategy 2: Limit sulfur dioxide emission to 2.0 lbs per million BTU heat input per hour on coal fired plants and 1.5 lbs per million BTU heat input per hour on oil fired plants.

Strategy 3: Limit sulfur dioxide emission to 1.5 lbs per million BTU heat input per hour on all power plants.

Strategy 4: Limit sulfur dioxide emission to 1.5 lbs per million BTU heat input per hour on coal fired plants and 1.0 lb per million BTU heat input per hour on oil fired plants.

Strategy 5: Limit sulfur dioxide emission to 1.0 lb per million BTU heat input per hour on all power plants.

B. Sulfuric Acid Processes:

Strategy 6: Limit sulfur dioxide emission to 10 lbs per ton of 100% acid produced.

Strategy 7: Limit sulfur dioxide emission to 8.0 lbs per ton of 100% acid produced.

Strategy 8: Limit sulfur dioxide emission to 6.5 lbs per ton of 100% acid produced.

The following is the summary of these eight control strategy testing exercise.

Strategy No.	Emission Reduction tons/yr.	Emission Reduction Percent Total
1 only	190,913.3	60.76
2 only	191,753.1	61.03
3 only	200,941.4	63.96
4 only	203,963.0	64.92
5 only	223,363.2	71.09
6 only	12,042.9	3.83
7 only	13,040.2	4.27
8 only	14,424.3	4.59

Combination of strategy numbers 3 and 6 was selected to be "the control strategy" for control of sulfur dioxide. The reasons behind selection of this combination are:

(a) There is no doubt that sulfur dioxide emission should be reduced very significantly. Most of the sulfur dioxide comes from power generation in Hillsborough County and presently there does not appear to be a satisfactory collection device available in the market which could achieve the desired removal of sulfur dioxide from exhaust gases. This is true for new sources also. The EPA performance standard level for power generating units are 1.2 and 0.8 lbs of sulfur dioxide per million BTU heat input per hour respectively for coal fired and oil fired power generating units. Options for control of sulfur dioxide could develop in two directions - one direction in the development of suitable control devices and the other direction in the development of desulfurization process. When one or both options develop, such options can be as easily incorporated for existing power plants as for new ones. Therefore, the proposed emission limit of 1.5 lbs of sulfur dioxide per million BTU heat input per hour is considered a reasonable goal to achieve.

(b) Control technology available today dictates that the emissions of sulfur dioxide from existing sulfuric acid plants can be limited to 6.5 lbs. per ton of 100% acid produced. The EPA performance standard for new sulfuric acid plants is 4.0 lbs per ton of 100% acid produced. Therefore, the proposed emission limit of 10.0 lbs. per ton of 100% acid produced in existing plants is considered very reasonable.

Control stretegy No. 3 in combination with Control Strategy No. 6 gives an expected emission reduction of 67.7 percent. The needed reduction is:

$$\frac{(239.8 - 100.0)}{(239.8 - 0)} = 58.3 \text{ percent}$$

where

239.8 is the highest sulfur dioxide concentration recorded in 1970, ppb.

100.0 is the standard for maximum 24 hour concentration, ppb.

0 is the background concentration.

As described previously in the particulate control strategy, TECO's Big Bend Unit #2 is being constructed. The resultant effect of this major source will be:

TECO Big Bend #2 Unit:

Construction Permit Issued September 1, 1970

To Complete April 1, 1973

Heat input capacity = 4440 million BTU/hour

Assume 24 hours/day and 350 days/year operation

Allowable sulfur dioxide emission

$$= (4440)\ (1.5)\ (24)\ (350)\ \left(\frac{1}{2000}\right)$$

$$= 27{,}975 \text{ tons/year}$$

Total sulfur dioxide emissions in Hillsborough = 314,173 tons/yr

Strategy 3: Emission reduction not accounting for Big Bend #2 Unit = 200941 tons/yr or 63.96% reduction

Strategy 3: Net Emission Reduction = 172,966 tons/year accounting for Big Bend #2 Unit. or 55.05% reduction

Strategy 3: Emission Reduction = 55.05%

Strategy 6: Emission Reduction = 3.83%

Total Expected Reduction = 58.88%
Needed Emission Reduction = 58.30%

Difference (Cushion) 0.58%

This cushion of 0.58% will not allow any future growth until after air quality diffusion modeling is done to determine whether new sources could be allowed.

The Florida Department of Pollution Control Board has adopted such a policy.

CONTROL STRATEGY - SO_2 - POLK COUNTY

Polk County has the second largest quantity of SO_2 emissions in the West Central Florida A.Q.C.R. The majority of SO_2 emitted in Hillsborough County comes from power plants, whereas process emissions contribute the majority, 89.7% of SO_2 emission in Polk. These originate largely from sulfuric acid plants of the phosphate industry.

Following the same control strategies utilized in Hillsborough County, the amount reduction anticipated is 65.2%.

The reduction from sulfuric acid plants is 62.9%.

$$\% \text{ reduction} = \frac{65666.95-18460.3}{75051.39} \times 100\% = 62.9\%$$

Similarly, the reduction from power plants is 2.3%.

Dade, Broward and Palm Beach Counties:

The proposed ambient air quality standard on sulfur dioxide for Dade, Broward and Palm Beach counties is

Annual Arithmetic Mean - 3 ppb.

Maximum 24 hour concentration - 10 ppb.

Maximum 3 hour concentration - 50 ppb.

Of the total annual sulfur dioxide emission of 113,258 tons from the Southeast Region, 111,084 tons (98.1%) are from these three counties. The breakdown of this 111,084 tons is as follows:

	Tons/yr.	Percent
Fuel Combustion	4,861	4.38
Power Plants	96,929	87.26
Process Emissions	3,747	3.37
Solid Waste Disposal	408	0.37
Transportation	5,139	4.62
	111,084	100.00

Power plants alone account for most of the sulfur dioxide emission. With the proposed emission limit of 1.5 obs sulfur dioxide emission, this quantity is expected to decrease to 80,059 tons, a reduction of 31420 tons per year. This amounts to a net reduction of 28.3 percent in these three counties. Separately this reduction is as follows:

	Tons/year		
County	Present Emissions	Reduction	% Reduction
Broward	40394.5	5897.4	14.6
Dade	37969.6	18607.4	49.0
Palm Beach	18565.0	6915.5	37.3
	96,929.1	31,420.3	

Ambient monitoring of sulfur dioxide carried out by Dade and Palm Beach County pollution control programs provide the following information on the maximum and arithmetic means for the year 1970.

Dade County - 1970

Annual Mean - 2 ppb.

Maximum 24 hour concentration - 13 ppb.

Palm Beach County - 1970

Annual Mean - 1.6 ppb.

Maximum 24 hour concentration - 28.0 ppb

While the Dade County values reported above are based on sampling done at periodic intervals throughout the year, those reported for Palm Beach County are based on approximately two week sampling periods in each of the eight locations which have been established in Palm Beach County. These are given below.

	1970 Sulfur Dioxide Concentration, ppb.	
Location	24 hour Max.	Average
Tequesta	10	0.7
North Palm Beach	28	5.2
West Palm Beach	7	1.7
Lake Worth	10	1.7
DelRay	3	0.3
Boca Raton	13	1.2
Royal Palm Beach	6	1.9
Belle Glade	0	0

Because the maximum and average values are based on only two week sampling period, as such, these values are to be regarded only as a thumbnail sketch of the ambient levels of sulfur dioxide concentrations in Palm Beach County. However, the fact that during this two week sampling period, the average concentration in North

Palm Beach was 5.2 ppb and that a maximum of 28 ppb was recorded in one of those sampling days leads one to believe that the magnitude of the sulfur dioxide problem is a little more severe in Palm Beach County than in Dade County.

The proposed emission limit of 1.5 lbs of sulfur dioxide per million BTU heat input per hour is based on reasonably available control technology. This limit achieves an emission reduction of 49.0 percent in Dade County, which will improve the air quality in Dade County to a significant degree. The 49.0 percent emission reduction is more than the 23 percent needed to achieve the standard of 10 ppb allowed for a maximum 24 hour concentration.

To achieve a standard of 10 ppb allowed for a maximum 24 hour concentration in Palm Beach County, an emission reduction of 64.3 percent is required. This would mean that an emission limit of less than 0.8 lbs per million BTU heat input per hour must be imposed on power plants. Based on sound engineering judgment and an appreciation of existing control technology on the removal of sulfur dioxide from power plants, only the following conclusions could be drawn:

(a) the air quality standard set for these counties will be unattainable in Palm Beach County under the existing technology even by prohibiting any new source.

(b) allow only natural gas for power generation and prevent future growth.

(c) close or relocate the sources outside the County.

With the Department policy to protect public health and welfare, the existing ambient levels in Palm Beach County as such are far away from those levels which would constitute a violation. However, with the ambient SO_2 standard set at 3 ppb annual arithmetic mean and 10 ppb maximum 24 hour concentration and with the Department policy to enhance the air quality in all areas of the state, the dilemma, simply stated, is a choice between closing dwon the existing source and progressively limiting the emissions, as the technology continues to expand, up to a point when the emissions will be such that the standards will be met. It is planned to achieve

the standard in Palm Beach County through updating of emission limits as the technology advances in the future. In the mean time no additional sources which emit sulfur dioxide can be allowed in Palm Beach County. To this effect the Board adopted a policy of no growth in Palm Beach County until further analysis is made to determine otherwise.

Control Strategy - Carbon Monoxide, Photochemical Oxidants and Nitrogen dioxide

According to Part 420, Federal Register, Volume 36, No. 158 (Requirements for preparation, Adoption and Submittal of Implementation Plans), each plan for a region classified Priority I with respect to carbon monoxide, photochemical oxidants or nitrogen dioxide must demonstrate through control strategy testing exercise an emission reduction to reflect a corresponding reduction in ambient concentration and attainment of the national standard. Priority I regions with respect to these pollutants as seen in Section on Priority classification are:

Carbon Monoxide	- None
Photochemical Oxidants	- Northeast and Northwest Interstate Regions
Nitrogen Dioxide	- Northeast, West Central and Southeast Regions.

(A) Carbon Monoxide - Dade, Broward and Palm Beach Counties

Based on the criterion used for Priority classification for carbon monoxide, there is no region in the state in Priority I classification for carbon monoxide. In view of the different set of standards for Dade, Broward and Palm Beach Counties, even though the present ambient concentrations do not exceed these standards, it was thought advisable to run a control strategy test. Almost all of the carbon monoxide load (97.5%) in the Southeast region is accounted from transportation sources. Automobile population which comprises the bulk of the transportation sources is increasing at the rate of about 8-9 percent which, over a period of 3½ years up to mid 1975, will be in the neighborhood of about 30 percent increase above the present population. This increase in population will be offset by the decreased emissions from automobiles by mid 1975 as shown in the following strategy test.

Using the normalized curve (figure 61) projected with a base of unity in 1967, the normalized emission rate for 1971 is 0.92 and that for 1975 is 0.70.

$$A.Q._1 = A.Q._o \left[\frac{E_1}{E_o F_o} + (1-F_o)\ (GF)\right]$$

where subscripts 0 and 1 devote the base year and future year of interest respectively.

A.Q. = Air quality (measured or estimated) in region

E = Normalized emission rate

F = Ratio of motor vehicle emission to total emission

GF = Growth factor of stationary sources.

Assuming a growth factor of two for stationary sources (a growth factor of two is very high for this short a time period of 3½ years).

$$A.Q._1 = A.Q._o \left[\frac{0.70}{0.92} (0.975) + (1-0.975) (2)\right]$$

$$= A.Q._o (0.742 + 0.05)$$
$$= A.Q._o (0.792)$$

This shows that the air quality by mid 1975 will be better than 1971.. Ambient concentrations determined during 1971 (see Appendix on the Summer Air Quality Measurements by EPA) reveals that the 1 hour standard of 12 ppm has been exceeded by 0.5 ppm once. In 1975 this maximum concentration will be 0.792 x 12.5 or 9.9 ppm. By 1985, the air quality is expected to improve, further more significantly even with a growth factor of six for stationary sources, as seen below

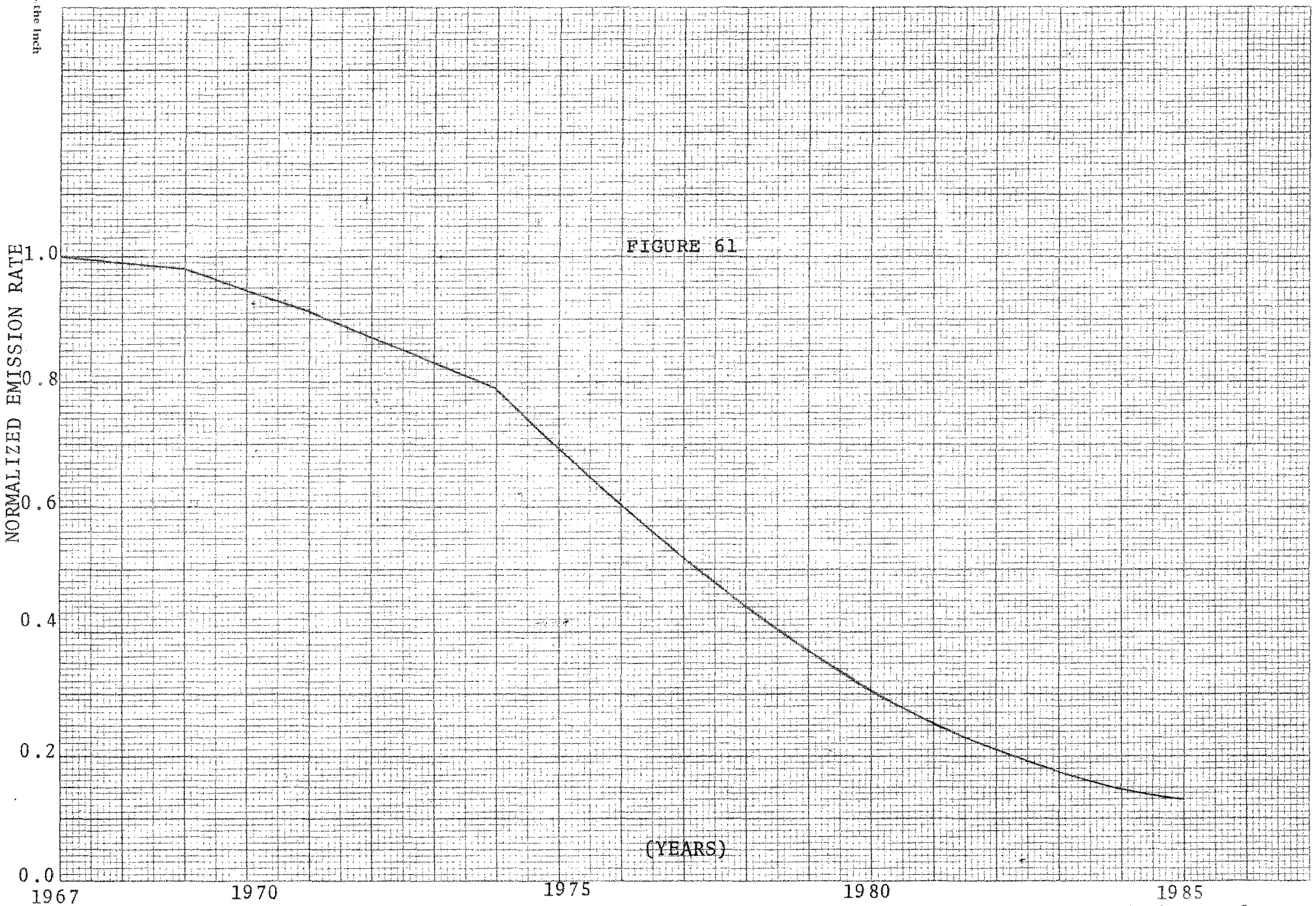
$$A.Q._{1985} = A.Q._{1971} \left[\frac{0.13}{0.92} (0.975) + (1-0.975)(6)\right]$$

$$= A.Q._{1971} (0.28)$$

(B) Photochemical Oxidants:

(1) Jacksonville Brunswick Interstate A.Q.C.R.

Priority I region for Photochemical Oxidants is the Northeast region (Jacksonville). The maximum recorded 1 hour concentration is 0.1 ppm whereas the national standard to be met is 0.08 ppm. The degree of reduction required is 20 percent. Since photochemical oxidants are not a primary pollutant, control of hydrocarbon emission is employed as the mechanism of control on photochemical oxidants concentration. The degree of control required on hydrocarbon emissions which will



Carbon Monoxide Emission Rates from Urban Vehicles in United States-Projected from 1967 base of 1.

achieve the national standard on photochemical oxidants is shown in Figure 62. From this curve, the degree of hydrocarbon reduction required is 20 percent.

To determine the amount of hydrocarbon reduction achieved by 1975, the equation utilized in the carbon monoxide control strategy must be used.

$$A.Q._1 = A.Q._o \left[\frac{E_1}{E_o} F_o + (1-F_o) (GF)\right]$$

From Figure 63 on normalized hydrocarbon emission rate, the following values were obtained.

Year	E, Normalized hydrocarbon emissions
1967	1.00
1971	0.83
1975	0.55

The ratio of motor vehicle emissions to total emissions of each pollutant in Duval County is:

$$F = \frac{53096.0 \text{ tons/yr}}{72286.06 \text{ tons/yr}} = 0.735$$

Since air quality data was obtained in Duval County (Jacksonville, City of) and the ratio of motor vehicle emissions to total is less for Duval County than for the region, the Factor "F" was calculated for Duval County.

If there is no control placed on stationary hydrocarbon sources and a 10% yearly increase of emissions from new sources, the growth factor (GF) will be 1.35.

The expected air quality in 1975 will be.

$$A.Q._{75} = A.Q._{71}\left[\frac{E_{75}}{E_{71}} F_{71} + (1-F_{71}) (G.F.)\right]$$

$$= A.Q._{71}\left[\frac{0.55}{0.83} (0.735) + (1-0.735)(1.35)\right]$$

$$= (0.828)\ A.Q._{71}$$

Required Hydrocarbon Emission Control as a Function of Photochemical Oxidant Concentration. Air Quality Criteria for Nitrogen Oxides, AP-84, Environmental Protection Agency, Washington, D. C. - January 1971.

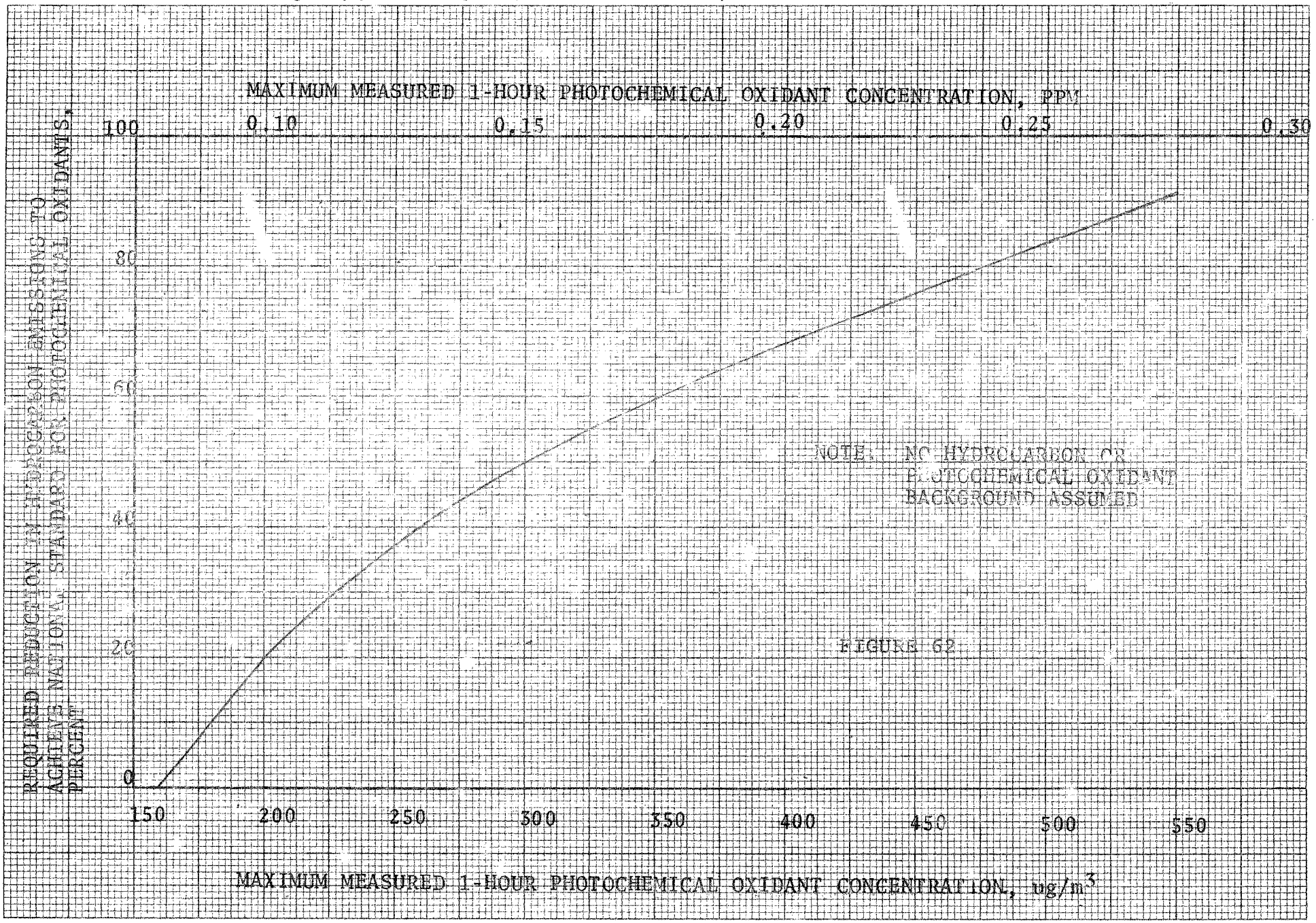


FIGURE 62

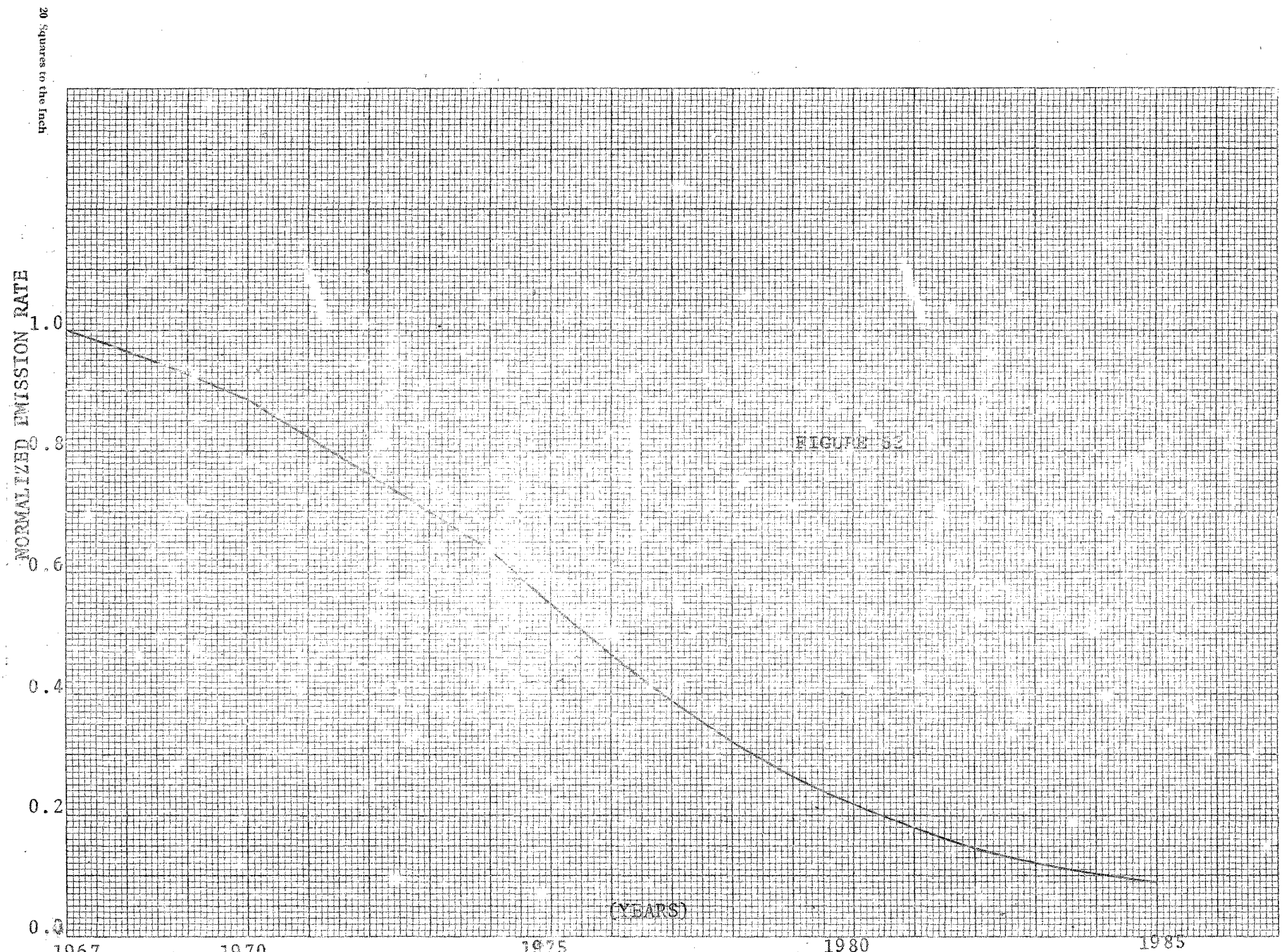


FIGURE 52

Hydrocarbon Emission Rates From Urban Vehicles in United States-Projected from 1967 base of 1.

Thus the reduction of ambient levels of hydrocarbons from 1970 to 1975 will be 17.2%. This is slightly under the 20% needed. However, incorporating emission limitations (see chapter 17-2 F.A.C.) on stationary sources the growth factor would nearly approximate 1.0. The resultant expected air quality in 1975 would be 0.735 times the present ambient level or a 26.5% reduction. This reduction is believed sufficient to obtain the desired air quality standard.

(2) Mobile-Pensacola-Panama City-Gulf Port Interstate A.Q.C.R.

The maximum 1 hour photochemical oxidant concentration recorded for the region was 250 ug/m^3 in Mobile, Alabama. This dictates from Figure 63 that a 37% reduction is required for hydrocarbons to effect a corresponding reduction in Photochemical oxidant concentration. The nearest urban center in Florida is Pensacola which is about 50 miles away from Mobile. The contribution of hydrocarbons transported from Pensacola to Mobile (and the existing air quality in Pensacola) is unknown. Consequently, performing a hydrocarbon control strategy would produce no definite results except for comparison. Following is our calculations on hydrocarbon reduction:

$$A.Q._1 = A.Q. \quad \frac{E_1 F_0 + (1-F_0)\ GF}{E_0}$$

The ratio of motor vehicle emissions to total emissions of hydrocarbons in Escambia County is:

$$F = \frac{18590.0 \text{ tons/yr}}{23265.2 \text{ tons/yr}} = 0.8$$

From Figure 63, the normalized hydrocarbon emission rate, E, for 1971 and 1975 is 0.83 and 0.55 respectively.

Assuming a 10% growth factor, the 1975 expected air quality will be:

$$A.Q._{15} = A.Q._{71} \quad \frac{0.55}{0.83} (0.8) + (1-0.8)\ (1.35)$$

$= A.Q._{71}$ (0.8) or a 20% reduction

As explained earlier, the growth factor would approximate 1.0 when emission limitations are applied. The expected reduction in this case would be 27%. This reduction would be insufficient if the problem were located in Pensacola (Escambia County). However, because the problem is in Mobile, this amount of reduction is believed sufficient to reduce the concentration of photochemical oxidants consistent with the reduction required in Mobile, Alabama.

(C) Nitrogen Dioxide:

Two regions, namely, West Central (Tampa), and Southeast (Miami) are Priority I Regions for nitrogen dioxide. The normalized nitrogen dioxide emission from automobiles is not expected to decrease by 1975, rather it is expected to increase slightly (see figure 64). As such, in areas where the automobiles are a significant contributor to nitrogen dioxide emission at the present time, difficulty may very likely be encountered in reducing the emissions to the desired degree.

Whatever reduction is achieved from automobile sources during this time period will have to be from such traffic control measures as banning traffic in certain areas in these cities and instituting mass transit system with pheripheral parking arrangements. Such contemplated measures will involve expenditure of large sums of money and public cooperation in addition to a longer period to bring such a system into operation. In view of the high ambient concentrations measured at these three locations, even though it may take longer, it was considered a step in the right direction to initiate appropriate steps with the cooperation from the Florida Department of Transportation. Attached is the Statement of Intent from the Secretary of the Department of Transportation on this subject and it is planned to pursue continued action at all levels until a satisfactory solution is found to effect a desired decrease in nitrogen dioxide emissions.

The following exercise is to demonstrate the magnitude of reduction/increase in nitrogen dioxide

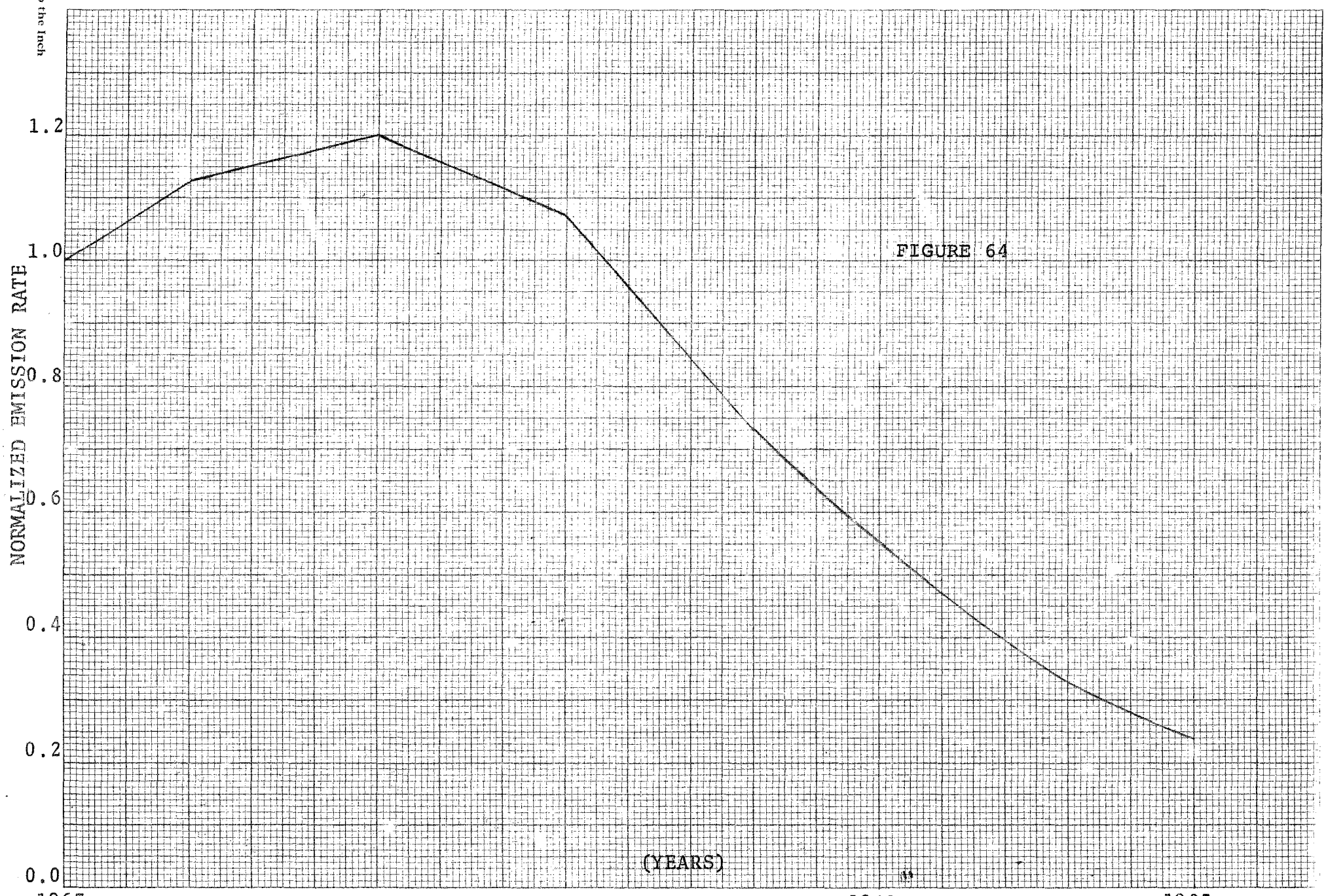


FIGURE 64

Nitrogen Oxides Emission Rates from Urban Vehicles in United States-Projected from 1967 based

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EARL M. STARNES..... Mass Transit Operations
RAY G. L'AMOREAUX..... Transportation Planning
TOM WEBB, JR. .....Administration

November 4, 1971

Mr. Vincent D. Patton
Director, Department of Air
and Water Pollution Control
Suite 300, Tallahassee Bank Building
Tallahassee, Florida 32304

Dear Mr. Patton:

Reference is made to the Clean Air Act of 1970, particularly as it relates to major urban areas in Florida and the air pollution problems created by automobile traffic in these areas.

In conference with Mr. David A. Scott, Mr. Walter Starnes and Dr. J. P. Subramani of your Agency, it was determined that the Department of Transportation could be of service to the Department of Air and Water Pollution Control in developing a plan for reduction of air pollution in major urban areas in at least two ways.

First, the Department will continue its efforts to advance mass and rapid transit projects now in its five-year program, in those urban areas where critical pollution is anticipated, to the maximum extent that Federal Aid, state and local funds will permit.

Second, with your assistance we will try to correlate traffic patterns with amount of pollution produced. Then to the extent possible, we will use our comprehensive urban area transportation study data and our professional staff to simulate the effects that changes in traffic patterns will create by reducing vehicular traffic within the Central Business Districts to conform with acceptable standards.

As you develop Florida's Air Pollution Prevention and Control Implementation Plan, please be assured that we will provide the above services to your staff and will help in any other way possible within the limits of available manpower and funds to perform this work.

Sincerely,

Edward A. Mueller
Secretary

EAM:hmd

emissions expected in these three locations.

West Central Region

Step 1:

Estimated Annual Average = 132 ug/m^3

National Standard to be met = 100 ug/m^3

Degree of reduction required:

$$\frac{132 - 100}{132 - 0} = 24.2 \text{ percent}$$

Step 2:

Use equation: $A.Q._1 = A.Q._o \left[\frac{E1}{E_o} F_o + (1-F_o)\ GF\right]$

Where: E= Normalized rate

F= Ratio of Motor vehicle emissions to total emissions

GF= Growth factor for stationary sources

For Hillsborough County:

F= 0.434

GF= 1.35 (assume 10% growth for 3½ years.)

E for 1971= 1.18

E for 1975= 1.07

The air quality in 1975, assuming growth and no stationary source control is:

$$A.Q._{1975} = A.Q._{1971} \left[\frac{1.07}{1.18} (0.434)+(1-0.434)1.35\right]$$

$$A.Q._{1971} (1.158)$$

This shows that the concentration will increase by 15.8% without any controls on stationary sources. With controls on stationary sources (mostly power plants) and

assuming growth as above, the air quality will be:

$$A.Q._{1975} = A.Q._{1971} \quad (1.062)$$

where: $GF = \frac{39581 \text{ (Stationary emission control)}}{45298 \text{ (Present stationary emissions)}} \times 1.35 \text{ (Growth)}$

Even with controls on stationary sources there is a slight increase, 6.2% in emissions. Assuming that no growth is allowed the air quality in 1975 would be:

$$A.Q._{1975} = A.Q._{1971} \quad (0.889)$$

where $GF = \frac{39581 \text{ (Stationary emissions with control)}}{45298 \text{ (Present stationary emissions)}}$

As shown above there will be a 11.1% decrease in emission when stationary controls and no growth measures are initiated. However, this decrease is not sufficient (only 11.1% compared to 24.2% needed) to meet the national primary air quality standard for nitrogen oxides.

With a two year extension to control nitrogen dioxide, the 1977 air quality, assuming growth and stationary source controls, will be:

$$A.Q._{1977} = A.Q._{1971} \quad \frac{(0.84)}{1.18} (0.434) + (1-0434)\frac{(39581)}{45298}(1.35)$$

$$= A.Q._{1971} \quad (1.074)$$

In 1977 there will be a 7.4% increase in the 1971 ambient levels of Nitrogen Dioxide when stationary source controls are utilized while still allowing growth. Allowing no growth in emissions from stationary sources and instituting source controls on existing stationary sources, the air quality in 1977 will be:

$$A.Q._{1975} = A.Q._{1971} \quad (0.804) \text{ or a } 19.6\% \text{ decrease}$$

This is still insufficient to meet primary National Air Quality Standard for Nitrogen Oxides.

Similar control strategy calculations were performed for the Southeast Region (Miami). Table XI contains the summary of these calculations on the expected Nitrogen Dioxide levels in these two areas by 1975 and 1977 respectively. Those calculations demonstrate that even

with a two year extension period (which will be the maximum time allowed by EPA) to meet the standard and with controls on stationary sources, still traffic control measures must be instituted in order to achieve the standard.

It is expected that by 1977, some traffic control measures would have been instituted and that a mass transit system will be at least in partial operation in these urban centers, which will reduce the automobile emissions to a desired level in order to be able to meet the air quality standard. The air quality surveillance program which will be expanded to meet the monitoring requirements will give more definite information on both the existing and projected concentration levels by 1975. Information on this will be updated as it becomes available and included in the future semiannual reports.

The Board has decided to recommend to the Governor to request a two year extension to meet the nitrogen dioxide standard by 1977.

TABLE XI

EXPECTED NITROGEN DIXOIDE LEVELS

1975 AND 1977

Region	Average Annual conc. ug/m^3	Percent Reduction Needed	Expected Conc. & Change 1975 Growth With no Control*	Growth with Control*	No Growth with Control*	Expected Conc. & Change 1977 Growth with no Control*	Growth with Control*	No Growth with Control*
West Central (Tampa)	Summer Study 131	24.2	152.9	140.2	117.4	156.4	141.0	106.1
	1970 NASN 132		+15.8%	+6.2%	-11.1%	+18.5	7.4	-19.6%
Southeast (Miami)	Summer Study & 1970 NASN 132	24.2	135.0	130.4	119.46	123.2	117.9	100.6
			+ 2.3%	- 1.2%	- 9.5%	- 6.7%	-10.7%	-23.8%

*Of Stationary Sources

SECTION III

RULES OF THE STATE OF FLORIDA

DEPARTMENT OF POLLUTION CONTROL

CHAPTER 17-2

AIR POLLUTION

RULES

OF THE

STATE OF FLORIDA

DEPARTMENT OF POLLUTION CONTROL

CHAPTER 17-2

AIR POLLUTION

17-2.01 Declaration and Intent

The State of Florida Department of Pollution Control promulgates this chapter to eliminate, prevent, and control air pollution. This chapter shall apply to all sources of air pollution except open burning or the use of outdoor heating devices allowed by chapter 17-5, Florida Administrative Code, unless otherwise provided in this chapter.

To protect and enhance the air quality of Florida, this chapter furthers the Department's nondegradation policy and establishes ambient air quality standards and emission standards. The policy inherent in the standards shall be to protect the air quality existing at the time the air quality standards were adopted or to upgrade or enhance the quality of the air of the State. In any event, where a new or increased source of air pollution poses a possibility of degrading existing high air quality or ambient air

quality established by this chapter, such source or proposed source shall not be issued a Department permit until the Department has reasonable assurance that such source construction or development will not violate this chapter.

This chapter is adopted to achieve and maintain such levels of air quality as will protect human health and safety, prevent injury to plant and animal life and property, foster the comfort and convenience of the people, promote the economic and social development of this State and facilitate the enjoyment of the natural attractions of this State.

General Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061 FS. History - New 1-11-72.

17-2.02 Definitions

The following words and phrases when used in this chapter shall, unless context clearly indicates otherwise, have the following meanings:

(1) "Air pollutant" - Any matter found in the atmosphere other than oxygen, nitrogen, water vapor, carbon dioxide and the inert gases in natural concentrations.

(2) "Air pollutant source" or "source" - Any source at, from, or by reasons of which there is emitted into the atmosphere any air pollutant(s).

(3) "Process weight" - The total weight of all materials introduced into any process. Solid fuels and recycled materials are included in the determination of process weights; but uncombined water, liquid and gaseous fuels, combustion air or excess air are not included.

(4) "Standard conditions" - A gas temperature of 70 degrees fahrenheit and a gas pressure of 14.7 psia.

(5) "Existing source" - A source which is in existence, (except for reactivation of older plants) operating or under construction or has received a permit to construct prior to the effective date of this chapter.

(6) "New Source" - any source other than an existing source. New source includes reactivating existing or older plants which have been shutdown for a period of more than one year.

(7) "Particulate matter" - Means any material, other than uncombined water, which exists in a finely divided form as a liquid or solid, as measured by the sampling methods approved by the Board.

(8) "Sulfuric Acid Plant" - Means any installation producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfides, organic sulfides and mercaptans, or acid sludge.

(9) "Acid mist" - Means any size liquid drops of any acid including but not limited to sulfuric acid and sulfur trioxide, hydrochloric acid and nitric acid as measured by test methods approved by the Board.

(10) "Visible emission" - Means an emission greater than 5 percent opacity or 1/4 Ringelmann measured by standard methods.

(11) "Fugitive particulate" - Particulate matter which escapes and becomes airborne from unenclosed operations or which is emitted into the atmosphere without passing or being conducted through a flue pipe, stack or other structure designed for the purpose of emitting air pollutants into the atmosphere.

(12) "Air Pollution Episode" - An occurrence of elevated levels of pollutants in the atmosphere which require hasty and unusual abatement action.

(13) "Odor" - Means a sensation resulting from stimulation of the human olfactory organ.

(14) "Objectionable Odor" - Any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which

unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.

(15) "Fossil fuel steam generators" - Furnaces and boilers which produce steam by combustion of oil, coal or gas of fossil origin.

(16) "Plant section" - A part of a plant consisting of one or more unit operations including auxiliary equipment which provides the complete processing of input (raw) materials to produce a marketable product, including but not limited to, granular triple super phosphate, phosphoric acid, run-of-pile triple super phosphate and di-ammonium phosphate, or one or more unit operations including auxiliary equipment or structures which are used for the functions of,including but not limited to, storage, shipping, loading, unloading, or bagging.

(17) "Department" - Means the State of Florida Department of Pollution Control.

(18) "Director" - Means the Executive Director of the Department.

(19) "Volatile organic compounds" or "Organic Solvents" Are any compounds containing carbon and hydrogen or carbon and hydrogen in combination with any other element which has a vapor pressure of 1.5 pounds per square inch absolute (77.6 mm. Hg) or greater under actual storage conditions.

(20) "Portland cement plant" - Means any facility manufacturing Portland Cement by either the wet or dry process.

(21) "Nitric acid plant" - Means any facility producing weak nitric acid by either the pressure or atmospheric pressure process.

(22) "Kraft Pulp Mill" - Means an industrial operation which processes wood to produce cellulose or cellulose materials by means of chemically cooking the wood with a liquor consisting of an alkaline sulfide solution containing sodium hydroxide and sodium sulfide, also known as the sulfate process.

(23) "Bark boilers" - Means a part of the process of a kraft pulp mill, a furnace which produces steam using wood bark, either continuously or intermittantly along with fossil fuels.

(24) "Sulphur Recovery Plant" - Any plant that recovers sulphur from crude (unrefined) petroleum materials.

(25) "Ringelmann Chart" - Means the chart published and described in the U. S. Bureau of Mines Information Circulars No. 8333 and No. 7718.

(26) "Stagnant atmospheric condition" - Denotes when the atmospheric and meteorological conditions will reduce the necessary diffusion and dispersement of air pollutants in the atmosphere.

(27) "Opacity" - Means a state which renders material partially or wholly impervious to rays of light causing obstruction of observer's view.

General Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061 FS. History - Revised 1-11-72.

17-2.03 General Restrictions

(1) Latest Technology - If the latest reasonably available technology as may be applied to air pollutant sources results in or is expected to result in lower or improved air pollutant emissions, then the latest available technology as determined by the Department shall apply.

(2) Existing Source Compliance - Except where compliance dates are specified, existing sources shall comply with this chapter as expeditiously as possible but in no case later than July 1, 1975.

(3) Operation Rates - No plant or source shall operate at capacities which exceed the limits of operation of a control device or exceed the capability of the plant or control device to maintain the air emission within the standard limitation imposed by this chapter, or by permit conditions.

(4) (a) Air Quality Standards Violated - No person shall build, erect, construct, or implant any new source or operate, modify or rebuild an existing source or by any other means release or take action which would result in release of air pollutants into the atmosphere of any region, which will, as determined by the Board, result in, including concentrations of existing air pollutants, ambient air concentrations greater than ambient air quality standards.

(b) Nondegradation - In those counties of the State which have, on the effective date of this chapter, better air quality than that defined by the Ambient Air Quality Standards, no person shall emit into the atmosphere any air pollutant which degrades that quality.

(5) Concealment - No person shall build, erect, install or use any article, machine, equipment or other contrivance, the use of which will conceal an emission which would otherwise constitute a violation of any of the provision of this chapter.

(6) Circumvention - No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.

(7) Maintenance - All air pollution control devices and systems shall be properly and consistantly maintained in order to maintain emissions in compliance with Department Rules.

General Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061 FS. History - New 1-11-72.

17-2.04 Prohibitive Acts

(1) Visible Emissions - No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere any air pollutants from:

(a) Existing Sources, until July 1, 1975, the density of which is equal to or greater than that designated as Number 2 on the Ringelmann Chart or the opacity of which is equal to or greater than 40 percent.

(b) New Sources, and after July 1, 1975, existing sources, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart or the opacity of which is equal to or greater than 20 percent.

(c) This subsection 17-2.04(1) does not apply to emissions emitted in accordance with specified emission limiting standards or in accordance with the process weight table (Table I) provided in this chapter.

(d) If the presence of uncombined water is the only reason for failure to meet visible emission standards given in this section such failure shall not be a violation of this rule.

(2) Particulate Matter - No person shall cause, let, permit, suffer, or allow the emission of particulate matter from any air pollutant source in total quantities in excess of the amount shown in Table I, except as otherwise provided for in this chapter for specific emission limiting standards of particulate matter from specified sources.

PROCESS WEIGHT TABLE

TABLE I

Process Weight Rate (pounds per hour)	Emission rate (pounds per hour)
50	0.03
100	0.55
500	1.53
1,000	2.25
5,000	6.34
10,000	9.73
20,000	14.99
60,000	26.90
80,000	31.19
120,000	33.28
160,000	34.85
200,000	36.11
400,000	40.35
1,000,000	46.72

Interpolation of the data in Table I for the process weight rates up to 60,000 pounds per hour shall be accomplished by the use of the equation: $E = 3.59P^{0.62}$, P less than or equal to 30 tons per hour and interpolation and extrapolation of the data for process weight rates in excess of 60,000 pounds per day shall be accomplished by use of the equation: $E = 17.31P^{0.16}$, P is greater than 30 tons per hour. Where: E = Emissions in pounds per hour. P = Process weight rate in tons per hour. Application of mass emission limitations on the basis of all similar units at a plant is recommended in order to avoid unequal application of this type of limitation to plants with the same total emission potential but different size units. Upon establishing the total mass limitation, individual source emissions will be determined by prorating the mass emission total on the basis of the percentage weight input to each source process.

(3) Fugitive Particulate - No person shall cause, let, permit suffer or allow the emissions of particulate matter, from any source whatsoever, including but not limited to vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrially related activities such as loading, unloading, storing or handling, without taking reasonable precautions to prevent such emission, except particulate matter emitted in accordance with the weight process table (Table I), the visible emissions standards or specific source limiting standards specified in this chapter.

(4) Objectionable Odor Prohibited - No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

(5) Volatile organic compounds emissions or organic solvents emissions.

(a) No person shall store, pump, handle, process, load, unload or use in any process or installation volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

(b) All persons shall use reasonable care to avoid discharging, leaking, spilling, seeping, pouring, or dumping volatile organic compounds or organic solvents.

(6) Stationary sources - No person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere emission from the following listed sources greater than any emission limiting standard given.

(a) Incinerators

1. The emission limiting standards for new incinerators with a charging rate of fifty or more tons per day are:

a. Particulate matter - 0.08 grains per standard cubic foot dry gas corrected to 50 percent excess air.

b. Odor - there shall be no objectionable odor.

2. The emission limiting standards for new incinerators with a charging rate of less than fifty tons per day are;

a. Visible emissions - no visible emissions except, visible emissions are allowable for up to three minutes in any hour at densities up to but not more than, a density of Ringelmann Number 1. (Opacity of 20 percent)

b. Odor - there shall be no objectionable odor.

3. As soon as possible, but not later than July 1, 1975, existing incinerators shall comply with the standards for new incinerators except that the particulate matter emission limiting standard for existing incinerators with a charging rate of fifty or more tons per day shall be 0.1 grains per standard cubic foot of dry gas corrected to 50 percent excess air.

(b) Sulfuric Acid Plants - the emission limiting standards for sulfuric acid plants are:

1. Existing Plants

a. Sulfur dioxide (SO_2) - ten pounds of SO_2 per ton of 100 percent H_2SO_4 produced, as expeditiously as possible but not later than July 1, 1975.

b. A plume with visibility of 5 percent opacity (equivalent to 1/4 Ringelmann Number), except for 30 minutes during plant startup periods with opacity allowed up to 40 percent (equivalent to Ringelmann Number 2)

2. New Plants

a. Sulfur dioxide - four pounds of SO_2 per ton of 100 percent H_2SO_4 produced.

b. Acid Mist - 0.15 pounds per ton of 100 percent acid produced.

c. No visible emission except for 30 minute period during startup, but no greater than the opacity of 40 percent (equivalent to Ringelmann Number 2)

(c) Phosphate Processing - the emission limiting standards for phosphate processing are:

1. Fluorides (water soluble or gaseous-atomic weight 19) the following quantities expressed as pounds of fluoride per ton of phosphatic materials input to the system, expressed as tons of P_2O_5 for:

a. New plants or plant sections:

a 1. Wet process phosphoric acid production, and auxiliary equipment - 0.02 pounds of F per ton of P_2O_5.

a 2. Run of pile triple super phosphate mixing belt and den and auxiliary equipment - 0.05 pounds of F per ton of P_2O_5.

a 3. Run of pile triple super phosphate curing or storage process and auxiliary equipment - 0.12 pounds of F per ton of P_2O_5.

a 4. Granular triple super phosphate production and auxiliary equipment.

i. Granular triple super phosphate made by granulating run-of-pile triple super phosphate 0.06 pounds of F per ton of P_2O_5.

ii. Granular triple super phosphate made from phosphoric acid and phorphate rock slurry - 0.15 pounds of F per ton of P_2O_5.

a 5. Granular triple super phosphate storage, and auxiliary equipment - 0.05 pounds of F per ton of P_2O_5.

a 6. Di ammonium phosphate production and auxiliary equipment - 0.06 pounds of F per ton of P_2O_5.

a 7. Calcining or other thermal phosphate rock processing and auxiliary equipment excepting phosphate rock drying and defluorinating - 0.05 pounds of F per ton of P_2O_5.

a 8. Defluorinating phosphate rock by thermal processing and auxiliary equipment - 0.37 pounds of F per ton of P_2O_5.

a 9. All plants, plant sections or unit operations and auxiliary equipment not listed in a.1 to a.8 will comply with best technology pursuant to Section 2.03(1) of this rule.

b. Existing plants or plant sections. Emissions shall comply with above section, 17-2.04(6)(c) 1.a., for existing plants as expeditiously as possible but not later than July 1, 1975 or

b 1. Where a plant complex exists with an operating wet process phosphoric acid section (including any items

17-2.04(6) 1., a., a.1. through a.6. above) and other plant sections processing or handling phosphoric acid or products or phosphoric acid processing, the total emission of the entire complex may not exceed 0.4 pounds of F per ton of P_2O_5 input to the wet process phosphoric acid section.

b 2. For the individual plant sections included in 17-2.04(6)(c), 1., a., 1.1. through 6.6 above but not included as a part as defined in 17-2.04(6)(c)1., b., b.1 above, if it can be shown by comprehensive engineering study and report to the Department that the existing plant sections are not suitable for the application of existing technology, which may include major rebuilding or repairs and scrubber installations, the emission limiting standard to apply will be the lowest obtained by any similar plant section existing and operating.

(d) Kraft (sulfate liquor) Pulp Mills

1. Black liquor recovery furnace. The emission limiting standards are:

a. Particulate matter - existing sources as expeditiously as possible, but not later than July 1, 1975, no greater than three pounds particulate per each 3,000 pounds black liquor solids fed. For new sources the same emission limiting standards apply.

b. Total Reduced Sulfur - existing plants as expeditiously as possible, but not later than July 1, 1975 - 17.5 ppm expressed as H_2S on a dry gas basis, or one-half (0.5) pounds per 3,000 pounds of black liquor solids fed, whichever is more restrictive. For new plants no greater than 1 ppm expressed as H_2S on the dry basis, or 0.03 pounds per 3,000 pounds of black liquor solids fed, whichever is the more restrictive.

(e) Fossil Fuel Steam Generators - The emission limiting standards for Fossil Fuel Steam Generators are:

1. New Sources - plants with more than 250 million BTU per hour heat input.

a. Particulate matter - 0.1 pounds per million BTU heat input, maximum 2 hour average.

b. Visible emissions - the density of which is equal to or greater than Number 1 of the Ringelmann Chart (20 percent opacity) except that a shade as dark as Number 2 of the Ringelmann Chart (40 percent opacity) shall be permissible for not more than 2 minutes in any hour.

c. Sulfur Dioxide - 0.8 pounds per million BTU heat input, maximum 2 hour average, when liquid fuel is burned.

d. Sulfur dioxide - 1.2 pounds per million BTU heat input, maximum 2 hour average, when solid fuel is burned.

e. Nitrogen oxides - 0.20 pounds per million BTU heat input maximum 2 hour average, expressed as NO_2 when gaseous fuel is burned.

f. Nitrogen oxides - 0.30 pounds per million BTU heat input, maximum 2 hour average, expressed as NO_2 when liquid fuel is burned.

g. Nitrogen oxides - 0.70 pounds per million BTU heat input, maximum 2 hour average, expressed as NO_2 when solid fuel is burned.

2. Existing Sources - plants with more than 250 million BTU per hour heat input.

a. Particulate no greater than the standard for new sources.

b. Visible emissions - no greater than the standard for new sources.

c. Sulfur dioxide - of 1.1 pounds per million BTU heat input when liquid fuel is burned, as expeditiously as possible but not later than July 1, 1975.

d. Sulfur dioxide of 1.5 pounds per million BTU heat input when solid fuel is burned as expeditiously as possible but no later than July 1, 1975.

e. Nitrogen oxides no greater than the standards for new sources as expeditiously as possible but no later than July 1, 1975.

3. New and existing Plants with 250 million or less BTU per hour heat input.

a. Visible emissions standards as set forth in item 17-2.04(6)(e) 1.b of this section.

b. Particulate matter, sulfur dioxide and nitrogen oxides apply 17-2.03(1) latest technology.

(f) Portland Cement Plants - the emission limiting standards for Portland Cement Plants are:

1. Existing and new sources.

a. For Kilns - particulate shall be not greater than allowed by the Process Weight Table, Table I, set forth in 17-2.04(2). The table shall be applied to each individual source rather than being applied on the basis of mass emission limitations.

b. For clinker-coolers the emission limiting standard of 17-2.04(6)(f) 1.a above apply.

(g) Nitric Acid Plants - the emission limiting standards for nitric acid plants producing weak nitric acid (50-70 percent) by pressure or atmospheric pressure process are:

1. New plants

a. Nitrogen oxides no greater than 3 pounds per ton of acid produced (100 percent basis)

b. Visible emissions - none permitted.

2. Existing plants shall comply with the standard as expeditiously as possible but no later than July 1, 1975.

(h) Sulfur Recovery Plants - the emission limiting standards for sulfur recovery plants recovering sulfur from crude oil gas are:

1. New Plant

a. Sulfur oxides calculated as sulfur dioxide - no greater than 0.004 pounds of SO_2 per pound of sulfur input to the recovery system or no greater than 0.004 pounds of SO_2 per pound of sulfur removed from an oil well.

2. Existing Plants

a. Sulfur oxides calculated as sulfur dioxide no greater than (h) 1.a. of this section above as expeditiously as possible but no later than July 1, 1975.

(7) Mobile Sources

(a) No person shall cause, let, permit, suffer or allow the emission of smoke from motor vehicles on public roadways which is visible within the proximity of the engine exhaust outlet for a period of more than five (5) seconds.

1. Definitions - apply to this paragraph 17-2.04(7)(a) only

a. Smoke is defined as small gasborne and airborne particles, exclusive of water vapor, from a process of combustion, in sufficient number to be observable.

b. Motor vehicle is defined as any device powered by an internal combustion engine and on or in which any person or property may be transported.

2. Exception - all 2 cycle gasoline engines manufactured prior to the year 1976.

General Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061 FS. History - Revised 1-11-72.

17-2.05 Ambient Air Quality Standards

(1) The air quality of the State's atmosphere is determined by the presence of specific pollutants in certain concentrations. Human health and welfare is affected and known or anticipated adverse results are produced by the presence of pollutants in excess of the certain concentrations. It is, therefore, established that maximum limiting levels, Ambient Air Quality Standards, of pollutants existing in the ambient air are necessary to protect human health and public welfare. The following statewide Ambient Air Quality Standards are established for Florida:

(a) Sulfur Dioxide

1. 60 micrograms per cubic meter (0.02 ppm) - annual arithmetic mean.

2. 260 micrograms per cubic meter (0.1 ppm) maximum 24 hour concentration, not to be exceeded more than once per year.

3. 1300 micrograms per cubic meter (0.5 ppm) maximum 3 hour concentration, not to be exceeded more than once per year.

(b) Particulate Matter

1. 60 micrograms per cubic meter - annual geometric mean.

2. 150 micrograms per cubic meter - maximum 24 hour concentration, not to be exceeded more than once per year.

(c) Carbon Monoxide

1. 10 milligrams per cubic meter (9 ppm) - maximum 8 hour concentration, not to be exceeded more than once per year.

2. 40 milligrams per cubic meter (35 ppm) - maximum 1 hour concentration, not to be exceeded more than once per year.

(d) Photochemical Oxidants - measured and corrected for interferenced due to nitrogen oxides and sulfur dioxide.

1. 160 micrograms per cubic meter (0.08 ppm) - maximum 1 hour concentration, not to be exceeded more than once per year.

(e) Hydrocarbons - For use as a guide in devising implementation plans to achieve oxidant standards. To be measured and corrected for methane.

1. 160 micrograms per cubic meter (0.24 ppm) maximum 3 hour concentration (6 to 9 a.m.) not to be exceeded more than once per year.

(f) Nitrogen Dioxide

1. 100 micrograms per cubic meter (0.05 ppm) annual arithmetic mean.

(2) Exception - in Dade, Broward, and Palm Beach County, the above Ambient Air Quality Standards apply except as provided differently below:

(a) Sulfur Dioxide

1. 8.6 micrograms per cubic meter (0.003 ppm) - annual arithmetic mean.

2. 28.6 micrograms per cubic meter (0.010 ppm) - 24 hour concentration.

3. 57.2 micrograms per cubic meter (0.020 ppm) - maximum four hour concentration.

4. 286 micrograms per cubic meter (0.100 ppm) - maximum one hour concentration.

(b) Suspended Particulates

1. 50 micrograms per cubic meter - annual geometric mean.

2. 180 micrograms per cubic meter - maximum 24 hour concentration.

(c) Carbon Monoxide

1. 9 milligrams per cubic meter (8 ppm) - maximum 8 hour concentration.

2. 14 milligrams per cubic meter (12 ppm) - maximum 1 hour concentration.

(3) Sampling and analyses of contaminants in this section shall be performed by the methods approved by the Board.

(4) Abatement - a determination that any of the above standards, 17-2.05(1), has been exceeded, shall be adequate evidence for the Department to commence an investigation to determine the cause and to execute appropriate remedial measures.

General Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061 FS. History - New 1-11-72.

17-2.06 Air Pollution Episode

An episode describes a condition which exists when meteorological conditions and rates of discharge of air pollutants combine to produce pollutant levels in the atmosphere which, if sustained, can lead to a substantial threat to the health of the people. In order to prevent episode conditions from continuing or from developing into more severe conditions, positive action and a rapid abatement response is necessary. The severity of an episode has been classified upon the basis of the criteria given in the following sections with the three levels, alert, warning and emergency described.

Due to the exigent nature of named episodes the Director shall determine and declare that an air pollution episode exists. His determination shall be in accordance with the following criteria:

(1)(a) Air Pollution Forecast - the existence or forecast of a stagnant atmospheric condition as advised by a National Weather Service advisory is in effect or an equivalent state or local determination of a stagnant condition.

(b) "Alert" - the alert level is that concentration of pollutants at which first stage control actions is to begin. An "alert" shall be declared when any one of the following levels is reached at any monitoring site:

1. Sulfur Dioxide (SO_2) - 800 micrograms per cubic meter (0.3 ppm) 24 hour average.

2. Particulate - 3.0 COH_s or 375 micrograms per cubic meter, 24 hour average.

3. Sulfur Dioxide (SO_2) and Particulate combined - product of SO_2 ppm, 24 hour average, and COH_s equal to 0.2 or product of SO_2 micrograms per cubic meter, 24 hour average equal to 65×10^3.

4. Carbon Monoxide (CO) - 17 milligrams per cubic meter (15 ppm), 8 hour average.

5. Oxidant (O_3) - 200 micrograns per cubic meter (0.1 ppm) 1 hour average.

6. Nitrogen Dioxide (NO_2) - 1130 micrograms per cubic meter (0.6 ppm), 1 hour average, 282 micrograms per cubic meter (0.15 ppm), 24 hour average,

and meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve (12) or more hours or increase unless control actions are taken.

(c) "Warning" - the warning level indicates that air quality is continuing to degrade and that additional control actions are necessary. A "warning" shall be declared when anyone of the following levels is reached at any monitoring site:

1. Sulfur Dioxide (SO_2) - 1600 micrograms per cubic meter (0.6 ppm), 24 hour average.

2. Particulate - 5.0 COHs or 625 micrograms per cubic meter, 24 hour average.

3. Sulfur Dioxide (SO_2) and Particulate combined - product of SO_2 ppm, 24 hour average and COHs equal to 0.8 or product of SO_2 micrograms per cubic meter, 24 hour average and particulate micrograms per cubic meter, 24 hour average equal to 261 X 10^3.

4. Carbon Monoxide (CO) - 34 milligrams per cubic meter (30 ppm), 8 hour average.

5. Oxidant (O_3) - 800 micrograms per cubic meter (0.4 ppm) - 1 hour average.

6. Nitrogen Dioxide (NO_2) - 2260 micrograms per cubic meter (1.2 ppm) - 1 hour average; 565 milligrams per cubic meter (0.3 ppm), 24 hour average,

and meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve (12) or more hours or increase unless control actions are taken.

(d) "Emergency" - the emergency level indicates that air quality is continuing to degrade to a level that should never be reached and that the most stringent control actions are necessary. An "emergency" shall be declared when any one of the following levels is reached at any monitoring site:

1. Sulfur Dioxide (SO_2) - 2,100 micrograms per cubic meter (0.8 ppm), 24 hour average.

2. Particulate - 7.0 COHs or 875 micrograms per cubic meter 24 hour average.

3. Sulfur Dioxide (SO_2) and Particulate combined - product of SO_2 ppm, 24 hour average and COHs equal to 1.2 or product of SO_2 micrograms per cubic meter, 24 hour average and particulate micrograms per cubic meter, 24 hour average equal to 393 X 10^3.

4. CO - 46 milligrams per cubic meter (40 ppm), 8 hour average.

5. Oxidant (O_3) - 1,200 micrograms per cubic meter (0.6 ppm), 1 hour average.

6. Nitrogen Dioxide (NO_2) - 3,000 micrograms per cubic meter (1.6 ppm), 1 hour average; 750 micrograms per cubic meter (0.4 ppm), 24 hour average,

and meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve (12) or more hours

(e) Area of Episode. The Director shall, when declaring any episode level, declare the counties in which the episode exists.

(f) "Termination" - once declared, any episode level will remain in effect until the pollutant concentration increases to meet the next higher level criteria or decreases to a point below the declared criteria level.

(2) (a) Emission Reduction Plans and Actions.

Upon a declaration by the Director that any episode level exists-- alert, warning, or emergency--any person responsible for the operation or conduct of activities which result in emission of air pollutants shall take actions as required for such source or activity for the declared episode level as set forth in Episode Tables I, II, and III of this section and shall put into effect the Preplanned Abatement Strategy.

EPISODE TABLE I

Alert Level Emission Reduction Plans

Part A. General
During an "alert" level episode:

1. All forms of open burning are prohibited.

2. The use of incinerators for disposal of any form of solid waste or liquid waste is prohibited.

3. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12 noon and 4 p.m.

Persons operating motor vehicles should eliminate all unnecessary operations.

Part B. Source Curtailment
During an alert level episode any persons responsible for the operation of a source of air pollutants listed below shall take all required control actions for this alert level:

Source of Air Pollution	Required Control Action
1. Coal or oil-fired electric power generating facilities.	a. Substantial reduction by utilization of fuels having low ash or sulfur content.
	b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
	c. Substantial reduction by diverting electric power generation to facilities outside of alert area.
2. Process steam generating facilities which fire coal or oil.	a. Substantial reduction by utilization of fuels having low ash and sulfur content.

EPISODE TABLE I CONTINUED

	b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence of boiler lancing and soot blowing.
	c. Substantial reduction of steam demands consistent with continuing plant operations.
3. Process steam generating facilities which fire wood, bark, or bagassee; totally or in combination with other fuels.	a. Substantial reduction by switching to fossil fuels with low ash and sulfur content or by diverting steam demands to steam generators utilizing low ash and sulfur content fuels.
	b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
	c. Substantial reduction of steam demands consistent with continuing plant operations.
4. Manufacturing industries of the following classifications: Pulp and paper industries Citrus industries Mineral Processing industries Phosphate and allied chemical industries Secondary metal industry Petroleum operations	a. Substantial reduction of air pollutants from manufacturing operations by enacting preplanned abatement strategies including curtailing postponing or deferring production and all operations.
	b. Curtail trade waste disposal operations which emit air pollutants.

EPISODE TABLE I CONTINUED

5. Bulk handling operations which transfer or store material including but not limited to: Cement Fertilizer Phosphate rock Grain or Feed POP Triple Super Phosphate Lime Sand and Gravel Dolomite	a. Maximum reduction of fugitive dust by curtailing, postponing or deferring bulk handling operations.
6. Any other industrial or commercial establishments which emit air pollutants.	a. Substantial reduction of air pollutants by curtailing, postponing, or deferring operations. b. Curtail trade waste disposal operations which emit air pollutants.

EPISODE TABLE II

Warning Level Emission Reduction Plant

Part A. General
During a "Warning" level episode:

1. All forms of open burning are prohibited.
2. The use of incinerators for disposal of any form of solid waste or liquid waste is prohibited.
3. Persons operating fuel burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12 noon and 4 p.m.
4. Persons operating motor vehicles must reduce operations by the use of car pools and increased use of public transportation and elimination of unnecessary operation.
5. Unnecessary space heating or cooling is prohibited.

Part B. Source Curtailment
During a warning level episode any persons responsible for the operation of a source of air pollutants listed below shall take all required control actions for this warning level:

Source of Air Pollution	Required Control Action
1. Coal or oil-fired electric power generating facilities.	a. Maximum reduction by utilization of fuels having lowest ash and sulfur content.
	b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
	c. Maximum reduction by diverting electric power generation to facilities outside of warning area or to generating stations emitting less pollutants per kilowatt generated.

EPISODE TABLE II CONTINUED

Process steam generating facilities which fire oil or coal.	a. Maximum reduction by utilization of fuels having the lowest available ash and sulfur content. b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing. c. Stand-by to enact preplanned emergency action plan.
Process steam generating facilities which fire wood, bark or bagassee.	a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage. b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
Manufacturing industries of the following classifications: Pulp and paper industries Citrus industries Mineral processing industries Phosphate and allied chemical industries Secondary metal industry Petroleum operations	a. Commence preplanned abatement strategies for the elimination of all air pollutants. b. Elimination of air pollutants from trade waste disposal operations which emit air pollutants.
Bulk handling operations which transfer or store material including but not limited to: Fertilizer Phosphate Rock Grain or Feed ROP Triple Super Phosphate Cement Lime Sand and Graven Dolomite	a. Elimination of fugitive dust by ceasing, curtailing, postponing or deferring transfer or storage of material.

EPISODE TABLE II CONTINUED

6. Any other industrial or commercial establishments which emit air pollutants.	a. Maximum reduction by curtailing, postponing or deferring operations. b. Eliminate trade waste disposal operations which emit air pollutants.

EPISODE TABLE III

Emergency Level Emission Reduction Plans

Part A. General
During an "emergency" level episode:

1. All forms of open burning are prohibited.

2. The use of incinerators for disposal of any form of solid or liquid waste is prohibited.

3. All places of employment described below shall immediately cease operations.

   a. Mining and quarrying of nonmetallic minerals.

   b. All construction work except that which must proceed to avoid emergent physical harm.

   c. All manufacturing establishments except those required to have in force an air pollution emergency plan.

   d. All wholesale trade establishments ; i.e., places of business primarily engaged in selling merchandise to to retailers, or industrial, commercial, institutional or professional users, or to other wholesalers, or acting as agents in buying merchandise for or selling merchandise to such persons or companies, except those engaged in the distribution of drugs, surgical supplies and food.

   e. All offices of local, county and State government including authorities, joint meetings, and other public bodies excepting such agencies which are determined by the chief administrative officer of local, county, or State government, authorities, joint meetings and other public bodies to be vital for public safety and welfare and the enforcement of the provisions of this order.

   f. All retail trade establishments except pharmacies, surgical supply distributors, and stores primarily engaged in the sale of food.

EPISODE TABLE III CONTINUED

g. Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges and services; offices of insurance carriers, agents and brokers, real estate offices.

h. Wholesale and retail laundries, laundry services and cleaning and dyeing establishments; photographic studios; beauty shops, barber shops, shoe repair shops.

i. Advertising offices; consumer credit reporting, adjustment and collection agencies; duplicating, addressing, blueprinting; photocopying, mailing, mailing list and stenographic services; equipment rental services, commercial testing laboratories.

j. Automobile repair, automobile services, garages.

k. Establishments rendering amusement and recreational services including motion picture theaters.

l. Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, and public and private libraries.

All commercial and manufacturing establishments not included in this section will institute such actions as will result in maximum reduction of air pollutants from their operation by ceasing, curtailing or postponing operations which emit air pollutants to the extent possible without causing injury to person or damage to equipment.

5. The use of motor vehicles is prohibited except in emergencies with the approval of local or state police.

6. Unnecessary lighting, heating or cooling in unoccupied structures is prohibited.

Source of Air Pollution	Required Control Action
1. Coal or oil-fired electric power generating facilities.	a. Maximum reduction by utilization of fuels having lowest ash and sulfur content.
	b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

EPISODE TABLE III CONTINUED

		c. Maximum reduction by diverting electric power generation to facilities outside of emergency area or to generating stations emitting less pollutants per kilowatt generated.
2.	Coal, oil, natural gas, wood, bark and bagassee - fired process steam generating facilities.	a. Maximum by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage.
		b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing or soot blowing.
		c. Taking the action called for in preplanned emergency action plan.
3.	Manufacturing industries of the following classifications: Pulp and paper industries Citrus industries Mineral processing industries Phosphate and allied chemical industries Secondary metal industries Petroleum operations	a. Continuation of preplanned abatement strategies for the elimination of air pollutants. b. Elimination of air pollutants from trade waste disposal operations which emit air pollutants.
4.	Bulk handling operations which transfer or store material including but not limited to: Cement Fertilizer Phosphate Rock Grain ROP Triple Super Phosphate Lime Sand and Gravel Dolomite	a. Elimination of fugitive dust by ceasing, curtailing, postponing or deferring transfer or storage of material.

EPISODE TABLE III CONTINUED

5. Any other industrial or commercial establishments which emit air pollutants.	a. Elimination of air pollutants by ceasing, curtailing, postponing or deferring operations. b. Elimination of air pollutants from trade waste disposal process which emit air pollutants.

(b) Preplanned Abatement Strategies - any person responsible for one or more air pollutant sources shall prepare and submit, upon written request from the Department, a stand-by plan which describes the action which will be taken by that person to reduce emissions when an episode is declared. The plan shall be submitted within 30 days of the request and will be subject to approval, modification or rejection by the Department. The plan shall be in writing and shall include but not be limited to:

1. Identity and location of pollutant sources and of contaminants discharged.

2. Approximate amount of normal emission and of reduction of emission expected.

3. A brief description of the manner in which reduction will be achieved, for each of the episode levels, alert, warning and emergency.

(c) Whenever during an episode (alert, warning, or emergency) any person responsible for the operation of a source or conduct of activities which result in emission of air pollutants does not take actions as required for the source or activity for the declared episode level or put into effect the Preplanned Abatement Strategy, the Director shall immediately institute proceedings in a court of competent jurisdiction for injunctive relief to enforce this chapter.

General Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061 FS. History - New 1-11-72.

17-2.07 Sampling and Testing

(1) All persons shall, upon request of the Department, provide continuous automatic monitoring testing and records of contaminants being emitted from a source.

(2) All persons shall provide facilities for continuously determining the input process weight or input heat when such factors are the basis for limiting standards.

(3) A person responsible for the emission of air pollutants from any source shall, upon request of the Department provide in connection with such sources and related source operations, such sampling and testing facilities exclusive of instruments and sensing devices as may be necessary for the proper determination of the nature and quantity of air pollutants which are, or may be emitted as a result of such operation.

(4) Such facilities may be either permanent or temporary at the discretion of the person responsible for their provision and shall be suitable for the use of methods and equipment acceptable to the Department, who shall indicate in writing the required size, number and location of sampling holes; the size and location of the sampling platform; and the utilities for operating the sampling and testing equipment. The facilities shall comply with all applicable laws and regulations concerning safe construction and safe practice in connection with such facilities.

(5) When the Department upon investigation has good reason to believe that the provisions of this chapter concerning emission of pollutants are being violated, it may require the person responsible for the source of pollutants to conduct tests which will identify the nature and quantity of pollutant emissions from the source and to provide the results of said tests to the Department. These tests shall be carried out under the supervision of the Department, and at the expense of the person responsible for the source of pollutants.

(6) All analyses and tests shall be conducted in a manner specified by the Department. Results of analyses and tests shall be calculated and reported in a manner specified by the Department.

(7) Analyses and tests for compliance may be performed by the Department at the cost of the person responsible for the emission of air pollutants.

General Authority 403.061, 403.101 FS. Law Implemented 403.021, 403.031, 403.061, 403.101 FS. History - Revised 1-11-72.

17-2.08 Local Regulations. Regulations controlling air pollution may be adopted by local governmental authorities, provided that such regulations shall not be in conflict herewith or that standards so adopted shall not be less stringent than those established herein.

General Authority 403.061, 403.182 FS. Law Implemented 403.021, 403.031, 403.061, 403.182 FS. History - Formerly 17-2.09, FAC.

STATEMENT OF REASONS FOR AND
PURPOSE OF ADOPTING THE RULES

On December 31, 1970, the Congress of the United States enacted the Federal Clean Air Act of 1970. This act requires each state to adopt ambient air quality standards and rules and regulations to achieve and maintain those standards. The State of Florida Department of Pollution Control, in order to comply with the Clean Air Act, had to completely revise Chapter 17-2, FAC.

The reason for this revised chapter is to eliminate, prevent, and control air pollution; and to protect and enhance the air quality of Florida.

The purpose of this chapter is to achieve and maintain such levels of air quality as will protect human health and safety, prevent injury to plant and animal life and property, foster the comfort and convenience of the people, promote the economic and social development of this state and facilitate the enjoyment of the natural attractions of this state.

SECTION IV

COMPLIANCE SCHEDULE AND

REVIEW OF NEW SOURCES AND MODIFICATIONS

According to Chapter 17-4, Florida Administrative Code which became effective March 3, 1970, a permit is required for the operation, construction or expansion of any installation that may be a source of air pollution. Authority resides with the Department of Pollution Control for issuance, rejection or revocation of such permits (Chapter 17-4, FAC attached in the Appendix along with blank copies of permit applications).

Pursuant to adoption of this Rule, all the existing sources in the state were given one year to apply for a permit and new ones were allowed only after issuance of construction permits. As a result, all the sources of air pollution have been brought into the permit system.

Compliance Schedules

It is the intent of the Department of Pollution Control to utilize the Permit System of the state and Administrative Enforcement Procedures to obtain compliance with set time schedules, the installation of emission control equipment and meeting emission standards.

All facilities which emit pollutants greacer than 100 tons/year will be reviewed and permits for these facilities will have attached conditions or implementation schedules for compliance. Under provisions of Chapter 403, Florida Statutes, and Chapter 17-4, FAC, the issuance of a permit, with conditions, has the full force of law and backing by legal action. In the event a facility is recalcitrant, the use of Administrative Notices and Orders, Chapter 403, will be utilized to provide the implementation schedule.

It is anticipated that a system of priorities will be utilized to review all facilities as mentioned above. Major sources such as phosphate, power, pulp and paper, sugar and citrus will be the first facilities reviewed.

An effort will be made to bring all the major sources in the state under a compliance schedule by the date of the first semi-annual report (December, 1972).

As with current adopted procedures of the State of Florida, the compliance schedule will set forth the following dates, all of which shall be no greater than July, 1975.

A - Preliminary Plans Submittal

B - Final Plans Submittal

C - Construction Beginning

D - Scheduled Completion

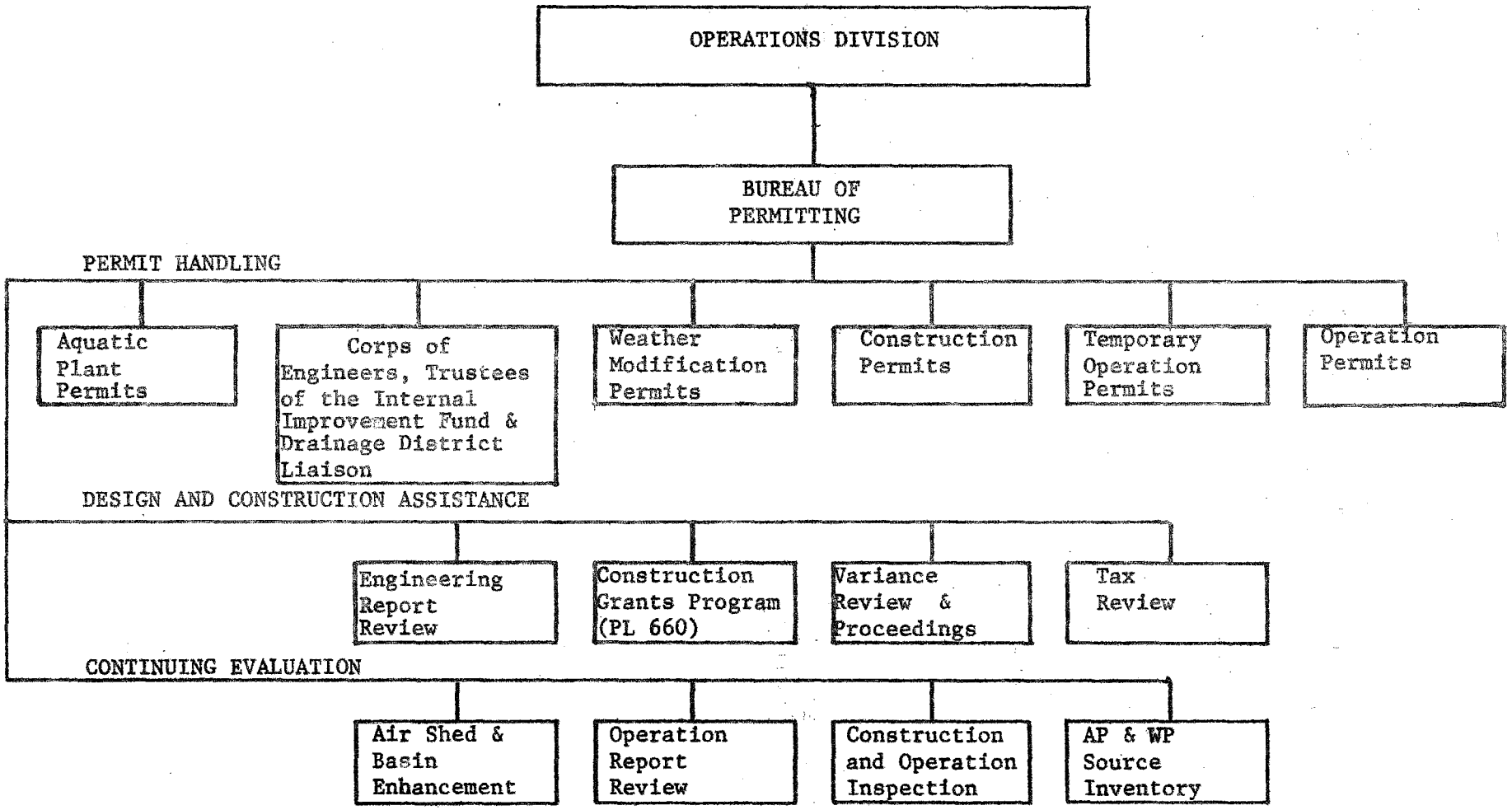
Review of New Sources and Modifications

The functions of the Bureau of Permitting within the Department of Pollution Control have been outlined in the following page. For handling these permit applications, procedures and general guidelies have been worked out and are presently followed. Attached also in the following pages are the flow diagram of the permit handling system and some of the guidelines specifically designed for incinerators and air pollution sources.

FIGURE 65

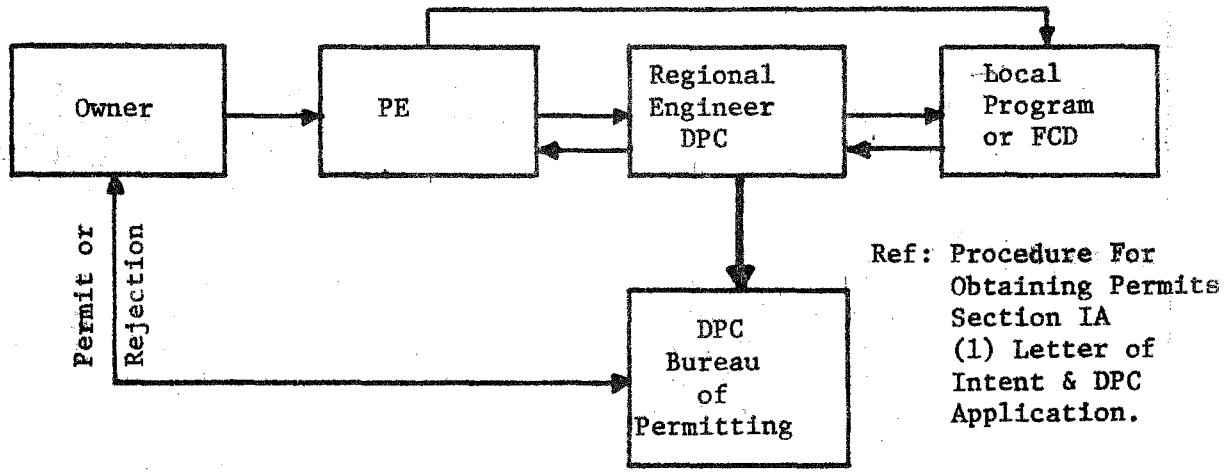
STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

Major Program Areas - Bureau of Permitting



PERMIT FLOW DIAGRAMS:
Ref: DPC Procedure for Obtaining Permits (Form G)

I. Permit to Construct New Sources of AP, IW, and Inc.



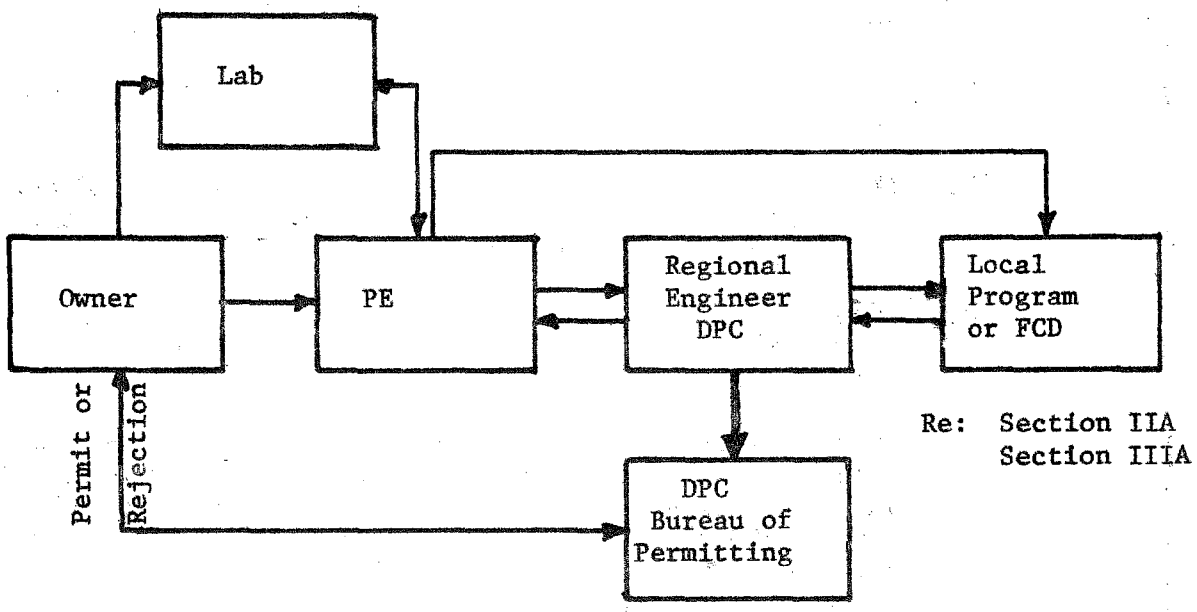


FIGURE 66

I. AIR POLLUTION

A. General Application Review by the DPC Regional Office.

1. There should be at least four applications.

2. If in area of local programs, and there is no indication that the local program has been supplied an application, one application should be forwarded to the program for review and comments prior to DPC action.

3. Page 1-C should contain the names and addresses of the applicant and project engineer. It is very important that both applicant's and P.E.'s signatures in ink on all copies appear in the application (Applicant's signatures on page 2-C).

4. The location of the pollution source must be specified. Only the city or county is not adequate. The street address or suitable location description (for example: U.S. Highway 1, 8 miles South of Junction with State Road 40) should be specified. Locate also by longitude and latitude or UTM Grid Coordinates.

5. The type of pollution source should be clearly specified. (sugar mill; asphalt plant; boiler; dryer; crusher, etc.)

6. Appropriate box on left hand side of page should be filled in.

7. The application should be dated although if not, date of application which will appear in the permit will then be estimated.

8. Estimated schedule of construction of project should be completed on page 2-C. This is important for permit duration scheduling.

9. If the signature is by an agent on page 2-C then there shall accompany the application a letter of authorization from a corporate officer of the company stating that the individual whose signature does appear on application is authorized.

10. The estimated cost of the proposed control facilities on page 30 should be specified. This information is required for the filing of quarterly and annual reports.

11. Items 2, 3, and 4 (flow diagrams and plot plans) should accompany the application, the size as indicated (8 1/2 X 11) does not necessarily restrict the drawings to this size, it merely facilitates easier filing of permit applications.

12. On page 3-C in Section I-A under General, the listing of raw materials and/or chemicals used should be filled out completely. The information provides useful data for chemical balance determinations.

13. Page 4-C Item B, Fuels shall be filled out completely. Most fuel distributors are willing to supply their customers with BTU gross heat output of their respective fuels. Again this item relates to combustion efficiency.

14. Where applicable item C should be filled out for process weight table and emission comparisons in accordance with the code under chapter 17-2.

15. Operating hours in Section I-D must be filled out, again this provides the necessary data for calculations of weight and emission tables under chapter 17-2.

16. Identification of air contaminants on page 4-C should be filled out and if the contaminant does not appear listed it should be specified as indicated.

17. Page 5-C - III air pollution control devices should be filled out relating to the particular contaminant. The description of the controls or control device should be brief, accurate and informative with any necessary drawings to be supplied. It should be noted that enclosures of this control equipment should be noted.

18. Where applicable on page 6-C there should be a complete contaminant balance listing which when added up should balance out (input to output). Observe note at bottom of page 6-C. This could involve more than one stack in which case the applicant should be encouraged to file an application for each stack.

19. Page 7-C, Section V discharged emissions to atmosphere should relate to the flow diagram with accurate data of the discharge point. Temperature at discharge point is important.

20. Section V-B, Tabulations of Discharged Contaminants is essential and should be listed as specific contaminants with GR./cu.ft. and lbs./day, and the totals should be shown at the bottom of this page under their respective columns.

II. Incinerator Review

A. General Application Review by Regional Office.

1. There should be at least four applications.

2. Comments from local program should be secured prior to DPC action.

3. If applicant is under enforcement, coordination should be made with Enforcement Bureau.

4. The names and addresses of both the applicant (Corporate Officer, Owner or Authorized Agent), and Project Engineer must be present on page 1-E or 1-F. It is imperative that both the project engineer and applicant signatures appear on pages 1-E or 1-F and pages 2-E or 2-F respectively. Any absence of one of the above signatures will result in rejection with applications returned for appropriate signatures. If anyone other than the owner or a corporate officer signs as the applicant, a letter of authorization from the owner or a corporate officer must be attached.

5. The exact location of the incinerator must be specified. (Street address and city) UTM or Latitude and Longitude should also be indicated.

6. The establishment served and its address should be specified.

7. The appropriate box under Permit Applied for should be filled in and dated, although if not, date of application which will appear in permit can be estimated.

8. It is strongly recommended in construction permit applications and necessary in operation permit applications that the name, address, and signature of person in charge of incinerator operation be contained on the first page.

9. The application should be dated, although if not, the date of application which will appear in the permit, can be estimated.

10. In addition to completed applications the following should be submitted in at least quadruplicate:

    a. Plot plans adequately locating the incinerator and establishment served, and showing the location, type, and height of all buildings within a five hundred foot radius of the incinerator stack.

    b. Drawings of the incinerator and appurtenances in sufficient detail for evaluation of air pollution aspects (also water pollution aspects if scrubber is provided).

    c. Incinerator operating instructions.

    d. If the application is for an incinerator operation permit, a report of test results must accompany the application (except for pathological incinerators of less than 100 pounds per hour capacity, and tee pee burners.)

11. The following information on page 3-F must be completed for all incinerators:

    a. Type waste to be burned.

    b. Description of waste.

    c. Composition of waste: combustible, non-combustible, moisture and heat valve.

    d. Unit quantities of waste generated.

    e. Number of waste generating units.

    f. Total waste generated per day.

    g. Hours of operation.

    h. Design capacity.

    i. Manufacture and model number.

    j. Approximate cost.

k. Primary chamber data.

l. Air requirement data.

m. Stack data.

n. Ash pit data.

The remaining information must be completed where appropriate. (For example, burner data if burners are provided or scrubber and detention tank data if a scrubber is utilized.

12. Stack must be capable of withstanding 1800°F.

13. Height or stack must be 10 feet higher than top of any building within 100 feet.

14. A 3 1/2" I.D. test port installed in the incinerator stack at a point of uniform flow, ie: at a point at least 8 stack diameters from the nearest restriction, is necessary. A stack extention, which should generally be 10 feet in length, having the same inside diameter as the stack and having 3 1/2 inch I.D. test ports, 3 feet from one end, can be used in testing.

SECTION V

AIR QUALITY SURVEILLANCE

The selection and distribution of air quality surveillance equipment in Florida is based on Federal Register, Volumn 36, No. 158 dated August 14, 1971 and Air Region Priority Classifications. A total of 23 items of continuous monitoring equipment and 58 items of periodic sampling equipment have been identified. Table XII shows the equipment allocated for each region under the assigned priorities, and Table XIII shows the equipment acquisition schedule.

Figures 67 to 72 are maps of the six Air Quality Regions in Florida showing the general location of the equipment identified in Table XII. The UTM locations and installation date are given in Table XIV.

It should be noted that Florida's Northwest and Northeast Regions are interstate regions and only the Florida portion of the equipment allocated to those regions is accounted for on the maps. Final selection of the exact locations of each item shown will be made based on an analysis of the situation at the time the equipment is acquired.

Timetable for New Equipment (See attached acquisition schedule)

Continuous Monitoring Trailers:

1971-72: Miami, Jacksonville and Tampa
Special partially equipped
trailer in Gainesville

1972-73: Seven trailers requested in FY 72/73
budget

1973-74: Eight trailers (not necessarily the fully equipped, all encompassing trailers, but will be portable-perhaps mobile) projected for a total of 19 to complete continuous network

Manual Samplers:

	1971-72	1972-73
Hi-Volume Samplers	35	
SO_2 and NO_2 Bubblers (Combined boxes)	5	15

TABLE XII

	Region Population	% of Inter-State Region	Particulates	SO_2 Bubbler & Continuous	CO Continuous	NO_x Bubbler	O_x Continuous	Needs/Region
Northwest Pensacola (Interstate)	497K 2,112K	24%	Pri. I 3 Hi-Vols 2 Tapes Continuous	Pri. I 2 Bubblers 1 Continuous	Pri. III Ø	Pri. III Ø	Pri. I 1 Continuous	3 Hi-Vols 2 SO_2 Bubblers 2 Trailers
Northeast Jacksonville (Interstate)	1,114K 1,316K	85%	Pri. I 9 Hi-Vols 4 Tapes Continuous	Pri. II 3 Bubblers 1 Continuous	Pri. III Ø	Pri. III Ø	Pri. I 3 Continuous	9 Hi-Vols 3 SO_2 Bubblers 4 Trailers
W. Central	1,491K		Pri. I 11 Hi-Vols 6 Tapes Continuous	Pri. I 8 Bubblers 3 Continuous	Pri. III Ø	Pri. I 10 Bubblers	Pri. III Ø	11 Hi-Vols 8 SO_2 Bubblers 10 NO_x Bubblers 6 Trailers
Central	715K		Pri. II 3 Hi-Vols 1 Tape Continuous	Pri. III 1 Bubbler	Pri. III Ø	Pri. III Ø	Pri. III Ø	3 Hi-Vols 1 SO_2 Bubbler 1 Trailer
Southeast	2,415K		Pri. II 3 Hi-Vols 1 Tape Continuous	Pri. III 1 Bubbler	Pri. III Ø	Pri. I 10 Bubblers	Pri. III Ø	3 Hi-Vols 1 SO_2 Bubbler 10 NO_2 Bubblers 1 Trailer
Southwest	349K		Pri. III 1 Hi-Vol	Pri. III 1 Bubbler	Pri. III Ø	Pri. III Ø	Pri. III Ø	1 Hi-Vol 1 SO_2 Bubbler
			30 Hi-Vols 14 Tapes	16 Bubblers 5 Continuous		20 Bubblers	4 Continuous	

NOTE: Eleven of the above trailers are intended to be completely equipped. At the minimum, the trailers will staisfy EPA requirements.

TABLE XIII

71-72		72-73		73-74	
HI-VOLS	35	HI-VOLS		HI-VOLS	
SO_2 BUBBLERS	5	SO_2 BUBBLERS	16	SO_2 BUBBLERS	
NO_X BUBBLERS	5	NO_X BUBBLERS	15	NO_X BUBBLERS	
TRAILERS	4	TRAILERS	7	*TRAILERS	8*
SOILING					
CO					
SO_2					
NO_2					
O_3					
THC					
AUTO TECHS	3	AUTO TECHS	6	AUTO TECHS	3
		MANUAL TECHS	3	MANUAL TECHS	3
		A.P. SPEC.	1		
		INSTRUMENT SPEC.	1		
		ENGINEER	1		

FUNDED REQUESTED PROJECTED

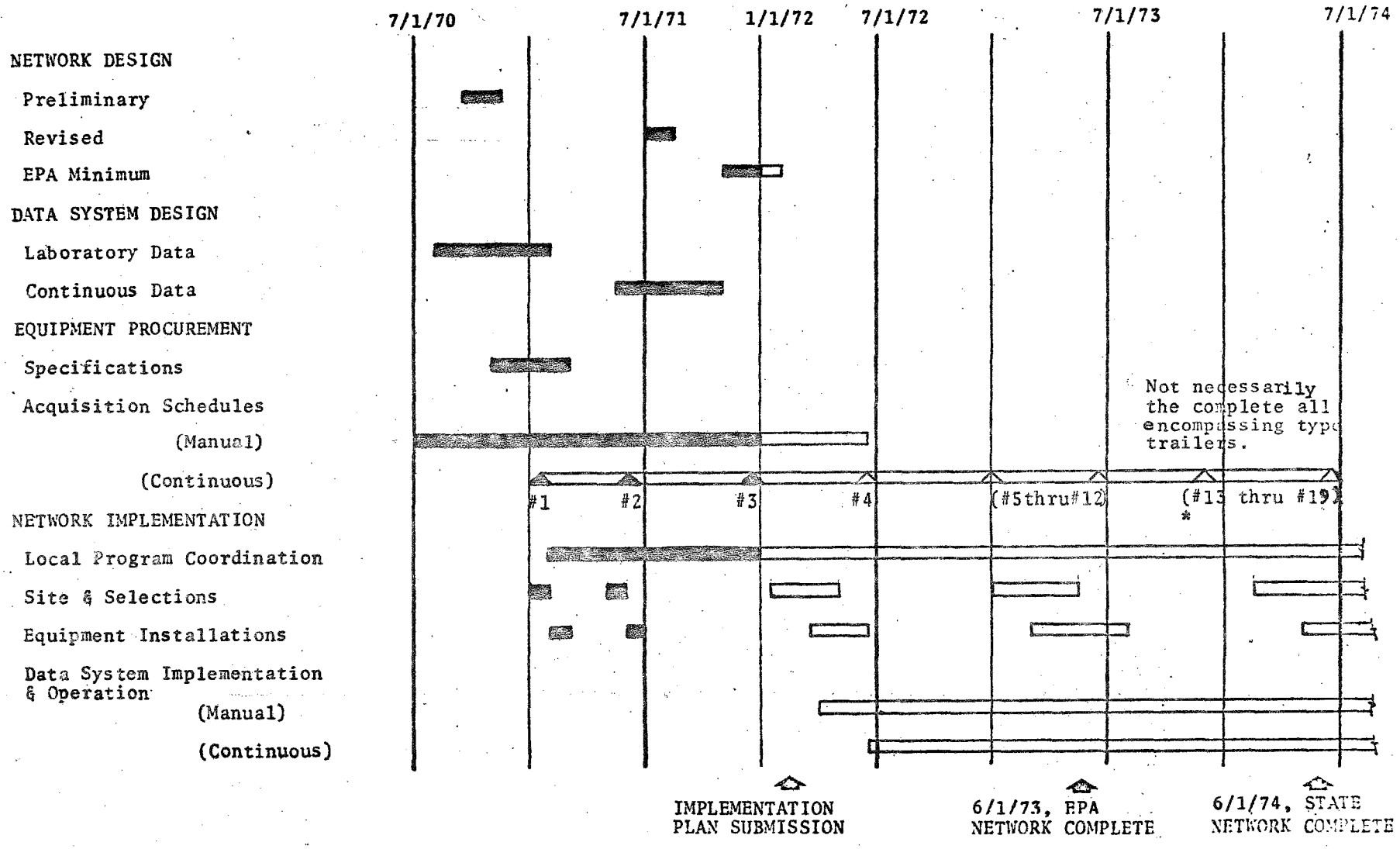
ACQUISITION SCHEDULE

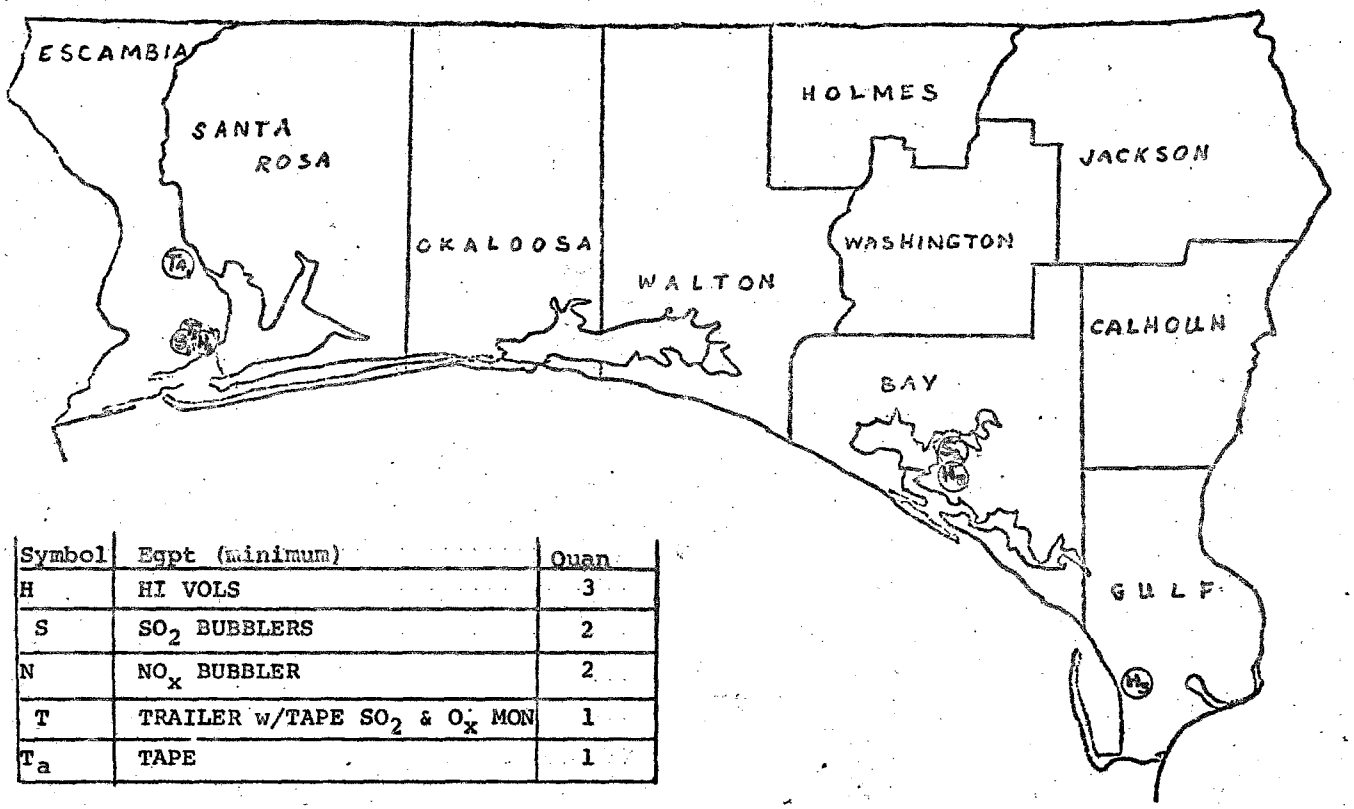
EQUIPMENT & MANPOWER

FOR AIR 71-72 TO 73-74

*Not necessarily the fully equipped all encompassing trailers, but will be portable & perhaps mobile

STATEWIDE AIR NETWORK PLANNING CHART AND SCHEDULE

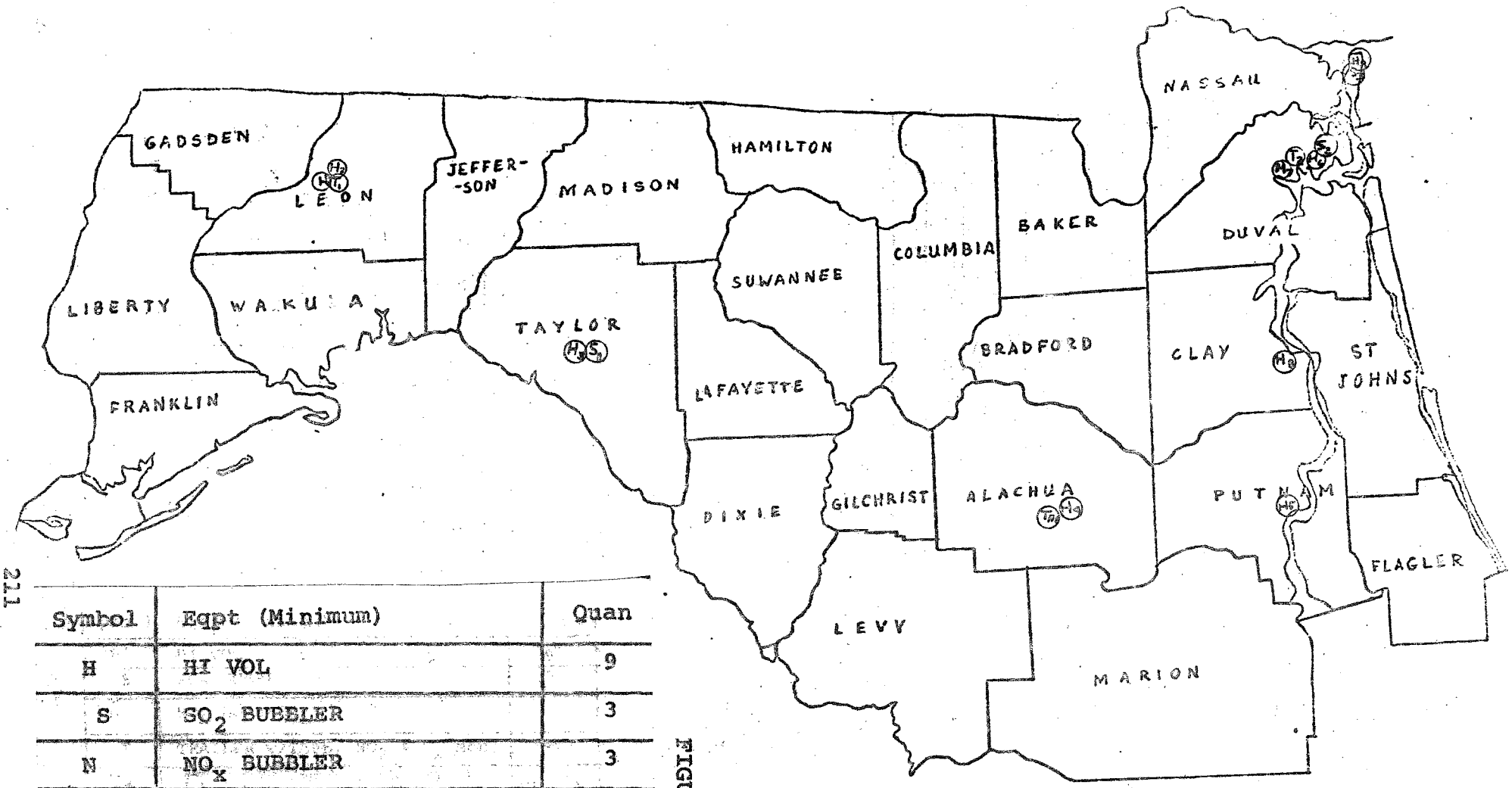




Symbol	Eqpt (minimum)	Quan
H	HI VOLS	3
S	SO_2 BUBBLERS	2
N	NO_x BUBBLER	2
T	TRAILER w/TAPE SO_2 & O_x MON	1
T_a	TAPE	1

NORTH WEST REGION

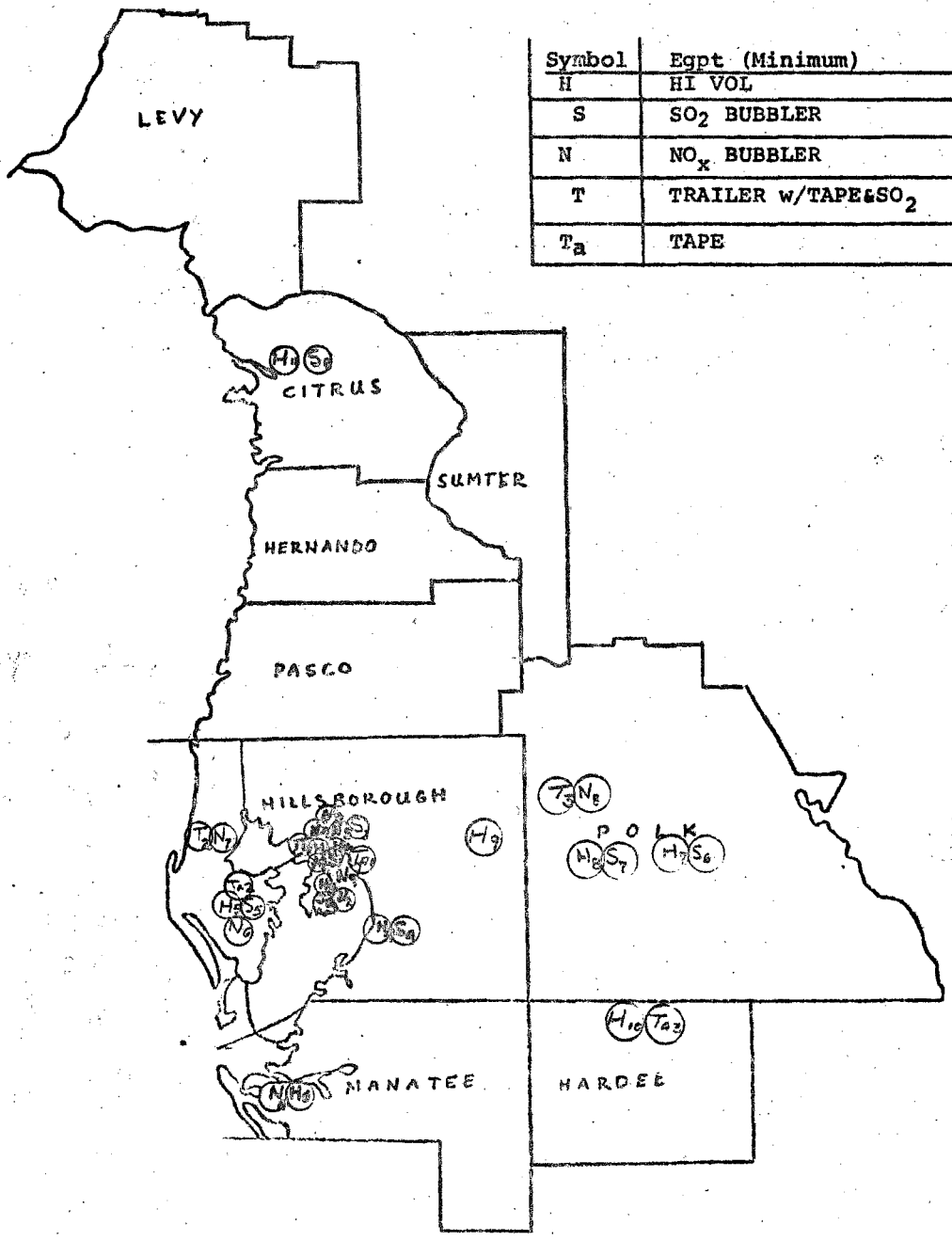
FIGURE 67



Symbol	Eqpt (Minimum)	Quan
H	HI VOL	9
S	SO_2 BUBBLER	3
N	NO_x BUBBLER	3
T	TRAILER w/TAPE, SO_2 & O_x Mon.	3
T	Tape	1

FIGURE 68

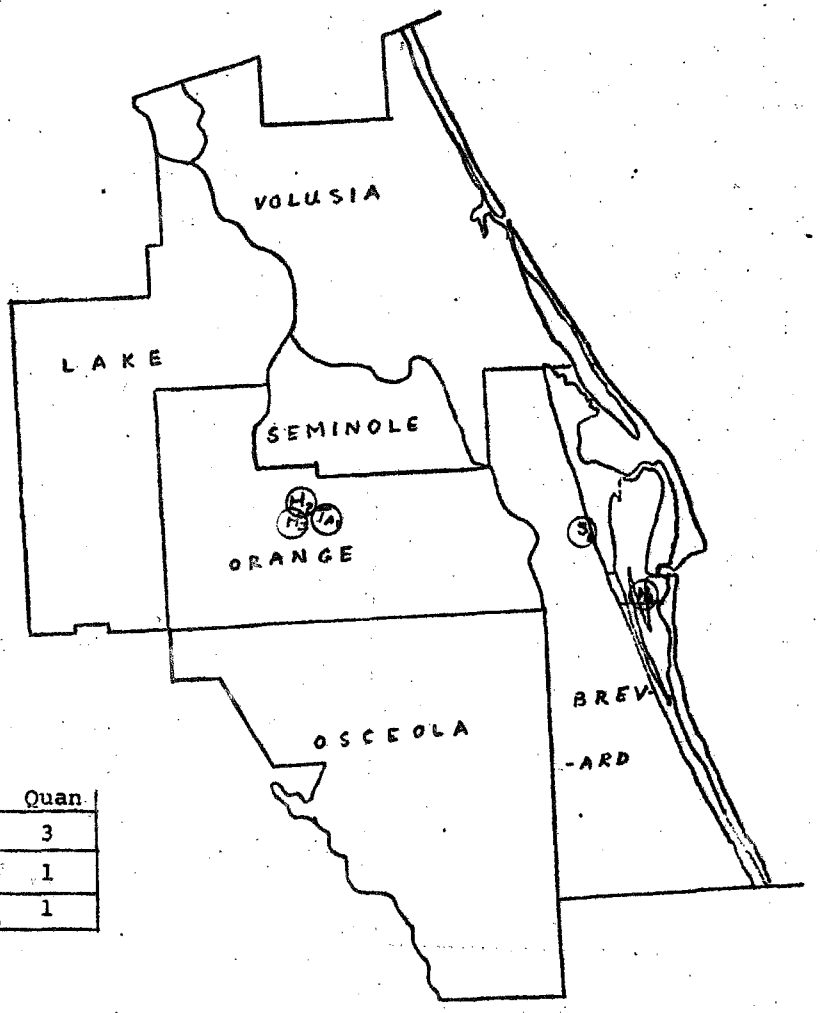
NORTH EAST REGION



Symbol	Eqpt (Minimum)	Quan
H	HI VOL	11
S	SO_2 BUBBLER	8
N	NO_x BUBBLER	10
T	TRAILER w/TAPE&SO_2	3
T_a	TAPE	3

FIGURE 69

WEST CENTRAL REGION



Symbol	Eqpt (Minimum)	Quan
H	HI VOL	3
S	SO_2 BUBBLER	1
T_a	TAPE	1

FIGURE 70

CENTRAL REGION

Symbol	Egpt (Minimum	Quan
H	HI VOL	3
S	SO_2 BUBBLER	1
N	NO_2 BUBBLER	10
T_a	TAPE	1

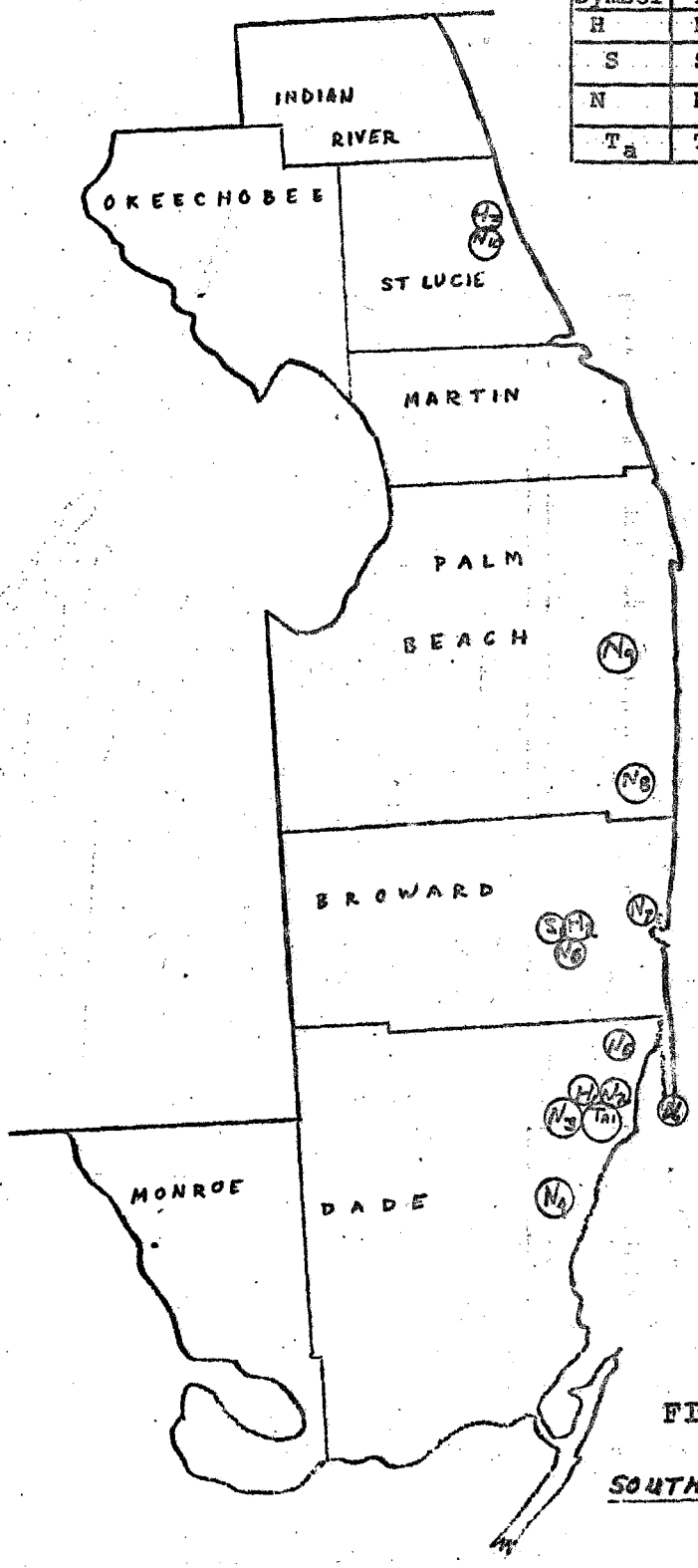
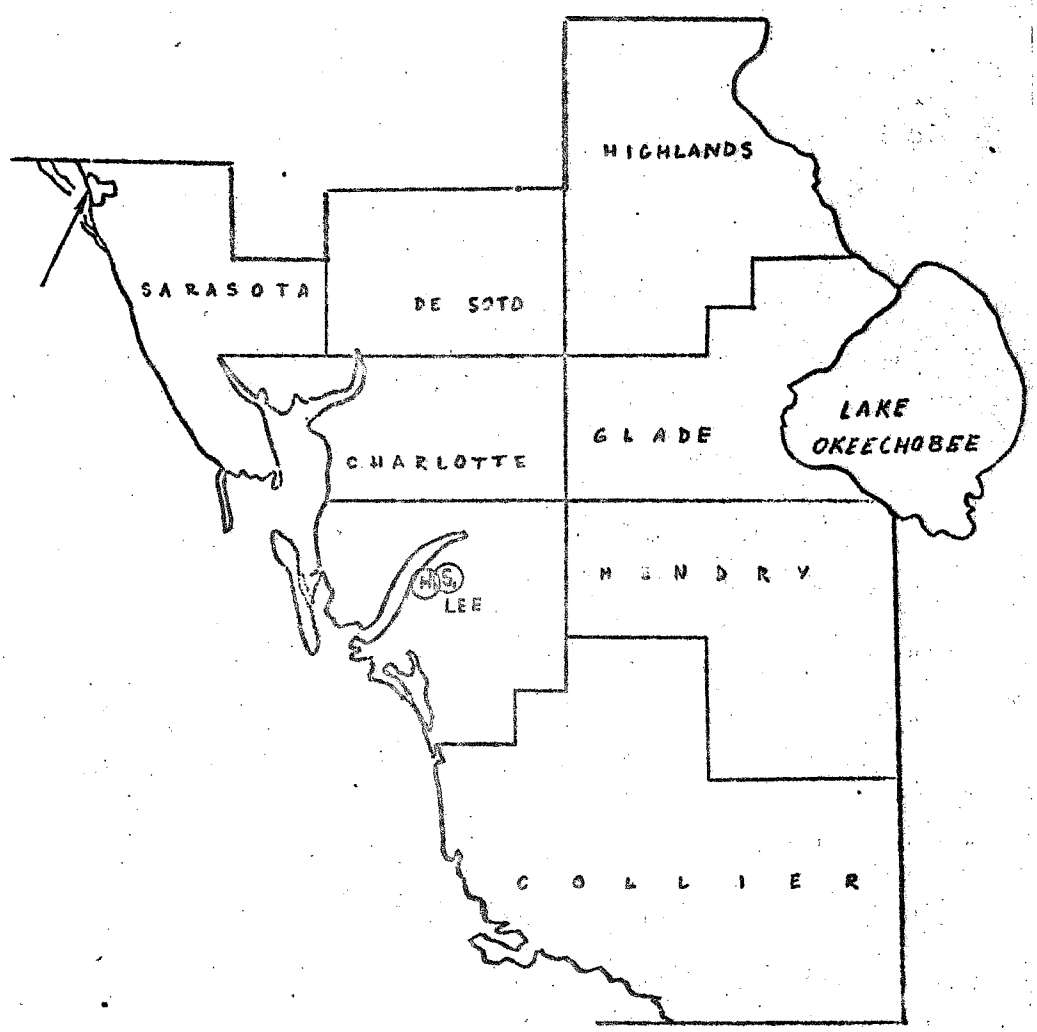


FIGURE 71

SOUTH EAST REGION



Symbol	Egpt (Minimum)	Quan
H	HI VOL	1
S	SO_2 BUBBLER	1

FIGURE 72

SOUTH WEST REGION

TABLE XIV

Northwest Region Air Quality Surveillance System

Equipment	Proposed Location (UTM, 10^3M)	Latest Date Installation Expected
(H_1) Hi Vol	16 - 479.5 - 3362.8	June, 1972
(H_2) Hi Vol	16 - 628.7 - 3335.6	June, 1972
(H_3) Hi Vol	Lat. 29°48'40" Long 85°18'04"	June, 1972
(S_1) SO_2 Bubbler	16 - 479.5 - 3362.8	June, 1972
(S_2) SO_2 Bubbler	16 - 630.0 - 3345.1	June, 1973
(T_1) Trailer w/Tape SO_2 & O_3 Mon.	16 - 478.1 - 3367.9	June, 1973
(TA_1) Tape Sampler	16 - 468.1 - 3386.0	June, 1974

Northeast Region Air Quality Surveillance System

(H_1) Hi Vol Sampler	16 - 759.1 - 3369.4	June, 1972
(H_2) " " "	16 - 760.8 - 3370.7	June, 1972
(H_3) " " "	Lat. 30°07'20" Long 83°35'03"	June, 1972
(H_4) " " "	17 - 370.0 - 3280.7	June, 1972
(H_5) " " "	17 - 437.9 - 3279.8	June, 1972
(H_6) " " "	17 - 446.3 - 3361.5	June, 1972
(H_7) " " "	17 - 439.3 - 3356.5	June, 1972
(H_8) " " "	17 - 424.9 - 3318.3	June, 1972
(H_9) " " "	17 - 456.5 - 3393.2	June, 1972

Northeast Region Air Quality Surveillance System (Cont.)

Equipment	Proposed Location (UTM, 10^3M)	Latest Date Installation Expected
(S_1) SO_2 Bubbler	Lat. 30° 07'20" Long 83° 35' 03"	June, 1973
(S_2) SO_2 Bubbler	17 - 446.3 - 3361.5	June, 1972
(S_3) SO_2 Bubbler	17 - 456.5 - 3393.2	June, 1973
(T_1) Trailer w/Tape, SO_2 and O_x Monitors	16 - 760.8 - 3370.7	June, 1973
(T_2) Trailer w/Tape, SO_2 and O_x Monitors	17 - 435.5 - 3356.4	June, 1972
(TA_1) Tape Sampler	17 - 370.0 - 3280.7	June, 1972
	CENTRAL REGION	
(H_1) Hi Vol Sampler	17 - 529.4 - 3136.6	June, 1972
(H_2) Hi Vol Sampler	17 - 464.1 - 3157.4	June, 1972
(H_3) Hi Vol Sampler	17 - 465.8 - 3162.7	June, 1972
(S_1) So$_2$ Bubbler	17 - 518.8 - 3162.8	June, 1972
(TA_1) Tape Sampler	17 - 465.8 - 3162.7	June, 1973

West Central Region Air Quality Surveillance System

Equipment	Proposed Location (UTM, 10^3M)	Latest Date Installation Expected
(H_1) Hi Vol Sampler	17 - 358.6 - 3094.2	June, 1972
(H_2) " " "	17 - 358.9 - 3091.3	June, 1972
(H_3) " " "	17 - 353.5 - 3085.6	June, 1972
(H_4) " " "	17 - 355.0 - 3063.9	June, 1972
(H_5) " " "	17 - 335.6 - 3073.5	June, 1972
(H_6) " " "	17 - 344.8 - 3041.7	June, 1972
(H_7) " " "	17 - 417.1 - 3085.5	June, 1972
(H_8) " " "	17 - 403.3 - 3086.0	June, 1972
(H_9) " " "	17 - 390.3 - 3099.4	June, 1972
(H_{10}) " " "	17 - 421.4 - 3041.1	June, 1972
(H_{11}) " " "	17 - 345.2 - 3197.7	June, 1972
(S_1) SO_2 Bubbler	17 - 358.9 - 3091.3	June, 1972
(S_2) " "	17 - 353.5 - 3085.6	June, 1973
(S_3) " "	17 - 355.3 - 3091.0	June, 1973
(S_4) " "	17 - 355.0 - 3063.9	June, 1973
(S_5) " "	17 - 335.6 - 3073.5	June, 1972
(S_6) " "	17 - 417.1 - 3085.5	June, 1973
(S_7) " "	17 - 403.3 - 3086.0	June, 1973
(S_8) " "	17 - 345.2 - 3197.9	June, 1973

West Central, Continued

Equipment	Proposed Location (UTM, 10^3M)	Latest Date Installation Expected
(N_1) NO_x Bubbler	17 - 358.6 - 3094.2	June, 1972
(N_2) " "	17 - 353.5 - 3085.6	June, 1972
(N_3) " "	17 - 356.8 - 3102.4	June, 1973
(N_4) " "	17 - 358.3 - 3093.6	June, 1973
(N_5) " "	17 - 355.3 - 3091.0	June, 1973
(N_6) " "	17 - 335.6 - 3073.5	June, 1973
(N_7) " "	17 - 324.6 - 3094.7	June, 1973
(N_8) " "	17 - 405.8 - 302.7	June, 1973
(N_9) " "	17 - 358.9 - 3091.3	June, 1973
(N_{10}) " "	17 - 344.8 - 3041.7	June, 1973
(T_1) Trailer w/ Tape & SO_2 Mon.	17 - 348.5 - 3093.0	June, 1972
(T_2) Trailer w/ Tape & SO_2 Mon.	17 - 324.6 - 3094.7	June, 1973
(T_3) Trailer w/ Tape & SO_2 Mon.	17 - 405.8 - 3102.7	June, 1974
(TA_1) Tape Sampler	17 - 358.9 - 3091.3	June, 1973
(TA_2) Tape Sampler	17 - 335.6 - 3073.5	June, 1974
(TA_3) Tape Sampler	17 - 421.4 - 3041.1	June, 1974

Southeast Region Air Quality Surveillance System

Equipment	Proposed Location (UTM, 10^3M)	Latest Date Installation Expected
(H_1) Hi Vol. Sampler	17 - 579.2 - 2852.8	June, 1972
(H_2) " " "	17 - 576.6 - 2883.8	June, 1972
(H_3) " " "	17 - 565.7 - 3035.6	June, 1972
(S_1) SO_2 Bubbler	17 - 576.6 - 2883.8	June, 1972
(N_1) NO_x Bubbler	17 - 586.9 - 2851.7	June, 1973
(N_2) " "	17 - 579.2 - 2852.8	June, 1972
(N_3) " "	17 - 572.7 - 2855.1	June, 1973
(N_4) " "	17 - 567.3 - 2834.6	June, 1973
(N_5) " "	17 - 578.2 - 2868.6	June, 1972
(N_6) " "	17 - 576.6 - 2883.8	June, 1972
(N_7) " "	17 - 586.0 - 2889.2	June, 1973
(N_8) " "	17 - 589.5 - 2917.0	June, 1973
(N_9) " "	17 - 590.7 - 2956.0	June, 1973
(N_{10}) " "	17 - 565.7 - 3035.6	June, 1973
(TA_1) Tape Sampler	17 - 579.2 - 2852.8	June, 1972
	Southwest Region	
(H_1) Hi Vol. Sampler	17 - 419.8 - 2950.8	June, 1972
(S_1) SO_2 Bubbler	17 - 419.8 - 2950.8	June, 1973

Site Justification:

A. Northwest Region:

H_1 - Located in the downtown area of Pensacola and within the zone of influence of major sources.

H_2 - A Kraft Pulpmill (>1300 T.P.D. capacity) is located in this area (Panama City).

H_3 - Located in Port St. Joe, site of major pulpmill (>1300 T.P.D. capacity)

S_1 - Same as H_1

S_2 - Located near a coal-fired steam electric power plant.

T_1 - Located in proximity of I-10 and major Pensacola St.

TA_1- Located in small industrialized town (Cantonment).

B. Northeast Region:

H_1, H_2 - Located in Tallahassee, a small urban city.

H_3 - A large Kraft pulpmill, saw and lumber mills are located in this area.

H_4 - Located in Gainesville, a small urban city.

H_5 - Located in proximity to a large pulp mill.

H_6 - Two major point sources, a pulp and paper plant and a steam electric power plant, are in this area (North Jacksonville).

H_7 - Located in downtown Jacksonville.

H_8 - Located in area (Green Cove Springs) with small industry.

H_9 - Located in proximity to two pulpmills.

S_1 - Same as H_3

S_2 - Same as H_6

S_3 - Same as H_9

T_1 - Located adjacent to U.S. Hwy. 90 and U.S. Hwy. 27.

T_2 - Located along I-95 in Jacksonville.

TA_1 - Located in Gainesville.

C. West Central Region

H_1, H_2, H_3 - Located in general area (Downtown Tampa) where the Hillsborough County Pollution Control has recorded maximum values.

H_4 - Located in Ruskin, site of T.E.C.O.'s Big Bend Station.

H_5 - Located in St. Petersburg

H_6 - Located in Bradenton

H_7, H_8 - Located in the general vicinity of the phosphate industry (Bartow and Mulberry)

H_9 - Located in Plant City, site of citrus and phosphate industries.

H_{10} - Will record background concentration.

H_{11} - Large oil-fired steam electric power plant located in area (Crystal River).

S_1, S_2, S_3 - Same as H_1, H_2, H_3

S_4 - Same as H_4

S_5 - Same as H_5

S_6, S_7 - Same as H_7, H_8

S_8 - Same as H_{11}

N_1, N_2, N_3, N_4, N_5, N_9 - Located in downtown Tampa along main through-a-fares such as I-4 and I-75.

N_6 - Same as H_5

N_7 - Located in Clearwater, a urban community

N_8 - Located in Lakeland.

N_{10}- Located in Bradenton.

T_1 - Located near I-75 and Tampa Intn's Airport.

T_2 - Same as N_7

T_3 - Same as N_8

TA_1- Same as H_2

TA_2 - Same as H_5

TA_3 - Same as H_{10}

D. Central Region:

H_1 - Located on Merrit Island to determine Coastal Background.

H_2, H_3 - Located in Orlando, the largest city in this region.

S_1 - Located in proximity of two oil-fired steam electric power plants

TA_1- Same as H_2

E. Southwest Region:

H_1 - Located near a large oil-fired steam electric power plant.

S_1 - Same as H_1

Southeast Region:

H_1 - Located in proximity of downtown Miami

H_2 - Located downwind (Easterly winds are prevailing] from two large oil-fired steam electric power plants.

H_3 - Located in Ft. Pierce

S_1 - Same as H_2

N_1 - Located in the heavily traffic congested Miami Beach.

N_2 - Same as H_1

N_3 - Located near Miami International Airport and major traffic areas.

N_4 - Located along U.S. 1, Rockdale.

N_5 - Located in proximity of S.R. 826 (Palmetto Expressway) and I-95.

N_6 - Same as H_2

N_7 - Located in Downtown Ft. Lauderdale.

N_8 - Located in Boca Raton

N_9 - Located along I-95 West Palm Beach

N_{10}- Same as H_3

TA_1- Same as H_1

EMERGENCY EPISODE SURVEILLANCE SYSTEM

Northwest Region:

Particulate: H_1, H_2, H_3, T_1

Sulfur Oxides: S_1, T_1

Photochemical Oxidants: T_1

Northeast Region:

Particulate: H_1, H_3, H_4, H_7, H_6, TA_1, T_2, T_1

Sulfur Oxides: S_2, S_3, T_1, T_2

Photochemical Oxidants: T_2, T_1

Central Region:

Particulates: H_1, H_2, TA_1

Sulfur Oxides: S_1

West Central Region:

Particulates: H_1, H_2, H_4, H_5, H_8, T_1, T_2, TA_1

Sulfur Oxides: S_1, S_2, S_4, S_5, S_7, T_1, T_2

Nitrogen Oxides: N_1, N_3, N_5, N_6, N_7, T_1, T_2

Southwest Region:

Particulates: H_1

Sulfur Oxides: S_1

Southeast Region:

Particulates: H_1, H_2, TA_1

Sulfur Oxides: S_1

Nitrogen Oxides: N_1, N_2, N_3, N_4, N_5, N_6, N_7, N_9

Sampling Schedule:

A. High Volume samplers - One 24 hr. sample every 6 days

B. Tape sampler - One sample every 2 hours

C. SO_2 gas bubbler - One 24 hr. sample every 6 days

D. SO_2 monitor - continuous

E. Photochemical oxidant monitor - continuous

F. NO_x gas bubbler - one 24 hr. sample every 14 days

Analytical Methods:

A. Automatic Analyzers now in use:

The following definitions apply in the listed sensor specifications:

Response time - The time interval from a change in the parameter being measured until the instrument registers 90% of the change.

Precision - The maximum deviation between the numerical values of two or more identical measurements.

Operating period - The period of time over which the analyzer can be operated and be expected to give meaningful results without the need of field maintenance, service, or adjustment.

The instrument performance specifications given in the following paragraphs shall be satisfied at all times with the specified operating temperature environment and power regulation are maintained.

WIND SPEED

Operating principle - Three cup anemometer

Range - 0 to 40 mph

Sensitivity - Initial sensitivity less than 0.80 mph

Precision - 0.5 mph in the range of 20-30 mph wind speed

Output - One pip per 0.5 miles of wind passage

Availability - An available instrument of this type is Wong EcoWind III.

WIND DIRECTION

Operating principle - Damped vane

Sensitivity - Responds to less than 0.80 mph wind speed

Output - Intermittent pips on 2 1/2" chart

Availability - See Wind Speed

SULPHUR DIOXIDE

Operating principle - Flame photometric analysis utilizing the 394 mu-centered band emitted by sulfur containing compounds in a hydrogen-rich air flame.

Range - 0-1.00 ppm total sulfur as equivalent SO_2, based on dynamic span calibration gas concentrations provided during a calibration cycle.

Response - less than 15 seconds

Precision - $\pm$ 1%

Output - 1 to 5 volts (linearizing amplification to be provided).

Operating period - 14 days unattended

Availability - An available instrument of this type is the Melpar, Model LL-1100-1, SO_2 analyzer.

NITROGEN DIOXIDE: (Mostly for emergency surveillance and short period concentration determination)

Operating Principle - Modified Griess Saltzman, colorimetric. (24 hour concentrations will be determined by Hochheiser method using bubblers)

Range - Adjustable 0 to 0.10 ppm/V, 0 to 8.0 ppm/V.

Response - less than three minutes

Output - 0 to 5 volts (amplification provided by bidder).

Operating period - 14 days unattended

Availability - An available instrument of this type is the Atlas Electric Devices Model 1303, NO_2 Analyzer.

SOILING INDEX

Operating Principle - In head light transmission, continuous sampling with lamp and detector out of sampling stream.

Range - 0 to 11.0 COH's per 1000 ft.

Output - 0 to 5 volts.

Operating Period - Approximately 30 days.

Availability - An instrument of this type is the Research Appliances Model 5000-A Filter Tape Sampler.

CARBON MONOXIDE TOTAL HYDROCARBONS AND METHANE

Operating Principle - Gas chromatograph utilizing flame ionization detection with dual column separation.

Repeatability - .5% full scale

Linearity - 1% of full scale

Ranges - field selectable 0-1, 05, 0-10, (any range for any parameter) 0-25 or 0-100 ppm.

Output - Individual, 0 - 1 volt signal, trend recording. 0 - 10 mv auxillary.

Operating Period - 14 days

Availability - An available instrument of this type is the Beckman Model 6800 Air Quality Chromatograph.

OXIDANTS

Operating Principle - Chemiluminescence using gas phase titration of ethylene with O_3.

Range - 0-.01, 0-.1, 0-1.0, 0-1-, ppm selectable by switch.

Precision - ±5%

Response - 5 seconds

Output - 0-5 volts

Operating Period - 14 days or greater

Availability - An available instrument of this type is the Bendix Ozone Analyzer.

B. Secondary Equipment

Gas Bubblers and wet chemistry analysis

SO_2 - Midget impingers (Pararosniline method)

NO_2 - Fritted disc bubblers (Jacobs-Hochhelser method)

Older existing equipment

Hydrocarbons - Beckman 400 - flame - photometric

SO_2 - Beckman 906 - coulometry (buffered KI)

CO - Beckman 315AL - Non dispersive Infra-red

NO_X - Beckman K-76 Acralyzer - $(O_3+NO+NO_2)$

NO_2 - Atlas Electric, Motel 1303, - Modified Greiss Saltzman

HI Volume Samplers - Hi Volume Samplers as specified in Appendix B of the Federal Register, Volume 36, No. 21, January 30, 1971.

Data Acquisition & Analysis

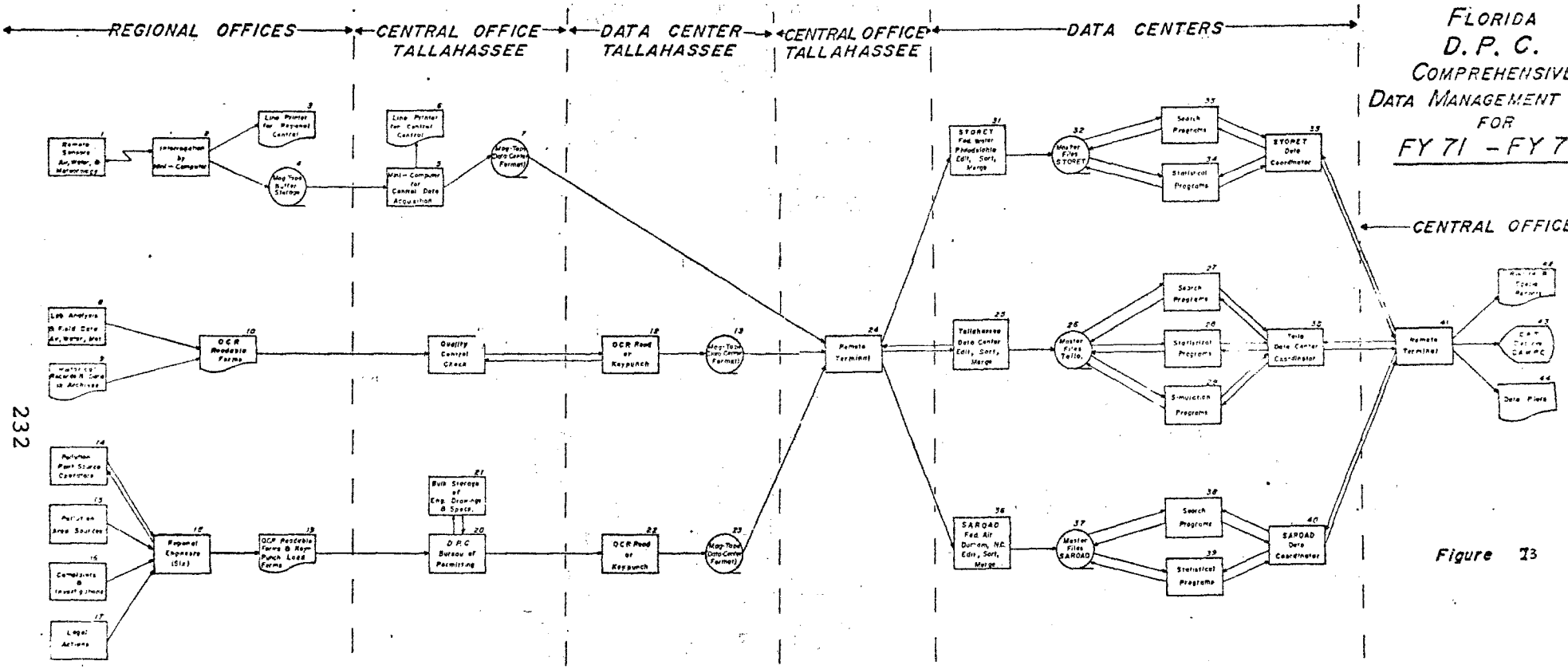
The Florida Department of Pollution Control intends to implement a consolidated data management system, including air, water and permit data functions. Considerable planning has been done toward this goal as outlined in the Department's "Data Management Plan 71-78".

From the data management plan, the air data acquisition and analysis can be separated into the following individual tasks to handle air data:

1. Automatic Data Storage
2. Manual Data Storage
3. Saroad Formatting
4. Retrieval and Manipulation

Referring to Figure 73 (Data Management Plan, page 7-A), Item 1 above is shown on the top left of the diagram. The elements of Item 1 include continuous analyzers at remote sites, telemetry using leased phone lines, and a central data logger (mini-computer) which writes the incoming data on magnetic tape. The magnetic tape is then the input to state's EDP center. At present, the remote terminal (24) is not a part of the system.

Item 2, the manual data system, is shown center left of Figure 73. Laboratory or archive data is typed on a pre-printed machine and man readable form. The data is manually verified and the form is the input to the EDP center via an optical character reader.



FLORIDA
D. P. C.
COMPREHENSIVE
DATA MANAGEMENT PLAN
FOR
FY 71 - FY 78

Figure 13

Item 3, Saroad Formatting, comes directly from the EDP center. All incoming air data will be re-formatted onto cards or mag tape for direct entry into the Saroad data center.

Item 4, retrieval and manipulation, is the programs which provide data access on the state level and, in the future, cross-correlation between other functional data banks within the state system. The Department of Pollution Control is not currently projecting a need for data reduction beyond the capability available to the state through the use of Saroad.

A brief summary of the scheduled in-service completion dates for items one through four is shown below:

Automatic Data Storage	March, 1972
Manual Data	April, 1972
Saroad Formatting	February, 1972
Retrieval & Manipulation	June, 1972 to June, 1973

The above dates do not reflect a total system capability, but are based on having a workable system. For instance, remote terminal capability is not expected before late 1973 or 1974. The data flow, however, will be accomplished using conventional reports and verbal retrieval requests. Portions of the system are already nearly complete. A demonstration automatic data storage system, including the EDP interface, has been working reliably since June 1971.

SECTION VI

SOURCE SURVEILLANCE

Source surveillance was recognized very early in Florida as a necessary phase of an air pollution control program. A source sampling group has been established in central Florida, for several years, and is being maintained as a special source group. In addition to the special group, each region is being equipped with basic manpower and equipment to maintain at least one source sampling team designed to handle sources normally sized and constituted. For the larger and more complex problems the special source team will be called upon.

As another and equally important phase of surveillance, the State has developed a complaint and investigation system. Complaints are normally received at the Regional Offices by telephone or letter. If the nature of the complaint is significant or serious and occurs outside of office hours, a 24 hour phone number is available to anyone in the State for registering a complaint. Urgent complaints are investigated immediately, while others are investigated depending upon the work load. All complaints are followed up to a satisfactory conclusion. A complaint may result in a full investigation followed up with enforcement action or it may only require cooperation between Department personnel and pollution source owners for satisfactory resolution.

The source sampling program has been or is established in five of the six local control programs within the State. Dade, Duval and Manatee counties have well established source sampling teams. Hillsborough, and Broward counties are presently setting up a source sampling team. To date Palm Beach county has depended upon State technical assistance for source sampling. All local programs have complaint and investigation systems.

A visible emission limitations enforcement program is active at the State level in the investigative and enforcement program through Regional personnel and in a training program. Both local program and state personnel are trained for visible emissions determination by the use of a smoke generator and the Visible Emission Evaluation course conducted by State and Environmental Protection Agency personnel. The plan includes conducting the course frequently enough to maintain an adequately sized staff for visible evaluations. The course is being provided presently twice per year to about 30 trainees.

Visible emission limitations will be promulgated in proposed Chapter 17-2, Section 2.04 Florida Administrative Code, Prohibitive Acts. Other sections on stationary and mobile sources contain additional limitations. The proposed limitations are amendments to and expansions of existing rules, Chapter 17-2 Florida Administrative Code.

Legally enforceable procedures for requiring owners of stationary sources to sample sources and report emissions have existed in Florida rules for several years. Presently the proposed amendments to Chapter 17-2.07 Florida Administrative Code includes the requirement of automatic monitoring systems to be installed and operated by the source owner at the request of the Department. Reports of source emissions are required as a part of 17-4 Florida Administrative Code, Permits, and periodic reports are required as a condition of each Permit.

A program for periodic testing and inspection of sources is planned to interface with the computerized permit system presently being developed. The nature of the program will be one of response to the variability of source emissions for single or groups of sources, the historical validity of owners reports, the source location, concentration, and kinds of pollutants emitted relative to receptors and other factors which relate to the degree of agency control and abatement required.

The present source sampling and inspection program is keyed to requirements of permit issuance and enforcement actions.

SECTION VII

Resources

The resources for implementing and enforcing the plan for compliance with the National Ambient Air Quality Standard in Florida consists of air pollution control programs established at two levels of government. The first, which has primary responsibility for implementing the plan, is the Florida Department of Pollution Control at the State governmental level and the second is the local air pollution control programs at the County governmental level. There are seven such County wide programs in the State, three in the Southeast Air Quality Region; Dade, Broward, and Palm Beach Counties, two in the West Central Air Quality Region; Hillsborough and Manatee County; one in the Northeast Air Quality Region, the Consolidated City of Jacksonville, and one in the Southeast Region, Sarasota County. As a result of review and requirements by the State organization pursuant to Chapter 403 Florida Statutes each of the Local Programs include the components necessary to implement and enforce an air pollution control program such as represented in the implementation plan.

The Florida Department of Pollution Control pursuant to Chapter 403 Florida Statutes is charged with the air pollution control responsibility for the State of Florida. The Department consists of a five man board, which is appointed by the Governor and acts as head of the Department, and an Executive Director and Office of the Executive Director, and three Departmental divisions. The Divisions are Administrative Services, Operations, and Planning.

The Office of the Executive Director includes the Information Section and the Legal Section. The Division of Administrative Services is made up of Fiscal and Accounting, Personnel Services and Training and Staff Services. The Division of Operations is made up of four bureaus; Bureau of Surveillance, Permitting, Field Services and Enforcement. The Division of Planning is made up of three sections; Section of Air Quality Management, Section of Air and Water Quality Standards Development and Section of Water Quality Management. The functions and activities of each Department bureau and section in general follow the descriptive name and rather

than define those activities in this paragraph they will be discussed during the description of the program components. It should be pointed out that the Division of Operations - Bureau of Field Services is the field arm of the entire Department and has offices located within each region.

Several factors should be considered in evaluating the Department of Pollution Control comments regarding Resources required for the State Plan.

The State of Florida, Department of Pollution Control, is currently operating under a Cost Accounting System, coupled with a "Planning Program Budgeting System" (PPBS) of the State. This system is based upon ten major programs as outlined in the attached memo of April 14, 1971. It should be realized that this program is currently being handled under the Data Management System of the Department of Pollution Control.

Realizing the Appendix K of 42CFR, Paragraph 420.20, is based upon similar type functions, expressed in other terms, the following relationship is requested to be approved.

Enforcement Services:	Prosecution & Adjudication (Enforcement) Complaints/Investigations
Engineering Services:	Permitting Source Evaluations
Technical Services:	Air Quality Monitoring Special Projects
Management Services:	Training/Education Information Planning Administration

This submission of Resources of the State of Florida is based upon the total State capability broken down into Air Quality Control Regions, including resources of the Local Programs in each region.

A Cost Accounting Data System of the Department of Pollution Control has been in use since the beginning of the fiscal year 1971-1972. The full development of its capability has not been utilized to date. But it does have the capability to set forth, by Regions or Cost Centers, all costs by program and earmarked as to salaries, other personnel services (contracts), expenses and operating capital outlay.

The attached table is submitted as information concerning the State of Florida's estimated needs and expenditures for the current year and future years. It should be realized that the information presented for the year 1971-1972 is based upon a few months of experience. The other years are based upon the Department of Pollution Control estimates submitted to the State Legislature as a Master Plan of the Department.

With respect to Local Programs of the State, a full evaluation of needs has not been accomplished within the time available for this submission. It is anticipated that Local Programs will be requested to develop and submit to the Department of Pollution Control similar type cost accounting information utilized by the Department of Pollution Control. In this way, actual and projected costs could be standardized for both the State and local areas.

NORTHWEST FLORIDA AIR QUALITY CONTROL REGION

Personnel Requirements

Man - Years

		71 - 72	72 - 73	74 - 75	76 - 77
		STATE	STATE	STATE	STATE
Enforcement Services	Enforcement	0.4	0.5	0.5	0.8
	Complaints/ Investigation	0.3	0.4	0.4	0.6
Engineering Service	Permitting	1.0	1.2	1.2	1.8
	Source Sampling	0.4	0.5	0.5	0.8
Technical Services	Monitoring	1.2	1.4	1.5	2.0
	Special Projects	0.2	0.2	0.2	0.3
Management Services	Training/ Education	0.1	0.1	0.2	0.3
	Information	0.2	0.2	0.2	0.3
	Planning	0.2	0.2	0.2	0.3
	Administration	0.9	1.1	1.1	1.8
	Totals	4.9	5.8	6.0	9.0

NORTHEAST FLORIDA AIR QUALITY CONTROL REGION

Personnel Requirements

Man - Years

		71-72		72-73		74-75		75-76	
		STATE	DUVAL	STATE	DUVAL	STATE	DUVAL	STATE	DUVAL
Enforcement Services	Enforcement	0.9	3.0	1.1	3.0	1.5	3.0	1.8	3.0
	Complaints/ Investigation	0.7	1.0	0.8	1.0	1.0	1.0	1.5	1.0
Engineering Service	Permitting	2.3	1.0	2.7	1.0	3.0	1.0	4.5	1.0
	Source Sampling	0.9	2.5	1.1	2.5	1.0	2.5	1.5	2.5
Technical Services	Monitoring	2.7	4.5	3.2	4.5	3.5	4.5	5.0	4.5
	Special Projects	0.4	1.0	0.5	2.0	0.5	2.0	0.8	2.0
Management Services	Training/ Education	0.2	1.0	0.2	1.0	0.4	1.0	0.6	1.0
	Information	0.4	0.5	0.5	0.5	0.5	0.5	0.8	0.5
	Planning	0.6	0.5	0.7	0.5	1.0	0.5	1.5	0.5
	Administration	2.0	0.8	2.4	0.8	2.6	0.8	4.0	0.8
	Totals	11.1	15.8	13.2	16.8	15.0	16.8	22.0	16.8

WEST CENTRAL FLORIDA AIR QUALITY CONTROL REGION

Personnel Requirements

Man - Years

		71 - 72			72 - 73			74 - 75			76 - 77		
		STATE	HILLS-BOROUGH	MANATEE	STATE	HILLS-BOROUGH	MANATEE	STATE	HILLS-BOROUGH	MANATEE*	STATE	HILLS-BOROUGH	MANATEE*
Enforcement Services	Enforcement	1.2	1.0	1.1	1.4	2.0	1.3	2.5	3.0	1.0	3.5	3.5	1.0
	Complaints/ Investigation	0.9	1.0	2.1	1.1	2.0	2.0	1.5	2.5	3.0	2.0	3.0	2.0
Engineering Service	Permitting	5.1	6.5	0.3	5.0	1.0	0.1	6.0	1.5	0.1	9.0	1.5	0.1
	Source Sampling	1.2	0.3	0.4	1.4	0.3	0.3	1.5	0.9	0.2	2.5	1.0	0.3
Technical Services	Monitoring	5.5	4.5	2.0	6.8	5.5	2.0	6.5	6.5	2.0	9.0	7.5	2.0
	Special Projects	0.6	0.5	0.2	0.7	0.5	--	1.0	0.8	--	1.5	1.0	--
Management Services	Training/ Education	0.3	0.4	0.1	0.4	0.5	0.1	0.5	0.6	0.1	1.0	0.7	0.1
	Information	0.6	0.4	0.2	0.7	0.5	0.1	1.0	0.6	0.1	1.5	0.7	0.1
	Planning	0.9	0.35	0.2	0.9	1.0	0.1	1.0	1.5	0.1	1.5	2.0	0.1
	Administration	3.7	2.3	0.5	4.2	3.5	0.3	4.5	4.5	0.3	7.5	5.5	0.3
	Totals	20.0	11.75	7.0	23.1	17.0	6.0	26.0	22.3	6.0*	33.0	26.4	6.0*

* Manatee County Figures Assumed to be the same as 72-73.

CENTRAL FLORIDA AIR QUALITY CONTROL REGION

Personnel Requirements

Man - Years

		71 - 72	72 - 73	74 - 75	76 - 77
		STATE	STATE	STATE	STATE
Enforcement Services	Enforcement	0.6	0.7	1.0	1.5
	Complaints/ Investigation	0.4	0.5	0.5	0.3
Engineering Service	Permitting	2.5	2.9	3.0	4.5
	Source Sampling	0.6	0.7	1.0	1.5
Technical Services	Monitoring	2.7	3.2	3.5	5.0
	Special Projects	0.3	0.4	0.5	0.8
Management Services	Training/ Education	0.2	0.2	0.5	0.8
	Information	0.3	0.4	0.5	0.8
	Planning	0.4	0.5	0.5	0.8
	Administration	1.3	1.5	2.0	2.5
	Totals	9.3	11.0	13.0	19.0

SOUTHWEST FLORIDA AIR QUALITY CONTROL REGION

Personnel Requirements

Man - Years

		71-72		72-73		74-75		76-77	
		STATE	SARA-SOTA	STATE	SARA-SOTA	STATE	SARA-SOTA	STATE	SARASOTA
Enforcement Services	Enforcement	0.3	0.1	0.3	0.1	0.5	0.1	0.8	0.1
	Complaints/ Investigation	0.2	0.5	0.2	0.5	0.2	0.5	0.3	0.5
Engineering Service	Permitting	0.8	0.3	0.9	0.3	1.0	0.3	1.5	0.3
	Source Sampling	0.4	0.1	0.5	0.1	0.5	0.1	0.8	0.1
Technical Services	Monitoring	0.8	1.0	1.0	1.0	1.0	1.0	1.5	1.0
	Special Projects	0.2	0.2	0.2	0.2	0.5	0.2	0.8	0.2
Management Services	Training/ Education	0.1	0.1	0.1	0.1	0.3	0.1	0.5	0.1
	Information	0.1	0.2	0.1	0.2	0.3	0.2	0.5	0.2
	Planning	0.2	0.1	0.2	0.1	0.2	0.1	0.3	0.1
	Administration	0.7	0.4	0.8	0.4	1.0	0.4	1.0	0.4
	Totals	3.8	3.0	4.3	3.0	5.5	3.0	8.0	3.0

SOUTHEAST FLORIDA AIR QUALITY CONTROL REGION

Personnel Requirements

Man - Years

		71 - 72				72 - 73				74 - 75				76 - 77			
		STATE	BROWARD	DADE*	PALM BEACH*	STATE	BROWARD	DADE*	PALM BEACH*	STATE	BROWARD	DADE*	PALM BEACH*	STATE	BROWARD	DADE*	PALM BEACH*
Enforcement Services	Enforcement	1.9	0.64	1.0	0.8	2.2	0.50	1.0	0.8	2.5	0.53	1.0	0.8	4.0	0.56	1.0	0.8
	Complaints/ Investigation	1.5	2.00	1.0	0.7	1.8	2.00	1.0	0.7	2.0	2.12	1.0	0.7	3.0	2.25	1.0	0.7
Engineering Service	Permitting	2.1	0.29	0.5	0.3	2.7	0.23	0.5	0.3	3.0	2.44	0.5	0.3	3.0	2.59	0.5	0.3
	Source Sampling	1.8	0.17	0.2	0.2	2.1	0.86	0.2	0.2	2.0	0.91	0.2	0.2	3.0	0.97	0.2	0.2
Technical Services	Monitoring	2.8	4.20	4.6	3.4	3.5	3.50	4.6	3.4	3.5	3.70	4.6	3.4	4.0	3.95	4.6	3.4
	Special Projects	0.9	0.13	0.5	0.3	1.1	0.35	0.5	0.3	1.0	0.37	0.5	0.3	1.5	0.40	0.5	0.3
Management Services	Training/ Education	0.5	0.99	0.4	0.3	0.6	0.95	0.4	0.3	1.0	1.01	0.4	0.3	1.0	1.07	0.4	0.3
	Information	0.9	0.91	0.3	0.3	1.1	1.50	0.3	013	1.5	1.58	0.3	0.3	1.5	1.69	0.3	0.3
	Planning	1.2	0.05	0.3	0.2	1.4	0.10	0.3	0.2	1.5	0.11	0.3	0.2	1.5	1.13	0.3	0.2
	Administration	3.3	1.75	2.8	2.0	4.1	2.50	2.8	2.0	4.0	2.64	2.8	2.0	5.5	2.82	2.8	2.0
	Totals	16.9	11.18	11.60*	8.50*	20.6	12.49	11.60*	8.50*	22.0	15.41	11.60*	8.50*	28.0	17.43	11.60*	8.50*

*Local Program did not provide estimates
Figures are estimates by DPC and assumed to be the same each year.

NORTHWEST FLORIDA AQUALITY CONTROL REGION

Financial Requirements

COST (1000 $)

		71 - 72	72 - 73	74 - 75	76 - 77
		STATE	STATE	STATE	STATE
Enforcement Services	Enforcement	6.6	7.8	7.8	12.0
	Complaints/ Investigation	4.9	5.8	5.8	9.0
Engineering Service	Permitting	17.2	20.4	20.0	30.0
	Source Sampling	6.6	7.8	8.0	12.0
Technical Services	Monitoring	19.7	23.4	23.4	34.0
	Special Projects	3.3	3.9	5.0	7.5
Management Services	Training/ Education	1.6	1.9	2.0	3.0
	Information	3.3	3.9	4.0	6.0
	Planning	4.1	4.9	5.0	7.5
	Administration	14.8	17.6	19.0	26.0
	Totals	82.1	97.4	100.0	150.0

NORTHEAST FLORIDA QUALITY CONTROL REGION

Financial Requirements

COST ($ 1000)

		71-72		72-73		74-75		76-77	
		STATE	DUVAL	STATE	DUVAL	STATE	DUVAL	STATE	DUVAL
Enforcement Services	Enforcement	14.7	37.2	17.5	39.0	20.0	40.9	30.0	43.0
	Complaints/ Investigation	11.0	16.6	13.1	17.4	14.0	18.3	21.0	19.2
Engineering Service	Permitting	38.7	14.6	46.0	15.3	46.0	16.1	69.0	16.9
	Source Sampling	14.7	29.6	17.5	31.1	18.0	32.6	27.0	34.2
Technical Services	Monitoring	44.2	67.5	52.5	70.8	55.0	74.4	82.5	77.8
	Special Projects	7.4	10.6	8.8	24.1	9.0	25.3	13.5	26.6
240-A Management Services	Training/ Education	3.6	14.3	4.3	15.0	5.0	15.8	7.5	16.6
	Information	7.4	6.3	8.8	6.6	9.0	6.9	13.5	7.2
	Planning	9.2	9.3	10.9	9.8	12.0	10.3	18.0	10.8
	Administration	33.1	12.5	39.4	13.1	42.0	13.8	63.0	14.5
	Totals	184.0	218.5	218.8	242.2	230.0	254.4	345.0	266.8

WEST CENTRAL FLORIDA AIR QUALITY CONTROL REGION
Financial Requirements

COST (1000 $)

		71 - 72			72 - 73			74 - 75			76 - 77		
		STATE	HILLS-BOROUGH	MANATEE	STATE	HILLS-BOROUGH	MANATEE	STATE	HILLS-BOROUGH	MANATEE*	STATE	HILLS-BOROUGH	MANATEE*
Enforcement Services	Enforcement	19.7	12.35	7.0	23.4	20.23	5.0	23.5	30.26	5.0	35.0	35.25	5.0
	Complaints/ Investigation	14.8	12.35	20.0	17.6	20.23	15.0	17.5	25.22	15.0	27.0	30.22	15.0
Engineering Service	Permitting	71.8	6.17	2.0	93.5	10.12	1.0	95.0	15.12	1.0	125.0	15.11	1.0
	Source Sampling	20.0	2.47	1.6	33.8	5.06	1.0	34.0	8.06	1.0	36.0	10.07	1.0
Technical Services	Monitoring	79.3	56.81	30.0	102.4	55.64	22.0	102.5	65.56	22.0	140.0	75.51	22.0
	Special Projects	9.8	6.17	1.0	11.5	5.06	--	11.5	8.06	--	18.0	10.07	--
Management Services	Training/ Education	4.9	4.94	2.4	5.8	5.06	1.0	6.0	6.05	1.0	9.0	7.05	1.0
	Information	9.9	4.94	1.4	11.8	5.06	1.0	12.0	6.05	1.0	18.0	7.05	1.0
	Planning	12.4	4.33	1.7	14.7	10.12	1.0	15.0	15.12	1.0	22.5	20.14	1.0
	Administration	64.4	34.58	7.0	72.8	35.40	5.0	73.0	45.38	5.0	109.5	55.41	5.0
	Totals	307.0	145.1	74.1	387.4	172.0	52.0	390.0	225.0	52.0*	540.0	266.0	52.0*

* Manatee County Figures assumed to be the same as 72-73.

CENTRAL FLORIDA AIR QUALITY CONTROL REGION

Financial Requirements

COST (1000 $)

		71 - 72	72 - 73	74 - 75	76 - 77
		STATE	STATE	STATE	STATE
Enforcement Services	Enforcement	9.5	11.3	12.0	18.0
	Complaints/ Investigation	7.2	8.6	9.0	13.5
Engineering Service	Permitting	35.0	41.6	42.0	63.0
	Source Sampling	9.6	11.4	12.0	18.0
Technical Services	Monitoring	38.3	45.5	46.0	69.0
	Special Projects	4.7	5.6	6.0	9.0
240-C Management Services	Training/ Education	2.3	2.7	3.0	4.5
	Information	4.7	5.6	6.0	9.0
	Planning	5.9	7.0	8.0	12.0
	Administration	21.3	25.3	26.0	39.0
	Totals	143.2	164.6	170.0	255.0

SOUTHWEST FLORIDA AIR QUALITY CONTROL REGION

Financial Requirements

COST (1000 $)

		71-72		72-73		74-75		76-77	
		STATE	SARA-SOTA	STATE	SARA-SOTA	STATE	SARA-SOTA	STATE	SARASOTA
Enforcement Services	Enforcement	4.6	1.7	5.5	1.7	6.0	1.7	9.0	1.7
	Complaints/ Investigation	3.5	8.8	4.2	8.8	4.0	8.8	6.0	8.8
Engineering Service	Permitting	12.2	1.7	14.5	1.7	15.0	1.7	25.0	1.7
	Source Sampling	4.6	1.7	5.5	1.7	6.0	1.7	9.0	1.7
Technical Services	Monitoring	13.8	25.3	16.4	10.3	18.0	25.3	30.0	25.3
	Special Projects	2.3	1.0	2.8	1.0	3.0	1.0	5.0	1.0
Management Services	Training/ Education	1.2	0.5	1.5	0.5	2.0	0.5	3.0	0.5
	Information	2.3	3.5	2.8	3.5	3.0	3.5	5.0	3.5
	Planning	2.9	1.7	3.5	1.7	5.0	1.7	8.0	1.7
	Administration	10.5	7.1	12.5	7.1	13.0	7.1	20.0	7.1
	Totals	49.8	53.0	69.2	38.0	75.0	53.0	120.0	53.0

SOUTHEAST FLORIDA AIR QUALITY CONTROL REGION

Financial Requirements

COST (1000 $)

		71 - 72				72 - 73				74 - 75				76 - 77			
		STATE	BROWARD	DADE*	PALM BEACH*	STATE	BROWARD	DADE*	PALM BEACH*	STATE	BROWARD	DADE*	PALM BEACH*	STATE	BROWARD	DADE*	PALM BEACH*
Enforcement Services	Enforcement	31.9	5.8	18.4	12.1	37.9	7.0	18.4	12.1	38.0	7.4	18.4	12.1	55.0	7.9	18.4	12.1
	Complaints/ Investigation	23.0	13.8	18.4	12.1	28.6	12.6	18.4	12.1	28.5	23.3	18.4	12.1	40.0	24.8	18.4	12.1
Engineering Service	Permitting	50.8	2.0	9.2	6.0	55.8	2.1	9.2	6.0	56.0	9.2	9.2	6.0	70.8	2.4	9.2	6.0
	Source Sampling	33.9	10.4	3.7	2.4	37.9	10.6	3.7	2.4	28.0	13.3	3.7	2.4	55.0	14.2	3.7	2.4
Technical Services	Monitoring	65.0	70.8	84.6	55.8	69.0	67.7	84.6	55.8	66.0	71.0	84.6	55.8	85.0	76.0	84.6	55.8
	Special Projects	16.0	8.3	9.2	6.0	19.0	8.3	9.2	6.0	19.0	4.5	9.2	6.0	25.0	4.9	9.2	6.0
Management Services	Training/ Education	7.9	8.7	7.4	4.9	9.3	14.0	7.4	4.9	10.0	15.0	7.4	4.9	15.0	16.7	7.4	4.9
	Information	15.0	8.8	7.4	4.9	19.0	16.4	7.4	4.9	19.0	17.3	7.4	4.9	28.0	18.5	7.4	4.9
	Planning	20.0	0.9	6.5	4.3	23.7	1.0	6.5	4.3	25.0	1.1	6.5	4.3	40.0	1.1	6.5	4.3
	Administration	51.8	14.8	51.6	34.2	65.3	22.7	51.6	34.2	66.5	24.0	51.6	34.2	97.0	25.9	51.6	34.2
	Totals	319.0	127.7	216.4*	142.7*	356.3	170.6	216.4*	142.7*	360.0	179.7	216.4*	142.7*	500.0	192.0	216.4*	142.7*

* Local Program did not provide estimates. Figures are estimates by DPC and assumed to be the same each year.

LOCAL PROGRAM SUMMARY 1971-1972

	Broward	Dade	Palm Bch.	Duval	Manatee	Hills.	Sarasota	State (1)
Total Air Program (Local & Federal)	139,979	216,361	122,691	199,517	98,629	145,105	0	1,087,400
Air Program (Federal)	89,979	90,315	79,938	90,006	45,000	82,105	0	515,400
Air Program (Local)	50,000	126,046	42,753	109,511	53,629	64,000	53,070	572,000
Air Program Personnel (Man/Years)	7.7	19.6	10.7	16.5	7.0	11.75	3.0	66
Population (Million)	0.654	1,300	0.363	0.539	0.100	0.500	0.125	3.076
Expenditure ¢/Person (a) Air	19	16	34	37	94	29	43	35
Man Power Per 100,000 Population (a) Air	1.2	1.5	2.7	3.1	6.0	2.4	2.4	2.1

(1) Does not Inc. L. P. Areas

STATE OF FLORIDA
DEPARTMENT OF
AIR & WATER POLLUTION CONTROL
INTEROFFICE COMMUNICATION

MEMORANDUM

April 14, 1971

TO: All Interested Parties

FROM: Vincent D. Patton

SUBJECT: DAWPC Air & Water Pollution Control Program

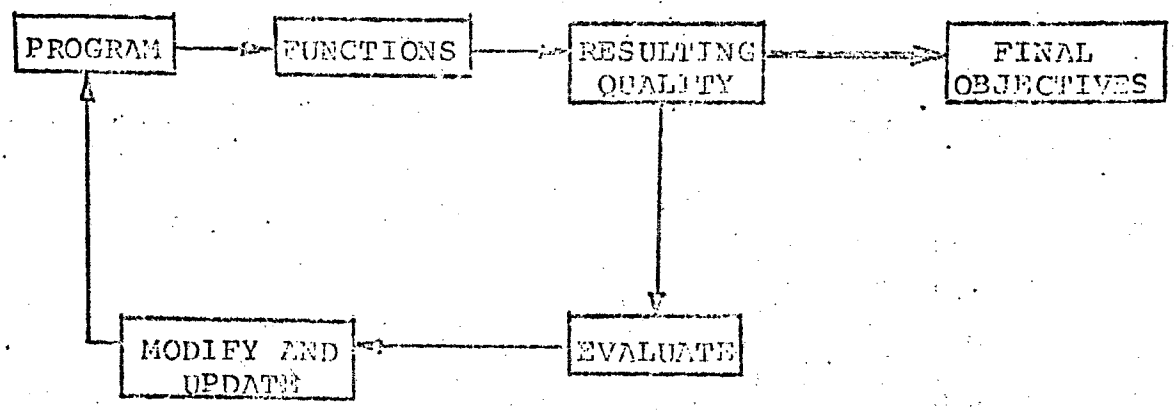
With the recent adoption of the Federal Clean Air Act of 1970 and the latest amendments to the basic Water Pollution Control Act, and the activity of the DAWPC of the State of Florida in the past year, a definite State Air and Water Quality Control Program has been developed. The purpose of this memorandum is to set forth this Program in terms of:

I. Objectives.

II. Programs to meet objectives.

III. Functions (actions) for Program.

IV. Assignment of Responsibility.



The intent of this memorandum is to describe the State Program for the personnel of DAWPC and make available to all other interested parties the policy, direction, and overall program of the State pollution control department.

SECTION I. Long-Term Objectives:

A. Maintain a program of abatement by means of:

1. Maintaining and operating a system to evaluate sources of pollution.

2. Continually enforcing rules and regulations.

3. Providing and maintaining a system of evaluating major and minor pollution problems.

B. Maintain a program of control by means of:

1. Operate and evaluate data derived from a system of determining ambient air and water quality.

2. Maintaining and operating a system of permitting and evaluating operations of pollution sources.

3. Coordinating and continually developing a local program activity that is part of the State-wide program.

C. Continually update the overall program of air and water quality control by means of:

1. Reviewing existing and adopting new standards and regulations.

2. Encouraging land-use planning consistent with State pollution control objectives.

3. Reviewing State and local pollution control activities.

4. Informing all interested parties of pollution control activities.

5. Maintaining and developing up to date control techniques.

Short-Term Objectives:

Development of a State-wide implementation plan, including:

A. Review and up-date of legislation.

B. Evaluate ambient air and water quality in selective areas of State.

C. Complete effluent and emission inventory of both area and point sources.

D. Review and revise air and water quality rules and regulations.

E. Draft and present at a public hearing the State Control Plan.

SECTION II. Programs to Meet Objectives:

A.	Set goals (Air and Water Quality Standards).	[Planning]
B.	Evaluate Air and Water Quality (Monitoring).	[Control]
C.	Evaluate sources of pollution (Permit System, Source Sampling).	[Control]
D.	Develop effluent and emission standards to meet air and water quality standards.	[Planning]
E.	Pollution abatement (bring to legal standards) - enforcement.	[Abatement]
F.	Pollution control (Maintain at legal standards) - inspection, source sampling, permit system.	[Abatement and Control]

Section III. Functions.

To accomplish the objectives of Section I, the following functions will be carried on:

Enforcement: All technical and legal activities conducted to enforce rules and regulations of the Department from the time that an official legal action (administrative or litigated) has been initiated, until final compliance has been obtained.

Administration: All activities related to both internal affairs (personnel, financing, etc.) and technical management of personnel and resources of the Department, including programming and administration of work loads and objectives.

Permitting: All activities, actions or work to provide a system of review, approval, permitting, or certification of all projects that will have an effect upon the air and water quality of the State.

Source Evaluations: Routine, scheduled, or programmed work or actions to review and evaluate all sources of pollution to determine compliance with the rules and regulations of the Department.

Air and Water Quality Monitoring: Routine, scheduled, or programmed work or actions to evaluate the air and water quality of the State.

Complaints and Investigations: All actions required to evaluate and take appropriate actions concerning major or minor sources of pollution, both of a chronic and acute nature.

Special Projects: All activities or actions of specialized nature--long or short term--that support, may be supplemental or have a relation to the overall pollution control effort but not covered by any other function, e.g., Local Program coordination.

Training and Education:	All activities to plan, coordinate, or conduct training programs of Department personnel or all other interested parties.
Information:	All actions required to inform all persons, staff, and public as to the Department's pollution control activities, or any other information of general interest dealing with air and water quality of the State.
Planning:	All actions in the development, implementation, and continual review of the State's pollution control programs and plans.

SECTION Iv RELATION OF PROGRAMS/FUNCTION/STAFF

	Office of Director	Planning Division	Operations Division				
			Director of Operations	Bureau of Permitting	Bureau of Surveillance	Bureau of Enforcement	Bureau of Field Services
ABATEMENT PROGRAM							
Enforcement				B	B	A	B
Complaints/Investigations							A
CONTROL PROGRAM							
Source Evaluation				C	C		A
Monitor Air/Water Quality (1)					B		A
					C		
Permitting				A			B
Special Projects			A	B	B	B	B
PLANNING & ADMINISTRATION							
Planning		A	B				
Administration	A	B	B				
Information	A						
Training/Education	A	B	B				

CODE:

A = Primary Responsibility

B = Secondary Responsibility--Support

C = Secondary Responsibility--Guidance

E: (1) Automatic Monitor-
- Bur of Sur - Primary
onsibility.

In order to describe the State level resources available, the activities of the Pollution Control Department are described under the seven program components making up the entire program for the Department. Those components are Licensing and Permitting, Source Evaluation, Complaint and Investigation, Prosecution and Adjudication (Enforcement), Air Quality Monitoring, Training and Education, Administrative Direction and Support Services (ADSS). Each program is discussed in the following paragraphs.

Licensing and Permitting

The Bureau of Permitting within the Division of Operations is a focal point of permitting activity with final review and issuance of permits being done by the Bureau. Pursuant to Chapter 17.4, Permits, which was promulgated within the authority of Chapter 403, Florida Statutes, permits for construction, operation, expansion or installation of any facility which may be a source of air pollution is required in the State of Florida. Such permits may be revoke upon failure to perform to permit conditions or upon violation of pollution rules or State laws. Some pollution sources are exempt, however, they are minimum in both emissions and effect as maybe seen from the attached copy of 17-4. Failure for a person, company or legal entity to have a permit for operation or for construction can lead to administrative enforcement action or to civil penalties, a maximum of $5,000 a day. The permit application is made on forms printed by the Department and requires among other things the owners name, the plant location, the type of operation, a material balance, specifications and plans for control devices and the number of sources along with the emission rates of contaminants and other source information such as volumes and temperatures. The permit application is reviewed first by the Department regional personnel or if within a county having a local program by the local program, then by regional personnel. Then the application is forwarded to the Bureau of Permitting in Tallahassee for further review and consideration for approval. All of the factors affecting or affected by the new source are considered including; location, kind and quantity of emission as it relates to the latest control technology and to specific emission limits set by State rule, and existing ambient air conditions.

The Licensing and Permitting activity includes about 22% of the air pollution program funds for the

State. The total funding includes money for the use of part of a computerized data system designed for collection, handling, storage, retrieval and computations for permit data.

Source Evaluation

The component source evaluation includes the actions taken to determine the kinds and rates of emission of contaminants from individual sources in order that the emissions can be related to permit requirements and/or environmental considerations. Each region is staffed with man power and equipment to field one source team which can make determinations to test rule and permit violations. In addition to the usual capabilities a centrally located group with equipment and technical know-how is maintained in order that sources of unusual size or contaminant complexity may be sampled. In the same location there is also a special analytical group to handle analyses of contaminants which due to the cost or complexity is not performed in the regions. The funding for the source evaluation program represents about 8% of the total air program. For the 1972-73 budget the funding is increased by nearly five times, to $195,200. Methods for sampling mobile sources are presently not included in the source evaluation program, however, a limited program has been initiated under Chapter 325.19 Florida Statute at the motor vehicle inspection stations throughout the State.

Complaint and Investigation

The complaint and investigation component represents a valuable activity which results in the location of previously unknown sources, a documentation of unusual discharges, and the pursuit of public health, welfare and damage incidences. This program is conducted almost entirely at the regional level with each employee trained to respond to complaints. Complaint reaction is followed up with complete investigation and sampling as required and notification to the suspect source with follow-up by enforcement action if necessary. The funding for the complaint investigation is 6% of the total Department's air program funds.

Prosecution and Adjudication (Enforcement)

The enforcement phase of the total departmental program has annually become stronger both in personnel and funds. Presently the enforcement phase at the Tallahassee office includes a total of 11 persons, 6 in the Legal Section and 5 in the Bureau of Enforcement. The Legal Section includes 4 attorneys and the Enforcement Section includes 3 engineers. This constitutes the group who control and manage all enforcement cases for the entire Department. The funds of the air program enforcement phase represent about 8% of the air program budget.

The following description will demonstrate how the enforcement system works. An enforcement case may originate from a complaint-investigation, a plant inspection or an incident experienced by an employee or it may arise out of a rule or permit violation discovered by source emission tests or the air monitoring program. The case is investigated thoroughly within the region in which it occurs and a report of the case is forwarded to the Division of Operations in Tallahassee. The Division of Operations reviews the case for accuracy and validity and the case is then transferred to the Legal Section with the Department's recommendations. The case is then usually handled by administrative order, after which time complete control and follow-up of the case becomes the responsibility of the Bureau of Enforcement. At this time, through administrative procedures, the polluter is put under specific dated schedule for compliance and the case is followed up until pollution abatement is accomplished. Since the Bureau of Enforcement is limited in number of Personnel, after the initiation of the case, follow-up actions such as source evaluation, inspections, and monitoring programs are performed by regional personnel at the request of the Bureau of Enforcement.

Some cases, upon initially being transferred to the Legal Section, may be taken to Civil Court depending upon the factors involved with the emissions, the source owner, and possible effects of the pollutant. Such cases then are handled in Civil Court and control is maintained with the Legal Staff. For other cases both administrative action and civil penalty may be sought simultaneously. It is anticipated that for the year 72-73 both the legal and enforcement staffs will be increased to a total of eighteen persons for the entire Department. The air program funds for 72-73 are estimated to be increased to about $213,000.

Air Quality Monitoring

Funds for air quality monitoring will be increased from 260,900 dollars for the 71-72 year or about 24% of the total air budget to $930,100 for the 72-73 year or about 37% of the total air budget. These values indicate an alerted interest in ambient air quality. There are presently three automatic monitoring stations operating and owned by the State. These will be increased in number and are described more completely in the section on Surveillance and Monitoring. It is the intent of the State to provide adequate coverage pursuant to outlines by the Environmental Protection Agency for the six pollutants included sulfur dioxide, particulate, nitrogen oxides, carbon monoxides, photochemical oxidants and hydrocarbons as well as providing the necessary monitoring system for additional ambient contaminants as national air standards are promulgated.

Training and Education

This component is shown as about 2.0 percent of the total air budget. The program includes primarily training and education of new employees with respect to inhouse training and the training of analytical and operational personnel both within the district facilities and at the source owners facilities. The funds shown do not include enrollment and expense fees for outside schools such as conducted by EPA and universities. Those funds are included in other categories.

Administration Direction and Support Services (ADSS) *

The ADSS component includes sub-programs of Planning, Administration, Information and Special Pollution Control Projects. For the 1971-72 air budget ADSS includes 31 percent of the total funds and for 72-73 43 percent, increasing from a total of 337,200 for 71-72 to 666,300 for 72-73. The largest of the sub-programs within this program component is Planning.

The Planning Division, within which most of the program is carried out, consist of an office of the Director and three sections of which two are involved with air quality. Those two sections are Air Quality Management and Air and Water Quality Standards Development. The total man years allotted to air pollution are 3.4 for 1971-72. These sections will provide resources to

* Management Services

follow-up the air implementation plan as it is carried out by the Division of Operations and to respond to the needs of the program with respect to rules and area planning as it relates to ambient air quality.

The sub-program of Information reflects an active program with a $43,500 funding for the year 71-72 following by about $43,600 funding for the year 72-73. This is a very small portion of the total air budget. The budget will cover public appearances, preparation of published material, education displays and other modes of presenting the air pollution story to the general public.

The sub-program Administration deals with purchasing, personnel, cost accounting, interdepartmental administrative actions and requirements concerning budgeting and projected overall program control and management. This sub-program provides necessary support to a properly managed overall program. The funding represents 18 percent of the total funded budget or about $195,800 for 1971-72.

The last sub-program under the ADSS component is special pollution control projects.* This program includes both a problem solving phase and maintenance of on-going interagency activities. The interagency activities include coordination with local programs which are currently in existence. The problem solving phase would provide solutions to situations such as updating overall air pollution data into the EDP system, investigating methods of analyses and setting up specialized and centrally located stack sampling equipment and capabilities. As in many others, the funds for this program will be spread through two or more Department Divisions or Bureaus.

Local Programs

The local pollution control programs generally are staffed and equipped in a manner similar to the State program. Since under Chapter 403 Local Programs must be approved by the State program, each one is required to provide the phases necessary to implement abatement and control programs and they will be required to take necessary action for implementation of the air quality control region plan. Failure to perform under the implementation plan can impose requirements of the State statute and bring about reconsideration of approval of the program. Thus, following appropriate administration action open to the Department, imposition of the State

* Included under Technical Services in tables.

control program in each county failing to respond properly is legally possible. Prior to approval each local program is examined carefully for proper funding, enforcement capability, source and ambient air monitoring, complaint and investigation, and the basis in adequate law and rule for enforcement of a control program.

Although, the present local program control budgets do not necessarily reflect the needs of the implementation plan, subsequent funding and program activities must reflect those needs pursuant to State Statute requirement. Some factors are discussed in the following paragraphs as they presently exist and as they will continue to be carried out within the local programs.

Enforcement is generally the prerogative of the local program, however, certain situations which the local programs cannot handle are referred to the State level for enforcement. These situations may include problems with county or city owned facilities which may not be enforceable due to local public or private pressures. In addition, enforcement relative to sources whose size or complex nature is beyond the scope of a local program may be referred to the State for action under State rules or Statutes.

With the exception of Dade County, the local programs have no permit system and act in cooperation with the State permit system by providing necessary reviews, inspections, testing, etc., for possible enforcement actions. The Dade County permit system presently includes many small sources which are not permitted by the State system. Since the Dade system does not include larger sources, the two systems are compatible.

Local programs have both source and ambient monitoring systems and are expected to maintain and improve as necessary those systems in response to the air implementation plan. The State will make use of the data generated by a direct input to the State computer system.

Other State Agencies

The cooperation of other State agencies is expected and in fact is legally required pursuant to Chapter 403, Florida Statutes, in order to carry out pollution control programs in the State. Past performance indicates an excellent degree of cooperation with other agencies. Two such agencies which previously and presently are involved

with air pollution control activities are the Division of Forestry, Department of Agriculture and Consumer Services, and the Department of Transportation. The Division of Forestry is cooperating in the implementation of the open burning rule in the State and cooperation with the Department of Transportation is evidence by attached letter from the Secretary of the Department of Transportation describing the Departments plans and possible modes of action.

Florida Resources

Local Air Pollution Control Programs

South East Air Quality Region

Dade County

Metropolitan Dade County Pollution Control
864 N. W. 23rd Street
Miami, Florida 33127
Mr. Peter J. Baljet, Director

Broward County

Broward County Air and Water Pollution Control Board
540 Southeast Third Avenue
Fort Lauderdale, Florida 33301
Mr. Warren S. Craven, Chairman

Palm Beach County

Palm Beach County Health Department
P. O. Box 29
West Palm Beach, Florida 33402
Mr. C. L. Brumback, M. D., County Health Director

West Central Air Quality Region

Manatee County

Manatee County Air and Water Pollution Control Department
202 Sixth Avenue East
Bradenton, Florida 33505
Mr. L. H. Fortson, Jr., Chairman, Board of County Commissioners

West Central Air Quality Region (Continued)

Hillsborough County

Hillsborough County Pollution Control Commission
906 Jackson Street
Tampa, Florida 33602
Mr. Frank Neff, Chairman, Hillsborough County Pollution Control Commission

North East Air Quality Control Region

Duval County

City of Jacksonville
Department of Health, Welfare and Bio-Environmental Services,
Bio-Environmental Services Division
Air and Water Pollution Control
Jacksonville, Florida 32202
Mr. Robert J. Stroh, Chief, Bio-Environmental Services

South West Air Quality Control Region

Sarasota County

Sarasota County Pollution Control Board
P. O. Box 2658
Sarasota, Florida 33578
Mr. F. H. Heinzman, Director

Section VIII

Intergovernmental Cooperation

Interstate Relationship

Adequate implementation of abatement and control programs in an interstate region is confronted with many problems, the most important of which are organizational and jurisdictional conflicts between the States. In order to coordinate to the fullest extent possible, two factors are considered important - (i) the states should have control organizations, and (ii) the states should have comparable air quality standards. By the enactment of the Clean Air Acts of 1967 and 1970, and with the promulgation of the national air quality standards, these factors have been established.

The Department of Pollution Control of the State of Florida intends to cooperate fully with other state agencies involved in its two interstate regions. For the purpose of developing the Implementation Plan, the State of Florida has already furnished to Alabama and Georgia information on emission inventory and available air quality data. The State of Florida intends to continue to cooperate with these two adjoining states in matters relating to ready exchange of above information plus cooperation and assistance in air quality surveillance and air pollution emergencies pertaining to any or all portions of its interstate regions.

There is no local air pollution control program in the Florida portion of the Northwest Region and one local air pollution control program (Consolidated City of Jacksonville) in the Northeast Region. Since the state is responsible for the control and abatement program throughout the state including locally regulated areas, interstate activities will be carried out at the state level rather than including local programs, since this approach will avoid any conflicts which may arise as a result of possible different approaches to solutions.

The Department of Pollution Control assures the bordering states of Alabama and Georgia that the emissions in the Florida portions of the Mobile - Pensacola and Jacksonville - Brunswick Interstate Air Quality Control Regions will be controlled to such a degree which will allow attainment and

further enhancement of national air quality in the counterparts of these interstate regions. These assurances are contained in letter form to Alabama and Georgia and are made part of this plan.

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL
SUITE 300, TALLAHASSEE BANK BUILDING
315 SOUTH CALHOUN STREET, TALLAHASSEE, FLORIDA 32301

VINCENT D. PATTON
EXECUTIVE DIRECTOR

DAVID H. LEVIN
CHAIRMAN

May 2, 1972

Mr. W. T. Willis, Director
Alabama Air Pollution Control
Commission
Alabama Department of Health
Montgomery, Alabama, 36184

Dear Mr. Willis:

Section 420.21 of the "Federal Requirements for Preparation, Adoption, and Submittal of Implementation Plans" list the requirements for intergovernmental cooperation. Since the Mobile - Pensacola Air Quality Control Region is an interstate region, please be assured that any available data on emissions, air quality, and control strategy development for the Florida portion will be furnished, upon request, to your agency or any authorized representative of your agency.

Also, please be assured that the State of Florida Department of Pollution Control will not allow emissions or grant variances from its applicable rules and regulations, which may result in such quantities as to prevent the State of Alabama from achieving the national air quality standards. Further be assured, that the Florida Department of Pollution Control will institute adequate emergency abatement steps in the Florida portion, and assist in everyway possible the State of Alabama Air Pollution Commission, or its representative agency or agencies by providing manpower and equipment in case of an air pollution emergency situation in the Alabama portion of the said interstate air quality control region.

We have had a close working relationship in the past and to assure it is continued in the future, we are making this as part of our Air Implementation Plan, which is under consideration for approval before the Administrator of the Environmental Protection Agency.

Sincerely,

Vincent D. Patton

Vincent D. Patton

VDP/spm

258-A

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL
SUITE 300, TALLAHASSEE BANK BUILDING
315 SOUTH CALHOUN STREET, TALLAHASSEE, FLORIDA 32301

VINCENT D. PATTON
EXECUTIVE DIRECTOR

DAVID H. LEVIN
CHAIRMAN

May 2, 1972

Mr. R. H. Collom, Jr.,
Director
Air Quality Control Branch
Georgia Department of Public Health
47 Trinity Avenue, Southwest
Atlanta, Georgia, 30334

Dear Mr. Collom:

Section 420.21 of the "Federal Requirements for Preparation, Adoption, and Submittal of Implementation Plans" list the requirements for intergovernmental cooperation. Since the Jacksonville - Brunswick Air Quality Control Region is an interstate region, please be assured that any available data on emissions, air quality and control strategy development for the Florida portion will be furnished, upon request, to your agency or any authorized representative of your agency.

Also, please be assured that the State of Florida Department of Pollution Control will not allow emissions or grant variances from its applicable rules and regulations, which may result in such quantities as to prevent the State of Georgia from achieving the national air quality standards. Further be assured, that the Florida Department of Pollution Control Will institute adequate emergency abatement steps in the Florida portion, and assist in everyway possible the State of Georgia Air Pollution Control Department, or its representative agency or agencies by providing manpower and equipment in case of an air pollution emergency situation in the Georgia portion of the said interstate air quality control region.

We have had a close working relationship in the past, and to assure it is continued in the future, we are making this as part of our Air Implementation Plan, which is under consideration for approval before the Administrator of the Environmental Protection Agency.

Sincerely,

Vincent D. Patton

Vincent D. Patton

VDP/spm

258-B

State of Alabama
Department of Public Health
State Office Building
Montgomery, Alabama 36104

IRA L. MYERS, M. D.
STATE HEALTH OFFICER

October 20, 1971

Mr. Vincent Patton
Executive Director
State of Florida Department of
Air and Water Pollution Control
315 South Calhoun Street
Tallahassee, Florida 32301

Dear Mr. Patton:

As you are well aware, Section 420.21 of Subpart B of the Federal Requirements for Preparation, Adoption, and Submittal of Implementation Plans lists the requirements for Intergovernmental Cooperation. In keeping with these responsibilities our Division has developed a Statement of Intent for interstate cooperation. It is actually a modification of the statement of intent adopted by the Kentucky - Virginia Air Pollution Control Committee. Our only addition to this existing document is Section IX which allows for modifications. Several of the original sections of the document have been changed to meet our specific needs.

We have enclosed a copy of the Statement for your review and comments. Feel free to offer any suggestions or corrections you may have for making it a more workable plan. If you have written a similiar statement and feel that it offers a better approach, please send us a copy so that we may review it. Our only objective is to complete the requirements of the Federal Plan and have a good working relationship with our neighboring states so that we may all get the job done as expeditiously as possible. We look forward to hearing from you in the near future.

Sincerely yours,

W. T. Willis

W. T. Willis, Director
Division of Radiological Health

WTW:lgc

Enclosure

STATEMENT OF INTENT FOR
INTERSTATE COOPERATION OF THE

ALABAMA - FLORIDA - MISSISSIPPI
AIR POLLUTION CONTROL COMMITTEE

This Statement of Intent, effective October 1, 1971, and concurred in by the air pollution control agencies of the State of Alabama, State of Florida, and the State of Mississippi, is designed to set forth basic policies of interjurisdictional cooperation in the areas designated by the Administrator, Environmental Protectional Agency, as the Mobile (Alabama) - Pensacola-Panama City (Florida) - Southern Mississippi Interstate Air Quality Control Region (hereinafter referred to as the "Region"). The purpose of this document is to establish a flexible mechanism whereby the control agencies of the three States can readily exchange information and data of common interest, and coordinate, insofar as possible, control efforts, achieve optimum utilization of data, avoid unnecessary expense and duplication of effort, and enable the party states to develop and effectively carry out their respective Implementation Plans as required by Section 110 of the Clean Air Act (as amended).

Policies and Procedures

I. Name: The organization shall be known as the Alabama - Florida - Mississippi Air Pollution Control Committee (hereinafter referred to as the "Committee").

II. Membership: The following governmental air pollution control agencies shall be members of the Committee:

State of Alabama
Air Pollution Control Commission

State of Florida
Air and Water Pollution Control Board

State of Mississippi
Air and Water Pollution Control Commission

III. Designated Representatives: For purposes of giving notice of meetings, exchanging data and other pertinent information, etc.,

the following are designated as the Representatives for each respective control agency:

State of Alabama

Director (or his designee)
Alabama Air Pollution Control Commission
Room 311, State Office Building
Montgomery, Alabama 36104
Telephone: 205-269-7634/7635

State of Florida

Director (or his designee)
Air and Water Pollution Control Board
315 S. Calhoun Street
Tallahassee, Florida 32301
Telephone: 904-224-9151

State of Mississippi

Director (or his designee)
Air and Water Pollution Control Commission
P. O. Box 827
Jackson, Mississippi 39205
Telephone: 601-354-6783

IV. Local Representatives: In recognition that local government units may be delegated significant responsibilities in carrying out Implementation Plans for the prevention and control of air pollution, and to assure proper coordination between state and local government officials, it is felt that local representatives on the Committee would be desirable and appropriate. Therefore, it is mutually agreed that each member may invite local representatives to attend and participate in all activities of the Committee. The names of said local representatives, upon designation, will be appended to this document.

V. Federal Representation: Due to the impact of the Clean Air Act (as amended) on the control efforts of the various agencies having jurisdiction within the Regions, and the desire of the Committee members to be informed of federal activities and available technical assistance which may inure to each other's

benefit, it is felt that a federal representative on the Committee would be appropriate and advantageous. Therefore, it is mutually agreed that an official of the Office of Regional Activities, Region IV, Atlanta, Environmental Protection Agency, shall be invited to attend and participate in all activities of the Committee as an observer and non-voting member, such official's name upon designation to be appended to this document.

VI. Organization, Meetings, Minutes:

A. Organization - The organization and conduct of Committee meetings shall be as informal as possible. The Committee shall have no permanent chairman or secretary, but shall, at the discretion of the members, delegate such responsibilities and duties in an equitable manner.

B. Meetings - It is felt that the purposes of the Committee can, for the most part, be achieved by routine correspondence and telephone communications. Accordingly, the Committee shall meet at a mutually agreeable time and place on the call of one of the members when matters of import dictate but in any event not less than once in every calendar year.

C. Minutes - Minutes of Committee meetings shall be recorded and distributed to the members by the person designated as the secretary of the meeting.

VII. Exchange of Information: It is the intention of the Committee members that information and data of common interest should be freely exchanged. Such exchange shall be directed to the Designated Representative for each respective control agency. Without limiting the scope of exchange, the following matters will form the basis of interjurisdictional exchange of information and data:

A. Legislative and Administrative - The Committee members shall

exchange copies of enabling legislation, adopted regulations or ordinances, annual reports, and any other pertinent information relative to control activities within the Region.

B. Proposed Standards - Each Committee member shall forward copies of proposed ambient air quality and emission standards applicable to any portion of the Region for other Committee members' review and comment. Notice of any public hearings held relative to the adoption of said standards shall be given the Committee through each member's Designated Representative.

C. Air Quality Monitoring Data - The Committee members shall exchange summary tabulations of air quality data and other information on the location of monitoring sites and methods used sufficient to interpret the data for each agency's portion of the Region. The Committee agrees to adopt report formats as are or may be required by the Environmental Protection Agency, or such other format that is suitable.

D. Source Emission Data -

1. Existing Sources. The Committee members shall exchange summary tabulations of air pollutant emission data for both point and area sources within each agency's portion of the area of concern. Any Committee member shall, upon request of another member, provide to such other member specific air pollutant emission data related to a particular source or sources. The Committee agrees to adopt report formats as are or may be required by the Environmental Protection Agency, or such other format that is suitable.

2. New Sources. Each Committee member shall promptly transmit to all other members information concerning proposed

new construction or expansion of air pollutant sources within that agency's jurisdiction that has the potential of emitting 100 tons per year or more of any pollutant which may affect the other agency's area. Such information shall include, but is not limited to, the type of source, the nature and quantity of emissions, the stack height and diameter, the gas exit temperature and velocity, the type and design efficiency of proposed control systems, and an evaluation as to the potential for contravening air quality standards of a neighboring state. As used here, a new or expanded source is one whose proposed or expanded operation begins after the date upon which this agreement takes effect.

E. Complaint Referrals - Any complaint received by one control agency concerning air contaminant emissions originating in the other state will be forwarded to the control agency of that latter state for action. The control agency of that latter state will then report on the action taken.

It is the intention of the Committee that progress reports submitted by its individual members to the Administrator, Environmental Protection Agency, which are related to the achievement of Implementation Plan Goals will be deemed to meet the objectives of this section contained in paragraphs C and D (1).

VIII. The Committee shall work toward and cooperate in the development of communications and operational procedures as are necessary and appropriate for the conduct of joint air-quality monitoring and regulatory actions during emergency air pollution episodes that occur in the areas of concern.

IX. Modifications: This Statement of Intent may be modified or altered by concurrence of the signatories hereto. To the extent that commitments are hereby made, it is the intent of said signatories hereto that this Statement of Intent is binding upon them and their successors unless and until expressly revoked by a signatory party.

X. Expression of Intent: The undersigned hereby witness that they concur with the aforesaid purposes and objectives, and that they recognize the desirability and indeed the necessity of coordination of technical matters in interstate areas of joint interest and concern. It is understoood that no legal liabilities or other binding commitments beyond the authority bestowed by each state's respective statutes are hereby made, but that a positive intent for cooperation in all the above matters is expressed.

Ira L. Myers, M. D., Chairman and
acting on behalf of, The Alabama
Air Pollution Control Commission

Nathaniel P. Reed, Chairman,
Florida Air and Water Pollution
Control Board

James W. Carraway, Chairman,
Mississippi Air and Water Pollution
Control Commission

State/Local Relationship

Attached is the initial development of assignment of responsibility between the Department of Pollution Control and Local Programs. This material has been submitted to each Local Program in the State. Detailing and outlining specific actions to be taken are currently being formulated and will be disseminated to the responsible local area when complete.

It should be noted that the Department of Pollution Control will retain a majority of the responsibility to carry out the Air Implementation Plan, particularly in the programs of Permitting and Enforcement.

STATE/LOCAL RELATIONSHIP

Section II - Legal Authority

	State	Local
Authority:	Chapter 403, F. S., (Department of Pollution Control)	Dade County - Local Acts and Ordinances & DPC Approval Palm Beach County - Same Broward County - Same Hillsborough County - Same Duval County - Same Manatee County - Same Sarasota County - Same Note: Only the above are authorized Local Control Groups.
Responsibility:	The DPC shall have overall state responsibility for the conduct of the Air Implementation Plan under the provisions of Chapter 403, F.S.	The authorized Local Programs listed above shall have the responsibility to coordinate and report to the DPC all actions and activities outlined and defined by the Air Implementation Plan and any other information that may be required.
Required Actions:	Continue to review federal requirements and update plan. Advise and consult with Local Programs for updating of their authority.	Review and modify basic laws and ordinances in conformance with state requirements.
Staffing:	Not applicable.	Not applicable.
Logistics:	Not applicable.	Not applicable.

Section III - Rules and Regulations

	State	Local
Authority:	FAC 17-2, 170C-12, 17-5, 17-4.	Applicable local ordinances, duly adopted rules and regulations.
Responsibility:	The DPC shall continually review, modify and adopt new rules and regulations to implement the intent of the Air Implementation Plan. The Department of Pollution Control shall enforce all rules and regulations in all areas of the state, except in authorized Local Program areas; and with certain exceptions under Permitting and granting of variances.	Local Programs shall review, modify where necessary, and adopt air pollution control regulations that are as strict as requirements of the state rules and regulations, except in those sections dealing with Permitting and variances to state rules. Local Programs can require more stringent rules and regulations only if the rules do not conflict with the intent of Air Implementation Plan. All programs shall have the responsibility to enforce local rules and regulations.
Required Action:	The DPC shall carry forward a strong program of Enforcement, with the intent of gaining correction to air pollution problems. It shall continue to develop a program of C/I, gaining correction at the local level for minor type problems and utilize all other legal methods available for the control of air pollution. Each Regional Office of the DPC shall coordinate with and assist Local Programs in the enforcement of rules and regulations of the state.	Actions by Local Programs shall have the same intent as the state program. Reporting of all actions to the DPC shall be in the same form and manner as utilized by the DPC and through the Regional Offices of the DPC.
Staffing:	The DPC shall provide a uniform organizational structure at the central staff level and the regional level to conduct all programs. See Table I.	All Local Programs shall conform to a standard program structure, compatible to the DPC regional program and assignment of responsibility.

Section III - Rules and Regulations

	State	Local
Staffing: (Cont'd.)	At the regional level the structure shall take the following form and assigned responsibility. Administrative Group: Planning, Administration, Information, Training, Special Projects Engineering Section: Permitting, Enforcement Analytical Service Section: Source Evaluations, Air Quality Monitoring Inspector Section: Complaints/Investigations Staffing of specific positions within each section of the organizational structure shall be dependent upon the needs of the regions and bureaus.	Specific positions of personnel within the overall structure shall be dependent upon the needs of the area or program.
Logistics:	Major items of equipment and other support covered under other sections. May vary with respect to programs of Enforcement, Planning, Special Projects, Training and Information.	Major items of equipment and other support covered under other sections. May vary with respect to programs of Enforcement, Planning, Special Projects, Training and Information.

Section IV - Permits

	State	Local
Authority:	FAC 17-4, F. S. 403.061 (7) (10) (18); 403.087; 403.088.	All permits for pollutional sources covered under state rules and laws applicable to Local Program areas. All sources not encompassed under the above, authority granted by local ordinances or rules.
Responsibility:	The DPC shall have the full responsibility for the issuance and denial of permits under provisions of the above authority. Procedures for handling of permits are outlined in other parts of this section. Enforcement of violations of permit conditions imposed by the state, shall be the responsibility of the DPC. This authority can be delegated to Local Programs.	The Local Programs shall be required to review and comment on all permits prior to issuance by the DPC. Any rejection of permits by the Local Program shall be resolved with the applicant prior to submission to DPC. Any local conditions applied to state permits shall be the responsibility of the Local Program to enforce. Local Programs may enforce violations of state permits upon delegation of authority by the DPC.
Required Action:	Actions by the state in the handling of permit applications are outlined in other sections of this plan, including data processing. The DPC shall review each permit on a routine basis and in conjunction with the Source Surveillance System, determine compliance or non-compliance with permit conditions.	Actions by the Local Programs in handling of permit applications are outlined in other sections of this plan. All actions by the Local Program in the handling of permits and data processing shall conform to state procedures. The Local Programs shall routinely evaluate each permit issued and in conjunction with Source Surveillance System, determine compliance or non-compliance of permit conditions. All actions by Local Programs in regard to the State Permit System shall be reported routinely to the DPC, through the Regional Offices of the DPC.

Section IV - Permits

	State	Local
Staffing:	See Staffing of Section III.	See Staffing of Section III.
Logistics:	See Logistics of Section III.	See Logistics of Section III.

Section V - Air Quality Surveillance

	State	Local
Authority:	Applicable Section F. S. 403.	Applicable section of Local Acts, Ordinances, Rules and approval under F. S. 403.182.
Responsibility:	The DPC shall have the full responsibility to conduct, analyze and handle data from a Statewide Surveillance (Air Quality Monitoring) Program. Delegation of certain portions of this responsibility are defined under other portions of this section. The overall surveillance network of the state is outlined on pg. 208 - 223. The data handling is also included in this section.	Local Programs shall be delegated the authority to conduct an Air Surveillance (Air Quality Monitoring) Program. The functions of the Local Program shall conform to and be a part of the statewide plan. All requirements and actions indicated by the state plan are minimum requirements and may be exceeded if in the interest of providing a more expanded control activity and not in conflict with the Air Implementation Plan.
Required Action:	The DPC shall be responsible for the development and selection of the state surveillance network, including the data handling system. The DPC shall maintain and operate all network facilities outside of Local Program areas. The scheduling of the routine sampling, network details and data handling specifications and details shall be fully developed by the DPC.	The Local Programs shall be responsible for the conduct of an Air Surveillance Program within their area of responsibility. All actions shall conform to the statewide adopted procedures, specifications, policy, performance standards and schedules. Reporting of all actions taken under this section shall be in the same form and manner as utilized by the DPC and through the Regional Offices of the DPC.

Section V - Air Quality Surveillance

	State	Local
Required Action: (Cont'd.)	Finalization of this portion of the Air Quality Surveillance Plan will be forthcoming from the Department and certain portions will be delegated to the interested Local Programs.	
Staffing:	Specific positions shall be dependent upon the needs of the Region or Bureau. Positions will be located within the organization structure shown in Staffing of Section III.	Specific positions shall be dependent upon the needs of the Local Program areas. Positions will be located within the organization structure shown in Staffing of Section III.
Logistics:	Full details of existing, required and needed equipment and facilities shall be derived by the DPC and made part of supplemental information to this section. Specifications, performance standards and types of facilities shall be outlined and certain portions will be delegated to all interested parties, both state and local.	Upon notification by the DPC, delegated logistics will be provided by all respective Local Programs.

Section VI - Source Surveillance

Authority:	Applicable laws and rules to allow for monitoring of emissions and evaluation by regulatory agency.	Same as state except some Local Programs may require revisions of ordinances or rules to allow for inspection of facilities.
Responsibility:	The DPC shall have the full responsibility to conduct a Source Surveillance program on a routine and scheduled basis. This program will be conducted in conjunction with the permit review program.	The Local Programs shall provide and maintain the capability to conduct a program of Source Evaluation within their area of responsibility. This program shall be conducted in conjunction with and conformance to the state program.

Section VI - Source Surveillance

	State	Local
Required Action:	Under this program and permitting each Regional Office will develop the capability to evaluate sources of pollution, both engineering-wise and stack sampling in the Analytical Service Section. Schedules of evaluations shall be developed for all major sources shown on the emission inventory. Priority of scheduling shall be based upon major pollutional discharges and emissions in the region. All evaluations shall be conducted by approved standard methods adopted by the DPC.	Local Programs shall develop and implement a Source Surveillance Program compatible with the state program. Scheduling of source evaluations shall be based upon the same principles as designated by the state program. Scheduling of evaluations shall be coordinated with the Regional Offices of the DPC and all actions will be reported as in other programs.
Staffing:	It shall be the intent of the DPC to provide within each Regional Office, under the Analytical Services Section, a stack sampling crew with necessary equipment. Also, under the direction of the Bureau of Surveillance, a special capability shall be retained to evaluate all sources that may have emissions beyond the evaluation capability of the Regional Office.	Local Programs shall develop the capability to conduct routine source evaluations within the organizational structure of each program as shown under Staffing of Section III.
Logistics:	Full details of existing, required and needed equipment and facilities shall be derived by the DPC and made part of supplemental information to this section. Specifications, performance standards and types of facilities shall be outlined and certain portions will be delegated to all interested parties, both state and local.	Upon notification by the DPC, delegated logistics will be provided by all respective Local Programs.

AIR IMPLEMENTATION PLAN

State/Local Responsibilities

	FUNCTIONS	STATE	BROWARD	DADE	DUVAL	HILLS-BOROUGH	MANATEE	PALM BEACH	SARASOTA
PERMITTING (Chapter 17-4 FAC)	Distribution & Review of Applications		1	1	1	1	1	1	1
	Engineering Review & Requisition of Compliance Schedule	1	2	2	2	2	2	2	2
	Issue or Denial of Permits	5	3	3	3	3	3	3	3
	Follow up of Compliance Schedule	1	2	2	2	2	2	2	2
	Operation Information Follow up		2	2	2	2	2	2	2
	Compliance Schedule Progress Report	5	1	1	1	1	1	1	1
AIR QUALITY MONITORING	Designation of Statewide Network	1	2	2	2	2	2	2	2
	Designation of County Non-degradation	4	1	1	1	1	1	1	1
	Sampling & Reporting		1	1	1	1	1	1	1

AIR IMPLEMENTATION PLAN

State/Local Responsibilities
(Continued)

	FUNCTIONS	STATE	BROWARD	DADE	DUVAL	HILLS-BOROUGH	MANATEE	PALM BEACH	SARASOTA
AIR QUALITY MONITORING (Continued)	Data Storage & Retrieval	1	2	2	2	2	2	2	2
	Standard Methods of Analysis & Scheduling	5	1	1	1	1	1	1	1
COMPLAINTS AND INVESTIGATIONS	Local Complaints & Investigation	4	1	1	1	1	1	1	1
	Complaints & Investigation initiated at State Level	1	2	2	2	2	2	2	2
	Complaints & Investigation initiated at Federal Level	5	2	2	2	2	2	2	2
ENFORCEMENT	Initial Review for Compliance		1	1	1	1	1	1	1
	Preparation of Case Summary		1	1	1	1	1	1	1
	Administrative/Legal Action	5	4	4	4	4	4	4	4
	Follow up for Compliance	1	2	2	2	2	2	2	2

AIR IMPLEMENTATION PLAN

State/Local Responsibilities
(Continued)

	FUNCTIONS	STATE	BROWARD	DADE	DUVAL	HILLS-BOROUGH	MANATEE	PALM BEACH	SARASOTA
SOURCE EVALUATION	Review of Operation Reports	1	2	2	2	2	2	2	2
	Sample and Evaluation of Sources		1	1	1	1	1	1	1
	Engineering Review of Inplant Operations	1	2	2	2	2	2	2	2
	Inspection		1	1	1	1	1	1	1

CODE: 1 - Authority to handle fully and decision making; Report action to DPC

2 - Authority to handle and advise DPC; Decision and action by DPC

3 - Authority to comment only to DPC

4 - No authority

5 - Full State responsibility

Section IX

Emergency Action Plans

This Emergency Action Plan sets forth the steps to be taken by the Department in case air quality reaches undesirable levels in any part of the state. Outlined hereunder is a sequence of specific control steps and actions designed to trigger the preplanned episode emission reduction and to prevent further air quality deterioration.

Level 0: High Air Pollution Potential Advisory (HAPPA)

Level 1: Air Pollution Alert

Level 2: Air Pollution Warning

Level 3: Air Pollution Emergency

Sometimes due to unforeseen circumstances and quick build up on pollutant levels, it may be necessary to go into Air Pollution Alert or Warning without going through earlier stages. In such cases it will be necessary to carry out all the actions designed for that stage as well as previous stages.

I. Level 0: High Air Pollution Potential Advisory (HAPPA)

This level may only indicate the presence of adverse meteorological conditions covering a portion or whole area of a region or regions. When HAPPA is received, a control center in Tallahassee and a field center for affected areas in each of the Regions are immediately set up. These control centers are to be under the Executive Director and will include the following:

1. Tele-communications:

The Tallahassee Control Center and field centers have available sufficient telephones and exchanges to make all necessary communications. The Tallahassee Control Center has 15 regular

telephone lines and one long distance WATS line. Each of the regional offices has a minimum of 2 telephone lines with which to make necessary calls.

2. Display Board:

The display board will consist of a black or cork board which will be used to continually present air quality data, meteorological conditions, checklists of sources contacted and enforcement projects. U. S. Geological Survey quadrangle maps with major point sources located on each map will be used for the location of monitoring equipment.

3. Personnel:

a. Tallahassee Control Center:

(1) Executive Director or his designated agent will determine and declare that an air pollution episode exists and be responsible for the operation of the emergency action plan.

(2) Chief, Bureau of Surveillance: Coordination of ambient and source sampling will be his responsibility.

(3) Chief of Enforcement: Will notify upon direction of the Executive Director, all sources that must initiate pre-planned abatement strategies. Under his direction there will be two staff engineers or engineer technicians to perform the actual contacts and determine the area and the sources where emission reduction is necessary.

(4) Legal: Will be an attorney experienced in legal aspects of air pollution abatement. Among his responsibilities as consultant will be to initiate court injunctive relief if and when required.

(5) Meteorologist: During an episode he will update forecast of atmospheric stagnation condition at least every 12 hours. He will work closely with National Weather Service and continually watch the situation.

(6) Information Director: His duties will be to notify and keep the general public informed through all the available news media in the affected area.

b. Field Control Center:

(1) Regional Engineer: He will coordinate and be responsible for all field services such as surveillance, enforcement and local programs. It will also be his responsibility to ascertain compliance of all sources with applicable preplanned abatement strategies and other emission control requirements. Sufficient staff will be available or made available to carry out all directives of the regional engineer.

(2) Enforcement Personnel: Will determine if preplanned abatement strategies are initiated and other emission control actions fulfilled.

(3) Surveillance Personnel: They will make frequent visits to ambient sampling sites during emergency condiditions (HAPPA, Alert, Warning and Emergency) AND will monitor, on a twenty-four (24) hour basis, both the concentrations of pollutant(s) in the ambient air and the local meteorological conditions. Data acquired will be sent to the Tallahassee Control Center through the Regional Engineer and will be used to establish and monitor emergency episodes.

(4) Equipment:

a. Tallahassee Control Center:

1) Monroe 1766 programable calculator for point source diffusion estimates.

2) Telephones for communication.

3) Other necessary office supplies.

b. Field Control Center:

1) Ambient monitoring equipment including; hi-volume samplers and tape samplers for particulates, pararosaniline method gas bubblers for SO_2, nondispersive infrared continuous monitors for CO, Jacobs-Hochheiser method gas bubblers for

NO_2, and gas phase chemiliminesence continuous monitors for O_3.

2) Source sampling equipment.

3) Meteorological equipment to measure wind speed, temperature, pressure, humidity, etc.

As soon as HAPPA is received, the field center (Regional Engineer) will do the following:

(1) Commence air quality monitoring of the following pollutants:

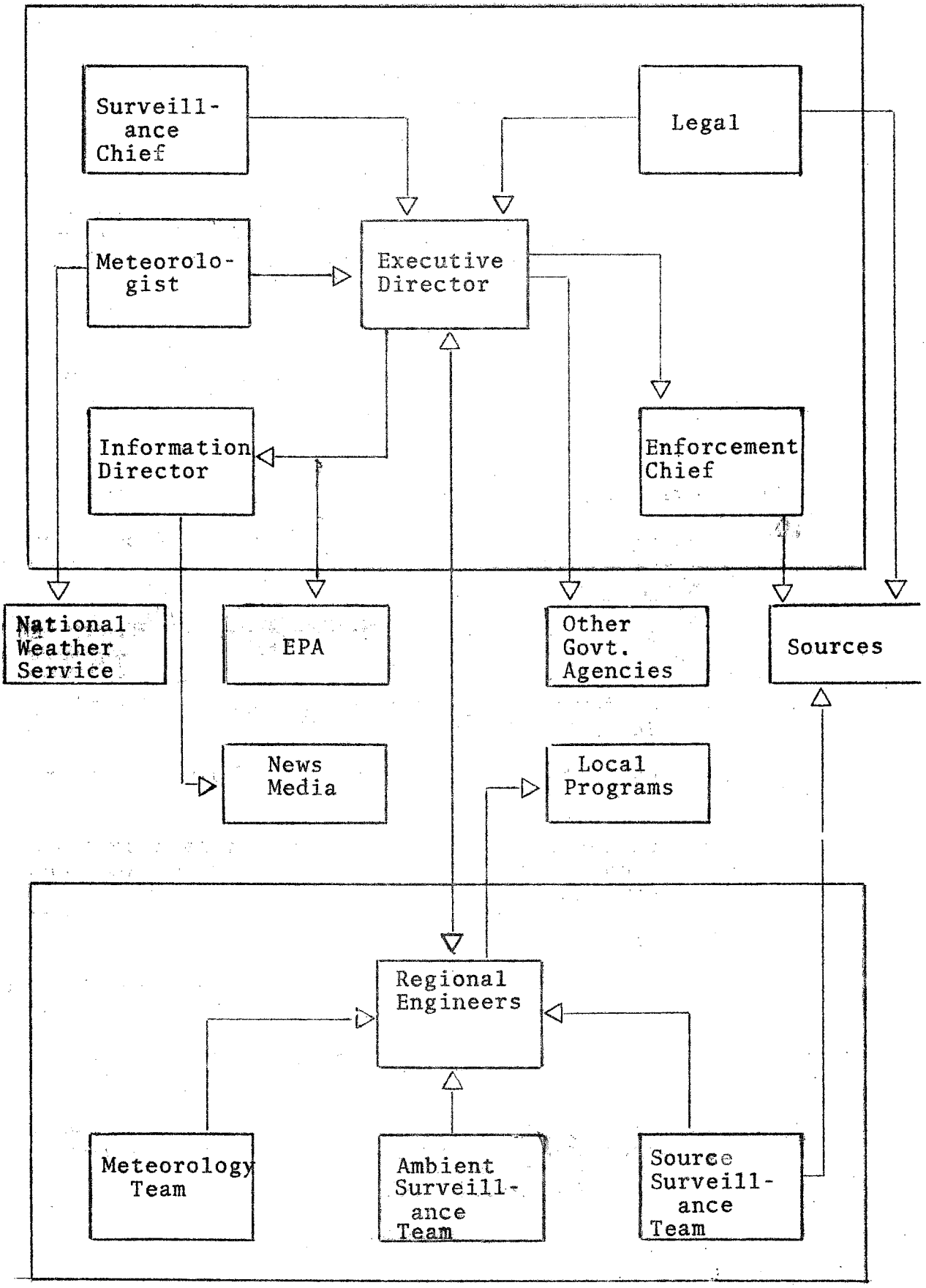
(a)	Particulate:	24 hour Hi Vol Sample 2 hour tape samples
(b)	SO_2	1 hour has bubbler samples (every 4 hours) 24 hour sample-gas bubbler
(c)	Oxidants:	24 hour gas bubbler samples (every 4 hours) 1 hour samples (every 4 hours)
(d)	CO	30 minutes samples detector tubes (every 4 hours) 8 hour samples
(e)	NO_2	24 hour gas bubbler samples 1 hour samples (every 4 hours)

(2) Commence meteorological data collection. If meteorological equipment is not available, contact nearest weather station for wind speed, direction, mixing depth, precipitation. Request special (radiosonde) soundings if such information is not available.

(3) Inform the local news-media. Emphasize it is only advisory on adverse meteorological conditions and no need for any alarm.

(4) Advise major sources of air pollution in the affected area on the possibility of forthcoming emission reduction.

TALLAHASSEE CONTROL CENTER



FIELD CONTROL CENTER

(5) Advise Tallahassee Control Center on the progress of item 1-4 above.

Tallahassee Control Center will do the following:

1. Establish and maintain communication with National Weather Service on existing stagnation conditions and expected meteorological patterns.

2. Analyze ambient air quality data.

3. Transfer needed equipment and manpower to the effected area for episode air quality surveillance.

II. Level 1: Alert

The Alert level is that concentration of pollutants at which a short term health effects can be expected. An Alert level will be declared by the Executive Director or his designated agent when any one of the following levels is reached and is expected to continue for 12 or more hours.

1. Sulfur Dioxide (SO_2) - 800 ug/m^3 (0.3 ppm), 24 hour average.

2. Particulate - 3.0 COHs or 375 ug/m^3, 24 hour average.

3. Sulfur Dioxide (SO_2) and Particulate combined - product of SO_2 ppm, 24 hour average, and COHs equal to 0.2 or product of SO_2 ug/m^3, 24 hour average, and particulate ug/m^3, 24 hour average equal to 65 x 10^3.

4. Carbon Monoxide (CO) - 17 mg/m^3 (15 ppm), 8 hour average.

5. Oxidant (O_3) - 200 ug/m^3 (0.1 ppm) - 1 hour average.

6. Nitrogen Dioxide (NO_2) - 1130 ug/m^3 (0.6 ppm), 1 hour average, 282 ug/m^3 (0.15 ppm), 24 hour average

West Central Region

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Evans Packing Company	Citrus		Dade City Pasco Co.	Particulate 655.5 T/Y SO_2 525.0 T/Y	A.H. Reppard, Jr. Lionel L. Lowry, V.Pres. 904/567-5661	
Ewell Engineering & Contracting Co.	Asphalt	Drying	Hudson Pasco Co.	Particulate 91.0 T/Y SO_2 83.2 T/Y	J.L. Ewell Fred B. Gill, Supr.	
Lykes Pasco Packing Co.	Citrus		Dade City Pasco Co.	Particulate 293.1 T/Y SO_2 6832.5 T/Y	A.F. Spencer W.F. Edwards. Pres. 904/567-5211	
Florida Power Corporation	Electric Utility	Steam Generation	St. Petersburg Oldsmar Pinellas Co.	Particulate 2175 T/Y SO_2 29827 T/Y		
H.P. Hood & Sons	Citrus		Dunedin Pinellas Co.	Particulate 129.0 T/Y SO_2 1079.0 T/Y	Ralph Brinklow, Mgr. 813/733-2121	
Stauffer Chemical Corporation	Phosphate	Kiln, Ect.	Tarpons Springs Pinellas Co.	Particulate 277.5 T/Y SO_2 264.5 T/Y NO_x^2 52.38 T/Y	C.A. Hendrickson Plant Manager Res: 813/934-4331 C.E. Sexton, Prod.Supt. Res: 813/937-2420 Office 813/937--113	Alert: Reduce nodulizing kiln load in proportion to electric furnace load reduction. Warning: Shut down nodulizing kiln. Emergency:Shut down electric furnace, time to shut down is approx. 1 hr.

West Central Region

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
W.L. Cobb Construction Company	Asphalt	Drying	St. Petersburg Pinellas Co.	Particulate 42.9 SO_2 93.0	813/394-7681	
C.F. Chemicals, Inc.	Phosphate	H_2SO_4	Bartow Polk County	SO_2 29,800.0 T/Y	J.A. Brafford, Chief Process Engineer 813/533-3181	To decrease emission during warning level would require 4 hrs. To completely shut down, time required would be 8 hrs.
Coca-Cola Company Foods Division	Citrus		Leesburg Polk County	Particulate 422.0 T/Y	Max Walker Office: 904/787-2711 Res: 904/787-5814	Time to process all the fruit and shut down is 3 to 4 days.
Coca-Cola Company Foods Division	Citrus		Auburndale Polk Co.		Don Kimball 813/967-6611 Office 813/294-8544 Home	
Cypress Gardens Citrus	Citrus		Winter Haven Polk County	Particulate 1854.4 T/Y SO_2 1720.0 T/Y	Ted King, Mgr 813/293-1151	
W.R. Grace & Company	Phosphate	Rock Drying	Bartow Polk County	Particulate 840 T/Y	L.L. White Office: 813/533-2171 Res: 813/686-1261	
W.R. Grace & Company	Phosphate	Fertilizer Mfg.	Polk County	SO_2 11800.0 T/Y	J.L. Connolly Office 813/533-2171 Res: 813-686-7388	

West Central Region

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Griffin, Ben Hill Company	Citrus		Bartow Polk County	Particulate 72.3 T/Y SO_2 127.8 T/Y	James E. Redd B.H. Griffin, Pres. 813/635-2251	
Griffin, Ben Hill, Company	Citrus		Frostproof Polk County	Particulate 195.0 T/Y SO_2 362.0 T/Y	James E. Redd B.H. Griffin, Pres. 813/635-2251	
IMC Corp.	Phosphate		West Polk Polk County	Particulate 170.5 T/Y	K.E. Nielsen, Mgr. Res: 813/646-4032 Office: 813/533-1121	
IMC Corp	Phosphate		Clear Springs Polk County	Particulate 107.0 T/Y	O.G. Florence, Mgr. Res: 813/683-4431 Office: 813/533-1121	
Kraft Fooeds	Citrus		Lakeland Polk Connty	Particulate 64.0 T/Y	Anthony Maltese, Plt.Mgr. 813/686-1173	
Lakeland, City (Parker Dr.)	Electric Utiltity	Steam Generation	Lakeland Polk County	Particulate 49.37 T/Y SO_2 28880.0 T/Y	C.D. McIntosh, Director 813/683-6561	
Lakeland City Of (Larsen)	Electric Utility	Steam Generation	Lakeland Polk County	Particulate 43.78 T/Y SO_2 2565.8 T/Y	C.D. McIntosh, Director 813/682-8163	

West Central Region

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Adams Packing Company	Citrus		Auburndale Polk County	Particulate 669.9 T/Y	H.W. James James A. Goff, V. Pres. 813/967-1151	
Agrico Chemical Company	Phosphate		Pierce Polk Co.	Particulate 3495.0 T/Y SO_2 2800.0 T/Y	John A. Layton, Mgr. 813/428-1431	
Agrico Chemical Company	Phosphate		Pierce Polk County	Particulate 78.0 T/Y	John A. Layton, Mgr. 813-428-1431	
Alcoma Packing Comapny	Citrus		Lake Wales Polk County	SO_2 47.0 T/Y	John C. Updike, Pres. 813/676-3487	
Aluminum Company of America	Alumninum		Fort Meade Polk County		W.W. Williams, Works Manager Office: 813/285-8101 Res: 813/646-4118 N.V. Lubbers, Prod.Supt. Office: 813/285-8101 Res: 813/646	Time to shut down 8 hours. Time to decrease emissions 6 hours.
Americal Cyanamid Company	Phosphate	Drying & Shipping	Bradley Polk County	Particulate 2970 T/Y SO_2 564.0 T/Y	R.C. Timberlake, Plt. Mgr. D.C. Rice, Drying & Ship Manager 813/428-1411	
Blue Seal Excavating Paving Co.	Asphalt	Drying	Lakeland Polk County	Particulate 33.0 T/Y	W.M. Redding 646-1588	

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Borden Chemical Company	Phosphate	Drying & Shipping	N.E. OF Lakeland Polk County	Particulate 1075.0	B.L. Sapp Office: 813/686-2143 Res: 813/752-6708	
Citrus World Inc.	Citrus	Boiler	Lake Wales Polk County	Particulate 535.1 T/Y SO_2 375.8 T/Y	Marvin H. Walker, V.Pres. 813/676-1411	
Mobil Chemical Company	Phosphate		Nichols Polk County	Particulate 107.0 T/Y	K.D. Ferrow, Mgr.Eng Office: 813/425-3011	
Orlando Paving Co.	Asphalt	Drying	Polk County	Particulate 167.0 T/Y SO_2 26.3 T/Y	Orlando 305/293-4340	
Owens - Illinois	Glass		Winter Haven Polk County	Particulate 50.4 T/Y SO 32.7 T/Y	Russell D. Hobbs 813/294-4431 J.L. Sommerfield, Plt.Mgr.	
D.S. Prosser Partnership	Citrus		Highland City Polk County	Particulate 67.6 T/Y	D.S. Prosser, Jr. 813/646-1436	
Redd Orange Concentrate	Citrus		Lakeland Polk County	Particulate 34.1 T/Y	John E. Stehr, Pres. 813/858-4491	

West Central Region

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Royster	Phosphate	Sulfuric Acid	Mulberry Polk County	SO_2 1660.0 T/Y	R. Cox - Office 813/425-1176 E. Bradbury R. Hammock L. Miller	
Suni-Citrus Product Co.	Citrus		Haines City Polk County	Particulate 54.0 T/Y	Emory Coche 813/422-1127	
Swift Agricultural Chemical Corp. (Agricola)	Phosphate		WinterHHaven Polk County	Particulate 481.75 T/Y SO_2 1802.5 T/Y	Robert H. Dean Proj. Engineer 813/533-7164 810/875-0894 Leslie D. Alderman/813/293-3147	
Dixie Lime & Stone Company	Mineral	Fine Lime Stone	Sumterville Sumter County	Particulate 4390.0 SO_2 304.5 NO_x 45.9	Office: 904/793-3111 E.D. Riggs, Plt.Mgr. Res: 694-2564	Calcium Carbonate dryer-shut down with minimum notice. Can cut production 40%.
		Quicklime		Particulate 1095.0 SO_2 507.0 NO_x 76.65	F.G. Andrews - Supervisor Res: 904/793-3271 W.W. Reynolds - Supervisor Res: 904/793-3369	Lime burning kiln 6 hrs. to cut production 42%, 12 hrs. to shut down.

CENTRAL FLORIDA REGION SOURCE DIRECTORY

COUNTY: Central Region

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Florida Hot Mix Corp.	Asphalt	Drying	Eaugallie Brevard Co.	Particulate 9.7 T/Y SO_2 116.0 T/Y	William F. LaLonde 305/254-8929	
Florida Power & Light	Electric Utility	Steam Generation	Cape Kennedy Plant #2 Brevard Co.	Particulate 342.5 T/Y SO_2 13,061.0 T/Y	Systems Dispatcher 305/374-7557 Ben H. Fuqua 305/445-6211	
Houdaille-Duval-Wright Company	Asphalt	Drying	Sharpes Brevard Co.	Particulate 78.0 T/Y SO_2 113.5 T/Y	B.E. Ellis, grp.mgr. 904/356-1951 W.S. Burns, Pres. 800/342-2461	
Orlando Utilities Commission	Electric Utility	Steam Generation	Titusville Brevard Co.	Particulate 88.9 T/Y SO_2 2430.0 T/Y	C.H. Stanton 305/841-1230	
Weekley & White Corp.	Asphalt	Drying	Rockledge Brevard Co.	Particulate 120.0 T/Y	W.D. Weekley, Pres. 305/983-4636	
B & W Canning Co.	Citrus		Groveland Lake Co.	Particulate 244.0 T/Y	E.C. Busbee, Pres. 904/429-2101	
Coca-Cola Company	Citrus		Leesburg	Particulate 422.0 T/Y	John M. Cahill 843-9250	
Florida Food Products, Inc.	Citrus		Eustis Lake Co.	Particulate 162.0 T/Y	Jerry Brown, Pres. 904/357-4141	

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE.
Golden Gem Growers	Citrus	Drying	Umatilla Lake Co.	Particulate 69.3 T/Y	W.N. Sebree, Prod.Mgr. 904/669-2101	
Silver Springs Citrus Coop.	Citrus	Drying	Howey-in-the-Hills Lake Co.	Particulate 49.2	B.C. Youngblood Phillip Tope 305/656-1122	
Basic Asphalt Corp.	Mineral (Asphalt)		Orlando Orange Co.		S.W. Carlson, Pres. 305/293-2878	
Orlando Paving Co.	Asphalt	Drying	Orlando Orange Co.	Particulate 321 T/Y	305/293-4340	
Orlando Utilities Commission	Electric Utility	Steam Generation	Orlando Orange Co.	SO_2 390.45 T/Y	Curtis H. Stanton, V.Pres. 305-841-1230 -reached thru	
Plymouth Citrus Prod. Coop.	Citrus	Drying	Plymouth Orange Co.	Particulate 200 T/Y	L.L. Mallory C.B. Smith D.C. Carpenter 305/886-1111	
Southern Fruit Distributor	Citrus		Orlando Orange Co.	Particulate 830 T/Y	A.A. Cornso, Pres. 305/241-9531	
Osceola Fruit Distributors	Citrus		Kissimmee Osceola Co.	SO_2 29.8 T/Y	Jerry Ivey, Pres. 305/847-3141 305/847-3145	

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Hi-Acrea Cove, Inc.	Citrus		Orlando Seminole Co.	Particulate 154.5 T/Y	Charles E. Bradshaw, Pres. 305/838-3110	
Daytona Beach Paving	Asphalt	Drying	Daytona Beach Volusia Co.	SO_2 58.2 T/Y	305/767-1451	
Florida Power & Light Co.	Electric Utility	Steam Generation	Sanford Volusia Co.	Particulate 205 T/Y SO_2 6097 T/Y	Systems Dispatcher 305/374-7557	Alert: Switch to low sulfur fuels as available. Warning: Increase load on nuclear plants, start gas turbines. Emergency: Transfer power where possible
H.W. Given Company	Citrus	Drying	Deland Volusia Co.	Particulate 87.5	S.H. Given, V.Pres. Office: 734-4634 Home: 734-4704	
Houdaille-Duval-Wright Co.	Asphalt	Drying	Ormond Beach Volusia Co.	Particulate 77.0 T/Y SO_2 129.0 T/Y	800/342-2461 Jacksonville 904/672-3911	
Seminole Asphalt Refining	Asphalt	Drying	St. Marks Volusia Co.	Particulate 49.38 T/Y SO_2 169.45 T/Y	M.J. Lewis, Pres. 904/224-1194	

SOUTHEAST FLORIDA REGION SOURCE DIRECTORY

COUNTY: **Southeast Region**

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Dixie Asphalt Co.	Asphalt	Drying	Deerfield (Broward County)	Particulates 176.0 T/Y SO_2 387.5 T/Y	Jay S. Eaton (305)399-3043	
Florida Power & Light Company	Electric Utility	Steam Generation	Dania, Port Everglades, Broward County	Particulate 1224.5 T/Y SO_2 40394.5 T/Y	Systems Dispatcher (305)374-7557	Alert: Switch to low sulfur fuels as available. Warning: Operate nuclear plants at maximum capacity, start turbines. Emergency: Transfer power where possible.
Aerodex, Inc. (Miod)	Aircraft		Miami (Dade County)	SO_2 27.5 T/Y	R. M. Tonhs, Pres. (305)887-0241	
Aluminium Anodizing Co.	Anodizing		Miami (Dade County)	SO_2 58.5 T/Y	Donald E. Hammerstrom,VP. (305)691-8352	
Asphalt Material & Paving, Ind.	Asphalt	Drying	Miami (Dade County)	Particulate 1,048.3T/Y SO_2 66.0 T/Y	B. Newton Gilmore,Ex.V.P. (305)667-2551	
Brewer Co. of Fla. (Medley)	Asphalt	Drying	Miami (Dade County)	Particulate 1,041.3T/Y SO_2 29.7 T/Y	C. H. Munz, President (305)635-4563	
Brewer Co. of Fla. (Medley #2)	Asphalt	Drying	Miami (Dade County)	Particulate 2,600T/Y SO_2 106.0 T/Y	C. H. Munz, President (305) 635-4563	

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Brewer Co. of Fla. (H omestead)	Asphalt	Drying	Homestead (Dade County)	Particulate 467.0 T/Y	C. H. Munz, Pres. 305/635-4563	
DuPont Plaza Center	Office Building	Steam Generation	Miami (Dade Co.)	SO_2 26.9 T/Y	305/[illegible]8-2541	
Fla. Portland Cement Div.	Cement	Steam Generation	Miami (Dade Co.)	Particulate 690.0 T/Y SO_2 2,814.0 T/Y	305/377-0456	
Fla. Power & Light Company	Electric Utility	Steam Generation	Miami, Culter Ridge, Turkey Pt., Dade County	Particulate 942.8 T/Y SO_2 37969.6 T/Y	Systems Dispatcher 305/374-7557	Alert: Switch to low sulfur fuels as available. Warning: Operate nuclear plants at maximum capacity, start turbines. Emergency: Transfer power where possible.
Lehigh Portland Cement Company (Medley)	Cement	Concrete Block	Medley (Dade Co.)	SO_2 86.2 T/Y	John M. Arribas, Jr. J. F. Bennett, Sales Mgr. 305/379-6548	
Lehigh Portland Cement Company	Cement	Concrete Block	Miami (Dade Co.)	Particulate 187.0 T/Y SO_2 198.0 T/Y	J. F. Bennett, Sales Mgr. 305/379-6548	
Mary MacIntosh Services, Inc.	Laundry & Dry Cleaning	Steam Generation	Miami (Dade Co.)	SO_2 96.5 T/Y	305/373-6601	

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Maule Industries	Mineral (Cement)	Drying	Medley (Dade Co.)	Particulate 200.7 T/Y	H. B. Burks 305/823-6570 J. J. Feira 305/823-3861	12 hours required to shut down.
Northeast Incinerator	Municipal Incinerator		Miami (Dade Co.)	Particulate 3900 T/Y	N. W. 12th Ave. 305/377-5528	
Pan American Construction Co.	Asphalt	Drying	Miami (Dade Co.)	Particulate 955.0 T/Y	305/887-3501	
Robert Russell Metals Inc.	Smelting		Miami (Dade Co.)	Particulate 64.28 T/Y	305/635-1402	
Seaboard Coastline R.R. Company	RR Service		Miami (Dade Co.)	SO_2 44.5 T/Y	305/371-6611	
South Dade Asphalt	Asphalt	Drying	Miami (Dade Co.)	Particulate 286.0 T/Y	305/237-7722	
U. S. Foundry & Mfg. Corp.	Foundry		Miami (Dade Co.)	Particulate 35.1 T/Y	Alex DeBogory, Jr. Pres. 305/888-2347	
Key West, City of	Electric Utility	Steam Generation	Key West (Monroe Co.)	Particulate 60.7 T/Y SO_2 1404.0 T/Y	Jos. S. Roberts, Mgr. 305/296-5651 Leonary Curry	

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Atlantic Sugar Assoc.	Sugar		Belle Glade (Palm Beach County)	Particulate 300.0 T/Y SO_2 74.0 T/Y	Sam Knight, Sr. Pres. 305/996-6541	
Dixie Asphalt Co.	Asphalt	D ying	West Palm Beach (Palm Beach Co.)	Particulate 176.0 T/Y SO_2 387.5 T/Y	Jay S. Eaton, V.P. 305/683-0430	
Florida Power & Light Co.	Electric Utility	Steam Generation	Riviera Beach (Palm Beach Co.)	Particulate 553.9 T/Y SO_2 18565.0 T/Y	Systems Dispatcher 305/374-7557	Alert: Switch to low sulfur fuels as available. Warning: Operate nuclear plants at maximum capacity, start Turbines. Emergency: Transfer power where possibl
Florda Sugar Corp.	Sugar		Palm Beach County	Particulate 300.0T/Y SO_2 220.0 T/Y	Frank L. Froment, V.P. 305-996-5518	
Gulf and Western Food Products Co.	Sugar		South Bay Palm Beach County	Particulate 1720.0 T/Y SO_2 1379.0 T/Y	Arthur Kirstein III	
Osceola Farms Co.	Sugar		Pahokee Palm Beach County	Particulate 1460.0 T/Y SO_2 232.0 T/Y	Rafael Fanjul 924-7116 924-7117 924-7391	

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LENGTH OF TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Rite-Way Paving	Mineral (Asphalt)	Drying	West Palm Beach Palm Beach County		J.L. Boling, President 305-683-5484 305-881-1928	
Rubin Construction Company	Mineral (Asphalt)	Drying	West Palm Beach Palm Beach County	Particulate 132.0 T/Y SO_2 183.0 T/Y	R.P. Levinson, V. Pres. J.R. Brown, Adm. V. Pres. 305-683-[illegible]400	
Sugar Cane Growers Coop of Fla	Sugar	Boilers	Belle Glade Palm Beach County	Particulate 1032.5 T/Y SO_2 1547.5 T/Y	George Wedgeworth 305-996-5556	
Talisman Sugar Corp..	Sugar		Belle Glade Palm Beach County	Particulate 1090.0 T/Y SO_2 117.8 T/Y	Miguel Cervera 996-5527 W.D. Pauley, 305-996-5527	
U.S. Sugar Corp.	Sugar		Clewiston Palm Beach County	Particulate 1300.0 T/Y SO_2 278.0 T.Y	H.T. Vaughn, President 813-983-8121	
Treesweet Prod. Co.	Citrus	Drying	Ft. Pierce St. Lucie Co.	Particulate 699.5 T/Y	W.E. Parker, Gen. Mgr. E.D. Hawkes, Prod. Mgr. Office: 305-461-3800	

SOUTHWEST FLORIDA REGION SOURCE DIRECTORY

(cont'd.) Southwest Region

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Warren Brothers Company	Asphalt	Drying	Naples Collier Co.	Particulate 270.0 T/Y	813/774-0221	
DeSoto Canning Company	Citrus	Drying	Arcadia DeSoto Co.	SO_2 22.26 T/Y NO_x 53.64 T/Y	B.C. Mixon, Plt. Supt. 813/92[illegible]-1191 929-2201	Shut down can be accomplished in 2 days without spoiling fruit.
Myakka Processors, Inc.	Citrus	Drying	Hwy. 72 West Arcadia DeSoto Co.	Particulate 170.0 T/Y SO_2 203.5 T/Y NO_x 30.8 T/Y	W.P. Cooper, Jr.-V.Pres. E.E. Russell, Sec. Plt. 813/927-2201 927-4741	Shut down can be accomplished almost immediately. However, fruit would spoil & required time to process remaining fruit would be 16 hours.
Everglades Sugar Refinery Inc.	Sugar	Boilers Char kiln	Clewiston Hendry Co.	Particulate 105.5 T/Y SO_2 359.4 T/Y	W.R. Willis, Plt.Mgr. R.H. Dickey, Asst.Plt. Mgr. 813/983-8171 983-8172	Shut down time is 6 hours.
Ewell Engineering & Contracting Company	Asphalt	Drying	Ft. Basinger Highlands Co.	Particulate 52.0 T/Y SO_2 56.7 T/Y	J.L. Ewell, Pres. Fred B. Gibbs, Supr. Plant City Office Hillsborough 752-2716	
Florida Power Corp.	Electric	Steam Generation	Avon Park Highlands Co.	Particulate 83.7 T/Y SO_2 710.0 T/Y	G.W. Marshall - Prod. Supt. S.A. Brandemore 813/893-2141	

Southwest Region

COMPANY	TYPE INDUSTRY	PROCESS	LOCATION	MAJOR POLLUTANTS EMITTED AND QUANTITY	RESPONSIBLE PERSONS IN CHARGE AND PHONE NUMBER	ABILITY TO CUT PRODUCTION & LEAD TIME INVOLVED, ACTION PLAN GIVEN IF AVAILABLE
Macasphalt Corp.	Asphalt	Drying	Lake Placid Highlands Co.	SO_2 115.8 T/Y	William Blalonde A.F. Patton, Pres. 813/68. -8116 (Lakela e)	
Sebring Utilities Commission	Electric Utility	Steam Generator	Sebring Highlands Co.	SO_2 130.5 T/Y	Ernest C. White, Pres. James H. Phillips 313/385-6706	
Florida Power & Light Co.	Electric Utility		Tice Lee County	Particulate 549.7 T/Y SO_2 19843.0 T/Y HC 378.5 T/Y NO_x 7947.9 T/Y	Systems Dispatcher 305/374-7567	Alert: Switch to low sulfur fuels as available. Warning: Increase nuclear load, start gas turbines. Emergency: Transfer power from outside affected areas.
Warren Brothers Company	Asphalt	Drying	Ft. Meyers Lee County	Particulate 34.8 T/Y SO_2 46.5 T/Y	813/936-2105	
Warren Brothers Company	Asphalt	Drying	Sarasota Sarasota Co.	Particulate 39.2 T/Y	813/333-7178	

COMMUNICATION WORK SHEET

Level Declared: _____

Pollution Source	Person Contacted	Time	Call By (intials)

COMMUNICATION WORK SHEET (cont.)

Level Declared: _____

Air Pollution Local Program	Person Contacted	Time	Call By (intials)
1.			
2.			
3.			

Govt. Offices	Person Contacted	Time	Call By (intial)
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			

Public Media	Person Contacted	Time	Call By (intial)
1.			
2.			
3.			
4.			

APPENDIX A

1971 Summer

AIR QUALITY MEASUREMENTS

SITE CODE: 10 4360002
CITY NAME: TAMPA
STATE (10): FLORIDA
SITE ADDR: HEALTH CENTER ROOF 1105 E KENNEDY
AQCR (96): WEST CENTRAL FLORIDA
SMSA (8280): TAMPA-ST. PETERSBURG, FLA.
COUNTY (1800): HILLSBOROUGH
AGENCY TYPE: EPA/ATMOS. SURV.
AGENCY/PROJECT CODE: A01
STATION TYPE (13): CENTER CITY-COMMERCIAL
TIME ZONE (E): EASTERN
SUPPORTING AGENCY: HILLSBOROUGH CO. POLLUTION CONTROL COMMISSION
COMMENTS:

LATITUDE: D. M. S. NORTH
LONGITUDE: D. M. S. WEST
UTM ZONE:
UTM NORTHING:
UTM EASTING :
ELEVATION ABOVE GROUND:
ELEVATION ABOVE MSL:
CITY POPULATION: 470000
AQCR POPULATION: 1491570
EPA-REGION:4

OCT 27, 1971

IMPLEMENTATION PLAN - SUMMER STUDY DATA
NITROGEN DIOXIDE 24-HOUR DATA
JACOBS-HOCHHEISER METHOD
REPORTED IN MICROGRAMS PER CUBIC METER

104360002

SITE NAME	SITE	YEAR	MONTH	DAY	VALUE
TAMPA FLORIDA	002	71	07	05	99
				14	128
				18	146
				20	134
				23	132
				29	140
			08	01	177
				04	229
				08	158
				10	154
				13	47
				17	100
				19	107
				22	161
				25	199
				29	128
				31	172
			09	03	154
				06	123
				11	101
				15	101
				21	121
				24	126
				27	103
				30	100
SITECODE AVG.					139
				EST ANN AVG	131

PAST DATA

YEAR	1968	1969	1970
ANN AVG	150		132

1970 MAX 302 (3/10/70)

1970 JULY THROUGH SEPT AVG. 133

JACKSONVILLE , FLORIDA SITE 001

SITECODE: 101360001
CITYNAME: JACKSONVILLE
STATE (10): FLORIDA
SITE ADDR: 1217N PEARL STREET — LAB
AQCR (91): JACKSONVILLE-BRUNSWICK *
SMSA (3600): JACKSONVILLE, FLA. *
COUNTY (1080: DUVAL
AGENCY TYPE: EPA/ATMOS. SURV.
AGENCY/PROJECT CODE: A01
STATION TYPE ( ): *
TIME ZONE (E): EASTERN
SUPPORTING AGENCY: DEPT OF HEALTH + REHABILITATIVE SERVICES
COMMENTS:

LATITUDE: D. M. S. NORTH
LONGITUDE: D. M. S. WEST
UTM ZONE:
UTM NORTHING:
UTM EASTING :
ELEVATION ABOVE GROUND: 45
ELEVATION ABOVE MSL: 55
CITY POPULATION: 201030
AQCR POPULATION: 1315530
EPA-REGION: 4

OCT 27, 1971

IMPLEMENTATION PLAN - SUMMER STUDY DATA
NITROGEN DIOXIDE 24-HOUR DATA
JACOBS-HOCHHEISER METHOD
REPORTED IN MICROGRAMS PER CUBIC METER

101960101

SITE NAME	SITE	YEAR	MONTH	DAY	VALUE
JACKSONVILLE FLORIDA	001	71	07	05	115
				11	24
				14	82
				17	195
				20	62
				23	63
				29	68
			08	01	46
				04	84
				09	87
				10	92
				13	90
				16	90
				19	74
				22	62
				25	113
				28	89
				31	130
			09	03	122
				06	64
				11	123
				15	109
				18	79
				21	127
				24	134
				27	106
				30	90
SITECODE AVG.					93
				EST ANN AVG	96

PAST DATA (SITE 02)

YEAR 1969

ANN AVG 71

1970 MAX 168 (5/23/70)

$\Sigma \log^2 x = 98.74$

MIAMI , FLORIDA SITE 002

SITECODE: 120703002
CITYNAME: MIAMI
STATE (10): FLORIDA
SITE ADDR: 864 NORTHWEST 23RD STREET
AQCR (49): SOUTHEAST FLORIDA
SMSA (5000): MIAMI, FLA.
COUNTY (0860): DADE
AGENCY TYPE: EPA/ATMOS. SURV.
AGENCY/PROJECT CODE: A11
STATION TYPE ( ):
TIME ZONE (E): EASTERN
SUPPORTING AGENCY: DADE COUNTY HEALTH DEPARTMENT
COMMENTS:

LATITUDE: D. M. S. NORTH
LONGITUDE: D. M. S. WEST
UTM ZONE:
UTM NORTHING:
UTM EASTING :
ELEVATION ABOVE GROUND: 15
ELEVATION ABOVE MSL: 10
CITY POPULATION: 291688
AQCR POPULATION: 2415327
EPA-REGION: 4

OCT 27, 1971

IMPLEMENTATION PLAN - SUMMER STUDY DATA
NITROGEN DIOXIDE 24-HOUR DATA
JACOBS-HOCHHEISER METHOD
REPORTED IN MICROGRAMS PER CUBIC METER

102700002

SITE NAME	SITE	YEAR	MONTH	DAY	VALUE
MIAMI FLORIDA	002	71	07	07	110
				08	119
				11	117
				14	110
				18	88
				20	118
				23	110
				29	110
			08	01	119
				04	202
				08	103
				10	147
				13	166
				16	115
				19	106
				22	137
				25	191
				28	574
				31	120
			09	03	198
				07	144
				09	177
				11	63
				15	62
				18	80
				21	104
				27	110
				30	151
SITECODE AVG.					140
				EST ANN AVG	132

PAST DATA

YEAR	1968	1969	1970
ANN AVG	136	115	132

1970 MAX VALUE: 233 (7/04/70)

1970 JULY THROUGH SEPT. AVG 133

POLLUTANT : 42101 - CARBON MONOXIDE — SAMPLING INTERVAL : 1-HOUR

MINIMUM DETECTABLE VALUE : 0.2 — METHOD CODE : 11

1/2 THE MIN. DET. IS SUBSTITUTED FOR ZERO VALUES IN ALL COMPUTATIONS. — REPORT INTERVAL : 71 05 TO 71 05 (YR MO / YR MO)

UNITS : PARTS PER MILLION

LOCATION :				FREQUENCY DISTRIBUTION - PERCENT												ARITH	ARITH	GEO	GEO
	YR	NO. SAMP	MIN	10	20	30	40	50	60	70	80	90	95	99	MAX	MEAN	STD DEV	MEAN	STD DEV
FLORIDA																			
JACKSONVILLE, FLA																			
101980080A05	71	1345	0.0	0.0	0.5	0.5	1.0	1.5	2.0	2.5	3.0	4.5	6.0	8.5	21.5	1.9	2.03	0.4	18.93

POLLUTANT : 42101 - CARBON MONOXIDE SAMPLING INTERVAL : 1-HOUR

MINIMUM DETECTABLE VALUE : 0.2 METHOD CODE : 11

1/2 THE MIN. DET. IS SUBSTITUTED FOR ZERO VALUES IN ALL COMPUTATIONS. REPORT INTERVAL : 71 05 TO 71 09 (YR MO YR MO)

8-HOUR RUNNING AVERAGES UNITS : PARTS PER MILLION

LOCATION :				FREQUENCY DISTRIBUTION - PERCENT															
	YR	NO. SAMP	MIN	10	20	30	40	50	60	70	80	90	95	99	MAX	ARITH MEAN	STD DEV	GEO MEAN	STD DEV
FLORIDA																			
JACKSONVILLE, FLA																			
101980060005	71	1169	0.0	0.0	1.2	1.6	2.0	2.4	2.7	3.1	3.6	4.6	5.4	6.8	8.6	2.5	1.49	1.9	2.4

JACKSONVILLE, FLA , FLORIDA SITE 080

SITECODE: 101980080	LATITUDE: D. M. S. NORTH
CITYNAME: JACKSONVILLE, FLA	LONGITUDE: D. M. S. WEST
STATE (IC): FLORIDA	UTM ZONE:
SITE ADDR: SNYDER UNITED METH CHURCH-226 LAURA ST	UTM NORTHING:
AQCR ( ): *	UTM EASTING :
SMSA ( ): *	ELEVATION ABOVE GROUND: 18
COUNTY ( ): DUVAL	ELEVATION ABOVE MSL: 43
AGENCY TYPE: EPA/ATMOS. SURV.	CITY POPULATION: 000
AGENCY/PROJECT CODE: AOS	AQCR POPULATION: 000
STATION TYPE ( ): *	EPA-REGION:
TIME ZONE ( ):	

SUPPORTING AGENCY: BIO-ENVIRONMENTAL SERIVES AIR POLLUTION CONTROL

COMMENTS:

10/27/71

FLORIDA
JACKSONVILLE, FLA

110198.0803

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL NONDISPERSIVE INFRA-RED

CARBON MONOXIDE
JUN 1971

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN NO.
1																									
2																									
3																									
4																									
5*																									
6*																									
7																									
8																									
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28																									
29													0.0	3.0	3.0	6.5	7.5	5.0	4.5	3.5	1.5	0.0	0.0	0.0	12
30	0.0	0.0	0.0	0.0	0.5	1.0	3.0	3.0	1.5	1.0	2.5	2.0	2.0	1.5	0.0	3.5	2.5	1.0	1.0	0.5	1.0	0.5	0.0	0.0	1.2 24
AVG NO.	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	36
MAX	0.0	0.0	0.0	0.0	0.5	1.0	3.0	3.0	1.5	1.0	2.5	2.0	2.0	3.0	3.0	6.5	7.5	5.0	4.5	3.5	1.5	0.5	0.0	0.0	7.5

10/27/71

FLORIDA
JACKSONVILLE, FLA

(1[illegible])
CARBON MONOXIDE
JUL 1971

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL NONDISPERSIVE INFRA-RED

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO.
1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	1.5	2.5	3.0	3.0	3.5			4.0	3.5	2.5	0.5	0.5	1.0	1.5	1.0	0.5	1.4	22
2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.0	1.0	1.0																10
3*																										
4*	0.5												1.0	1.0	1.5	1.0	1.0	0.5	2.0	2.0	3.0	2.5	2.0	0.5		13
5	0.5	0.5	0.5	0.5	0.5	1.0	1.5	1.5	1.5	1.5	1.0	1.5	1.0	1.5		1.0	0.5	0.5	1.0	0.5	0.0	0.5	0.5	0.5	0.8	23
6	0.0	0.0	0.0	0.0	0.0	1.0	3.5	3.0	2.0	4.0	3.5	1.5	1.5	6.0	3.5	2.5	2.5	1.0	1.5	1.5	0.0				1.8	21
7																										
8																										
9																										
10*																										
11*																										
12																										
13	2.0	1.0	0.5	1.0	2.0	1.0	0.0	0.0	0.0	0.0		0.0	0.5	0.5	0.5		1.0			3.0	2.5	2.0	2.0	1.0	1.0	20
14	1.0																									1
15																										
16																										
17*																										
18*																										
19																										
20																										
21																										
22											2.0	2.5	2.0	1.5	2.0	4.0	4.0	0.5	0.5		1.0	0.5	0.0	0.5		13
23	0.0					1.5	5.5	6.5	2.5	1.5	2.0	1.5	2.5	1.5	2.5	2.0	2.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	1.7	23
24*	0.0						0.0	0.0		0.0		1.0	1.0	0.5	0.5	1.0	0.5	0.5	0.5	0.0			0.0			14
25*												0.0	0.0	0.0	0.0			0.0	0.0	1.0	1.0	1.0	0.5	0.0		11
26							1.0	0.5	0.5	1.0	1.5	2.0		1.5	2.0	2.5	4.0	2.5	1.0	1.5	1.5	1.0	1.0	1.0		17
27	0.5	0.0	0.0	0.0	0.0	0.5	3.0	4.5	1.5	1.5		1.5	3.0	2.0	2.5	1.5	1.5	0.5	0.5	0.0	0.0	1.0	1.0	0.0	1.2	23
28						0.0	4.0	3.5	1.5	2.0	1.5	2.0	1.5	2.0	2.5	3.0	8.5	3.0	2.0	0.5	1.5	1.5	0.5	3.0	2.2	19
29	0.0				0.0	1.0	5.0	6.0	4.0	3.5	3.5	3.5	3.0	3.0	3.0	4.0	5.0	1.5	2.5	3.0	3.0	3.0	2.5	3.0	3.0	21
30	1.5	0.5	0.0	0.0	0.0	1.5	4.5	5.0	4.0	3.5	3.0		2.5	2.5	4.5	5.5	4.0	1.5	1.5	1.5	0.0	0.5	0.0	0.0	2.1	23
31*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.0		1.0	1.0	1.0	1.0	1.0	0.5	0.0	0.0	0.5	0.0	1.0	1.0		0.4	22
AVG																										
NO.	13	8	8	8	9	11	13	13	12	13	9	13	14	14	13	13	14	14	14	14	14	13	14	12		293
MAX	2.0	1.0	0.5	1.0	2.0	1.5	5.5	6.5	4.0	4.0	3.5	3.5	3.5	6.0	4.5	5.5	8.5	3.0	2.5	3.0	3.0	3.0	2.5	3.0		8.5

10/27/71

FLORIDA
JACKSONVILLE, FLA

1131980[illegible]

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL NONDISPERSIVE INFRA-RED

CARBON MONOXIDE
AUG 1971

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	12	PM 1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO.
1*																										
2	0.0	0.5	0.0		0.0	3.0	2.0	1.0	2.5	2.0	1.5	1.5		1.0	0.5	2.0	0.5	1.5	0.5	0.0	1.0	0.5			1.1	20
3							5.0	2.0	0.5	1.5	1.0	2.5	2.0	4.0	3.5	3.5	3.0	0.5	0.5	0.5	0.5	1.0	0.5	0.0	1.8	18
4		0.5			0.0	1.0	9.0	7.0	1.0	0.5			3.0	3.0	1.5	1.5	2.5	1.0	1.5	2.0	2.0	0.5	1.0	1.0	2.1	19
5	0.5	0.0				0.0	1.5	2.0	1.0	0.5	1.0	1.5	2.5	1.5	1.5	1.5	2.0	0.5	1.0	1.5	1.0	1.5	1.0	0.0	1.1	21
6	0.0	0.0	0.5	0.0	0.0	1.0	5.0	4.0	1.0	1.0	1.5	1.5	1.5													13
7*																										
8*																										
9																										
10																										
11																										
12																										
13																										
14*																										
15*																										
16																										
17						0.0	2.5	3.5	3.5	4.5		3.5	6.0	5.5	7.0	8.5	7.5	3.0	2.5	3.0	3.5	3.0	2.0	2.5	4.0	18
18	2.5	1.5	1.0	0.5	1.0	2.0	5.0	7.0	5.5	4.0	4.0		5.5	5.0	5.0	4.5	5.0	1.5	1.5	1.5	2.0	1.0	1.0	0.5	3.0	23
19	0.0	0.0	0.0	3.0	3.0	0.5	3.5	4.0	5.0	4.0	4.5	7.5	4.5	5.0	3.5	6.0	4.0	1.5	1.5	2.0	3.0	2.0	1.5	0.5	2.7	24
20	0.5	0.5	0.0	0.5	1.0	3.5	8.5	7.5	4.5	5.0	6.0	6.5	4.5	5.0	6.0	6.5	7.0	2.0	2.0	2.5	2.0	1.5	1.0	1.5	3.6	24
21*	1.0	1.0	0.0	0.0	0.5	1.0	2.5	2.0	3.0	3.5		3.5	2.0	1.0	1.0	1.5	2.5	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.4	23
22*	0.5	0.0					0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	0.0	0.5	0.5	1.5	1.5	1.0	0.0	0.0		0.4	19
23						1.0	4.0	8.5	6.5	6.5	6.0	9.0		3.5	5.0	5.0	5.0	2.0	3.0	3.0	2.0	1.0	1.5	1.0	4.2	18
24	0.0	0.0	0.0	0.0	0.0	1.0	5.0	7.5	5.0	6.0		4.0	4.5	4.5	5.5	4.0	5.5	2.5	2.0	2.5	2.0	2.5	2.5	2.0	2.9	23
25	1.0	0.5	1.0	1.0	1.0	1.5	4.5	4.5	2.5	2.5	3.0		4.0	1.5	1.5	4.0	7.0	3.5	3.5	2.5	3.0	3.0	2.5	1.5	2.6	23
26	2.5	3.5	3.0	1.0	0.5	1.5	5.5	5.5	2.0	2.0	1.0		2.0	2.5	3.0	2.5	2.0	0.5	0.5	1.0	2.0	1.5	2.5	1.0	2.1	23
27	0.0	0.0	0.0	0.0	0.5	2.5	6.5	7.0	6.5	9.0	11.0	7.5		6.5	6.0	9.0	11.5	3.0	2.5	2.5	3.0	3.0	2.0	1.5	4.4	23
28*	1.0	1.0	0.0			0.5	1.5	3.0	3.5	2.5	2.5	3.0	3.5	3.0	2.0	2.5	3.5	2.5	2.5	2.5	3.0	4.0	2.5	3.0	2.4	22
29*	1.5	2.5	3.0	2.0	2.0	3.5	2.0	2.0		0.5	0.5	1.5	0.5	0.0	1.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.5	0.0	1.1	23
30	0.0	0.0	0.0	0.5	0.5	2.5	6.5	6.0		4.0	5.0	4.5	4.5	2.0	4.0	4.0	4.0	1.5	1.5	2.0	2.0	1.5	1.0	1.0	2.6	23
31	0.5	0.5	0.0	0.0	0.0	1.5	4.5	8.5	3.0	5.0		4.0	3.5	3.0	3.0	3.0	3.0	1.0	1.0	0.5	1.0	1.5	1.0	0.5	2.2	23
AVG																										
NO.	16	17	14	12	14	18	20	20	18	20	15	16	17	19	19	19	19	19	19	19	19	19	18	17		423
MAX	2.5	3.5	3.0	2.0	2.0	3.5	9.0	8.5	6.5	9.0	11.0	9.0	6.0	6.5	7.0	9.0	11.5	3.5	3.5	3.0	3.5	4.5	2.5	3.0		11.5

10/27/71

FLORIDA
JACKSONVILLE, FLA

(1,198,386)

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL NONDISPERSIVE INFRA-RED

CARBON MONOXIDE
SEP 1971

DAY	AM												PM												DAILY MEAN	NO.
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11		
1	0.0	0.0	0.0	0.0	1.0	2.0	6.0	6.5	1.5	2.0	1.5		3.0	2.0	1.5	2.5	2.5	1.0	1.0	0.5	0.5	0.5	0.0	0.0	1.5	23
2	0.0	0.0	0.0	0.0	0.0	0.5	2.0	3.5	1.5	2.0	2.5		2.5	3.0	2.5	2.5	3.0	1.0	1.0	1.5	1.5	1.0	0.5	0.5	1.4	23
3	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.5	1.0	2.0	4.5	4.5		3.0	4.5	3.5	3.5	1.5	1.0	1.5	2.5	1.5	1.5	1.0	1.8	23
4*	0.5	0.0	0.0	0.0	0.0	1.0	2.0	2.0	3.0	2.0		3.5	2.5	2.5	2.5	2.0	1.5	2.0	1.5	1.0	1.5	1.5	1.5	1.5	1.5	23
5*	1.0	0.5	0.0	0.0	0.0	1.0	1.0	1.0	0.5	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.5	0.5	0.5	1.5	1.0	1.5	1.0	0.5	24
6	0.5	0.0	0.5	0.5	0.5	1.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	1.0	1.0	1.5	1.0	1.0	0.5	0.6	24
7	0.5	0.5	0.0	0.0	0.0	1.5	4.0	3.5		3.0	3.0	3.0	2.5	3.5	5.0	4.5	3.5	3.5	1.5	1.0	1.0	1.0	1.0	0.0	2.0	23
8	0.0	1.0	1.0	1.0	0.5	2.0	7.0	8.0	4.0		2.0	3.0	1.5	3.0	2.0	2.0	2.0	1.0	1.5	1.5	2.0	1.5	0.5	0.5	2.1	23
9	0.0	0.0	0.0	0.0	0.5	4.0	6.5		6.5	5.0	4.0	3.0	2.5	2.5	4.5	4.0	6.5	6.0	1.5	1.5	2.0	3.5	2.0	2.0	3.0	23
10	1.5	1.5	1.0	0.5	0.5	1.0	6.5	7.5	7.5		7.5	10.5	8.5	6.5	6.5	9.0	10.0	3.0	3.0	3.5	4.5	2.5	2.5	1.5	4.6	23
11*	2.0	1.5	1.0	0.5	0.5	1.0	2.0	2.0	2.5	4.0	4.0	2.5	3.0	3.5		2.5	2.5	3.0	3.0	3.0	2.0	2.0	2.5	0.5	2.2	23
12*	1.0	1.0	0.5			0.0	0.0	0.0	0.5	0.5	0.5	1.0	1.0	0.5	0.5	0.5	1.0	1.0	1.0	1.0	1.5	0.5	1.0	0.5	0.7	22
13	0.5	0.5	0.5	0.5	0.5	1.5	4.0	8.0		8.0	8.5	8.5	6.0	4.0	4.5	4.5	3.5	4.0	3.0	4.0	3.5	2.5	2.0	1.5	3.7	23
14	3.0	2.5	0.5	0.0	0.0	1.5	8.0	9.5		5.0	5.5	6.0	6.5	4.0	3.5	4.5	4.5	2.5	2.0	2.0	2.0	1.5	1.0	0.5	3.3	23
15													4.5	4.0	4.0	5.5	6.0	3.0	3.0	3.5	3.0	4.0	3.0	1.5		12
16	0.5	1.5	0.0	0.0	0.0	0.5	5.0	5.0	5.0	4.0		3.0	2.5	2.5	2.5	4.5	3.0	1.5	1.0	0.0	0.0	2.0	0.5	0.5	2.0	23
17	0.0	0.0	0.0	0.0	0.5	2.0	6.5	7.5									2.5	0.5	1.0	0.5	1.0	0.0	1.0	0.0		16
18*	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.5	1.0	1.5		1.0	0.5	0.5	0.5	0.5	1.5	2.0	1.5	2.0	2.5	3.0	3.0	1.1	23
19*	2.0	1.5	0.5	0.5	0.0	1.0	3.0		0.0	0.5	1.5	1.5	1.5	1.5	1.5	0.5	1.0	0.5	1.5	2.0	2.5	1.5	0.0		1.2	22
20	0.0	0.0	0.0	1.0	0.5	3.0	7.5		3.5	1.5	1.0	0.5	0.5													12
21																										
22																										
23																										
24	0.0	0.0	0.0	0.0	1.0	1.5	3.0	4.0	2.0	9.0	21.5	7.0	12.5	1.0	1.5	2.0	3.0	2.5	0.5	0.5	1.0	0.5	1.0	0.0	3.1	24
25*	1.0	1.5	0.5	0.0	0.0	0.5	1.5	2.0	1.0	1.0		0.0	0.0	0.5	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	23
26*	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.5	1.0	2.5	0.3	22
27	1.5	0.5	0.0	0.0	0.0	1.5	3.5	4.0		2.5	2.0	1.5	1.5	1.5	1.5	1.5	2.0	1.0	0.5	0.5	0.5	0.5	0.0	1.2	23
28	0.0	0.0	0.0	0.0	0.0	1.5	4.0	5.0		1.5	1.5	1.5	1.5	0.5	1.0	2.0	2.0	1.0	1.0	1.0	2.0	3.0	1.5	1.5	1.4	23
29	1.0	0.5	0.0	0.0	0.0	1.0	2.5	3.5		1.5	1.0	2.0	2.0	1.5	0.5	1.0	1.0	0.0	1.0	2.0	2.0	2.0	1.5	1.0	1.2	23
30	0.0	0.0	0.0	0.0	0.5	1.5	5.0	4.0	3.0	4.0	5.0	7.5	4.0	3.0	2.0	4.0	3.5	1.5	2.0	3.0	1.0	1.0	0.0	2.5	2.4	24
AVG	0.7	0.6	0.2	0.2	0.2	1.3	3.7	4.0		2.7		3.1	2.8	2.2	2.2	2.6	2.7	1.8	1.4	1.5	1.6	1.5	1.2	1.0	1.8	
NO.	26	26	26	25	25	26	26	23	19	23	21	23	25	25	24	25	26	25	25	26	26	26	26	25		593
MAX	3.0	2.5	1.0	1.0	1.0	4.0	6.0	9.5	7.5	9.0	21.5	10.5	12.5	6.5	6.5	9.0	10.0	6.0	3.0	4.0	4.5	4.0	3.0	3.0		21.5

10/29/71

FLORIDA
JACKSONVILLE, FLA

(11198.004)
CARBON MONOXIDE
RUN 1371

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL, NONDISPERSIVE INFRARED

8-HOUR RUNNING AVERAGES

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN NO.
1																									
2																									
3																									
4																									
5*																									
6*																									
7																									
8																									
9																									
10																									
11																									
12*																									
13*																									
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21																									
22																									
23																									
24																									
25																									
26*																									
27*																									
28																									
29													4.9	4.7	4.3	3.7	3.6	2.8	1.8	1.2	0.6	0.2	0.1	0.2	1.6	2.2	13
30	0.9	1.1	1.3	1.6	1.8	2.0	2.1	1.7	1.8	1.9	1.9	1.7	1.5	1.4	1.3	1.3	0.8	0.5	0.4	0.3	0.2	0.1	0.1	0.1	1.1	24	
AVG	0.9	1.1	1.3	1.6	1.8	2.1	2.1	1.7	1.8	1.9	1.9	3.2	3.1	2.8	2.6	2.4	1.8	1.2	0.8	0.6	0.2	0.1	0.1	0.3	1.5		
NO.	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	37	
MAX	0.9	1.1	1.3	1.6	1.8	2.0	2.1	1.7	1.8	1.9	1.9	4.9	4.7	4.3	3.9	3.6	2.8	1.8	1.2	0.6	0.2	0.1	0.2	0.6	4.9		

10/29/71

FLORIDA
JACKSONVILLE, FLA

([illegible])

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL NONDISPERSIVE INFRA-RED

CARBON MONOXIDE
JUL 1971

8-HOUR RUNNING AVERAGES

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO.
1								2.6	2.9	3.3	3.3	2.8	2.4	2.0	1.9	1.8	1.4	0.9	0.6	0.6	0.5	0.4	0.2	0.1	1.6	17
2	0.3	0.4	0.6	0.6	0.8																				0.5	5
3*																										
4*											1.0	1.0	1.1	1.4	1.6	1.8	1.7	1.6	1.6	1.4	1.3	0.9	0.8	0.7	1.3	14
5	0.8	0.9	1.1	1.1	1.3	1.3	1.4	1.4	1.3	1.1	1.3	1.0	0.9	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.3	0.6	0.8	24
6	0.9	1.2	1.7	2.1	2.3	2.5	3.1	3.1	3.1	3.1	2.8	2.5	2.5	2.3	1.6	1.5									2.3	16
7																										
8																										
9																										
10*																										
11*																										
12																							1.3	1.1	1.2	2
13	0.9	0.7	0.6	0.6	0.4	0.2	0.1	0.2	0.3	0.4							1.9	1.9	1.9	1.9					0.9	14
14																										
15																										
16																										
17*																										
18*																										
19																										
20																										
21																										
22									2.3	2.6	2.3	2.1	2.1	1.9	1.8	1.5	1.0	0.4	0.4						1.7	11
23				3.3	3.0	2.9	2.9	2.6	2.0	2.0	1.9	1.7	1.6	1.3	1.1	0.8	0.6	0.3	0.2	0.2					1.7	17
24*							0.4	0.5	0.7	0.6	0.7	0.7	0.6	0.5	0.5	0.4									0.6	10
25*												0.0	0.2	0.3	0.5	0.6	0.5	0.5	0.6						0.4	8
26					1.1	1.1	1.1	1.3	1.6	2.1	2.3	2.2	2.1	2.1	2.0	1.9	1.7	1.3	0.9	0.8	0.6	0.4	0.4	0.6	1.4	20
27	1.1	1.2	1.4	1.6	1.3	2.2	2.4	2.4	1.9	1.9	1.6	1.6	1.6	1.1	0.9	0.8	0.6	0.4	0.4						1.4	17
28				2.1	2.1	2.0	2.3	2.1	2.0	2.9	3.0	3.1	2.9	2.9	2.8	2.6	2.2	1.1	0.9	0.7					2.2	17
29			3.3	3.3	3.3	3.7	3.9	3.7	3.4	3.6	3.3	3.2	3.1	3.1	3.1	3.1	2.9	2.5	2.4	2.1	1.7	1.3	1.1	1.4	2.8	22
30	1.6	1.9	2.3	2.7	3.1	3.4	3.6	3.6	3.6	3.6	3.4	3.1	2.9	2.6	2.4	1.8	1.1	0.6	0.4	0.3	0.1	0.1	0.0	0.0	2.0	24
31*	0.1	0.1	0.2	0.2	0.4	0.5	0.6	0.8	0.9	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.4	0.4							0.5	18
AVG	0.8	0.9	1.4	1.8	1.8	2.0	2.0	2.0	2.0	2.2	2.1	1.8	1.7	1.6	1.5	1.4	1.3	1.0	0.9	0.9	0.7	0.6	0.6	0.6	1.5	
NO.	7	7	8	10	11	10	11	12	13	13	13	14	14	14	14	14	13	13	12	9	6	6	7	7		258
MAX	1.6	1.9	3.3	3.3	3.3	3.7	3.9	3.7	3.6	3.6	3.4	3.2	3.1	3.1	3.1	3.1	2.9	2.5	2.4	2.1	1.7	1.3	1.3	1.4		3.9

1972-771

FLORIDA
JACKSONVILLE, FLA

113198000

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL NONDISPERSIVE INFRA-RED

CARBON MONOXIDE
AUG 1971

8-HOUR RUNNING AVERAGES

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO.
1*																								0.9	0.9	1
2	0.9	1.3	1.5	1.7	1.7	1.9	1.6	1.9	1.6	1.3	1.2	1.1	0.8	0.9	0.8	0.9	0.7								1.3	17
3					2.1	2.1	2.3	2.1	2.3	2.6	2.5	2.4	2.2	2.0	1.5	1.3	0.8	0.5	0.5	0.5					1.7	16
4		3.1	3.1	3.1	3.1	3.0	3.5	2.7	1.8	2.1	2.1	2.1	2.3	1.9	1.4	1.5	1.4	1.2	1.1	1.1	0.8				2.1	23
5				1.0	1.1	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.3	1.3	1.3	1.1	0.8	0.6	0.7	0.5	0.4	0.3	0.8	1.1	21
6	1.3	1.4	1.6	1.7	1.9	2.1	2.2	1.8																	1.7	8
7*																										
8*																										
9																										
10																										
11																										
12																										
13																										
14*																										
15*																										
16																										
17					2.3	3.4	4.1	4.8	5.5	6.1	5.9	5.4	5.4	5.1	4.8	4.1	3.4	2.8	2.6	2.4	2.1	1.8	1.6	2.0	3.8	20
18	2.6	2.9	3.3	3.6	4.1	4.7	5.1	5.1	4.8	4.7	4.4	4.0	3.7	3.3	2.4	2.3	1.8	1.1	0.9	0.8	0.6	0.3	0.3	0.6	2.8	24
19	1.2	1.6	2.1	2.7	3.6	4.2	4.3	4.8	5.0	4.9	4.6	4.2	3.5	3.2	2.4	2.7	2.0	1.6	1.4	1.3	1.1	0.8	1.1	1.9	2.8	24
20	2.8	3.3	3.8	4.6	5.3	5.8	5.9	5.6	5.6	5.4	5.4	4.9	4.4	4.1	3.7	3.1	2.4	1.7	1.6	1.3	1.3	0.8	0.8	0.9	3.5	24
21*	1.0	1.3	1.6	1.8	2.3	2.5	2.5	2.3	2.2	2.1	1.8	1.7	1.4	1.3	1.3	1.3	1.1	0.9	0.8	0.7	0.7				1.5	21
22*					3.2	3.2	3.3	3.3	3.3	3.3	2.4	3.6	3.0	2.7	3.6	0.6	0.7	0.3							2.5	14
23				5.8	6.2	6.2	6.6	6.4	5.9	5.7	5.1	4.6	3.8	3.6	3.3	2.8	2.3	1.7	1.4	1.1	0.7	0.4	0.4	0.9	3.6	21
24	1.7	2.3	2.8	3.2	3.8	4.6	4.3	5.2	4.5	4.0	4.4	4.1	3.9	3.8	3.3	2.9	2.7	2.1	1.9	1.8	1.6	1.4	1.3	1.4	3.1	24
25	1.9	2.1	2.3	2.6	2.8	3.2	3.2	2.8	2.7	3.4	3.5	3.0	3.4	3.3	3.5	3.6	3.3	2.8	2.3	2.7	2.5	2.2	2.0	2.4	2.9	24
26	2.9	2.8	2.6	2.4	2.6	2.8	2.9	2.6	2.1	2.1	1.9	1.9	1.8	1.8	1.6	1.6	1.4	1.1	1.1	1.0	0.9	0.7	0.8	1.3	1.9	24
27	2.1	2.9	4.0	5.4	6.3	7.1	7.7	7.6	7.9	8.6	7.8	6.6	5.9	5.5	5.1	4.5	3.6	2.4	2.1	1.9	1.6	1.4	1.0	0.9	4.6	24
28*	1.2	1.6	1.9	2.3	2.4	2.5	2.8	2.9	2.8	2.8	2.8	2.8	2.8	2.7	2.9	2.9	3.0	2.8	2.8	2.8	2.8	2.6	2.4	2.4	2.6	24
29*	2.3	2.6	2.1	1.7	1.5	1.3	1.0	0.6	0.4	0.9	0.4	0.5	0.4	0.4	1.0	0.7	0.5	1.0	0.5	0.4	0.4	0.4	1.5	1.5	1.5	24
30	2.3	2.6	3.1	3.9	4.4	5.0	4.9	4.6	4.0	4.0	3.7	3.5	2.9	2.6	2.6	2.2	1.8	1.4	1.3	1.1	0.8	0.6	0.6	1.0	2.7	24
31	1.9	2.3	2.8	3.2	3.8	4.3	4.5	4.3	3.5	3.5	2.9	2.7	2.3	1.9	1.8	1.5	1.2	0.8	0.7	0.6	0.5	0.5	0.6	1.2	2.2	24
AVG	1.8	2.2	2.6	3.0	3.1	3.4	3.6	3.5	3.6	3.5	3.3	3.0	2.8	2.6	2.4	2.2	1.9	1.5	1.4	1.3	1.2	1.0	1.0	1.3	2.4	
NO.	14	15	15	17	20	20	20	20	19	19	19	19	19	19	19	19	19	18	17	17	16	14	14	15		423
MAX	2.9	3.3	4.0	5.8	6.3	7.1	7.7	7.6	7.9	8.6	7.8	6.6	5.9	5.5	5.1	4.6	3.6	2.8	2.8	2.8	2.8	2.6	2.4	2.4		8.6

[illegible]

FLORIDA
JACKSONVILLE, FLA

[illegible]
CONCENTRATION IN PARTS PER MILLION — INSTRUMENTAL NONDISPERSIVE INFRARED
CARBON MONOXIDE
SEP 1971

8-HOUR RUNNING AVERAGES

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO.
1	1.9	2.1	2.4	2.6	[illegible]	3.2	3.2	[illegible]	[illegible]	2.1	2.0	[illegible]	[illegible]	1.4	1.3	1.1	[illegible]	0.4	[illegible]	[illegible]	2.1	[illegible]	2.1	[illegible]	1.5	24
2	1.7	0.9	1.1	1.4	1.6	2.3	2.6	2.6	2.4	2.5	2.6	2.2	2.1	[illegible]	[illegible]	1.5	1.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.6	[illegible]
3	0.6	0.7	0.9	1.5	2.1	2.4	2.5	3.1	3.3	3.6	3.6	3.1	2.6	2.6	2.4	2.1	1.9	1.6	1.7	1.1	[illegible]	[illegible]	0.5	0.6	1.9	24
4*	0.7	1.3	1.3	1.6	1.9	2.3	2.5	[illegible]	[illegible]	2.6	2.6	2.3	1.3	1.6	1.7	1.6	1.5	1.4	1.3	1.1	0.9	[illegible]	1.7	[illegible]	1.6	24
5*	0.6	0.5	0.4	0.4	0.4	0.5	0.4	0.3	0.2	0.1	0.2	0.3	1.3	0.4	0.5	0.7	[illegible]	[illegible]	0.6	0.8	0.8	0.7	0.8	0.7	0.5	24
6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.6	0.4	0.5	0.9	0.6	24
7	1.5	1.6	1.7	2.1	2.6	2.9	3.2	3.6	3.5	3.5	3.6	[illegible]	3.1	2.9	[illegible]	[illegible]	[illegible]	[illegible]	1.7	1.6	[illegible]	0.6	0.7	1.6	2.1	24
8	2.6	3.1	3.4	3.5	3.8	3.9	4.1	3.4	2.5	2.2	2.1	2.0	1.8	1.9	1.7	1.5	1.3	1.1	0.9	0.8	0.6	0.4	0.7	1.4	2.1	24
9	1.6	2.5	3.2	3.8	4.2	4.4	4.2	[illegible]	[illegible]	4.2	4.3	4.0	3.6	3.6	3.5	3.6	3.1	2.5	1.7	1.8	1.2	1.6	1.3	1.8	3.1	[illegible]
10	2.5	3.3	3.5	4.4	5.9	7.0	7.6	7.3	8.3	8.4	7.7	7.1	6.3	5.8	5.3	4.8	3.3	2.8	2.6	2.4	2.0	1.5	1.3	1.3	4.7	24
11*	1.3	1.4	1.7	2.1	2.3	2.6	2.9	3.1	3.1	3.1	[illegible]	2.9	2.9	2.8	[illegible]	2.6	2.3	2.1	1.9	1.6	1.4	1.3	0.9	0.5	2.2	24
12*	0.4	0.3	0.3	0.3	0.5	0.6	0.5	0.4	0.6	0.7	0.8	0.8	0.8	0.8	0.6	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.7	1.1	0.7	24
13	2.0	2.2	3.3	4.4	5.6	6.4	6.7	6.2	6.3	5.9	5.4	4.5	4.2	3.9	3.7	3.4	3.0	2.9	2.6	2.6	1.9	1.6	1.3	2.1	3.9	24
14	3.1	3.1	3.6	4.2	5.1	6.3	6.4	5.7	5.0	[illegible]	4.5	[illegible]	3.7	3.1	2.8	2.5	2.3	1.6	1.5						3.8	19
15											4.5	4.3	4.2	4.0	4.0	3.9	3.4	2.7	2.5	2.1	1.7	1.3	0.9	1.1	2.9	14
16	1.6	2.1	2.4	2.8	3.2	3.6	3.9	3.5	3.6	3.1	[illegible]	2.6	2.2	1.9	1.8	1.6	1.1	0.7	0.5	0.4	0.4	0.4	0.4	1.2	2.0	24
17	2.1	2.4	2.8												0.9	0.9	[illegible]	0.5	0.4	0.3	0.1	0.1	0.1	0.1	0.9	13
18*	0.3	0.4	0.6	0.7	0.9	0.9	1.0	0.9	0.8	0.9	0.9	1.0	1.1	1.3	1.6	1.9	2.3	2.3	2.3	2.1	1.9	1.7	1.4	1.4	1.3	24
19*	1.2	0.9	0.8	0.9	1.1	1.3	1.4	1.1	1.1	1.2	1.2	1.2	1.3	1.4	1.6	1.2	1.3	1.1	1.1	0.9	0.7	0.6	0.6	1.7	1.1	24
20	1.7	2.2	2.4	2.6	2.4	2.4	2.3																		2.3	7
21																										
22																										
23																							0.3	0.6	0.4	2
24	1.1	1.3	2.6	5.1	6.1	7.6	7.5	7.3	7.1	7.2	[illegible]	3.0	[illegible]	1.5	1.6	1.4	1.1	[illegible]	0.8	0.8	0.7	0.6	0.6	0.6	[illegible]	24
25*	0.9	0.9	0.8	0.9	0.7	0.7	0.9	0.7	0.4	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	24
26*	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.7	0.9	0.9	0.8	0.8	0.8	0.9	1.2	0.4	24
27	1.4	1.4	1.6	1.9	2.1	2.4	2.4	2.1	1.7	1.8	1.6	1.4	1.3	1.1	1.0	[illegible]	0.7	0.6	0.3	0.3	0.2	0.1	0.3	0.7	1.2	24
28	1.3	1.5	1.7	1.9	2.1	2.4	2.2	1.8	1.4	1.4	1.4	1.3	1.3	1.3	1.6	1.7	1.6	1.5	1.4	1.3	1.2	0.9	0.7	0.8	1.5	24
29	1.1	1.1	1.2	1.4	1.6	1.9	2.0	1.7	1.6	1.3	1.1	1.1	1.1	1.1	1.2	1.3	1.3	1.2	1.2	1.1	0.8	0.6	0.6	1.0	1.2	24
30	1.4	1.8	2.3	2.9	3.8	4.3	4.4	4.1	4.1	4.1	3.6	3.4	2.9	2.5	2.3	2.0	1.8	1.6	1.6						2.9	19
AVG	1.3	1.5	1.8	2.2	2.6	2.9	3.0	2.9	2.7	2.7	2.7	2.4	2.2	[illegible]	[illegible]	1.8	[illegible]	[illegible]	1.2	[illegible]	0.9	0.7	0.7	0.9	1.9	
NO.	26	26	26	25	25	25	25	24	24	24	25	25	25	25	26	26	26	26	26	24	24	24	25	25		602
MAX	3.1	3.3	3.5	5.1	6.1	7.6	7.6	7.3	[illegible]	[illegible]	7.7	7.1	6.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.6	[illegible]	1.7	1.6	2.1	[illegible]	

A-19

POLLUTANT : 44201 - OZONE — SAMPLING INTERVAL : 1-HOUR

MINIMUM DETECTABLE VALUE : 0.002 — METHOD CODE : 11

1/2 THE MIN. DET. IS SUBSTITUTED FOR ZERO VALUES IN ALL COMPUTATIONS. — REPORT INTERVAL : 71 05 10 71 09 (YR MO YR MO)

UNITS : PARTS PER MILLION

LOCATION :	YR	NO. SAMP	MIN	FREQUENCY DISTRIBUTION - PERCENT 10	20	30	40	50	60	70	80	90	95	99	MAX	ARITH MEAN	ARITH STD DEV	GEO MEAN	GEO STD DEV
FLORIDA JACKSONVILLE, FLA 101980081A05	71	2044	0.0	0.0	0.005	0.005	0.010	0.015	0.020	0.025	0.030	0.040	0.045	0.055	0.100	0.018	0.01	0.011	3.19
FLORIDA MIAMI, FLA 112700081A05	71	2092	0.0	0.0	0.0	0.0	0.0	0.005	0.010	0.010	0.015	0.015	0.025	0.035	0.050	0.007	0.01	0.004	3.07
FLORIDA TAMPA, FLA 104362081A05	71	1919	0.0	0.0	0.0	0.005	0.005	0.010	0.015	0.020	0.030	0.035	0.040	0.055	0.070	0.015	0.01	0.008	3.73

JACKSONVILLE, FLA , FLORIDA SITE 301

SITECODE: 120120001
CITYNAME: JACKSONVILLE, FLA
STATE (2C): FLORIDA
SITE ADDR: AIR POLL CNTRL LABORATORY-6525 EVERGREEN
AQCR ( ):
SMSA ( ):
COUNTY ( ): DUVAL
AGENCY TYPE: EPA//ATMOS. SERV.
AGENCY/PROJECT CODE: AQS
STATION TYPE ( ):
TIME ZONE ( ):
SUPPORTING AGENCY: EIC-ENVIRONMENTAL SERVICES AIR POLLUTION CONTROL
COMMENTS:

LATITUDE: D. M. S. NORTH
LONGITUDE: D. M. S. WEST
UTM ZONE:
UTM NORTHING:
UTM EASTING :
ELEVATION ABOVE GROUND: 5
ELEVATION ABOVE MSL: 14
CITY POPULATION: 000
AQCR POPULATION: 000
EPA-REGION:

10/27/71

FLORIDA
JACKSONVILLE, FLA

[illegible]
OZONE
JUL 1971

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL CHEMILUMINESCENCE

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO.
1																										
2																	.010	.010	.005	.000						4
3*	.000	.000									.010	.010	.012	.015	.030	.035	.025	.020	.022	.015	.020	.020	.010	.005		16
4*	.005	.005	.005	.010	.020	.020	.010	.005	.015	.025	.030	.030	.030	.030	.030	.030	.035	.030	.025	.015	.015	.015	.005	.005	.018	24
5	.015	.025	.025	.015	.010	.010	.010	.015	.025	.030	.035		.035	.030	.030	.030	.040	.030	.020	.005	.030	.025	.025	.020	.023	23
6	.015	.000	.005	.005	.000	.000	.000	.005	.010	.015		.020	.015	.015	.015	.015	.015	.015	.005	.005	.005	.005	.010	.005	.008	23
7	.005	.005	.010	.000	.000	.005	.005	.010	.015		.025	.043	.035	.035	.030	.025	.020	[illegible]	.015	.015	.010	.010	.010	.005	.014	23
8	.015	.010	.015	.015	.005	.000	.000		.020	.020	.025	.020	.010	.015	.015	.015	.020	.015	.010	.005	.000	.000	.000	.005	.011	23
9	.000	.030	.010	.015	.005	.005	.015	.010		.025	.025	.025	.025	.025	.020	.020	.020	.020	.020	.010	.010	.015	.015	.000	.012	23
10*	.000	.000	.000	.000	.000	.000	.000	.010	.030	.030	.025	.045	.050		.040	.030	.020	.015	.015	.010	.005	.005	.000	.000	.014	23
11*	.000	.000	.000	.000	.005	.000	.010	.015	.020	.030	.035	.050	.055	.060	.050	.045	.035	.020	.020	.015	.010	.015	.005	.010	.021	24
12	.005	.010	.015	.010	.005	.005	.005		.020	.040	.045	.035	.035	.035	.040	.040	.040	.045	.045	.030	.020	.000	.005	.005	.023	23
13	.015	.020	.015	.005	.000	.000	.000		.025	.025	.035	.040	.050	.045	.050	.050	.040	.030	.015	.010	.015	.015	.005	.015	.022	23
14	.010	.020	.015	.010	.000	.000	.000			.045	.050	.050	.050	.045	.045	.045	.045	.045	.035	.025	.015	.025	.025	.030	.028	22
15	.025	.025	.025	.025	.025	.025	.020		.040	.050	.050	.050	.050	.050	.050	.050	.045	.045	.045	.020	.020	.010	.015	.015	.033	23
16	.005	.010	.020	.015	.015	.010	.005		.015	.025	.040	.045	.045	.045	.030	.020	.025	.025	.020	.020	.010	.010	.010	.015	.020	23
17*	.010	.010	.010	.010	.005	.000	.000	.010	.020	.010	.035	.040	.045	.040	.040	.040	.040	.035	.030	.025	.030	.020	.020	.020	.023	24
18*	.005	.005	.005	.005	.005	.000	.015	.030	.040	.045	.055	.060	.065	.055	.045	.030	.025	.025	.020	.010	.000	.005	.005	.005	.022	24
19	.005	.005	.005	.010	.010	.020	[illegible]	.005	.015		.030	.030	.025	.030	.025	.020	.025	.015	.015	.015	.005	.005	.005	.005	.013	23
20	.005	.005	.005	.005	.005	.000	.000		.015	.025	.030	.035	.035	.030	.020	.030	.025	.020	.010	.005	.010	.010	.005	.010	.014	23
21	.010	.005	.005	.005	.000	.000	.000		.020	.030	.025	.020	.010	.015	.020	.015	.015	.020	.010	.005	.010	.010	.015	.005	.011	23
22	.000	.005	.005	.000	.000	.010	.000	.005	.015	.020		.060	.035	.026	.035	.035	.020	.010	.015	.020	.015	.005	.005	.025	.014	23
23	.005	.010	.010	.010	.010	.005	.005		.035	.035	.040	.050	.065	.050	.045	.040	.035	.030	.020	.010	.005	.010	.005	.005	.023	23
24*	.010	.000	.000	.005	.005	.005	.005	.005	.020	.020	.025	.030	.030	.025		.010	.020	.010	.010	.005	.010	.005	.005	.005	.011	23
25*	.000	.000	.000	.000	.000	.010	.010	.015	.015	.025	.025	.025	.020	.020	.020	.025	.025	.025	.025	.020	.010	.005	.000	.000	.013	24
26	.000	.005	.000	.000	.000	.000	.000	.005	.010	.020		.030	.030	.030	.025	.015	.020	.015	.015	.005					.011	19
27	.000	.000	.000	.000	.000	.000	.000			.025	.030	.030	.030	.025	.025	.025	.020	.020	.020	.015	.010	.005	.000	.005	.012	22
28	.000	.010	.010	.005	.005	.000	.000		.025	.045	.045	.045	.050	.045	.020	.015	.015	.010	.000	.000	.005	.000	.005	.010	.015	23
29	.010	.020	.015	.005	.005	.005	.000		.000	.005				.020	.020	.025	.025	.025	.010	.015	.010	.000	.000	.005	.011	20
30	.000	.000	.000	.000	.000	.000	.000		.010	.020	.025	.025	.030	.020	.025	.025	.020	.020	.015	.005	.005	.000	.005	.005	.011	23
31*	.005	.010	.005	.010	.005	.005	.005	.005	.010	.015	.015	.020	.020		.015	.015	.015	.010	.010	.005	.010	.010	.010	.020	.010	23
AVG	.006	.007	.007	.006	.005	.003	.003		.019	.027	.032	.035	.034	.032	.030	.028	.025	.022	.018	.011	.011	.008	.007	.008	.016	
NO.	28	28	28	28	28	28	28	15	25	26	25	27	28	27	28	29	30	30	30	30	28	28	28	28		560
MAX	.025	.025	.025	.025	.025	.025	.020	.030	.040	.050	.055	.060	.065	.060	.050	.050	.045	.045	.045	.030	.030	.025	.025	.030		.065

A-22

10/27/71

FLORIDA
JACKSONVILLE, FLA

(1)(1981)

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL CHEMILUMINESCENCE

OZONE
AUG 1971

DAY	AM												PM												DAILY MEAN	NO.
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11		
1*	.025	.020	.010	.010	.010	.015	.020	.025	.025	.020	.020	.020	.020	.020	.020	.015	.015	.015	.015	.010	.015	.010	.010	.010	.016	24
2	.015	.015	.010	.010	.005	.005	.005	.015	.015	.020	.020	.020	.020	.020	.015	.015	.015	.015	.010	.015	.010	.010	.005	.005	.012	24
3	.000	.000	.000	.000	.000	.000	.000	.000	.005	.015	.010	.025	.025	.025	.025	.025	.025	.020	.020	.015	.010	.005	.005	.000	.010	24
4	.000	.000	.000	.000	.000	.000	.000	.000	.020	.025																10
5												.030	.030	.030	.025	.025	.025	.025	.025	.020	.020	.015	.015	.015		13
6	.010	.005	.000	.000	.015	.010	.000	.000	.020	.020	.025	.030	.030	.035	.035	.035	.035	.035	.035	.035	.035	.035	.035	.020	.015	.021	24
7*	.015	.010	.010	.010	.000	.010	.015	.025	.030	.030	.035	.040	.040	.030		.035	.035	.035	.030	.020	.015	.015	.010	.005	.021	23
8*	.000	.000	.000	.000	.000	.000	.000	.015	.035	.040	.045	.045	.045	.050	.045	.025	.030	.035	.020	.005	.000	.005	.000	.015	.018	24
9	.010	.005	.000	.000	.000	.000	.000	.000		.010	.025	.030	.025													12
10									.035	.035	.060	.060	.095	.100	.090	.080	.060	.065	.055	.045	.025	.020	.010	.005		16
11	.005	.005	.000	.000	.005	.005	.005	.015		.045	.055	.060	.060	.055	.055	.050	.045	.035	.030	.015	.005	.015	.015	.015	.025	23
12	.005	.010	.015	.005	.005	.010	.010		.025	.030	.050	.055	.075	.100	.100	.100	.065	.050	.045	.045	.040	.045	.035	.020	.040	23
13	.025	.020	.010	.005	.005	.005	.005		.035	.040	.040	.040	.040	.040	.045	.045	.045	.045	.035	.035	.035	.035	.025	.025	.029	23
14*	.030	.030	.030	.025	.025	.025	.020	.015	.010	.025	.035	.035	.030	.030	.030	.025	.025	.030	.030	.030	.030	.030	.030	.035	.027	24
15*	.035	.035	.035	.035	.035	.035	.030	.020	.025	.030	.030	.030	.030	.035	.035	.030	.025	.025	.025	.020	.025	.025	.020	.010	.028	24
16	.015	.015	.015	.015	.015	.020	.015	.015		.010	.015	.020	.005	.010	.010	.015	.015	.010	.010	.010	.010	.010	.020	.020	.013	23
17	.015	.020	.020	.020	.015	.010	.010	.005	.010	.020	.030		.000	.000	.005	.005	.010	.020	.010	.000	.000	.000	.000	.000	.009	23
18	.000	.000	.000	.000	.010	.020	.015	.010	.020	.030	.045	.060	.040	.045	.030	.025	.025	.035	.030	.020	.005	.000	.005	.005	.019	24
19	.005	.005	.000	.000	.000	.000	.000	.005	.010	.020	.030	.035	.040	.040	.025	.020	.010	.005	.005	.000	.000	.000	.000	.010		24
20	.000	.000	.000	.000	.000	.000	.000		.005	.010	.020	.025	.035	.045	.040	.035	.025	.015	.005	.000	.000	.000	.000	.000	.011	23
21*	.000	.000	.000	.000	.000	.000	.000	.000	.010	.020	.025		.035	.035	.035	.035	.035	.030	.020	.015	.005	.000	.000	.000	.013	23
22*	.000	.005	.005	.005	.005	.005	.005	.005	.015	.025	.035	.040	.040	.040	.040	.035	.030	.020	.005	.000	.000	.000	.000	.000	.014	24
23	.000	.000	.005	.010	.005	.000	.000	.010	.020	.020	.020	.020	.020	.020	.020	.020	.015	.015	.015	.000	.000	.000	.000	.000	.009	24
24	.000	.000	.000	.000	.000	.000	.000	.015	.015	.020	.025	.025		.020	.020	.025	.010	.015	.015	.005	.005	.005	.005	.005	.009	23
25	.000	.000	.000	.000	.005	.005	.005	.005	.010	.015	.020	.030	.030	.025	.025	.020	.010	.005	.005	.000	.000	.000	.000	.000	.008	24
26	.000	.000	.000	.000	.000	.000	.000	.005	.015	.010	.015	.015	.015	.015	.015	.015	.015	.015	.015	.005	.005	.000	.000	.005	.007	24
27	.005	.010	.010	.010	.005	.005	.000	.005	.010	.020	.025	.030			.055	.040	.035	.020	.020	.005	.005	.005	.005	.000	.014	22
28*	.000	.000	.000	.000	.000	.000	.000	.005	.015	.030	.035	.045		.030	.035	.030	.030	.020	.015	.005	.005	.005	.005	.005	.013	23
29*	.035	.030	.000	.000	.000	.030	.000		.025	.030	.030	.030	.030	.030	.030		.030	.020	.020	.015	.010	.005	.005	.005	.014	22
30	.005	.005	.005	.000	.005	.000	.000	.000	.005	.010	.015	.015			.015	.015	.015	.015	.010	.010	.010	.005	.005	.000	.007	22
31	.005	.005	.005	.010	.005	.000	.000		.010	.010	.010	.015	.010	.010	.010	.010	.010	.010	.010	.005	.005	.005	.005	.005	.007	23
AVG	.007	.007	.006	.005	.006	.006	.005	.008	.017	.022	.029	.032	.033	.034	.033	.030	.027	.024	.019	.013	.011	.010	.008	.007	.017	
NO.	29	29	29	29	29	29	29	24	27	30	29	28	26	27	28	28	29	29	29	29	29	29	29	29		682
MAX	.035	.035	.035	.035	.035	.035	.030	.025	.035	.045	.060	.060	.095	.100	.100	.100	.080	.065	.055	.045	.040	.045	.035	.035		.100

10/22/71

FLORIDA
JACKSONVILLE, FLA

(11158-181?)
OZONE
SEP 1971

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL CHEMILUMINESCENCE

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO.
1	.035	.035	.03?	.0??	.0??	.03?	.039		.010		.015	.015	.015	.015	.015	.015	.015	.015	.015	.015	.015	.015	.010	.01?	.01?	22
2	.01?	.015	.010	.01?	.01?	.015	.015		.015	.020	.02?	.020	.02?	.015	.015	.015	.015	.015	.010	.005	.01?	.010	.01?	.01?	.013	23
3	.01?	.010	.010	.015	.015	.015	.010	.015	.015	.015	.015	.015	.015			.015	.015	.015	.015	.015	.010	.013	.010	.01?	.013	22
4*	.00?	.01?	.01?	.01?	.01?	.00?	.005	.00?		.015	.01?	.015	.015	.02?	.015	.015	.015	.015	.015	.015	.01?	.01?	.01?	.01?	.011	23
5*	.005	.005	.005	.010	.010	.005	.005	.005	.015	.015	.015	.010	.015	.020	.020	.020	.020	.020	.015	.015	.015	.015	.010	.010	.012	24
6	.010	.015	.015	.015	.01?	.010	.010	.015	.020	.020	.020	.025	.025	.020	.020	.020	.020	.020	.020	.015	.015	.015	.015	.015	.016	24
7	.015	.015	.015	.015	.015	.015	.015	.020	.02?	.02?	.025	.025	.025	.025	.02?	.025	.025	.025	.02?	.02?	.02?	.02?	.020	.015	.019	24
8	.005	.000	.000	.000	.000	.000	.00?		.010	.020	.020	.020	.020	.020	.020	.020	.015	.020	.020	.015	.010	.015	.005	.010	.011	23
9	.005	.005	.01?	.01?	.01?	.00?	.0??		.01?	.015	.02?	.02?	.02?	.015	.020	.020	.020	.020	.0??	.015	.01?	.00?	.0??	.0??	.011	23
10	.000	.000	.000	.000	.005	.000	.000		.010	.010	.015	.025	.025	.025	.025	.025	.025	.025	.010	.005	.000	.000	.000	.00?	.0??	23
11*	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005		.025	.030	.030	.035	.035	.030	.030	.030	.015	.000	.000	.000	.00?	.011	23
12*	.0??	.005	.0??	.0??	.005	.005	.005	.01?	.01?	.02?	.02?	.02?	.02?	.02?	.025	.02?	.02?	.015	.01?	.01?	.015	.015	.005	.005	.011	24
13	.005	.005	.005	.010	.005	.005	.000	.005	.020	.030	.035	.040		.040	.040	.045	.040	.040	.030	.025	.025	.015	.015	.015	.021	23
14	.02?	.020	.02?	.020	.015	.01?	.01?	.01?	.025	.035	.04?	.045	.045	.045	.045	.04?	.045	.045	.0??	.0??	.0??	.02?	.0??	.035	.027	24
15	.030	.030	.025	.030	.030	.025	.010	.010	.030	.035	.045	.050	.050	.050	.050	.045	.045	.030	.015	.010	.005	.000	.000	.005	.027	24
16	.015	.020	.020	.025	.030	.020	.005		.015	.035	.045	.030	.050	.055	.055	.045	.045	.045	.040	.030	.030	.035	.025	.025	.031	23
17	.025	.025	.02?	.02?	.015	.035	.0??	.015	.025	.03?	.035	.04?	.05?	.045	.05?	.045	.04?	.035	.025	.015	.0??	.015	.01?	.0??	.025	24
18*	.010	.010	.010	.005	.005	.000	.000	.005	.010	.025	.030	.030	.045		.035	.030	.020	.015	.010	.010	.015	.015	.005	.005	.014	23
19*	.0??	.0??	.0??	.0??	.0??	.0??	.0??	.0??	.0??	.015	.015	.02?		.02?	.020	.03?	.025	.025	.02?	.02?	.015	.015	.01?	.005	.011	23
20	.000	.005	.000	.000	.000	.000	.000	.000		.020	.020	.030	.035	.045	.035	.035	.030	.025	.020	.020	.020	.015	.010	.010	.016	23
21	.005	.000	.000	.000	.000	.000	.000	.000	.005	.010	.020	.025	.025	.030	.025		.020	.020	.020	.025	.030	.025	.030	.020	.014	23
22	.015	.0??	.00?	.0?5	.005	.005	.0??	.0??	.01?	.010	.015	.015	.015	.015	.015	.015	.015	.010	.01?	.015	.015	.01?	.015	.015	.01?	24
23	.015	.015	.015	.015	.015	.010	.005		.015	.015	.020	.020	.020	.015	.015	.015	.015	.015	.010	.015	.015	.015	.015	.015	.014	23
24	.0??	.025	.0??	.0??	.0??	.005	.0??	.01?	.015	.02?	.025	.025	.02?	.02?	.020	.025	.025	.025	.020	.0??	.0??	.025	.015	.025	.017	24
25*	.015	.010	.005	.005	.005	.005	.000	.005	.015	.020	.025	.030	.035	.045	.045	.045	.050	.050	.050	.050	.040	.035	.030	.040	.026	24
26*	.040	.045	.045	.040	.040	.035	.030	.030	.035	.035	.040	.035	.040	.040	.040	.040	.040	.045	.040	.040	.040	.025	.020	.005	.036	24
27	.015	.02?	.02?	.02?	.02?	.02?	.0??	.015	.025	.04?	.045	.045	.045	.05?	.045	.05?	.050	.045	.04?	.04?	.04?	.045	.04?	.04?	.034	24
28	.015	.025	.015	.025	.025	.025	.010	.025	.020	.013	.025	.025	.029	.029	.029	.029	.029	.029	.029	.029	.029	.019	.019	.019	.024	24
29	.015	.015	.015	.015	.015	.015	.01?	.0??	.02?	.025	.025	.03?	.03?	.03?	.02?	.025	.03?	.03?	.025	.02?	.0??	.015	.01?	.015	.02?	24
30	.015	.010	.015	.015	.015	.010	.010	.015		.025	.030	.035	.035	.030	.030	.030	.030	.030	.005	.000	.000	.005	.005	.000	.016	23
AVG	.01?	.011	.01?	.011	.01?	.0?5	.005	.009	.015	.021	.025	.026	.029	.029	.029	.028	.027	.026	.021	.017	.015	.014	.013	.013	.015	
NO.	30	30	30	30	30	30	30	23	27	29	29	30	28	28	29	29	30	30	30	30	30	30	30	30		702
MAX	.04?	.045	.045	.04?	.040	.035	.030	.030	.035	.04?	.045	.050	.050	.055	.05?	.05?	.050	.050	.0??	.05?	.04?	.045	.04?	.04?	.055	

TAMPA, FLA , FLORIDA SITE 001

SITECODE: 104360001	LATITUDE: 27 D. 58 M. 52 S. NORTH
CITYNAME: TAMPA, FLA	LONGITUDE: 82 D. 30 M. 55 S. WEST
STATE (IC): FLORIDA	UTM ZONE:
SITE DESC: EDWARDS HOSPITAL- 4001 TAMPA BAY BLVD	UTM NORTHING:
AQCR ( ): *	UTM EASTING :
SMSA ( ): *	ELEVATION ABOVE GROUND: 10
COUNTY ( ): HILLSBOROUGH	ELEVATION ABOVE MSL: 40
AGENCY TYPE: EPA/ATMOS. SURV.	CITY POPULATION: 000
AGENCY/PROJECT CODE: ACS,	AQCR POPULATION: 000
STATION TYPE ( ): *	EPA-REGION:
TIME ZONE ( ):	
SUPPORTING AGENCY: HILLSBOROUGH CO POLLUTION CONTROL COMMISSION	
COMMENTS:	

12/27/71

FLORIDA
TAMPA, FLA

(1)436-0811

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL CHEMILUMINESCENCE

OZONE
JUL 1971

DAY	AM												PM											DAILY MEAN	NO.
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11		
1																										
2																										
3*																										
4*																										
5																										
6																										
7													.020	.020	.020	.020	.015	.015	.020	.030	.015	.010	.015	.010	.005	13
8	.000	.000	.000	.000	.005	.000	.000	.000	.000		.000	.015	.005	.020	.020	.020	.015	.010	.005	.005	.010	.015	.005	.000	.006	23
9	.000	.005	.005	.000	.000	.000	.000	.000	.000	.000	.005	.015	.021	.021	.025	.030	.020	.005	.005	.005	.000	.000	.000	.000	.006	24
10*	.000	.000	.000	.000	.000	.000	.000	.000	.005	.015	.015	.025	.030	.030	.030	.040	.045	.020	.025	.015	.010	.000	.000	.000	.012	24
11*	.000	.000	.000	.000	.000	.000	.000	.000	.005	.005	.010	.000	.010	.015	.015	.020	.030	.030	.030	.030	.030	.015	.005	.000	.010	24
12	.000	.000	.000	.000	.000	.005	.000	.000	.005	.025	.030	.035	.035	.031	.025	.005	.000	.000	.031	.020	.020	.000	.000	.000	.008	24
13	.000	.000	.005	.005	.005	.000	.000	.000	.000	.015	.015	.020	.025	.015	.015	.015	.015	.005	.010	.010	.000	.000	.000	.000	.007	24
14	.000	.000	.000	.000	.000	.000	.021	.000	.000	.000		.020	.025	.041	.031	.020	.015	.015	.015	.015	.010	.005	.010	.005	.009	23
15	.005	.010	.010	.010	.000	.005	.000	.000	.005	.010	.015	.015	.015	.015	.015	.015	.015	.015	.010	.010	.010	.000	.000	.000	.008	24
16	.000	.000	.000	.000	.000	.005	.000	.000	.000	.010	.010	.015	.015	.021	.020	.015	.010	.010	.010	.010	.005	.000	.000	.000	.006	24
17*	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.010	.020	.031	.025	.030	.025	.020	.020	.005	.010	.005				.009	21
18*													.010	.020	.035	.025	.015	.010	.005	.005	.000	.000	.000	.000		12
19	.000	.005	.005	.005	.000	.000	.000	.000	.005	.010	.020	.030	.041	.041	.031	.030	.025	.020	.015	.010	.010	.000	.000	.000	.012	24
20	.000	.000	.005	.005	.000	.000	.000	.000	.000	.015	.015	.015	.010	.010	.005	.005	.010	.010	.010	.005	.000	.000	.000	.000	.004	24
21	.000	.000	.000	.000	.000	.005	.000	.000	.000	.000	.005	.010	.010	.010	.005	.000	.005	.010	.005	.000	.000	.000	.000	.000	.002	24
22	.000	.000	.000	.010	.005	.010	.000	.000	.000																	9
23																		.035	.030	.015	.005	.000	.000	.000		7
24*	.000	.000	.005	.010	.000	.005	.005	.000	.005	.010	.010	.020	.025	.025	.020	.015	.015	.020	.020	.010	.000	.000	.000	.000	.009	24
25*	.000	.000	.000	.000	.000	.000	.000	.000	.010	.010	.015	.020	.025	.025	.025	.030	.030	.030	.035	.020	.015	.005	.005	.000	.012	24
26	.000	.010	.015	.005	.000	.000	.000	.000	.000	.005	.005	.010	.015	.025	.020	.030	.030	.020	.015	.015	.010	.005	.005	.000	.009	24
27	.000	.000	.010	.010	.000	.000	.000	.000	.000	.015	.010	.035	.021	.035	.045	.040	.030	.030	.025	.020	.015	.010	.005	.005	.014	24
28	.005	.010	.020	.015	.005	.000	.000	.000	.005	.010	.015		.015	.020	.015	.015	.015	.010	.015	.005	.000	.000	.000	.000	.008	23
29	.000	.000	.005	.005	.005	.000	.000	.000	.000	.000	.005	.010	.005	.015	.015	.015	.015	.015	.020	.015	.005	.000	.000	.000	.006	24
30	.010	.000	.000	.000	.005	.009	.014	.015	.014	.015	.024	.015	.010	.010	.020	.020	.019	.020	.020	.014	.010	.005	.005	.009	.012	24
31*	.019	.024	.019	.004	.004	.004	.004	.000	.004	.004	.009	.009	.010	.010	.009	.014	.010	.010	.014	.009	.000	.000	.000	.000	.008	24
AVG													.018	.021	.021	.019	.018	.016	.015	.011	.006	.003	.002	.001		
NO.	22	22	22	22	22	22	22	22	22	22	20	20	21	23	23	23	23	23	24	24	24	24	23	23	23	539
MAX	.019	.024	.020	.015	.005	.010	.014	.015	.014	.025	.035	.035	.040	.040	.045	.040	.045	.035	.035	.030	.030	.015	.010	.009		.045

10/27/71

FLORIDA
TAMPA, FLA

(1043600611)
OZONE
AUG 1971

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL CHEMILUMINESCENCE

DAY	AM												PM												DAILY MEAN	NO.
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11		
1*	.000	.015	.010	.000	.005	.010	.010	.010	.010	.010	.010	.020	.015	.020	.015	.015	.010	.020	.010	.005	.010	.005	.005	.005	.010	24
2	.010	.015	.015	.015	.015	.010	.010	.000	.000				.030	.035	.035	.035	.035	.060	.060	.035	.020	.010	.000	.000	.021	21
3	.005	.005	.005	.010	.005	.000	.000	.000	.000		.005	.015	.030	.040	.040	.025	.015	.010	.010	.010	.005	.000	.000	.000	.010	23
4	.000	.000	.000	.000	.000	.000	.000	.000	.005	.015	.030	.035	.035		.015	.010	.005	.000	.000	.000	.000	.005	.005	.005	.007	23
5	.010	.015	.020	.025	.015	.015	.015	.010	.015	.025	.030	.040	.050	.060										.030		15
6												.030	.030	.025	.035	.024										5
7*																										
8*																			.030	.025	.015	.010	.010	.010		6
9	.015	.010	.000	.000	.000	.000	.000	.000	.000	.010	.025		.025	.030	.030	.025	.025	.025	.025	.020	.025	.020	.000	.020	.014	23
10	.020	.010	.015	.010	.010	.010	.010	.000	.010	.020	.025	.035	.035	.035	.035	.035	.035	.035	.030	.020	.025	.015	.015	.000	.018	24
11	.010	.015	.000	.000	.000	.000	.000	.000	.000	.015	.025	.030	.025	.030	.035	.030	.035	.035	.040	.035	.035	.035	.045	.040	.021	24
12	.045	.045	.040	.040	.030	.030	.030	.020	.015	.020	.035	.045	.050	.050	.045	.045	.050	.045	.045	.040	.030	.030	.000	.000	.038	24
13	.000	.000	.025	.015	.015	.010	.010	.000	.015	.035		.045	.050	.045	.050	.045	.040	.020	.015	.025	.025	.015	.010	.020	.023	23
14*	.020	.020	.025	.030	.030	.030	.025	.025	.025	.025	.030	.035	.035	.035	.040	.035	.030	.035	.035	.035	.035	.030	.035	.030	.030	24
15*	.020	.015	.015	.020	.000	.010	.025	.025	.030	.030	.035	.035	.025	.030	.025	.030	.030	.030	.030	.025	.020	.030	.000	.035	.024	24
16	.035	.035	.035	.035	.035	.030	.030	.020	.020	.020	.030	.025	.030	.030	.025	.025	.035	.030	.030	.025	.010	.000	.010	.015	.025	24
17	.010	.015	.015	.015	.015	.010	.005	.000	.000	.010	.015	.020	.020	.025	.020	.020	.025	.030	.025	.020	.020	.005	.000	.000	.014	24
18	.000	.010	.010	.005	.000	.000	.000	.000	.000	.010	.015	.015	.020	.020	.030	.030	.025	.025	.015	.015	.005	.000	.000	.000	.010	24
19	.000	.000	.010	.000	.000	.000	.005	.000	.000	.005	.005	.020	.020	.025	.025	.030	.020	.010	.010	.005	.000	.000	.000	.000	.007	24
20	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.010	.010	.025	.035	.025	.045	.060	.035	.025	.010	.015	.020	.005	.000	.013	24
21*	.000	.000	.000	.000	.000	.000	.000	.000	.005	.010	.015	.025	.030	.035	.035	.035	.035	.035	.035	.030	.020	.010	.010	.005	.015	24
22*	.000	.005	.005	.005	.005	.005	.000	.000	.005	.010	.015	.025	.030	.030	.025	.025	.025	.035	.040	.030	.015	.010	.010	.015	.014	24
23	.010	.005	.010	.010	.005	.005	.000	.000	.000	.010	.015	.020	.015	.015	.020	.020	.015	.020	.030	.020	.005	.000	.000	.000	.010	24
24	.000	.000	.000	.000	.000	.000	.000	.000	.000	.010	.020	.020	.015	.010	.010	.020	.050	.055	.035	.030	.025	.010	.000	.000	.012	24
25	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.020		.035	.030	.025	.020	.020	.020	.025	.020	.015	.005	.000	.000	.010	23
26	.000	.000	.000	.000	.000	.000	.000	.000	.000	.004	.004	.014	.020	.025	.040	.040	.040	.040	.050	.040	.025	.015	.000	.000	.014	24
27	.000	.000	.000	.000	.000	.000	.000	.000	.000	.020	.025	.025	.020	.025	.020	.015	.020	.020	.015	.015	.005	.000	.000	.000	.009	24
28*	.000	.000	.000	.000	.000	.000	.000	.000	.000	.010	.020	.020	.030	.040	.045	.035	.040	.035	.035	.025	.015	.010	.025	.020	.016	24
29*	.010	.010	.010	.000	.010	.015	.015	.010	.010	.020	.035	.040	.040	.045	.050	.045	.040	.030	.010	.010	.005	.010	.005	.005	.020	24
30	.000	.004	.004	.004	.004	.004	.000	.000	.000	.009	.014	.019	.019	.019	.019	.019	.019	.019	.019	.019	.014	.009	.004	.009	.009	.010	24
31	.015	.010	.010	.010	.010	.010	.005	.000	.000	.010	.015	.020	.025	.030	.035	.030	.015	.010	.005	.005	.000	.000	.000	.000	.011	24
AVG	.008	.009	.009	.008	.007	.007	.006	.004	.005	.014	.020	.026	.028	.031	.030	.028	.029	.028	.025	.021	.015	.009	.007	.009	.016	
NO.	28	28	28	28	28	28	28	28	28	28	26	26	29	28	28	28	27	27	28	28	28	28	28	29		666
MAX	.045	.045	.040	.040	.035	.030	.030	.025	.030	.035	.035	.045	.050	.060	.050	.045	.060	.060	.060	.040	.035	.035	.045	.040		.060

10/27/71

FLORIDA
TAMPA, FLA

[1C43602811

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL CHEMILUMINESCENCE

OZONE
SEP 1971

DAY	AM												PM												DAILY MEAN	NO.
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11		
1	.005	.000	.000	.000	.000	.000	.000	.000	.000	.010	.015	.020	.020	.025	.030	.030	.015	.010	.010	.010	.005	.000	.000	.000	.008	24
2	.000	.000	.005	.005	.005	.005	.000	.000	.010	.015	.020	.025	.025	.025	.025	.020	.025	.015	.015	.005	.005	.000	.000	.000	.009	24
3	.000	.000	.005	.010	.010	.010	.005	.000	.000	.005	.015	.020	.020	.015	.020	.020	.030	.030	.015	.010	.000	.000	.000	.000	.009	24
4*	.005	.000	.011	.000	.000	.000	.000	.000	.010	.015	.015	.025	.030	.030	.030	.030	.025	.025	.020	.015	.005	.005	.000	.005	.011	24
5*	.000	.000	.000	.000	.000	.000	.000	.005	.005	.015	.015	.020	.025	.030	.025	.025	.030	.015	.005	.005	.005	.000	.000	.000	.009	24
6	.000	.005	.005	.010	.010	.010	.005	.005	.010	.010	.015	.020	.020	.015	.015	.015	.025	.015	.005	.000	.000	.005	.000	.000	.009	24
7	.000	.001	.000	.000	.000	.000	.000	.000	.000	.005	.015	.015	.015	.020	.025	.025	.025	.020	.010	.005	.005	.005	.005	.005	.008	24
8	.000	.000	.005	.000	.000	.000	.005	.010	.000	.000		.000	.000	.005	.005	.005	.000	.000	.005	.005	.010	.005	.005	.000	.002	23
9	.005	.010	.010	.010	.010	.005	.000	.000	.010	.005	.000	.000	.000	.000	.000	.010	.010	.010	.010	.015	.015	.015	.015	.005	.006	24
10	.000	.000	.000	.000	.000	.000			.000	.005	.005	.010	.020	.020	.020	.025	.020	.020	.020	.015	.010	.000	.010	.010	.009	22
11*	.010	.015	.010	.000	.000	.000	.000	.000	.000	.010	.015	.020	.015	.020	.020	.020	.015	.015	.015	.010	.005	.000	.000	.000	.008	24
12*	.000	.000	.000	.000	.000	.000	.005	.000	.000	.010	.015	.015	.020	.015	.015	.015	.010	.010	.015	.010	.000	.000	.000	.000	.007	24
13	.000	.000	.005	.000	.005	.000	.000	.000	.000	.005	.005	.025	.030	.035	.035	.030	.025	.025	.020	.015	.015	.015	.010	.010	.013	24
14	.005	.005	.020	.015	.025	.030	.015	.000	.000	.005	.015	.035	.045	.055	.060	.065	.055	.055	.040	.030	.020	.010	.010	.000	.028	24
15	.005	.000	.000	.000	.000	.005	.005	.000	.000	.000	.010	.040	.050	.060	.070	.060	.060	.050	.035	.025	.010	.010	.010	.010	.021	24
16	.000	.000	.000	.010	.010	.005	.000	.000	.000	.000	.010	.015	.010	.025	.035	.035	.035	.030	.035	.025	.020	.015	.005	.000	.013	24
17	.010	.010	.020	.015	.015	.005	.000	.000	.000	.000	.010	.015	.015	.020	.015	.010	.015	.030	.030	.025	.020	.020	.015	.010	.014	24
18*	.010	.005	.005	.005	.010	.005	.000	.000	.000	.000	.010	.015	.020	.035	.035	.035	.035	.035	.035	.030	.030	.025	.015	.005	.016	24
19*	.000	.005	.000	.000	.000	.000	.000	.000	.000	.000	.010	.010	.015	.035	.045	.045	.050	.045	.050	.040	.030	.020	.005	.005	.015	24
20	.000	.000	.005	.005	.005	.000	.000	.000	.000	.000	.010	.025	.030	.035	.045	.050	.050	.045	.040	.030	.015	.015	.025	.020	.015	.019	24
21	.005	.010	.015	.015	.015	.010	.005	.000	.000	.000	.010	.025	.035	.035	.030	.030	.035	.035	.035	.020	.000	.000	.010	.005	.000	.016	24
22	.000	.005	.005	.005	.005	.005	.000	.000	.000	.000	.010	.015	.025	.035	.035		.040	.035	.025	.025	.015	.010	.015	.010	.005	.013	23
23	.005	.010	.015	.015	.015	.010	.010	.005	.000	.005	.020	.025	.035	.035	.035	.035	.035	.035	.035	.030	.020	.015	.010	.005	.005	.017	24
24	.005	.010	.015	.010	.010	.010	.005	.005	.010	.015	.020	.025	.030	.030	.035	.035	.035	.035	.035	.030	.010	.010	.010	.010	.016	24
25*	.005	.005	.005	.010	.010	.010	.005	.005	.010	.015	.025	.030	.035	.035	.035	.045	.045	.040	.035	.030	.030	.030	.035	.020	.022	24
26*	.020	.025	.030	.030	.030	.030	.030	.025	.030	.035	.040	.045	.040		.045	.045	.045	.040	.035	.025	.020	.020	.025	.030	.032	23
27	.030	.030	.035	.035	.040	.035	.030	.010	.015	.035	.045	.045	.050	.050	.050	.050	.050	.045	.040	.035	.025	.020	.030	.035	.036	24
28	.035	.040	.040	.040	.040	.040	.035	.015	.010	.035	.035	.040	.040	.045	.040	.040	.035	.035	.030	.030	.025	.025	.030	.030	.033	24
29	.030	.030	.030	.035	.035	.035	.025	.010	.015	.030	.040		.045	.050	.050	.045	.045	.045	.040	.015	.015	.020	.015	.020	.031	23
30	.025	.020	.020	.010	.010	.010	.010	.000	.000	.025	.040	.055	.050	.055	.055	.055	.055	.050	.050	.045	.035	.035	.030	.030	.032	24
AVG	.007	.007	.009	.010	.010	.008	.006	.003	.004	.013	.021	.025	.030	.031	.031	.033	.032	.028	.023	.016	.011	.010	.009	.008	.016	
NO.	30	30	30	30	30	30	29	29	30	30	29	29	30	29	29	30	30	30	30	30	30	30	30	30		714
MAX	.035	.040	.040	.040	.040	.040	.035	.025	.030	.035	.045	.055	.060	.070	.060	.065	.065	.055	.050	.045	.035	.035	.035	.035	.070	

MIAMI, FLA , FLORIDA SITE (3)

SITECODE: 1027CC0E1
CITYNAME: MIAMI, FLA
STATE (IC): FLORIDA
SITE ADDR: 6400 N.W. 27 AVE
AQCR ( ):
SMSA ( ):
COUNTY ( ): DADE
AGENCY TYPE: EPA/ATMOS. SURV.
AGENCY/PROJECT CODE: AQS
STATION TYPE ( ):
TIME ZONE ( ):
SUPPORTING AGENCY: DADE COUNTY
COMMENTS:

LATITUDE: 25 D. 49 M. 59 S. NORTH
LONGITUDE: 80 D. 14 M. 57 S. WEST
UTM ZONE:
UTM NORTHING:
UTM EASTING:
ELEVATION ABOVE GROUND: 16
ELEVATION ABOVE MSL: 23
CITY POPULATION: 000
AQCR POPULATION: 000
EPA-REGION:

10/27/71

FLORIDA
MIAMI, FLA

(1027-0011)

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL - CHEMILUMINESCENCE

OZONE
JUN 1971

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN NO.
1																									
2																									
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29																		.005	.005	.010	.005	.002	.000	.000	.000	.000	8
30	.000	.000	.000	.000	.000	.000	.000	.000	.005	.010			.015	.015	.020	.020	.015	.015	.015	.015	.010	.005	.000	.005	.005	.007	23
AVG NO.	1	1	1	1	1	1	1	1	1	1			1	1	1	1	1	2	2	2	2	2	2	2	2		31
MAX	.000	.000	.000	.000	.000	.000	.000	.000	.005	.010			.015	.015	.020	.020	.015	.015	.015	.015	.010	.005	.000	.005	.005		.020

10427171

FLORIDA
MIAMI, FLA

(102700.A1)

CONCENTRATION IN PARTS PER MILLION — OZONE
INSTRUMENTAL CHEMILUMINESCENCE — JUL 1971

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO.
1	.000	.000	.000	.000	.010	.005	.005	.000	.005	.000	.000	.005	.010		.015	.010	.015	.015	.015	.010	.000	.000	.000	.000	.004	23
2	.005	.000	.010	.000	.000	.000	.000	.000	.005	.025		.015	.015	.010	.015	.015	.010	.010	.005	.025	.000	.000	.000	.000	.004	23
3*	.000	.000	.010	.000	.000	.000	.000	.000	.005	.010	.015	.015	.015	.015	.015	.015	.015	.010	.015	.015	.015	.015	.015	.005	.008	24
4*	.000	.000	.00	.000	.000	.000	.000	.000	.010	.015	.015	.15	.020	.015	.015	.010	.010	.010	.005	.000	.000	.000	.000	.000	.005	24
5	.000	.000	.000	.000	.000	.000	.005	.005	.010	.015	.015	.015	.015	.010	.015	.010	.010	.010	.010	.005	.000	.000	.000	.000	.006	24
6	.015	.010	.005	.010	.000	.000	.000	.000	.000			.005	.010	.015	.015	.010	.010	.005	.005	.005	.000	.005	.000	.000	.005	22
7	.000	.000	.000	.015	.025	.025	.010	.000	.010		.015	.010	.015	.015	.005	.020	.005	.005	.015	.015	.005	.005	.015	.010	.011	23
8	.005	.010	.010	.020	.015	.010	.000	.000	.000		.015	.015	.015	.015	.015	.015										15
9													.015	.010	.010	.010	.010	.010	.010	.010	.005	.000	.000	.005	.005	13
10*	.005	.010	.010	.010	.015	.010	.000	.000	.005	.010	.015	.015	.015	.015	.015	.015	.010	.010	.010	.010	.005	.005	.005	.025	.009	24
11*	.010	.005	.000	.000	.000	.000	.000	.000	.010	.020	.015	.010	.015	.015	.010	.010	.015	.015	.010	.010	.005		.000	.000	.007	23
12	.000	.010	.015	.005	.000	.000	.000	.000	.000		.010	.01	.015	.015	.015	.015	.010	.010	.010	.005	.010	.020	.010	.000	.013	23
13	.000	.000	.000	.000	.000	.000	.000	.000	.000		.025	.025	.015	.015	.015	.015	.010	.010	.010	.005	.000	.000	.000	.000	.006	23
14	.000	.000	.000	.000	.010	.010	.000	.000	.010	.020		.025	.040	.040	.015	.015	.015	.025	.025	.020	.015	.000	.000	.000	.011	23
15	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005		.025	.035	.020	.020	.015	.015	.010	.010	.005	.000	.000	.000	.000	.005	23
16	.000	.000	.000	.000	.000	.000	.000	.000	.000	.010	.005		.015	.015	.015	.010	.010	.010	.005	.000	.000	.000	.000	.000	.004	23
17*	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.010	.015	.015	.015	.015	.010	.015	.015	.015		.010	.005	.00	.000	.000	.005	23
18*	.000	.000	.000	.000	.000	.005	.005	.000	.000	.005	.015	.010	.015	.015	.010	.010	.010	.010	.010	.005	.000	.000	.000	.000	.005	24
19	.005	.010	.010	.010	.015	.000	.000	.000	.005		.010	.010	.015	.015	.015	.015	.015	.015	.015	.005	.005	.000	.000	.000	.007	23
20	.000	.000	.005	.005	.010	.010	.000	.000	.000	.005		.010	.015	.015	.015	.015	.010	.010	.010	.015	.010	.015	.015	.005	.008	23
21	.000	.000	.000	.000	.000	.005	.000	.000	.000	.005		.010	.015	.015	.015	.010	.010	.009	.010	.020	.010	.010	.000	.000	.006	23
22	.000	.005	.015	.005	.010	.000	.000	.000	.000	.010		.015	.015	.015	.010	.015	.010	.010	.005	.005	.020	.010	.000	.000	.007	23
23	.005	.010	.005	.000	.000	.000	.000	.000	.000		.005	.005	.005	.005	.005	.005	.010	.010	.005	.000	.000	.000	.000	.000	.003	23
24*	.000	.000	.010	.010	.015	.010	.010	.005	.010	.010	.010	.015	.015	.015	.015	.015	.020	.015	.010	.005	.000	.00	.000	.000	.003	24
25*	.000	.000	.000	.000	.000	.005	.005	.000	.005	.010	.010	.010		.010	.010	.010	.010	.010	.005	.005	.000	.000	.000	.000	.004	23
26	.000	.000	.000	.000	.000	.000	.000	.000	.005	.010		.010	.010	.010	.010	.010	.010	.010	.010	.005	.000	.00	.000	.000	.004	23
27	.005	.005	.010	.010	.025	.005	.005	.000	.000		.010			.015	.015	.010	.010	.010	.005	.005	.000	.000	.005	.00	.006	20
28	.005	.010	.010	.010	.010	.010	.000	.000	.000	.005	.005		.010	.010	.010	.010	.005	.005	.005	.005	.000	.005	.005	.000	.005	23
29	.015	.010	.015	.010	.005	.000	.000	.000	.005	.010	.005		.010	.010	.015	.015	.015	.015	.015	.010	.005	.005	.005	.000	.008	23
30	.000	.000	.000	.010	.005	.005	.000	.000	.000		.005	.010	.010	.010	.005	.010	.010	.005	.010	.005	.005	.000	.000	.000	.004	23
31*	.000	.000	.000	.005	.005	.005	.005	.000	.000	.000	.000	.005	.005	.005	.010	.005	.005	.005	.005	.005	.000	.000	.000	.000	.002	24
AVG	.002	.004	.004	.004	.004	.003	.001	.000	.003			.012	.014	.014	.012	.011	.010	.010	.009	.007	.004	.003	.002	.000	.006	
NO.	30	30	31	30	30	30	30	30	30	21	22	27	29	29	31	31	30	30	29	30	30	25	30	30		698
MAX	.015	.030	.020	.020	.025	.025	.010	.005	.010	.020	.025	.025	.040	.040	.020	.020	.015	.025	.025	.030	.020	.020	.015	.010	.040	

10/27/71

FLORIDA
MIAMI, FLA

(102700081)
OZONE
AUG 1971

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL CHEMILUMINESCENCE

DAY	AM												PM												DAILY MEAN	NO.
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11		
1*	.000	.000	.000	.000	.009	.009	.004	.000	.004	.000	.004	.004	.010		.015	.010	.015	.015	.015	.010	.000	.000	.000	.000	.005	23
2	.000	.010	.01	.005	.005	.005	.000	.000	.005		.015	.020	.020	.020	.020	.015	.015	.015	.015	.010	.005	.005	.000	.000	.009	23
3	.000	.000	.000	.005	.010	.005	.000	.000	.005	.015	.015		.020	.020	.025	.015	.010	.005	.005	.005	.000	.000	.015	.005	.007	23
4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.015	.005		.025	.025	.010	.025	.015	.010	.000	.010	.000	.000	.000	.000	.006	23
5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.030	.030	.005	.005	.005	.015	.015	.025	.000	.000	.000	.000	.000	.005	23
6	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005		.010	.010	.010	.010	.010	.010	.005	.005	.000	.000	.000	.000	.000	.003	23
7*	.000	.000	.000	.000	.000	.000	.000	.000	.005	.010	.015	.020	.015	.010	.010	.010	.005	.005	.005	.000	.000	.000	.000	.000	.004	24
8*	.000	.000	.000	.000	.000	.000	.000	.000	.005	.010	.015	.020	.025	.025		.020	.010	.010	.010	.005	.000	.000	.000	.000	.006	23
9	.000	.000	.000	.000	.010	.000	.000	.000	.000	.010	.020	.025	.030		.015	.010	.000	.010	.005	.010	.010	.000	.000	.000	.005	23
10	.000	.005	.000	.005	.010	.005	.000	.000	.005	.020		.030	.025	.030	.030	.020	.020	.015	.010	.005	.000	.000	.000	.000	.010	23
11	.000	.005	.010	.005	.000	.000	.000	.000	.005	.020		.030	.035	.035	.035	.040	.030	.020	.020	.015	.005	.005	.000	.000	.013	23
12	.005	.005	.005	.005	.000	.005	.000	.010	.000	.010		.005	.010	.015	.015	.020	.010	.015	.025	.010	.000	.000	.000	.000	.007	23
13	.000	.005	.010	.010	.015	.020	.025	.010	.010	.025	.020		.030	.035	.035	.030	.025	.025	.025	.020	.010	.015	.020	.020	.019	23
14*	.015	.025	.025	.030	.030	.025	.025	.020	.025	.030	.035	.035	.035	.030	.035	.030	.030	.030	.030	.015	.005	.000	.020	.015	.023	24
15*	.000	.015	.025	.025	.025	.025	.025	.020	.020	.020	.015	.015	.015		.010	.010	.010	.005	.005	.000	.000	.000	.000	.000	.012	23
16	.000	.000	.000	.005	.010	.005	.005	.000	.000	.005			.010	.010	.010	.010	.010	.005	.005	.000	.000	.000	.000	.000	.004	22
17	.000	.000	.005	.005	.010	.005	.000	.000	.000	.000	.005		.010	.010	.010	.010	.005	.005	.005	.005	.000	.000	.000	.000	.004	23
18	.000	.000	.010	.005	.010	.005	.005	.000	.005	.005		.010	.010	.010	.010	.010	.010	.010	.010	.005	.005	.005	.005	.005	.006	23
19	.005	.005	.010	.010	.010	.010	.000	.000	.005	.005		.005	.010	.010	.010	.010	.005	.005	.010	.005	.005	.005	.005	.005	.006	23
20	.005	.010	.010	.010	.010	.010	.000	.000	.005	.005	.010		.010	.010	.010	.005	.005	.010	.010	.005	.005	.005	.005	.005	.006	23
21*	.005	.005	.005	.005	.010	.010	.005	.000	.005	.010	.005	.010	.010	.010	.010	.010	.010	.010	.010	.005	.005	.005	.005	.005	.007	24
22*	.005	.005	.005	.005	.000	.000	.005	.000	.005	.005	.010	.010	.010	.010	.010	.015		.005	.005	.000	.000	.000	.000	.000	.004	23
23	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005		.010	.010	.010	.010	.005	.005	.005	.000	.010	.000	.000	.000	.000	.003	23
24	.005	.000	.000	.000	.000	.000	.000	.000	.000	.010		.015	.015	.010	.010	.010	.010	.010	.010	.010	.005	.000	.000	.010	.005	23
25	.000	.000	.005	.005	.000	.000	.000	.000	.000	.005	.005	.010	.010		.015	.010	.010	.010	.010	.005	.005	.005	.000	.000	.004	23
26	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005		.020	.030	.015	.020	.040	.035	.035	.030	.010	.005	.000	.000	.000	.010	23
27	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.020	.035	.035	.020	.010	.015	.025	.035	.010	.000	.010	.000	.000	.009	23
28*	.000	.000	.000	.000	.000	.000	.000	.000	.000	.010	.030	.035	.035	.035	.025	.025	.015	.010	.005	.005	.000	.000	.000	.000	.009	24
29*	.000	.000	.000	.000	.000	.000	.000	.000	.015	.015	.010	.010	.015		.015	.015	.015	.015	.005	.000	.000	.000	.010	.010	.005	23
30	.010	.010	.015	.015	.010	.010	.005	.000	.000	.000		.010	.010	.010	.010	.005	.005	.005	.005	.005	.000	.000	.000	.000	.006	23
31	.000	.000	.005	.005	.005	.010	.005	.000	.000	.005	.010		.015	.015	.015	.015	.010	.010	.010	.005	.000	.000	.000	.000	.006	23
AVG	.001	.003	.004	.003	.006	.005	.003	.001	.003	.008		.017	.018	.017	.015	.015	.012	.011	.011	.006	.001	.001	.002	.001	.007	
NO.	31	31	31	31	31	31	31	31	31	30	18	24	31	26	30	31	30	31	31	31	31	31	31	31		716
MAX	.015	.025	.025	.030	.030	.025	.025	.020	.025	.030	.035	.035	.035	.035	.035	.040	.035	.035	.035	.020	.010	.015	.020	.020		.040

10/27/71

FLORIDA
MIAMI, FLA

111270003I1
OZONE
SEP 1971

CONCENTRATION IN PARTS PER MILLION
INSTRUMENTAL CHEMILUMINESCENCE

DAY	AM 12	1	2	3	4	5	6	7	8	9	10	11	PM 12	1	2	3	4	5	6	7	8	9	10	11	DAILY MEAN	NO.
1	.000	.000	.005	.010	.005	.005	.000	.000	.000	.000		.000	.005	.010	.005	.005	.000	.000	.000	.000	.000	.000	.000	.000	.002	23
2	.000	.005	.000	.000	.005	.000	.000	.000	.015		.010	.010	.035	.010	.010	.015	.015	.020	.000	.020	.000	.000	.000	.000	.004	23
3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005		.010	.010	.010	.010	.010	.010	.010	.010	.005	.000	.000	.000	.000	.003	23
4*	.000	.000	.000	.000	.000	.000	.000	.005	.015	.010	.010	.010	.010	.010	.010	.005	.005	.010	.005	.000	.000	.000	.000	.010	.003	24
5*	.000	.005	.000	.000	.000	.000	.000	.000	.005	.005	.005	.005	.010		.005	.005	.010	.005	.005	.005	.000	.000	.000	.010	.003	23
6	.015	.005	.000	.000	.000	.000	.000	.000	.000	.005	.005	.015	.010	.010	.010	.000	.005	.010	.000	.000	.000	.000	.000	.000	.003	24
7	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.010	.015	.015		.025	.030	.010	.005	.000	.000	.000	.000	.050	.030	.004	23
8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005															11
9												.001	.035	.000	.020	.000	.000	.0[illegible]	.000	.000	.000	.000	.000	.000		13
10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.010	.015	.015	.005	.000	.005	.000	.000	.000	.000	.000	.000	.002	23
11*	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.010	.015	.020	.015												14
12*																			.000	.000	.000	.000	.000	.0[illegible]		6
13	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005		.010	.015	.010	.010	.005	.000	.005	.000	.000	.000	.000	.000	.002	23
14	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.010		.000	.000	.000	.035	.005	.005	.000	.000	.000	.000	.000	.000	.000	23
15	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005		.020	.025	.040	.050	.050	.035	.020	.015	.005	.000	.000	.000	.000	.011	23
16	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005		.010	.010	.010	.010	.010	.005	.005	.005	.005	.005	.000	.000	.005	.003	23
17	.005	.005	.005	.005	.005	.000	.000	.000	.000	.000		.005	.005	.005	.005	.005	.005	.005	.010	.000	.000	.000	.000	.005	.002	23
18*	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.005	.005	.005	.005	.005	.005	.005	.000	.000	.000	.000	.000	.000	.001	24
19*	.000	.000	.005	.000	.000	.000	.000	.000	.000	.010	.015	.015	.015	.023	.015	.015	.015	.015	.015	.010	.005	.005	.015	.005	.007	24
20	.010	.010	.015	.015	.010	.000	.000	.000	.000	.010		.015	.015	.015	.015	.015	.015	.015	.010	.010	.005	.005	.005	.005	.009	23
21	.000	.000	.000	.000	.000	.000	.000	.000	.000	.010		.015	.015	.020	.020	.015	.015	.015	.010	.010	.005	.005	.005	.005	.007	23
22	.010	.010	.010	.010	.010	.015	.000	.000	.000	.000		.010	.010	.005	.010	.010	.005	.010	.025	.015	.005	.005	.010	.015	.006	23
23	.015	.015	.015	.020	.020	.015	.010	.005	.005	.010		.015	.015	.015	.015	.015	.015	.015	.010	.010	.010	.005	.005	.005	.012	23
24	.010	.010	.010	.010	.010	.005	.000	.000	.000	.005		.010	.010	.010	.010	.015	.015	.010	.015	.010	.005	.005	.005	.005	.008	23
25*	.005	.010	.015	.015	.015	.015	.005	.000	.000	.010	.020	.020	.020	.020	.020		.015	.015	.015	.010	.010	.010	.015	.015	.012	23
26*	.025	.020	.025	.025	.010	.010	.010	.015	.010	.020	.030	.030	.030	.030	.025	.025	.025	.025	.025	.020	.010	.005	.000	.000	.018	24
27	.005	.010	.010	.010	.010	.010	.005	.000	.000	.005	.010		.015	.020	.020	.020	.015	.015	.015	.015	.010	.005	.000	.005	.009	23
28	.010	.015	.015	.015	.015	.010	.010	.000	.000	.005	.015		.020	.020	.020	.020	.015	.010	.010	.010	.000	.000	.000	.000	.010	23
29	.000	.005	.005	.005	.010	.010	.000	.000	.000	.005		.020	.025	.025	.030	.025	.015	.010	.005	.005	.000	.000	.000	.000	.008	23
30	.005	.005	.000	.005	.005	.000	.000	.000	.000	.005	.015		.035	.050	.050	.030	.035	.035	.020	.005	.005	.000	.000	.000	.013	23
AVG	.004	.004	.004	.005	.004	.003	.001	.000	.001	.004		.011	.013	.015	.015	.014	.011	.010	.007	.004	.002	.001	.001	.002	.006	
NO.	28	28	28	28	28	28	28	28	28	27	16	23	28	26	27	26	27	27	28	28	28	28	28	28		647
MAX	.025	.020	.025	.025	.020	.015	.010	.015	.010	.020	.030	.030	.035	.050	.050	.050	.035	.035	.025	.020	.010	.010	.015	.015		.050

APPENDIX B

Chapter 403

FLORIDA AIR AND WATER POLLUTION CONTROL ACT

CHAPTER 403

FLORIDA AIR AND WATER POLLUTION CONTROL ACT

air and water pollution control programs are to be supported to the extent practicable as essential instruments to provide for a coordinated statewide program of air and water pollution prevention, abatement and control for the securing and maintenance of appropriate levels of air and water quality.

(5) It is hereby declared that the prevention, abatement and control of the pollution of the air and waters of this state are affected with a public interest, and the provisions of this act are enacted in the exercise of the police powers of this state for the purpose of protecting the health, peace, and safety, and general welfare of the people of this state.

(6) The legislature finds and declares that control, regulation, and abatement of the activities which are causing or may cause pollution of the air or water resources in the state and which are or may be detrimental to human, animal, aquatic, or plant life, or to property, or unreasonably interfere with the comfortable enjoyment of life or property be increased to insure conservation of natural resources, to insure a continued safe environment, to insure purity of air and water, to insure domestic water supplies, to insure protection and preservation of the public health, safety, welfare, and economic well-being, to insure and provide for recreational and wildlife needs as the population increases and the economy expands, to insure a continuing growth of the economy and industrial development.

(7) The legislature further finds and declares that:

(a) Compliance with this law will require capital outlays of hundreds of millions of dollars for the installation of machinery, equipment, and facilities for the treatment of industrial wastes which are not productive assets and increased operating expenses to owners without any financial return and should be separately classified for assessment purposes;

(b) Industry should be encouraged to install new machinery, equipment and facilities as technology in environmental matters advances, thereby improving the quality of the air and waters of the state and benefiting the citizens of the state without pecuniary benefit to the owners of industries, and the legislature should prescribe methods whereby just valuation may be secured to such owners and exemptions from certain excise taxes should be offered with respect to such installations;

(c) Facilities as herein defined should be classified separately from other real and personal property of any manufacturing or processing plant or installation, as such facilities contribute only to general welfare and health and are assets producing no profit return to owners; and

(d) In existing manufacturing or processing plants it is more difficult to obtain satisfactory results in treating industrial wastes than in new plants being now planned or constructed and that with respect to existing plants in many instances it will be necessary to demolish and remove substantial portions thereof and replace the same with new and more modern equipment in order to more effectively treat, eliminate or reduce the objectional characteristics of any industrial wastes and that such replacements should be classified and assessed differently from replacements made in the ordinary course of business.

History.—ss. 3, ch. 67-436.

403.031 Definitions.—In construing this chapter, or rules and regulations adopted pursuant thereto, the words, phrases or terms, unless the context otherwise indicates, shall have the following meanings:

(2) "Director" is the director of the commission.

(3) "Pollution" is the presence in the outdoor atmosphere or waters of the state of any one or more substances or contaminants in quantities which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property, or unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

(4) "Waters" shall include, but not be limited to rivers, lakes, streams, springs, impoundments, and all other waters or bodies of water, including fresh, brackish, saline, tidal, surface or underground. Waters owned entirely by one person other than the state are included only in regard to possible discharge on other property or water. Underground waters include, but are not limited to, all underground waters passing through pores of rock or soils or flowing through in channels, whether man-made or natural.

(5) "Contaminant" is any substance which is harmful to plant, animal or human life.

(6) "Wastes" mean sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances which may pollute or tend to pollute any waters of the state.

(7) "Treatment works" and "disposal systems" means any plant or other works used for the purpose of treating, stabilizing, or holding wastes.

(8) "Sewerage system" means pipelines or conduits, pumping stations, and force mains, and all other structures, devices, appurtenances, and facilities used for collecting or conducting wastes to an ultimate point for treatment or disposal.

(9) "Installation" is any structure, equipment, facility, or appurtenances thereto, or operation which may emit air or water contaminants in quantities prohibited by rules of the department.

(10) "Plant" is any unit operation, complex, area, or multiple of unit operations that produce, process, or cause to be processed any materials, the processing of which can, or may, cause air or water pollution.

(11) "Source" is any and all points or origin of the item defined in subsection (5) of this section, whether privately or publicly owned or operated.

(12) "Person" means the state or any agency or institution thereof, any municipality, political subdivision, public or private corporation, individual, partnership, association, or other entity, and includes any officer or governing or managing body of any municipality, political subdivision, or public or private corporation.

History.—[A, ch. 67-436; 1968, 33, ch. 69-106.

*Note.—In order to comply with s. 36, ch. 69-106, the editors have substituted a definition of the term "department" for the definition of the term "commission." Subsection (2) was rendered obsolete by said section and will be repealed in a subsequent revisor's bill.

*403.041 Florida Air and Water Pollution Control Commission.—There is hereby created and established the Florida Air and Water Pollution Control Commission, hereinafter referred to as the commission. The commission shall be composed of the governor, the secretary of state, the attorney general, the commissioner of agriculture, and two discreet citizens appointed by the governor and confirmed by the senate. The governor shall serve as the chairman of the commission. Members of the commission shall serve without compensation, but shall be entitled to per diem and travel expenses as provided by §112.061.

History.—[B, ch. 67-436.

*Note.—S. 36, ch. 69-106 abolished the air and water pollution control commission and transferred its functions, powers, and duties to the department of air and water pollution control. This section will be repealed in a subsequent revisor's bill.

403.045 Air and water pollution control board.—The head of the department of air and water pollution control is the air and water pollution control board. The board shall be composed of five citizens appointed by the governor, subject to confirmation by the senate. The members of the board shall serve at the pleasure of the governor.

History.—§25, ch. 69-106.

403.051 Hearings and notice thereof relative to adoption or repeal of regulations; witnesses.—

*(1) The commission shall hold regular meetings not less than quarterly and such additional meetings as may be required for the proper discharge of its duties. Meetings may be called by the governor or at the request of a majority of the commission.

(2) No rule or regulation, or amendment or repeal thereof, shall be adopted by the department except after public hearing held for that purpose after thirty days prior notice given in the manner which the department shall prescribe. The manner prescribed shall at least include notice by mail to all parties known by the department to be affected by the matters under consideration and some system of newspaper publication reasonably calculated to bring the matter under consideration to the attention of the general public. There shall be stated in such notice the date, time and place of the hearing at which time opportunity to be heard shall be given to all affected parties and the public. To insure due process to all parties affected, the procedures of part II, chapter 120, shall be followed at all hearings of the department, including rule-making hearings.

(3) The department shall cause a transcript of the proceedings at all hearings and meetings to be made.

(4) The decision of the department to adopt, modify or repeal a rule or regulation shall be based solely on the preponderance of the competent substantial evidence presented at the public hearing.

(5) A quorum of the air and water pollution control board shall consist of three members for all hearings and meetings except those required by subsection (2) and §403.121, which shall require a quorum of four, and a majority vote of the entire board shall be required to take action on any matter before the board.

(6) The department shall have the power, and upon application of any affected party shall have the duty, to compel the attendance of witnesses and the production of evidence on behalf of the state or any affected party.

History.—§6, ch. 67-436; §§26, 35, ch. 69-106.
*Note.—These subsections were rendered obsolete by §26, ch. 69-106, and will be repealed by a subsequent reviser's bill.

403.061 Department; powers and duties.—The department shall have the power and the duty to control and prohibit pollution of air and water in accordance with the law and rules and regulations adopted and promulgated by it, and for this purpose to:

(1) Approve and promulgate current and long-range plans developed to provide for air and water quality control and pollution abatement.

(2) Hire only such employees as may be necessary to effectuate the responsibilities of the department.

(3) Utilize the facilities and personnel of other state agencies, including the division of health of the department of health and rehabilitative services, and delegate to any such agency any duties and functions as the department may deem necessary to carry out the purposes of this act.

(4) Secure necessary scientific, technical, research, administrative and operational services by interagency agreement, contract, or otherwise. All state agencies, upon direction of the department, shall make these services and facilities available.

(5) Accept state appropriations, loans and grants from the federal government and from other sources, public or private, which loans and grants shall not be expended for other than the purposes of this act.

(6) Exercise general supervision of the administration and enforcement of the laws, rules and regulations pertaining to air and water pollution.

(7) Adopt, modify and repeal rules and regulations to carry out the intent and purposes of this act. Any rules or regulations adopted pursuant to this act shall be consistent with provisions of federal law, if any, relating to control of emissions from motor vehicles.

(8) Hold hearings relating to the adoption of rules to control or prohibit air and water pollution, including hearings upon complaints for violations.

(9) To designate a hearing officer to conduct hearings, who shall have the power to issue notices of hearings, subpoenas requiring the attendance of witnesses and the production of evidence, to administer oaths and to take testimony as may be necessary or in conformity with this chapter, and such hearing officer shall certify and file with the department, recommendations, findings of fact, and a proposed order; provided, however, that all hearings for the adoption of rules shall be before the department.

(10) Issue such orders as may be necessary to effectuate the control of air and water pollution and enforce the same by all appropriate administrative and judicial proceedings.

(11) Adopt a comprehensive program for the prevention, control, and abatement of pollution of the air and waters of the state, and from time to time review and modify such program as necessary.

(12) In order to develop a comprehensive program for the prevention, abatement, and control of the pollution of the waters of the state, a grouping of the waters into classes may be made in accordance with the present and future most beneficial uses, such classifications may from time to time be altered or modified; provided, however, before any such

classification is made, or any modifications made thereto, public hearings shall be held by the department.

(13) Establish ambient air quality and water quality standards for the state as a whole or for any part thereof.

(14)(a) Cause field studies to be made and samples to be taken out of the air and from the waters of the state periodically and in a logical geographic manner so as to determine the levels of air quality of the air and water quality of the waters of the state.

(b) Whenever a study is made or a sample collected which proves to be below the air or water quality standard set for air or water, then the department shall determine the source of the pollution.

(15) Require persons engaged in operations which may result in pollution, to file reports which may contain information relating to locations, size of outlet, height of outlet, rate and period of emission and composition and concentration of effluent and such other information as the department shall prescribe to be filed relative to pollution.

(16) Establish a permit system whereby a permit may be required for the operation, construction or expansion of any installation that may be a source of air or water pollution; provide for the issuance and revocation of such permits and for the posting of an appropriate bond to operate.

(17) Consult with any person proposing to construct, install, or otherwise acquire a pollution control device or system, concerning the efficacy of such device or system, or the pollution problem which may be related to the source, device or system. Nothing in any such consultation shall be construed to relieve any person from compliance with this act, rules and regulations of the department, or any other provision of law.

(18) Require that notice be given to it prior to the undertaking of the construction or installation or expansion of any new air or water contaminant sources. Within thirty days of its receipt of such notice, the department shall require, as a condition precedent to the construction or installation or expansion of such sources, the submission of plans, specifications, and such other information as it deems necessary in order to determine whether the proposed construction or installation will be in accord with applicable laws, rules and regulations. If within sixty days of the receipt of plans, specifications or other information required pursuant to this chapter, the department determines that the proposed construction or installation will not be in accord with the requirements of this act or applicable rules and regulations, it shall issue an order prohibiting the construction or installation. Failure of such an order to issue within the time prescribed herein shall be deemed a determination that the construction or installation may proceed; provided, that it is in accordance with plans, specifications or other information, if any, required to be submitted.

(19) Encourage voluntary cooperation by persons and affected groups to achieve the purposes of this act.

(20) Encourage local units of government to handle pollution problems within their respective jurisdictions on a cooperative basis, and provide technical and consultative assistance therefor.

(21) Encourage and conduct studies, investigations, and research relating to pollution and its causes, effects, prevention, abatement and control.

(22) Make a continuing study of the effects of the emission of air contaminants from motor vehicles on the quality of the outdoor atmosphere of this state and the several parts thereof, and make recommendations to appropriate public and private bodies with respect thereto.

(23) Collect and disseminate information and conduct educational and training programs relating to pollution.

(24) Advise, consult, cooperate, and enter into agreements with other agencies of the state, the federal government, other states, interstate agencies, groups, political subdivisions, and industries affected by the provisions of this act, rules or policies of the department.

(25) Adopt, modify and repeal rules governing the specifications, construction and maintenance of industrial reservoirs, dams and containers which store or retain industrial wastes of a deleterious nature.

(26) Perform any other act necessary to control and prohibit air and water pollution, and to delegate any of its responsibilities, authority and powers, other than rule-making powers, to any state agency now or hereinafter established.

History.—§7, ch. 67-436; §§19, 26, 35, ch. 69-106.

403.062 **Pollution control; underground water, lakes, etc.**—The department and its agents shall have general control and supervision over underground water, lakes, rivers, streams, canals, ditches and coastal waters under the jurisdiction of the state insofar as their pollution may affect the public health or impair the interest of the public or persons lawfully using them.

History.—§2, ch. 29834, 1955; §§26, 35, ch. 69-106.
Note.—Formerly §381.43; §381.251.

*403.071 **Director; powers and duties.**—

(1) There shall be a director of the commission who shall be employed by the commission. The commission shall fix the director's compensation unless it is otherwise provided by law. The director shall possess experience in bioenvironmental or sanitary engineering and such other qualifications as the commission may prescribe.

(2) It shall be the duty of the director to:

(a) Act as the chief administrative officer for all environmental pollution control programs of the state;

(b) Formulate and recommend rules and regulations for approval or rejection by the commission;

(c) Coordinate all pollution control programs of the state carried on from time to time by all state agencies; and

(d) Act as agent for the commission in all matters relating to its activities and the discharge of its responsibilities.

History.—§8, ch. 67-436.

*Note.—This section was rendered obsolete by §26, ch. 69-106, which abolished the commission and transferred its functions to the department of air and water pollution control. It will be repealed by a subsequent reviser's bill.

403.081 Performance by other state agencies.—All state agencies, including the division of health of the department of health and rehabilitative services, shall be available to the department to perform, at its direction, the duties required of the department under this act.

History.—§9, ch. 67-436; §§13, 26, 35, ch. 69-106.

403.085 Sanitary sewage disposal units; advanced and secondary waste treatment.—

(1) Neither the division of health of the department of health and rehabilitative services nor any other state agency, county, special district, or municipality shall approve construction of any ocean outfall or disposal well for sanitary sewage disposal which does not provide for secondary waste treatment and, in addition thereto, advanced waste treatment as deemed necessary and ordered by the department of air and water pollution control.

(2) Sanitary sewage disposal treatment plants which discharge effluent through ocean outfalls or disposal wells on July 1, 1970, shall provide for secondary waste treatment and, in addition thereto, advanced waste treatment as deemed necessary and ordered by the department of air and water pollution control by January 3, 1974. Failure to conform by said date shall be punishable by a fine of $500 for each twenty-four hour day or fraction thereof that such failure is allowed to continue thereafter.

History.—§§1, 2, ch. 70-62.

403.091 Inspections.—Any duly authorized representative of the department may enter and inspect any property, premises or place, except a building which is used exclusively for a private residence, on or at which an air or water contaminant source is located or is being constructed or installed at any reasonable time for the purpose of ascertaining the state of compliance with the law, or rules and regulations of the department. No person shall refuse immediate entry or access to any authorized representative of the department who requests entry for purposes of inspection, and who presents appropriate credentials; nor shall any person obstruct, hamper or interfere with any such inspection. If requested, the owner or operator of the premises shall receive a report setting forth all facts found which relate to compliance status.

History.—§10, ch. 67-436; §§26, 35, ch. 69-106.

403.101 Classification and reporting.—

(1) The department, by rule or regulation, may classify air and water contaminant sources, which in its judgment may cause or contribute to air or water pollution, according to levels and types of emissions and other characteristics which relate to air or water pollution, and may require reporting for any such class or classes. Classifications made pursuant to this section may be for application to the state as a whole or to any designated area of the state, and shall be made with special reference to effects on health, economic, social and recreational factors, and physical effects on property.

(2) Any person operating or responsible for the operation of air or water contaminant sources of any class for which the rules and regulations of the department require reporting shall make reports containing information as may be required concerning location, size and height of contaminant outlets, processes employed, fuels used and the nature and time period or duration of emissions, and such other information as is relevant to air and water pollution and available or reasonably capable of being assembled.

History.—§11, ch. 67-436; §§26, 35, ch. 69-106.

403.111 Confidential records.—Any information relating to secret processes, methods of manufacture or production which may be required, ascertained or discovered by inspection or investigation, shall not be disclosed in public hearings and shall be kept confidential by any member, officer or employee of the department. Provided that nothing herein shall be construed to prevent the use of such records in judicial proceedings in connection with the prosecution of violations of this act, when ordered to be produced by appropriate subpoena or by order of the court. No such subpoena or order of the court shall abridge or alter the rights or remedies of persons affected in the protection of trade secrets or secret processes, in the manner provided by law, and such persons affected may take any and all steps available by law to protect such trade secrets or processes.

History.—§12, ch. 67-436; §§26, 35, ch. 69-106.

403.121 Enforcement; procedure.—

(1) If the department has reason to believe a violation of any provision of this act has occurred, it shall cause written notice to be served upon the alleged violator or violators. The notice shall specify the provision of the law, rule or regulation alleged to be violated, and the facts alleged to constitute a violation thereof, and may include an order that corrective action be taken within a reasonable time. No such order shall become effective except after reasonable notice and the order is served upon the person or persons named therein and a hearing held if requested within the time specified in the notice; except that injunctive relief may be sought as provided under §403.131.

(2) If, after hearing, the department finds that a violation or violations have occurred, it shall affirm or modify its order previously issued, or issue an appropriate order or orders for the prevention, abatement or control of the emissions or pollution involved or for the taking of such other corrective action as may be appropriate. Any order issued prior to a hearing as a part of a notice provided in subsection (1) of this section, or any order issued after a hearing may prescribe the date by which the violation shall cease by fixing reasonable timetables for necessary action to prevent, abate or control the pollution. If after hearing on an order contained in a notice, the department finds that no violation is occurring, it shall rescind the order.

(3) All testimony taken at any such hearing before the department shall be under oath or affirmation. A full and complete record of all proceedings and testimony presented shall be taken and filed, and upon payment and receipt of all costs or fees allowed there-

for, a certified transcript of the whole or any part of the record shall be furnished to any party in such hearing requesting the same. Upon application of any party, the department shall compel the attendance of witnesses and the production of evidence.

*(4)(a) As an alternative enforcement procedure to that provided in subsections (1)-(3), and applying to persons other than municipalities and political subdivisions, the department or a person or persons designated by it, having reason to believe a violation of any provision of this chapter has occurred which is determined to be of a temporary and noncontinuing nature, including but not limited to spills of a polluting substance, open burning, or sudden discharges of any pollutant, may issue a citation ordering corrective action upon which no administrative hearing shall be required and shall state in the citation the date when such corrective action shall commence and when it shall be completed. The department in such citations shall allow periods within which such actions can be reasonably commenced and completed. If corrective action is not commenced or completed, as the case may be, within twenty-four hours after the date fixed for either, the department may refer the case to the prosecuting attorney for the county in which the violation occurred. This subsection shall not be construed as requiring the department to report for prosecution minor violations whenever it determines that the public interest will best be served by a suitable notice of warning. Any person so cited may appeal such action by notice in writing filed with the department, and the chairman or three members of the board may suspend the effectiveness of the citation pending a hearing by the department.

(b) It shall be the duty of each prosecuting attorney to whom any such violation is reported to investigate such violation forthwith, and in the event it shall appear that a violation has occurred, a prosecution therefor shall be instituted and diligently prosecuted to conclusion.

(c) A violation of the provisions of this subsection shall be a misdemeanor.

(d) Nothing herein shall be construed as preventing any other legal or administrative action in accordance with law.

History.—§13, ch. 67-436; §§26, 35, ch. 69-106; §1, ch. 70-114; §1, ch. 70-439.
*Note.—Effective October 1, 1970.

403.131 Injunctive relief; emergency procedure.—If preventive or corrective measures are not taken in accordance with any order of the department, if the department finds that a generalized condition of air or water pollution exists and that it creates an emergency requiring immediate action to protect human health or safety, or if the department finds that a generalized condition of air or water pollution exists and that it creates an emergency requiring immediate action to prevent harm to property or to animal, plant, or aquatic life, the department shall institute proceedings in a court of competent jurisdiction for injunctive relief to enforce this chapter or rules, regulations, or orders adopted pursuant hereto. Such injunctive relief may include both temporary and permanent injunctions.

History.—§14, ch. 67-436; §§26, 35, ch. 69-106; §1, ch. 70-139; §1, ch. 70-439.

403.141 Civil liability; assessment of damages.—

(1) Whoever causes an unlawful discharge of contaminants into the waters of this state which results in damage to the fish and fish food or other damage to said waters is liable to the state for such damages and the reasonable costs and expenses of the state incurred in tracing the source of the discharge and in restoring the waters to their former condition.

(2) Upon the request of any state agency or the alleged violator, the department may consider and assess these damages. If the amount so assessed is not paid within a reasonable time as prescribed by the department, the department may institute civil action in the appropriate court for a judicial determination of liability and damages.

(3) Nothing herein shall give the department the right to bring an action on behalf of any private person. Nothing herein shall prohibit the department from proceeding forthwith to obtain a judicial determination of the liability and damages. No finding, written report or recommendation of the department made pursuant to this section shall be admissible in evidence in any action.

*(4) In assessing damages for fish killed, the value of the fish is to be determined in accordance with a table of values for individual categories of fish which shall be promulgated by the department. At the time the table is adopted, the department shall utilize tables of values established by the department of natural resources and the game and fresh water fish commission. The total number of fish killed may be estimated by standard practices used in estimating fish populations.

History.—§15, ch. 67-436; §§26, 35, ch. 69-106; §1, ch. 70-141.
*Note.—Effective October 1, 1970.

403.151 Compliance with rules or orders of department.—All rules or orders of the department which require action to comply with standards adopted by it, or orders to comply with any provisions of this act, may specify a reasonable time for such compliance.

History.—§16, ch. 67-436; §§26, 35, ch. 69-106.

403.161 Prohibition, violation, penalty, intent.—

(1) It is unlawful for any person:

(a) To cause the pollution of any of the air or waters of this state in violation of any rules or regulations adopted by the department pursuant to this chapter; or

(b) To violate or fail to comply with any order of the department, including orders or rules fixing standards of air or water quality, or permits issued pursuant to its authority.

(2) Violation is punishable by a civil penalty of not more than $5,000 for the first offense and of not more than $5,000 for each offense thereafter. Each day during any portion of which such violation occurs constitutes a separate offense. Failure of any offender to pay any fine imposed under this section within a time set by the court when imposing said fine shall be evidence of an intent to continue to violate orders of the department and shall enable the court to enter an order for the offender to cease from doing business or carrying on operations within the state.

(3) It is the legislative intent that the civil and criminal penalties and fines imposed by the court be of such amount as to insure immediate and continued compliance with this act and rules or regulations pursuant thereto.

History.—§17, ch. 67-436; §§26, 35, ch. 69-106; §1, ch. 70-338; §1, ch. 70-443.

403.171 Judicial review.—Any party aggrieved by any action of the department may seek appropriate judicial review.

History.—§10, ch. 67-436; §126, 35, ch. 69-106.

403.182 Local pollution control programs.—

(1) Each county and municipality or any combination thereof may establish and administer a local pollution control program if it complies with this act. Local pollution control programs in existence on the effective date of this act shall not be ousted of jurisdiction if such local program complies with this act. All local pollution control programs, whether established before or after the effective date of this act, must:

(a) Be approved by the department as adequate to meet the requirements of this act and any applicable rules and regulations pursuant thereto.

(b) Provide by ordinance, regulation, or local law for requirements compatible with, or stricter or more extensive than those imposed by this act and regulations issued thereunder.

(c) Provide for the enforcement of such requirements by appropriate administrative and judicial process.

(d) Provide for administrative organization, staff, financial and other resources necessary to effectively and efficiently carry out its program.

(2) The department shall have the exclusive authority and power to require and issue permits; provided, however, that the department may delegate its power and authority to local pollution control organizations if the department finds it necessary or desirable to do so.

(3) If the department finds that the location, character or extent of particular concentrations of population, contaminant sources, the geographic, topographic or meteorological considerations, or any combinations thereof, are such as to make impracticable the maintenance of appropriate levels of air and water quality without an areawide pollution control program, the department may determine the boundaries within which such program is necessary and require it as the only acceptable alternative to direct state administration.

(4)(a) If the department has reason to believe that a pollution control program in force pursuant to this section is inadequate to prevent and control pollution in the jurisdiction to which such program relates, or that such program is being administered in a manner inconsistent with the requirements of this act, the department shall, on due notice, conduct a hearing on the matter.

(b) If, after such hearing, the department determines that such program is inadequate to prevent and control pollution in the municipality, county, or municipalities or counties to which such program relates, or that such program is not accomplishing the purposes of this act, it shall require that necessary corrective measures be taken within a reasonable period of time, not to exceed ninety days.

(c) If the municipality, county, or municipalities or counties fail to take such necessary corrective action within the time required, the department shall administer within such municipality, county, or municipalities or counties all of the regulatory provisions of this act. Such pollution control program shall supersede all municipal or county pollution laws, regulations, ordinances and requirements in the affected jurisdiction.

(d) If the department finds that the control of a particular class of contaminant source because of its complexity or magnitude is beyond the reasonable capability of the local pollution control authorities or may be more efficiently and economically performed at the state level, it may assume and retain jurisdiction over that class of contaminant source. Classifications pursuant to this paragraph may be either on the basis of the nature of the sources involved or on the basis of their relationship to the size of the communities in which they are located.

(5) Any municipality or county in which the department administers its pollution control program pursuant to subsection (4) of this section may with the approval of the department establish or resume a municipal or county pollution control program which meets the requirements of subsection (1) of this section.

(6) In exercising its powers, duties and functions the department of air and water pollution control shall have no jurisdiction over local acts of a stricter or more stringent nature.

History.—§10, ch. 67-436; §126, 35, ch. 69-106.

403.1821 Water pollution control and sewage treatment.—Sections 403.1821-403.1833 shall be known and cited as "the Florida water pollution control and sewage treatment plant grant act of 1970."

History.—§1, ch. 70-251.

403.1822 Name; definitions.—As used in §§403.1821-403.1833:

(1) "Local governmental agencies" refers to any municipality, county, district, or authority, or any agency thereof, or a combination of two or more of the foregoing, acting jointly in connection with an eligible project, having jurisdiction over disposal of sewage, industrial wastes, or other wastes.

*(2) ["Department" refers to the department of air and water pollution control.]

(3) "Grants," "grant," "state grants," or "state grant" refer to disbursements from the state water pollution control trust fund pursuant to §403.1825.

History.—§2, ch. 70-251; §1, ch. 70-439.

*Note—In order to comply with §1, ch. 70-439 the editors have substituted a definition of the term "Department" for the term "Board." This definition will be included in a subsequent revisers bill.

403.1823 Department of air and water pollution control to administer; develop rules and regulations.—The department shall:

(1) Promulgate rules and regulations to carry out the purposes of §§403.1821-403.1833.

(2) Administer and control all funds appropriated to or received by the department for the purposes of §§403.1821-403.1833.

History.—§3, ch. 70-251; §1, ch. 70-439.

403.1824 Establish fund.—A trust fund to be known as the state water pollution control trust fund is established in the state treasury to be used for state grants to local governmental agencies for the construction or reconstruction of sewage treatment facilities. All funds received by the department to carry out the purposes of §§403.1821-403.1833 shall be deposited in this fund.

History.—§4, ch. 70-251; §1, ch. 70-439.

403.1825 Grant payments.—Warrants for the payment of grants to local governmental agencies or increments thereof from the water pollution control trust fund shall be issued by the state comptroller upon certification to him by the department that such payments are due and payable under the department's published rules and regulations.

History.—§5, ch. 70-251; §1, ch. 70-439.

403.1826 Grants, requirements for eligibility.—

(1) Grants shall be made under §§403.1821-403.1833 only for projects eligible for federal grants under Public Law 84-660, as amended, or other applicable federal law.

(2) No grant shall be made for any sewage treatment facility unless such facility and the plans and specifications therefor are approved by the department and such facility is constructed in accordance with a time schedule of the department, and subject to such requirements as the department shall impose. If the department requires that the facility be approved by the federal water quality administration, such grant shall be conditioned upon the local governmental agency complying with all of the requirements of said water pollution control administration.

(3) No grant shall be made until the local governmental agency has agreed to provide that part of the total cost of the facility which is in excess of the applicable state and federal grants.

(4) The grant to each local governmental agency shall not exceed 25 percent of that portion of the project cost that is eligible for a federal grant.

(5) Grants made under §§403.1821-403.1833 shall be paid to the local governmental agency in partial payments similar to the time schedule that such payments are provided to the local governmental agency by the federal water quality administration.

(6) No grant shall be made unless the local governmental agency assures the department of the proper and efficient operation and maintenance of the sewage treatment facility after construction.

(7) No grant shall be made unless the local governmental agency has filed properly executed forms and applications prescribed by the department.

(8) Any local government agency receiving assistance under §§403.1821-403.1833 shall keep such records as the department shall prescribe, including records which fully disclose the amount and disposition by the recipient of the proceeds of such assistance, the total cost of the project or undertaking in connection with such assistance given or used, the amount of that portion of the cost of the project or undertaking supplied by other sources, and such other records as will facilitate an effective audit. The department and the auditor general or any of their duly authorized representatives shall have access, for the purpose of audit and examination, to any books, documents, papers, and records of the recipient that are pertinent to grants received under §§403.1821-403.1833.

(9) Effective July 1, 1971, a grant shall not be made until the local governmental agency's governing body has adopted and submitted to the department a comprehensive long-range plan for the control of water pollution in the area within its jurisdiction, hereinafter referred to as the official plan. If more than one local governmental agency has authority to provide service for sewage treatment in the same area, the required plan may be submitted jointly by the local governmental agencies concerned or by one local governmental agency with the concurrence of the others. The official plan shall:

(a) Provide for a timely construction of sewage treatment facilities which will prevent the discharge of untreated or inadequately treated sewage or other wastes as defined by this chapter into the waters of the state.

(b) Provide for adequate planning, zoning, population projections, and engineering and economic studies to delineate with all practicable precision those portions of the area which public sewerage systems may reasonably be expected to serve within ten years and within twenty years, and any areas in which the provision of such services is not reasonably foreseeable.

(c) Be in compliance with the state pollution control plan required by Public Law 84-660, as amended, or other applicable federal law.

(d) Set forth a time schedule and proposed method of financing, construction, and operation of the water pollution control system.

(e) Be reviewed by the official planning agencies having jurisdiction within the local governmental agency, and by the regional planning agency, if any, for consistency with programs of planning for the area and region, which reviews shall be transmitted to the department with the plan.

History.—§6, ch. 70-251; §1, ch. 70-439.

403.1827 Planning grants.—The department

may administer grants to local governmental agencies to assist them in preparing official plans. Such planning grants shall be made from appropriations made by the legislature and from federal appropriations authorized by the Public Law 89-753 or other applicable federal law. However, the state grant shall not exceed 50 percent of the local governmental agencies' contribution.

History.—§7, ch. 70-251; §1, ch. 70-439.

403.1828 Official plans, approval; technical assistance; cooperation.—

(1) The department may approve the official plan as submitted or, if it finds the plan to be inconsistent with proper area or regional water pollution control, it may return the plan for appropriate modification. When more than one local governmental agency is involved in an official plan and the local governmental agencies are unable to agree upon an official plan which the department will approve, the department shall develop the necessary official plans.

(2) The department may provide technical assistance to local governmental agencies in coordinating official plans.

(3) The department shall cooperate with all appropriate federal, state, interstate, and local governmental agencies and with appropriate private organizations.

History.—§8, ch. 70-251; §1, ch. 70-439.

403.1829 Funding of projects; priorities.—Eligible projects shall be funded in descending order of their priority as established by the department until the state water pollution control fund is exhausted. The priority list as established by the department of health and rehabilitative services as agent of the board for the fiscal year beginning July 1, 1969, is ratified and confirmed. If funds available for the last project so funded are less than the amount of the grant to which the project is entitled, the balance due on such grant shall be paid from receipts of the fund in the next succeeding fiscal year before any other projects are so funded.

History.—§9, ch. 70-251; §1, ch. 70-439.

403.1830 State advances in anticipation of construction funds.—If federal funds have been approved for a project but are not available to the local governmental agency at the time of its scheduled construction of a sewage treatment facility, the department may advance to such local governmental agency, in addition to the state grant provided for in §403.1826, that sum of money which would equal the amount of the federal grant, provided the local governmental agency shall agree that any federal contribution thereafter made for the project shall be forwarded to the state as reimbursement for the funds expended under this section. Prior to advancing the federal share, the department shall require the local governmental agency to agree to do all that is necessary to retain its eligibility to qualify for the federal grant. The local governmental agency shall also agree to pay over to the department any installment of a grant received from the federal water pollution control administration on which the state has made an advance under this section.

History.—§10, ch. 70-251; §1, ch. 70-439.

403.1831 State advances in anticipation of contract plan funds.—If federal funds for contract plans and specifications for the construction of a sewage treatment facility are not available to the local governmental agency at the time of its scheduled planning, the department may advance to such local governmental agency a sum equal to 7 percent of the estimated construction cost, said amount to be used by the local governmental agency for the purpose of preparing contract plans and specifications. Any remaining balance of the 7 percent advanced under this section shall be applied to the cost of construction of the facility. The funds advanced to the local governmental agency under this section shall be considered a part of the total amount of the state grant provided for in §403.1826. Prior to advancing funds under this section, the department shall approve an official plan as provided in §403.1826(9).

History.—§11, ch. 70-251; §1, ch. 70-439.

403.1832 Department to accept federal aid.—The department is designated as the administrative agency of the state to apply for and accept any funds or other aid and to cooperate and enter into contracts and agreements with the federal government relating to the planning, developing, maintaining, and enforcing of the program to provide clean water and pollution abatement of the waters of the state or to any other related purpose which the Congress of the United States has authorized or may authorize. The department is authorized in the name of the state to make such applications, sign such documents, give such assurances, and do such other things as are necessary to obtain such aid from or cooperate with the United States government or any agency thereof. The department may consent to enter into contracts and agreements and cooperate with any other state agency, local governmental agency, person, or other state when it is necessary to carry out the provisions of §§403.1821-403.1833.

History.—§12, ch. 70-251; §1, ch. 70-439.

403.1833 Appropriations; state water pollution control fund.—There is hereby appropriated to the state water pollution control trust fund funds received by the state under the reimbursement provisions of §8C of Public Law 84-660, as amended.

History.—§13, ch. 70-251.

*403.1834 State bonds to finance facilities.—(1) The issuance of state bonds to finance the construction of air and water pollution control and abatement and solid waste disposal facilities, payable primarily from the

pledged revenues provided for by §14, Art. VII of the state constitution or from such pledged revenues and the full faith and credit of any county, municipality, district, authority, or any agency thereof, and pledging the full faith and credit of the state as additional security, is authorized, subject and pursuant to the provisions of §14, Art. VII of the state constitution, the provisions of the state bond act, §§215.57-215.83, as amended, and the provisions of this section.

(2) The state board of administration is designated as the state fiscal agency to make the determinations required by §14, Art. VII of the state constitution in connection with the issuance of such bonds.

(3) The amount of the state bonds to be issued shall be determined by the division of bond finance of the department of general services. However, the total principal amount issued shall not exceed one hundred million dollars in any state fiscal year.

(4) The facilities to be financed with the proceeds of such state bonds shall be determined and approved by the department of air and water pollution control, and may be constructed, acquired, maintained, and operated by any county, municipality, district, or authority, or any agency thereof, or by said department.

(5) The department of air and water pollution control and the division of bond finance of the department of general services are hereby authorized to enter into lease-purchase agreements between such departments or to enter into lease-purchase agreements or loan agreements between either of such departments and any county, municipality, district, or authority, or any agency thereof, for such periods and under such other terms and conditions as may be mutually agreed upon by the parties thereto in order to carry out the purposes of §14, Art. VII of the state constitution, and this section.

(6) The department of air and water pollution control shall have power to fix, establish, and collect fees, rentals, or other charges for the use or benefit of said facilities, or may delegate such power to any county, municipality, district, authority, or any agency thereof under such terms and conditions and for such periods as may be mutually agreed upon.

(7) It is found and declared that said facilities will constitute a public governmental purpose necessary for the health and welfare of all the inhabitants of the state, and none of said facilities or said state bonds or the interest thereon shall ever be subject to taxation by the state or any political subdivision or agency thereof.

History.—§§1-7, ch. 70-270; §1, ch. 70-439.

*Note.—This section shall be effective immediately upon ratification by the electors of the state of said amendment to §14, Art. VII of the state constitution. If the amendment submitted to the electors adding §14 is rejected, this section shall be null and void.

403.191 Construction in relation to other law.—

(1) It is the purpose of this act to provide additional and cumulative remedies to prevent, abate, and control the pollution of the air and waters of the state. Nothing contained herein shall be construed to abridge or alter rights of action or remedies in equity under the common law or statutory law, criminal or civil, nor shall any provisions of this act, or any act done by virtue thereof, be construed as estopping the state or any municipality, or person affected by air or water pollution, in the exercise of their rights in equity or under the common law or statutory law to suppress nuisances or to abate pollution.

(2) No civil or criminal remedy for any wrongful action which is a violation of any rule or regulation of the department shall be excluded or impaired by the provisions of this chapter.

(3) This act shall limit and restrict the application of chapter 24952, Laws of Florida, Acts of 1947, to any person operating any industrial plant that has located in the State of Florida in reliance thereon and exercised rights and powers granted thereby on and before the effective date of this act; provided such person shall henceforth in the exercise of such rights and powers install and use treatment works or control measures generally equivalent to those installed and used by other similar industrial plants pursuant to the requirements of the department.

History.—§20, ch. 67-436; §§26, 35, ch. 69-106.

403.201 Variances.—

(1) Upon application the department in its discretion may grant a variance from the provisions of this act or the rules and regulations adopted pursuant hereto. Variances and renewals thereof may be granted for any one of the following reasons:

(a) There is no practicable means known or available for the adequate control of the pollution involved.

(b) Compliance with the particular requirement or requirements from which a variance is sought will necessitate the taking of measures which, because of their extent or cost, must be spread over a considerable period of time. A variance granted for this reason shall prescribe a timetable for the taking of the measures required.

(c) To relieve or prevent hardship of a kind other than those provided for in paragraphs (a) and (b) above. Variances and renewals thereof granted under authority of this paragraph shall each be limited to a period of twenty-four months.

(2) The department or its duly designated hearing officer shall hold a hearing on each application for a variance. The hearing procedures of §403.051 shall apply at such hearing.

(3) The department may prescribe such time limits and other conditions to the granting of a variance as it shall deem appropriate.

History.—§21, ch. 67-436; §§26, 35, ch. 69-106.

403.212 Regulations validated.—Any regulations adopted or orders issued by the Florida Air Pollution Control Commission and effective in any air pollution control district on the effective date of this act and rules, regulations and orders of the State Board of Health relating to air or water quality or pollution, are hereby validated as though adopted pursuant to the provisions of this chapter, and shall con-

...nue in effect and be enforced until repealed by the department.

History.—§22, ch. 67-436; §§26, 35, ch. 69-106.

403.221 Pending proceedings.—No legal proceedings shall be abated because of any transfers made in this section, but the appropriate party exercising like authority or performing like duties or functions shall be substituted in said proceedings.

History.—§23, ch. 67-436.

403.231 Department of legal affairs to represent the state.—The department of legal affairs shall represent the state and its agencies as legal advisor in carrying out the provisions of this act.

History.—§24, ch. 67-436; §§11, 35, ch. 69-106.

403.251 Safety clause.—The legislature hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health and safety.

History.—§27, ch. 67-436.

403.261 Provisions specifying jurisdiction repealed.—All rule-making jurisdiction over air and water pollution matters held by other agencies within the state on September 1, 1967, is hereby repealed including, but without limitation, such jurisdiction held by the Florida State Board of Health, the Game and Fresh Water Fish Commission, the State Board of Conservation and the several water management districts within the state.

History.—§1, ch. 67-436.

403.271 Aquatic plants; permits; penalties.—

(1) No person shall import into the state any aquatic plant or seeds thereof of a species not native to the state without having first obtained a permit from the department.

(2) No person shall knowingly transport or transfer aquatic plants, whether indigenous or a species not native to the state, between bodies of water within the state without having first obtained a permit from the department.

(3) No person shall place or cause to be placed in the waters of the state or to cultivate or cause to propagate in the waters of the state any aquatic plant without first having obtained a permit from the department.

(4) The department is authorized to issue such permits only after the following conditions have been met:

(a) The department of agriculture and consumer services, the game and fresh water fish commission, and the department of air and water pollution control issue prior approval of such permit.

(b) An appropriate agency, such as an aquatic vegetation laboratory, issues a memorandum certifying that the importation, transportation, or cultivation of such species poses no danger to the waters, fish, reptiles, or ecology of the state.

(5) The department of air and water pollution control, the department of agriculture and consumer services, and the game and fresh water fish commission shall conduct investigations of such species prior to issuance or denial of a permit for importation, transport, or transfer of such species in the waters of the state. Such investigations and the issuance of such permits shall be subject to the criteria established by the department of natural resources.

(6) To insure due process to all parties affected, the department shall follow the procedures of parts II and III of chapter 120 relating to hearings and review.

(7) The department shall publicize the provisions of this section on road signs throughout the state.

(8)(a) Any person violating the provisions of this section is guilty of a misdemeanor and upon conviction shall be punished by a fine of not less than $100 nor more than $1,000 or by imprisonment not exceeding 6 months or by both such fine and imprisonment.

(b) All law enforcement officers of the state and its agencies with power to make arrests for violations of state law shall enforce the provisions of this section.

History.—§1, ch. 69-158; §§14, 26, 35, ch. 69-106; §4, ch. 70-203; §1, ch. 70-439.

403.281 Definitions; weather modification law.—As used in this chapter relating to weather modification:

*(1) ["Department" means the department of air and water pollution control.]

(2) "Person" includes any public or private corporation.

History.—§1, ch. 57-128; §§26, 35, ch. 69-106.

*Note.—In order to conform to §26, ch. 69-106 the editors have substituted a definition of the term "department" for the term "board." The section will be appropriately amended by a subsequent reviser's bill.

Note.—Formerly §373.261.

403.291 Purpose of weather modification law.—The purpose of this law is to promote the public safety and welfare by providing for the licensing, regulation and control of interference by artificial means with the natural precipitation of rain, snow, hail, moisture or water in any form contained in the atmosphere.

History.—§2, ch. 57-128.
Note.—Formerly §373.271

403.301 Artificial weather modification operation; license required.—No person without securing a license from the department, shall cause or attempt to cause by artificial means condensation or precipitation of rain, snow, hail, moisture or water in any form contained in the atmosphere, or shall prevent or attempt to prevent by artificial means the natural condensation or precipitation of rain, snow, hail, moisture or water in any form contained in the atmosphere.

History.—§3, ch. 57-128; §§26, 35, ch. 69-106.
Note.—Formerly §373.281.

403.311 Application for licensing; fee.—

(1) Any person desiring to do or perform any of the acts specified in §403.301 may file with the department an application for a license on a form to be supplied by the department for such purpose setting forth all of the following:

(a) The name and post office address of the applicant.

(b) The education, experience and qualifications of the applicant, or if the applicant is not an individual, the education, experience

and qualifications of the persons who will be in control and in charge of the operation of the applicant.

(c) The name and post office address of the person on whose behalf the weather modification operation is to be conducted if other than the applicant.

(d) The nature and object of the weather modification operation which the applicant proposes to conduct, including a general description of such operation.

(e) The method and type of equipment and the type and composition of materials that the applicant proposes to use.

(f) Such other pertinent information as the department may require.

(2) Each application shall be accompanied by a filing fee in the sum of one hundred dollars and proof of financial responsibility as required by §403.321.

History.—§4, ch. 57-128; §§26, 35, ch. 69-106.
Note.—Formerly §373.291.

403.321 Proof of financial responsibility.—

(1) No license shall be issued to any person until he has filed with the department proof of ability to respond in damages for liability on account of accidents arising out of the weather modification operations to be conducted by him in the amount of ten thousand dollars because of bodily injury to or death of one person resulting from any one incident, and subject to said limit for one person, in the amount of one hundred thousand dollars because of bodily injury to or death of two or more persons resulting from any one incident, and in the amount of one hundred thousand dollars because of injury to or destruction of property of others resulting from any one incident.

(2) Proof of financial responsibility may be given by filing with the department a certificate of insurance or a bond in the required amount.

History.—§5, ch. 57-128; §§26, 35, ch. 69-106.
Note.—Formerly §373.301.

403.331 Issuance of license; suspension or revocation; renewal.—

(1) The department shall issue a license to each applicant who:

(a) By education, skill and experience appears to be qualified to undertake the weather modification operation proposed in his application.

(b) File proof of his financial responsibility as required by §403.321.

(c) Pays filing fee required in §403.311.

(2) Each such license shall entitle the licensee to conduct the operation described in the application for the calendar year for which the license is issued unless the license is sooner revoked or suspended. The conducting of any weather modification operation or the use of any equipment or materials other than those described in the application shall be cause for revocation or suspension of the license.

(3) The license may be renewed annually by payment of a filing fee in the sum of fifty dollars.

History.—§6, ch. 57-128; §§26, 35, ch. 69-106.
Note.—Formerly §373.311.

403.341 Filing and publication of notice of intention to operate; limitation on area and time.—Prior to undertaking any operation authorized by the license, the licensee shall file with the department and cause to be published a notice of intention. The licensee shall then confine his activities substantially within the time and area limits set forth in the notice of intention.

History.—§7, ch. 57-128; §§26, 35, ch. 69-106.
Note.—Formerly §373.321.

403.351 Contents of notice of intention.—The notice of intention shall set forth all of the following:

(1) The name and post office address of the licensee.

(2) The name and post office address of the persons on whose behalf the weather modification operation is to be conducted if other than the licensee.

(3) The nature and object of the weather modification operation which licensee proposes to conduct, including a general description of such operation.

(4) The method and type of equipment and the type and composition of the materials the licensee proposes to use.

(5) The area in which and the approximate time during which the operation will be conducted.

(6) The area which will be affected by the operation as nearly as the same may be determined in advance.

History.—§8, ch. 57-128.
Note.—Formerly §373.331.

403.361 Publication of notice of intention.—The licensee shall cause the notice of intention to be published at least once a week for two consecutive weeks in a newspaper having general circulation and published within any county wherein the operation is to be conducted and in which the affected area is located, or if the operation is to be conducted in more than one county or if the affected area is located in more than one county or is located in a county other than the one in which the operation is to be conducted, then such notice shall be published in like manner in a newspaper having a general circulation and published within each of such counties. In case there is no newspaper published within the appropriate county, publication shall be made in a newspaper having a general circulation within the county.

History.—§9, ch. 57-128.
Note.—Formerly §373.341.

403.371 Proof of publication.—Proof of publication shall be filed by the licensee with the department fifteen days from the date of the last publication of notice. Proof of publication shall be by copy of the notice as published, attached

to and made a part of the affidavit of the publisher or foreman of the newspaper publishing the notice.

History.—§10, ch. 57-128; §§26, 35, ch. 69-106.
Note.—Formerly §373.351.

403.381 Record and reports of operations.—(1) Each licensee shall keep and maintain a record of all operations conducted by him pursuant to his license showing the method employed, the type and composition of materials used, the times and places of operation, the name and post office address of each person participating or assisting in the operation other than licensee and such other information as may be required by the department and shall report the same to the department at such times as it may require.

(2) The records of the department and the reports of all licensees shall be available for public examination.

History.—§11, ch. 57-128; §§26, 35, ch. 69-106.
Note.—Formerly §373.361.

403.391 Emergency licenses.—Notwithstanding any provisions of this act to the contrary, the department may grant a license permitting a weather modification operation without compliance by the licensee with the provisions of §§403.351-403.371, and without publication of notice of intention as required by §403.341 if the operation appears to the department to be necessary or desirable in aid of the extinguishment of fire, dispersal of fog or other emergency.

History.—§12, ch. 57-128; §§26, 35, ch. 69-106.
Note.—Formerly §373.371.

403.401 Suspension or revocation of license; appeal.—

(1) Any license may be revoked or suspended if the department finds, after due notice to the licensee and a hearing therein, that the licensee has failed or refused to comply with any of the provisions of this act.

(2) Any licensee may apply to the circuit court for the county of Leon to review any order of the department within the time provided by the Florida appellate rules. The review shall be by certiorari in the manner prescribed by the Florida appellate rules.

(3) Either the department or the licensee may appeal from the order or decree of the circuit court to the appropriate district court of appeal in the same manner appeals may be taken in suits in equity.

History.—§13, ch. 57-128; §21, ch. 63-512; §§26, 35, ch. 69-106.
Note.—Formerly §373.381.

403.411 Penalty.—Any person conducting a weather modification operation without first having procured a license, or who shall make a false statement in his application for license, or who shall fail to file any report or reports as required by this act, or who shall conduct any weather modification operation after revocation or suspension of his license, or who shall violate any other provision of this act, shall be guilty of a misdemeanor and upon conviction therefor shall be fined not more than $1,000, or imprisoned not more than 60 days, or both; and if a corporation, shall be fined not more than $1,000. Each such violation shall be a separate offense.

History.—§14, ch. 57-128.
Note.—Formerly §373.391.

Chapter 17-4: PERMITS

Florida Adminstrative Code

RULES

OF THE

DEPARTMENT OF AIR AND WATER POLLUTION CONTROL

CHAPTER 17-4

PERMITS

17-4.01 Scope of Rule.

Pursuant to Chaper 403, Florida Statutes, this rule is adopted whereby a permit is required for the operation, construction, or expansion of any installation that may be a source of air or water pollution. It provides for the issuance and revocation of such permits.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.02 Definitions.

17-4.02 Definitions.

(1) "Department" is the Department of Air and Water Pollution Control of the State of Florida.

(2) "Construction Permit" is legal authorization granted by the Department to construct or make alterations which increase or may increase any source of pollution at any specific location.

(3) "Operation Permit" is legal authorization granted by the Department to operate any source of pollution.

(4) "Director" is the Executive Director of the Department.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.03 Permits Required; Not Required.

(1) The following permits shall be issued by the Department as required and shall be applicable to sources such as domestic sewage, industrial wastes, contaminant emissions to the atmosphere, solid wastes disposed by incineration or mechanical means, and discharge of any materials to drainage wells.

(a) Construction Permits

(b) Operation Permits For New Sources

(c) Operation Permits For Existing Sources

(2) The following are exempted from this rule:

(a) Septic tank drainfield systems.

(b) Domestic sewage treatment plants of less than 3,000 gallons per day average daily flow.

(c) Home heating and/or comfort heating equipment with a gross maximum heat output less than one million BTU per hour.

(d) Comfort air conditioning or comfort ventilating systems.

(e) Internal combustion engines, boats, aircraft and vehicles used for transportation of passengers or freight. Such sources shall not be required to obtain an operation permit, but shall conform with rules with respect to emission of black smoke or of equivalent opacity.

(f) Incinerators constructed, installed, or used in one-or two-family dwellings or in multi-occupied dwellings containing six (6) or fewer family units, one of which is owner-occupied.

(g) The following equipment:

(1) Cold storage refrigeration equipment.

(2) Vaccum pumps in laboratory operations.

(3) Water cooling towers and water cooling ponds not used for evaporative cooling of process water or not used for evaporative cooling of water from barometric jets or from barometric condensers.

(4) Equipment used for steam cleaning.

(5) Belt or drum sanders having a total sanding surface of five square feet or less per sander, and other equipment used exclusively on wood or plastics or their products having a density of 20 pounds per cubic foot or more.

(6) Equipment used exclusively for space heating, other than boilers.

(7) Smoke houses used exclusively for smoking food products.

(8) Backery ovens and confection cookers where the products are edible and intended for human consumption.

(9) Laboratory equipment used exclusively for chemical or physical analyses.

(10) Brazing, soldering or welding equipment.

(11) Laundry driers, extractors or tumblers for fabrics cleaned with only water solutions of bleach or detergents.

(h) Vaccum cleaning systems used exclusively for industrial, commercial or residential housekeeping purposes.

(i) Structural changes which cannot change the quality, nature or quantity of air or water contaminant emissions or discharges.

(j) Any article, machine, equipment, contrivance, operation, process or activity which the Department shall determine does not cause the issuance of air or water contaminants in sufficient quantity, with respect to its character, quality or content, and the circumstances surrounding its location, use and operation, as to contribute significantly to the pollution problems within the State, so that the regulation thereof is not reasonably justified, and which does not in fact cause the issuance of contaminants in violation of law or of these rules and regulations. Such determination shall be made in writing and filed by the Department as a public record. Such determination may be revoked at

any time. The Department shall notify the Air and Water Pollution Control Board, at each regularly scheduled meeting, in writing of each such determination or revocation of a previous determination, with the reasons therefor in each instance.

These exemptions do not apply to any article, machine, equipment, contrivance or their exhaust systems, the discharge from which contains air or water-borne radioactive material in concentrations above the natural radioactive background concentration respectively in air or water.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.04 Construction Permit.

(1) Procedure to obtain permit.

To secure a construction permit it shall be necessary to submit the following, in quadruplicate, on forms and in the manner prescribed by the Department:

(a) A notice of intent by the owner(s) or his (their) authorized agent.

(b) A completed application form furnished by the Department. Applications covering domestic waste facilities should be made to the Department through the Division of Health of the Department of Health and Rehabilitative Services.

(c) An engineering report covering plant description and operations, types and quantities of all waste material generated whether liquid, gaseous or solid, and proposed waste control facilities, the treatment objectives and the design criteria on which the control facilities are based, and other information deemed relevant. Design criteria shall be based on the results of laboratory and pilot-plant scale studies whenever such studies are warranted. The design efficiencies of the proposed waste treatment facilities and the quantities and types of pollutants in the treated effluents or emissions shall be indicated. Work of this nature shall be subject to the requirements of Chapter 471, Florida Statutes. Where confidential records are involved, the Director is authorized to limit full disclosure after personal discussion with the applicant.

(d) Owners written guarantee to meet the design criteria as accepted by the Department and to abide by Chapter 403, Florida Statutes and the rules and regulations of the Department as to the quantities and types of materials to be discharged from the plant. The owner may be required to post an appropriate bond to guarantee compliance with such conditions in instances where owner's financial resources are inadequate or unavailable for underwriting such guarantee.

(2) The construction permit may contain an expiration date as determined by the Director.

(3) When the Department issues a permit to construct, the recipient of said permit shall be allowed a period of time, specified in the permit to construct for operating and testing to determine compliance with Chapter 403, Florida Statutes, Chapter 10D-12, Florida Administrative Code and other rules and regulations of the Department. The Department may require such tests and evaluations on the treatment facilities to be accomplished by applicant at his expense.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 4-3-70.

17-4.05 Operation Permit For New Sources

(1) Procedure to obtain permit.

To secure an operation permit for new sources it shall be necessary to submit the following on forms and in the manner prescribed by the Department.

(a) Test results, as specified in 17-4.04 (3).

(b) Certification of construction completion by Permittee noting any permit deviations.

(c) Final construction costs of pollution control facilities.

(2) Permit Guarantees — An operation permit shall refer to the approved guarantees for the plant, identifying such guarantees by date, name and number, a copy of which shall, at the option of the owner, be attached to the permit or shall be permanently retained in the office of the owner and shall be made available for inspection upon request by an authorized representative of the Department.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.06 Operation Permit For Existing Sources

(1) Owners of all existing sources of air and/or water pollution are allowed up to but not more than twelve (12) months time, from the effective date of this Chapter, during which they shall evaluate, test, modify or improve their existing pollution control facilities in regard to compliance with Chapter 403, Florida Statutes, Chapter 10D-12, Florida Administrative Code, and other rules and regulations of the Department. Prior to the end of the said period they shall make application, on form furnished by the Department, for the issuance of an operation permit.

If, after the review of an appliction for operation permit, the Department determines that the existing facilities do not comply with Chapter 403, Florida Statutes, Chapter 10D-12, Florida Administrative Code, and the rules and regulations of the Department, a temporary operation permit may be issued by the Department, stating the conditions under which the operations are permitted.

(2) Temporary Operation Permit.

A temporary operation permit may be issued by the Department when time is required for corrections in the method of waste treatment and/or disposal, to comply fully with Chapter 403, Florida Statutes, Chapter 10D-12, Florida Administrative Code, and other rules and regulations of the Department. The Director shall decide the duration of the temporary permit which may allow time for guidance study, corrections, testing and improvements in regard to the existing pollution control facilities.

(3) Existing State Permit.

Holders of valid operation permits issued by a state agency who have not received a superseding DAWPC operation permit within sixty days of effective date of this rule shall apply by letter within ninety (90) days of effective date of this rule for an operation permit under the provisions of this Chapter and shall be issued an operation permit in exchange for the previous permit.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.07 Standards For Issuing Permits; Revocations; Board Review

(1) Operation permits shall be effective until revoked or surrendered and shall be subject to the provisions of Chapter 403, Florida Statutes, Chapter

170C-10, Florida Administrative Code and other rules and regulations of the Department.

(2) Failure to comply with the laws and rules and regulations of the Department will constitute ground for revocation of said permit until the person affected complies with the requirements of said laws, rules and regulations.

(3) Permits May Be Revoked When:

(a) Chapter 403, Florida Statutes or rules and regulations of the Department or revisions thereof are violated.

(b) Operation reports are not provided as indicated by Section 4.10.

(c) Permit was obtained by misrepresentation of any material fact or by lack of full disclosure in the application.

(4) Board Review — An applicant who is denied a permit or a permit holder whose permit is revoked can, if desired, request a hearing within ten days of receipt of denial or revocation, before the Board.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.08 Executions of Permits.

Permits shall be executed in triplicate, one copy to be given the applicant, one copy shall remain with the Department and third copy to be filed with the Department of Air and Water Pollution Control Regional Engineer.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.09 Display.

All permits shall be prominently displayed on the premises.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.10 Reports.

Owners of pollution sources, subject to the provisions of these rules shall provide operational data and control test records required to indicate operating efficiency of said works and transmit these records to the Department.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.11 Effective Date.

Provisions of this Chapter shall become effective as legally published by the Director.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.12 Transfer of Permits.

A permit is issued in the name of a person., Upon the sale or legal transfer of a permitted facility the new owner must apply by letter for a transfer of permit within thirty (30) days.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 3-4-70.

17-4.13 Plant Operation — Problems.

In the event the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee is to immediately notify this Department. Notification shall include pertinent information as to the cause, and what steps are being taken to correct the problem and prevent its recurrence and the owner's intent toward reconstruction of destroyed facilities where applicable.

General Authority 403.061 (7) FS. Law Implemented 403.061 (16) FS. History—New 4-3-70.

Chapter 17-5

OPEN BURNING AND FROST PROTECTION FIRES

RULES

OF THE

DEPARTMENT OF AIR AND WATER POLLUTION CONTROL

CHAPTER 17-5

OPEN BURNING AND FROST PROTECTION FIRES

17-5.01 Declaration and Intent. The Department finds and declares that the open burning of materials outdoors and the use of outdoor heating devices result in or contribute to air pollution. The Department further finds that regulation of open burning and outdoor heating devices will reduce air pollution significantly.

It is the intent of the Department to require that open burning be conducted in a manner, under conditions, and within certain periods that will reduce or eliminate the deleterious and noisome effect of air pollution caused by open burning.

It is the intent of the Department to phase out, over a period of years, open burning of certain unapproved material and heating devices which are presently being used for crop protection against frost and freezing and to require that only materials and heating devices which emit a minimum of air pollutants be used.

The Department finds that certain fuels release less air pollution when burned than do other fuels. Therefore, the Department intends to approve fuels which contribute only a minimum of air pollution and allow their use for cold or frost protection and to phase out, over a period of years, all fuels which do not meet Department specifications.

General Authority 403.061(7) FS. Law Implemented 403.021, 403.031, 403.061 FS. History—New 7-1-71.

17-5.02 Definitions. The following words, phrases, or terms when used in this chapter shall, unless the content otherwise indicates, have the following meanings:

(1) "Air pollution" is the presence in the outdoor atmosphere of the state of any one or more substances or contaminants in quantities which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property, or unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

(2) "Department" is the Department of Air and Water Pollution Control.

(3) "Open burning" means any outdoor fire or open combustion of material which produces or may produce air pollution.

(4) "Outdoor heating device" means any apparatus, machine, equipment, or other contrivance in which is burned any type of fuel capable of producing air pollution, used outdoors for the purpose of giving protection from cold or frost.

(5) "Land clearing operation" means the uprooting or clearing of vegetation in connection with construction for buildings and rights-of-way, mineral operations, control of weeds, or enhancement of property value, but does not include site preparation; i.e., fires for the growing, raising, or harvesting of crops, timber, or wildlife.

(6) "Approved fuel" shall mean fuel approved by the Department to emit or release a minimum of pollutants when burned.

(7) "Forced draft" is an adequate current of air, blown or forced by a fan or other mechanical means, which is directed or arranged in relation to the open burning in such a manner as to increase the temperature of the fire and to reduce or minimize the resultant pollution.

(8) "Excessive visible emissions" are air pollutants emitted in such quantity as to obscure an observer's view to a degree equal to or greater than Number two (or 40% opacity) on the Ringelmann Smoke Chart as published in the U.S. Bureau of Mines Information Circular No. 7718.

(9) "Sunset" is official sunset as set forth by the U.S. Naval Observatory (tables are available at National Weather Services offices).

General Authority 403.061(7) FS. Law Implemented 403.021, 403.031, 403.061 FS. History—New 7-1-71.

17-5.03 Prohibitions.

(1) Any open burning not specifically allowed by this chapter is prohibited. No person shall ignite, cause to be ignited, permit to be ignited, suffer, allow, burn, conduct or maintain any prohibited open burning.

(2) No person shall use or operate any outdoor heating device or burn any unapproved fuel for cold or frost protection except as provided in this chapter.

General Authority 403.061(7) FS. Law Implemented 403.021, 403.031, 403.061 FS. History—New 7-1-71.

17-5.04 Limitations. Nothing in this chapter may be construed to allow open burning which causes or constitutes a hazard to air traffic, which artificially reduces visibility on public roadways to less than 500 feet, or which violates other laws, rules, regulations, or ordinances.

General Authority 403.061(7) FS. Law Implemented 403.021, 403.031, 403.061 FS. History—New 7-1-71.

17-5.05 Agricultural and Silvicultural Fires.

(1) Open burning between the hours of 9:00 a.m. (standard time) and one hour before sunset (except fires for cold or frost protection) in connection with agricultural, silvicultural or forestry operations related to the growing, harvesting or maintenance of crops or in connection with wildlife management is allowed, provided that permission is

secured from the Division of Forestry of the Department of Agriculture and Consumer Services prior to burning. The Division of Forestry may allow open burning at other times when there is reasonable assurance that atmospheric and meteorological conditions in the vicinity of the burning will allow good and proper diffusion and dispersement of air pollutants, and ready control of such fires within the designated boundaries.

(2) The Division of Forestry may, or at the request of the Department of Air and Water Pollution Control the Division of Forestry shall, suspend after reasonable notice any such permission whenever atmospheric or meteorological conditions change so that there is improper diffusion and dispersion of air pollutants which create a condition deleterious to health, safety, or general welfare, or which obscure visibility of vehicular or air traffic.

(3) This section (17-5.05) shall become effective October 1, 1971.

General Authority 403.061(3), (4), (7), and (24), 403.081 FS. Law Implemented 403.021, 403.031, 403.061 FS. History—New 7-1-71.

17-5.06 Burning for Cold or Frost Protection.

(1) Open Burning, Fuels, Devices, Schedules. Open burning or the use of outdoor heating devices for frost or cold protection in connection with agricultural or citrus operations is allowed, provided the fuel and the heating device used have approval from the Department prior to use.

(a) Fuels for open burning for frost or cold protection will be allowed in accordance with the following schedule:

1. Until June 1972, all fuels shall be allowed.

2. After June 1972, the burning of tires, rubber material, railroad cross ties, other creosoted lumber, refuse, wood, or vegetation shall be prohibited.

3. Until June 1974, oil in open pans is allowed, provided a No. 3 or better grade fuel oil is burned.

4. After June 1973, all fuels must have approval of the Department.

(b) Use of outdoor heating devices for frost or cold protection is allowed in accordance with the following schedule:

1. Outdoor heating devices and open pans in existence on July 1, 1971, may continue to be used until June 1974.

2. Any new outdoor heating device must have approval of the Department prior to use.

3. After June 1974, any outdoor heating device must have approval prior to use.

(2) List Required: Approved Fuels and Outdoor Heating Devices. The Department shall compile and maintain a list of approved fuels and outdoor heating devices. The list shall include conditions upon which approval was granted. The list shall be available to the public and may be published from time to time.

(3) Approval: Fuels and Outdoor Heating Devices; Procedure; Requirements. Fuels and outdoor heating devices shall be approved in the following manner:

(a) Fuels for open burning:

1. Any person desiring to have a fuel approved may submit an application. The application shall contain the following information:

A. Name, address, and telephone number of applicant;

B. Trade name or other designation of fuel;

C. Chemical composition of fuel;

D. The composition and quality of air contaminants given off per unit of fuel; and,

E. The expected use of the fuel.

2. The Department may require that samples be made by the applicant and may require that samples of the fuel be submitted for testing to the Department or the Division of Standards of the Department of Agriculture and Consumer Services.

3. The Department shall not approve any fuel which emits excessive visible emissions when burned in the proper manner.

4. The Department may approve a fuel on condition that it be used for certain specified purposes and in a certain specified manner.

(b) Outdoor heating devices:

1. Any person desiring to have an outdoor heating device approved may submit an application. The application shall contain the following information:

A. Name, address, and telephone number of applicant;

B. Trade name or other designation of the device;

C. Brief description of the device;

D. Type of fuel that is used in the device; and,

E. The composition and quantity of air contaminants given off by the device when in operation.

2. The Department may require that a test of the performance of a representative device be conducted by the applicant.

3. The Department shall not approve any outdoor heating device which emits more than five-tenths gram per minute of unconsumed solid carbonaceous matter or particulate matter.

4. The Department may approve the device on specified conditions and may limit the approval to a specified period of time.

(c) Any applicant who has been denied approval for a fuel or an outdoor heating device shall, upon request, be granted a public hearing. After the hearing, the Department shall affirm or modify the denial or set it aside and approve the fuel or device.

General Authority 403.061(7) and (16) FS. Law Implemented 403.021, 403.031, 403.061 FS. History—New 7-1-71.

17-5.07 Land Clearing.

(1) Open burning of wooden material or vegetation generated by a land clearing operation (except for agricultural, silvicultural, or forestry operations) or the demolition of a structure is allowed provided one of the following alternatives is satisfied:

(a) The open burning is fifty yards or more from any occupied building or public highway and is performed between 9:00 a.m. (standard time) and one hour before sunset;

(b) At other times when:

1. The open burning is fifty yards or more from any occupied building or public highway and a forced draft system is used; or,

2. The open burning is five-hundred yards or more from any occupied building or a public highway and the Department has given permission because of reasonable assurance that atmospheric and meteorological conditions in the vicinity of the

burning will allow good and proper diffusion and dispersement of air pollutants; or,

(c) The burning is conducted under the supervision of the Department of Transportation, a forced draft is used, and visibility on roadways is not artificially reduced to less than 500 feet.

(2) If the burning site is situated in a rural area or is adjacent to or near forest, grass, woods, wild lands or marshes, the Division of Forestry shall be notified and consulted prior to any burning.

(3) All open burning under this section shall be conducted in the following manner:

(a) The piles of materials to be burned shall be of such size that the burning will be completed within the designated time given in paragraph 17-5.07(1).

(b) The moisture content and composition of the material to be burned shall be favorable to good burning which will minimize air pollution.

(c) The starter fuel and materials to be ignited shall not emit excessive visible emissions when burned.

General Authority 403.061(7) FS. Law Implemented 403.021, 403.031, 403.061 FS. History—New 7-1-71.

17-5.08 Industrial, Commercial, Municipal, and Research Open Burning.

(1) Open burning in connection with industrial, commercial, or municipal operations is prohibited, except when the open burning is the only feasible method of operation and prior approval is obtained from the Department, or when an emergency exists which requires immediate action to protect human health and safety.

(2) Open burning and the use of outdoor heating devices which are essential to a research project are allowed provided prior approval is obtained from the Department.

(3) The application for approval under this section shall include the following:

(a) The name, address, and telephone number of the person submitting the application;

(b) The type of business or activity involved;

(c) A description of the proposed equipment and operating practices, the type, quantity, composition and amount of air contaminants to be released to the atmosphere;

(d) The schedule of burning operations, if known;

(e) The exact location of requested open burning;

(f) If applicable, reasons why no method o than open burning is feasible; and,

(g) Evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction.

(4) The Department shall approve such operations or research projects only on specified conditions which protect the ambient air from pollutants and contaminants to the greatest extent, and may limit the approval to a specified time.

General Authority 403.061(7) and (16) FS. Law Implemented 403.021, 403.031, 403.061 FS. History—New 7-1-71.

17-5.09 Open Burning Allowed.

(1) Open burning to reduce non-putrescible waste generated on occupied residential premises of not more than four family units is allowed; provided a municipal, county, or commercial refuse collection service is not available on a systematic basis, or at least once a week; further provided that the burning does not produce smoke, soot, odors, visible emissions, heat, flame, radiation, or other conditions to such a degree as to create a nuisance.

(2) A camp fire or other fire will be allowed that is used solely for recreational purposes, for ceremonial occasions, for outdoor noncommercial preparation of food, or on cold days for warming of outdoor workers, as long as excessive visible emissions are not emitted.

(3) Open burning for the flaring of waste gases is allowed for reasons of safety, as long as excessive visible emissions are not emitted.

(4) Open burning is allowed for the instruction and training of organized fire fighters or indus employees under the supervision of the appropr public fire control official.

General Authority 403.061(7) FS. Law Implemented 403.021, 403.031, 403.061 FS. History—New 7-1-71.

17-5.10 Effective Date. This chapter, unless otherwise specified, shall become effective July 1, 1971.

General Authority 120.041(6) FS. Law Implemented 120.041(6) FS. History—New 7-1-71.

APPENDIX C

EMISSION INVENTORY SUMMARY

Northwest Florida Interstate AQCR

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Particulate

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	28.39	2.33	54.8	3.31	2.93	11.11	24.87	10.0	4.51	3.25
b. Point										
3. Residual Oil										
a. Area	2.45	0.25	6.7	0.33	0.35	1.12	2.87	1.23	0.5	0.37
b. Point										
4. Natural Gas*										
a. Area	40.7	4.12	111.0	5.46	4.85	18.62	47.7	20.7	8.7	6.19
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	3.07	0.13	0.09	0.25	0.08	0.77	0.79	0.13	0.13	0.12
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point						7.1				
3. Residual Oil										
a. Area				38.8						
b. Point										
4. Natural Gas										
a. Area										
b. Point			158.7							
5. Process Gas										
a. Area										
b. Point										

POLLUTANT: Particulate

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
6. Wood or Bark										
a. Area			22.3							
b. Point			37.5							
7. Combination										
a. Area							19.5			
b. Point	2253.0		581.8	509.0						
D. Total Fuel Combustion	2327.61	6.83	972.89	557.15	8.21	38.72	95.73	32.06	13.84	9.93
II. Power Plants										
A. Coal	1800.0					4815.0				
B. Distillate Oil				0.42						
C. Residual Oil										
D. Natural Gas			470.6							
E. Combination										
F. Total Power Plants	1800.0		470.6	0.42		4815.0				
III. Process Emissions										
A. Chemical			77.7			5.7		169.0		
B. Food and Agriculture		2.4			3.3	35.8		44.3	5.9	
C. Metallurgical										
D. Mineral	141.4		260.3	2543.5		375.4	11.7	2.6	0.8	0.1
E. Wood	9350.0		15659.7	306.0		13.7				
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	9491.4	2.4	15997.7	2849.5	3.3	430.60	11.7	215.9	6.7	0.1
IV. Solid Waste Disposal										
A. Incineration										
1. Area	1.9	12.0	23.8			0.3	5.3	1.9		16.0
2. Point		25.0					65.0			
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	1.9	37.0	23.8			0.3	70.3	1.9		16.0
V. Transportation										
A. Motor Vehicles										
1. Gasoline	185.0	13.8	347.5	12.4	21.4	97.0	150.3	65.5	44.4	17.7
2. Diesel	29.44	2.19	55.3	1.97	3.4	15.44	23.93	10.4	7.05	2.81
B. Off-Highway Usage										
C. Aircraft	440.9		196.7				1428.4			
D. Railroads										
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	655.34	15.99	599.5	14.37	24.8	112.44	1602.23	75.9	51.45	20.51

POLLUTANT: Particulate

REGION: Northwest

	TOTALS
6. Wood or Bark	
a. Area	
b. Point	
7. Combination	
a. Area	
b. Point	
D. Total Fuel Combustion	4062.97
II. Power Plants	
A. Coal	
B. Distillate Oil	
C. Residual Oil	
D. Natural Gas	
E. Combination	
F. Total Power Plants	7086.02
III. Process Emissions	
A. Chemical	
B. Food and Agriculture	
C. Metallurgical	
D. Mineral	
E. Wood	
F. Petroleum Storage	
G. Petrochemical Operations	
H. Total Process Emissions	29009.30
IV. Solid Waste Disposal	
A. Incineration	
1. Area	
2. Point	
B. Open Burning	
1. Area	
2. Point	
C. Total Solid Waste Disposal	151.20
V. Transportation	
A. Motor Vehicles	
1. Gasoline	
2. Diesel	
B. Off-Highway Usage	
C. Aircraft	
D. Railroads	
E. Vessels	
F. Gasoline Handling	
G. Total Transportation	3172.52

POLLUTANT: Particulate

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
VI Miscellaneous Area Sources										
A. Forest Fires	146.97	113.0	278.3	116.8	92.2	178.6	400.8	434.2	195.9	109.5
B. Agricultural, Silvicultural and Landclearing Burning	200.4	154.2	577.0	159.3	218.6	423.7	831.0	900.3	464.7	259.7
C. Grove Protection										
D. Total Miscellaneous	347.37	267.2	855.3	276.1	310.8	602.3	1231.8	1334.5	660.6	369.2
II Grand Total	14623.62	329.42	18919.79	3697.54	347.11	5999.36	3011.76	1660.26	732.59	415.74
A. Area	1079.22	302.02	1673.49	338.62	343.81	746.66	2935.06	1444.36	725.89	415.63
B. Point	13544.40	27.40	17246.30	3358.92	3.30	5252.70	76.70	215.90	6.70	0.10

POLLUTANT: Particulate

REGION: Northwest

	Totals									
VII Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection										
D. Total Miscellaneous	6255.17									
VIII Grand Total	49737.18									
A. Area	10004.76									
B. Point	39732.42									

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Sulfur Oxides

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	20.42	1.68	39.5	2.38	2.13	7.97	17.9	7.18	3.18	2.35
b. Point										
3. Residual Oil										
a. Area	70.55	7.14	192.4	9.46	10.0	32.3	82.6	35.4	15.1	10.7
b. Point										
4. Natural Gas*										
a. Area	1.29	0.13	3.5	0.17	0.15	0.59	1.51	0.65	0.27	0.20
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	1.47	0.06	0.04	0.12	0.04	0.37	0.38	0.06	0.06	0.06
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point				615.0		113.9				
4. Natural Gas										
a. Area			6.35							
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Sulfur Oxides

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area			9.5				5.9			
b. Point	8795.0			12200.0				29.1		
D. Total Fuel Combustion	8888.73	9.01	251.29	12827.13	12.32	155.13	108.29	72.39	18.61	13.31
II. Power Plants										
A. Coal	5400.0					3655.8				
B. Distillate Oil				1.2						
C. Residual Oil										
D. Natural Gas										
E. Combination			16861.5							
F. Total Power Plants	5400.0		16861.5	1.2		3655.8				
III. Process Emissions										
A. Chemical						34.1		33.0		
B. Food and Agriculture										
C. Metallurgical										
D. Mineral	12.7			114.5				9782.0		
E. Wood	2350.0		154.2	1630.0		129.0				
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	2362.7		154.2	1744.5		163.1		9815.0		
IV. Solid Waste Disposal										
A. Incineration										
1. Area	1.1		3.9			0.4	1.6	0.3		
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	1.1		3.9			0.4	1.6	0.3		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	92.5	6.9	173.7	6.2	10.7	48.5	75.2	32.7	22.2	8.9
2. Diesel	56.38	4.2	105.9	3.78	6.53	29.57	45.82	19.94	13.49	5.39
B. Off-Highway Usage										
C. Aircraft	179.64		140.8				289.9			
D. Railroads										
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	328.52	11.1	420.4	9.98	17.23	78.07	831.32	52.64	35.69	14.29

POLLUTANT: Sulfur Oxides

REGION: Northwest

	TOTALS
6. Wood or Bark	
a. Area	
b. Point	
7. Combination	
a. Area	
b. Point	
D. Total Fuel Combustion	22356.21
II. Power Plants	
A. Coal	
B. Distillate Oil	
C. Residual Oil	
D. Natural Gas	
E. Combination	
F. Total Power Plants	25918.50
III. Process Emissions	
A. Chemical	
B. Food and Agriculture	
C. Metallurgical	
D. Mineral	
E. Wood	
F. Petroleum Storage	
G. Petrochemical Operations	
H. Total Process Emissions	14239.50
IV. Solid Waste Disposal	
A. Incineration	
1. Area	
2. Point	
B. Open Burning	
1. Area	
2. Point	
C. Total Solid Waste Disposal	7.30
V. Transportation	
A. Motor Vehicles	
1. Gasoline	
2. Diesel	
B. Off-Highway Usage	
C. Aircraft	
D. Railroads	
E. Vessels	
F. Gasoline Handling	
G. Total Transportation	1799.24

CLUTANT: Sulfur Oxides

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washingt
VI Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection										
D. Total Miscellaneous										
II Grand Total	16981.05	20.11	17691.29	14582.81	29.55	4052.5	941.21	9940.33	54.30	27.60
A. Area	423.35	20.11	675.59	22.11	29.55	119.70	941.21	96.23	54.30	27.60
B. Point	16557.70	0.00	17015.70	14560.70	0.00	3932.80	0.00	9844.10	0.00	0.00

POLLUTANT: Sulfur Oxides

REGION: Northwest

	TOTALS									
VI Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection										
D. Total Miscellaneous	0.00									
II Grand Total	64320.75									
A. Area	2409.75									
B. Point	61911.00									

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Carbon Monoxide REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	14.19	1.17	27.45	1.67	1.48	5.56	12.43	4.99	2.25	2.63
b. Point										
3. Residual Oil										
a. Area	1.22	0.12	3.3	0.16	0.17	0.56	1.43	0.6	0.26	0.19
b. Point										
4. Natural Gas*										
a. Area	42.85	4.34	116.86	5.75	5.1	19.6	50.19	21.78	9.16	6.52
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.04					0.01	0.1			
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area			4.23							
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Carbon Monoxide

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washing
6. Wood or Bark										
a. Area			11.9							
b. Point										
7. Combination										
a. Area							3.9	2.0		
b. Point	223.4		149.2							
D. Total Fuel Combustion	281.70	5.63	312.94	7.58	6.75	25.73	68.05	29.37	11.67	9.3
II. Power Plants										
A. Coal	1.35					96.2				
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination			234.7							
F. Total Power Plants	1.35		234.7			96.2				
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral										
E. Wood	9821.8			0.3						
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	9821.8			0.3						
IV. Solid Waste Disposal										
A. Incineration										
1. Area	9.3		33.0			0.4	7.4	2.6		
2. Point		378.6					845.0			
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	9.3	378.6	33.0			0.4	852.4	2.6		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	38221.4	2861.5	113711.8	2570.6	4429.2	20042.4	31057.3	13524.5	9169.8	3666.2
2. Diesel	393.4	29.3	738.9	26.4	45.6	206.3	319.7	139.1	94.2	37.6
B. Off-Highway Usage										
C. Aircraft	1952.4		874.6				9203.1			
D. Railroads										
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	40567.2	2890.8	115325.3	2597.0	4474.8	20248.7	40580.1	13663.6	9264.0	3703.8

POLLUTANT: Carbon Monoxide

REGION: Northwest

	TOTALS									
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	758.76									
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination										
F. Total Power Plants	332.25									
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral										
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	9822.10									
IV. Solid Waste Disposal										
A. Incineration										
1. Area										
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	1276.30									
V. Transportation										
A. Motor Vehicles										
1. Gasoline										
2. Diesel										
B. Off-Highway Usage										
C. Aircraft										
D. Railroads										
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	253315.30									

POLLUTANT: Carbon Monoxide

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
VI Miscellaneous Area Sources										
A. Forest Fires	475.5	365.8	900.6	378.0	298.2	577.8	1296.8	1404.8	633.7	354.1
B. Agricultural, Silvicultural and Landclearing Burning	1179.0	907.0	3394.5	937.0	1286.0	2492.9	4888.5	5296.0	2733.5	1527.5
C. Grove Protection										
D. Total Miscellaneous	1654.5	1272.8	4295.1	1315.0	1584.2	3069.8	6185.3	6700.8	3367.2	1881.6
II Grand Total	52335.85	4547.83	120201.04	3919.88	6065.75	23440.83	47685.85	20396.37	12642.87	5594.74
A. Area	42289.30	4169.23	119817.14	3919.58	6065.75	23344.63	46840.85	20396.37	12642.87	5594.74
B. Point	10046.55	378.6	383.90	0.30	0.00	96.20	845.00	0.00	0.00	0.00

POLLUTANT: Carbon Monoxide

REGION: Northwest

	TOTALS									
VI Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection										
D. Total Miscellaneous	31326.30									
VII Grand Total	296831.01									
A. Area	285080.46									
B. Point	11750.55									

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Hydrocarbon

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	8.52	0.72	16.45	0.99	0.87	3.32	7.45	3.02	1.35	1.0
b. Point										
3. Residual Oil										
a. Area	0.73	0.07	2.0	0.1	0.1	0.34	0.86	0.37	0.16	0.11
b. Point										
4. Natural Gas*										
a. Area	17.14	1.74	46.75	2.3	2.04	7.84	20.08	8.71	3.66	2.61
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.61	0.03	0.02	0.05	0.02	0.15	0.16	0.03	0.03	0.02
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area						0.9				
b. Point										
4. Natural Gas										
a. Area										
b. Point			423.4							
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Hydrocarbon

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
6. Wood or Bark										
a. Area			12.9							
b. Point										
7. Combination										
a. Area				3.9			4.6			
b. Point	278.2		161.3					143.7		
D. Total Fuel Combustion	305.20	2.56	662.82	7.34	3.03	12.55	33.15	155.83	5.2	3.74
II. Power Plants										
A. Coal	44.9					2.9				
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination			308.5							
F. Total Power Plants	44.9		308.5			2.9				
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral	1.0		1.8	28.7						
E. Wood	17.8		18.5							
F. Petroleum Storage	1672.3		1675.7	263.8			157.4	194.5	91.4	
G. Petrochemical Operations										
H. Total Process Emissions	1691.1		1696.0	292.5			157.4	194.5	91.4	
IV. Solid Waste Disposal										
A. Incineration										
1. Area	4.3	32.0	15.3			0.2	3.4	1.2		
2. Point							71.5			
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	4.3	32.0	15.3			0.2	74.9	1.2		
V. Transportation										
A. Motor Vehicles			**							
1. Gasoline	7352.9	550.5	18590.0	494.5	852.1	3855.7	5974.7	2601.8	1764.1	705.3
2. Diesel	76.43	5.69	143.54	5.12	8.86	40.08	62.11	27.03	18.3	7.3
B. Off-Highway Usage										
C. Aircraft	279.5		61.5				3843.9			
D. Railroads										
E. Vessels										
F. Gasoline Handling	443.6	36.4	912.1	32.7	56.3	254.6	394.6	171.8	116.5	46.6
G. Total Transportation	8152.43	592.59	19707.14	532.32	917.26	4150.38	10275.3	2800.63	1898.9	759.2

** - The predicted emissions in Escambia County from automobiles will be 11,563 tons in 1975 (from figure 63, page 150 of the plan). Reduction of emissions from other sources is not expected since there are no specific hydrocarbon emission limitations.

POLLUTANT: Hydrocarbon

REGION: Northwest

	TOTALS									
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	1191.42									
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination										
F. Total Power Plants	356.30									
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral										
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	4122.90									
IV. Solid Waste Disposal										
A. Incineration										
1. Area										
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	127.90									
V. Transportation										
A. Motor Vehicles										
1. Gasoline										
2. Diesel										
B. Off-Highway Usage										
C. Aircraft										
D. Railroads										
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	49786.15									

POLLUTANT: Hydrocarbon

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
VI Miscellaneous Area Sources										
A. Forest Fires	103.7	79.8	196.5	82.5	65.1	126.1	282.9	360.5	138.3	77.3
B. Agricultural, Silvicultural and Landclearing Burning	235.8	181.4	678.9	187.4	257.2	498.2	977.7	1059.2	546.7	305.5
C. Grove Protection										
D. Total Miscellaneous	339.5	261.2	875.4	269.9	322.3	624.3	1260.6	1419.7	685.0	382.8
VII Grand Total	10537.43	888.35	23265.16	1102.06	1242.59	4790.33	11801.35	4571.86	2680.5	1145.7
A. Area	8523.32	888.35	20675.96	809.56	1242.59	4787.45	11572.45	4233.66	2589.10	1145.7
B. Point	2014.20	0.00	2588.20	292.50	0.00	2.90	228.90	338.20	91.40	0.0

** - Accounting for emission reduction from automobiles in 1975 and assuming no emission growth or reduction from other sources, the expected total emissions in 1975 will be 16,238 tons or approximately 30% reduction.

POLLUTANT: Hydrocarbon

REGION: Northwest

	TOTALS
III Miscellaneous Area Sources	
A. Forest Fires	
B. Agricultural, Silvicultural and Landclearing Burning	
C. Grove Protection	
D. Total Miscellaneous	6440.70
II Grand Total	62025.37
A. Area	56468.16
B. Point	5557.30

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Nitrogen Oxide

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	34.03	2.74	65.8	3.98	3.57	3.83	29.85	11.97	5.37	3.92
b. Point										
3. Residual Oil										
a. Area	2.94	0.3	8.0	0.4	0.42	1.34	3.44	1.47	0.63	0.45
b. Point										
4. Natural Gas*										
a. Area	117.8	11.93	321.4	15.8	14.03	53.9	138.0	59.9	25.2	17.9
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	12.27	0.52	0.34	0.98	0.3	3.09	3.17	0.52	0.53	0.47
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area						19.9				
b. Point				77.8						
4. Natural Gas										
a. Area										
b. Point			2424.5							
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Nitrogen Oxide

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
6. Wood or Bark										
a. Area			5.2							
b. Point			59.3							
7. Combination										
a. Area							23.2			
b. Point	2431.9		815.8	1720.0				970.7		
D. Total Fuel Combustion	2598.94	15.49	3700.34	1818.96	18.32	82.06	197.66	1044.56	31.73	22.74
II. Power Plants										
A. Coal	808.6					1731.7				
B. Distillate Oil				8.6						
C. Residual Oil										
D. Natural Gas										
E. Combination			7317.4							
F. Total Power Plants	808.6		7317.4	8.6		1731.7				
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral	12.8		30.1	135.8		19.5				
E. Wood	356.0		78.7							
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	368.8		108.8	135.8		19.5				
IV. Solid Waste Disposal										
A. Incineration										
1. Area	2.1	3.0	7.3			0.1	8.1	0.6		
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	2.1	3.0	7.3			0.1	8.1	0.6		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	6682.4	500.3	10771.8	449.4	774.4	3504.1	5429.9	2364.5	1603.2	641.8
2. Diesel	446.7	32.27	838.9	29.9	51.76	234.3	363.0	158.0	106.9	42.7
B. Off-Highway Usage										
C. Aircraft	431.0		83.4				638.5			
D. Railroads										
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	7560.1	532.57	11694.1	479.3	826.16	3738.4	6431.4	2522.5	1710.1	683.

POLLUTANT: Nitrogen Oxide

REGION: Northwest

	TOTALS									
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	9530.80									
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination										
F. Total Power Plants	9866.30									
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral										
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	632.90									
IV. Solid Waste Disposal										
A. Incineration										
1. Area										
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	21.20									
V. Transportation										
A. Motor Vehicles										
1. Gasoline										
2. Diesel										
B. Off-Highway Usage										
C. Aircraft										
D. Railroads										
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	36178.13									

POLLUTANT: Nitrogen Oxide

REGION: Northwest

	Bay	Calhoun	Escambia	Gulf	Holmes	Jackson	Okaloosa	SantaRosa	Walton	Washington
VI Miscellaneous Area Sources										
A. Forest Fires	17.3	13.3	32.7	13.7	10.8	21.0	47.2	51.1	23.0	12.9
B. Agricultural, Silvicultural and Landclearing Burning	23.6	18.1	67.9	18.7	25.7	49.8	97.8	105.9	54.7	30.6
C. Grove Protection										
D. Total Miscellaneous	40.9	31.4	100.6	32.4	36.5	70.8	145.0	157.0	77.7	43.5
II Grand Total	11379.44	582.46	22928.54	2475.06	880.98	5642.56	6782.16	3724.66	1819.53	749.9
A. Area	7770.14	582.46	12202.74	532.86	880.98	3891.36	6782.16	2753.96	1819.53	749.9
B. Point	3609.30	0.00	10725.80	1942.20	0.00	1751.20	0.00	970.70	0.00	0.0

POLLUTANT: Nitrogen Oxide

REGION: Northwest

	TOTALS
VI Miscellaneous Area Sources	
A. Forest Fires	
B. Agricultural, Silvicultural and Landclearing Burning	
C. Grove Protection	
D. Total Miscellaneous	735.80
VII Grand Total	56965.33
A. Area	37966.13
B. Point	18999.20

EMISSION INVENTORY SUMMARY

Northeast Florida Interstate AQCR

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Particulate

REGION: Northeast

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										146.0
2. Distillate Oil										
a. Area	40.4	4.29	7.0	10.28	8.45	2.0	268.1	1.76	2.37	10.9
b. Point										
3. Residual Oil										
a. Area	3.24	0.29	0.45	1.0	0.78	0.17	16.3	0.14	0.22	1.2
b. Point										
4. Natural Gas*										
a. Area	2.82	0.25	0.39	0.90	0.70	0.12	14.25	0.12	0.19	1.06
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	2.5	0.34	0.6	0.6	0.04	0.12	23.1	0.11	0.14	0.23
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area							12.0			
b. Point										
3. Residual Oil										
a. Area				4.72			21.7	3.88		
b. Point							73.5			
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Particulate

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putnam
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	1.33	2.4	3.1	1.0	37.9	0.8	3.05	24.17	8.7	15.8
b. Point										
3. Residual Oil										
a. Area	0.11	0.24	0.27	0.09	3.19	0.1	0.4	2.13	0.64	1.12
b. Point										
4. Natural Gas*										
a. Area	0.10	0.21	0.24	0.08	2.78	0.09	0.36	1.86	0.56	0.98
b. Point										
5. Combination										
a. Area					26.1					
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.07	0.09	0.17	0.05	2.13		0.12	1.4	0.61	1.15
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area									3.0	
b. Point										377.5
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Particulate

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Wakulla					
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	16.3	11.5	4.4	2.6	2.0					
b. Point										
3. Residual Oil										
a. Area	0.95	0.48	0.42	0.25	0.19					
b. Point										
4. Natural Gas*										
a. Area	0.83	0.42	0.37	0.22	0.17					
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	1.45	1.28	0.19	0.1	0.08					
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point					58.9					
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Particulate

REGION: Northeast

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
6. Wood or Bark										
a. Area										
b. Point	33.8				277.5					94.5
7. Combination										
a. Area							3:4			
b. Point							2468.5			
D. Total Fuel Combustion	82.76	5.17	8.44	17.5	287.83	4.41	2900.05	6.01	2.92	253.8
II. Power Plants										
A. Coal										
B. Distillate Oil			1.85							
C. Residual Oil							607.2			
D. Natural Gas										
E. Combination	92.7									
F. Total Power Plants	92.7		1.85				607.2			
III. Process Emissions										
A. Chemical										
B. Food and Agriculture				41.0			160.7			
C. Metallurgical	2.81									14.3
D. Mineral	709.96			2386.8			917.0			1486.5
E. Wood							3581.5			
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	712.77			2427.8			4659.2			1500.7
IV. Solid Waste Disposal										
A. Incineration										
1. Area	13.2		19.2	1.5	2.1		83.7			1.9
2. Point					43.3			144.0		
B. Open Burning										
1. Area							222.4			
2. Point										
C. Total Solid Waste Disposal	13.2		19.2	1.5	45.4		306.1	144.0		1.9
V. Transportation										
A. Motor Vehicles										
1. Gasoline	221.8	23.0	46.4	39.7	87.3	20.7	992.4	10.7	20.7	45.3
2. Diesel	35.3	3.66	7.38	6.31	13.89	3.3	157.99	1.7	3.28	7.2
B. Off-Highway Usage										
C. Aircraft							1542.94			
D. Railroads	9.9		1.1				296.4			
E. Vessels							33.43			13.1
F. Gasoline Handling										
G. Total Transportation	267.0	26.66	54.88	46.01	101.19	24.0	3023.16	12.4	23.98	65.6

POLLUTANT: Particulate

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putn
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point									3040.0	
D. Total Fuel Combustion	1.61	2.94	3.78	1.22	72.1	0.99	3.93	29.56	3053.51	396.
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination					12.99					80.
F. Total Power Plants					12.99					80.
III. Process Emissions										
A. Chemical								1095.0		
B. Food and Agriculture								149.3	54.5	
C. Metallurgical										
D. Mineral					32.5			172.7		
E. Wood									2005.0	14100.
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions					32.5			1417.0	2059.5	14100.
IV. Solid Waste Disposal										
A. Incineration										
1. Area		10.0			15.8			11.9	0.6	3.
2. Point										165.
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal		10.0			15.8			11.9	0.6	168.
V. Transportation										
A. Motor Vehicles										
1. Gasoline	8.5	48.2	17.0	5.9	197.0	4.0	43.6	205.0	52.9	64.
2. Diesel	1.35	7.64	2.68	0.93	31.35	0.62	6.93	32.63	8.41	10.
B. Off-Highway Usage										
C. Aircraft					61.0					
D. Railroads					10.4			2.8	0.07	2.
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	9.85	55.84	19.68	6.83	299.75	4.62	50.53	240.43	61.38	76.

POLLUTANT: Particulate

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Wakulla	TOTALS
6. Wood or Bark						
a. Area						
b. Point						
7. Combination						
a. Area		19.0				
b. Point			1677.8			
D. Total Fuel Combustion	19.53	32.68	1683.18	3.17	61.34	8935.82
II. Power Plants						
A. Coal						
B. Distillate Oil						
C. Residual Oil						
D. Natural Gas	73.0				10.9	
E. Combination						
F. Total Power Plants	73.0				10.9	879.54
III. Process Emissions						
A. Chemical						
B. Food and Agriculture						
C. Metallurgical						
D. Mineral		382.0			5.4	
E. Wood			7650.0			
F. Petroleum Storage						
G. Petrochemical Operations						
H. Total Process Emissions		382.0	7650.0		5.4	34946.87
IV. Solid Waste Disposal						
A. Incineration						
1. Area		2.8	0.82			
2. Point			172.0			
B. Open Burning						
1. Area						
2. Point						
C. Total Solid Waste Disposal		2.8	172.82			913.52
V. Transportation						
A. Motor Vehicles						
1. Gasoline	82.8	42.0	55.4	18.7	12.1	
2. Diesel	13.18	6.69	8.82	2.97	1.93	
B. Off-Highway Usage						
C. Aircraft						
D. Railroads		0.02	0.29			
E. Vessels						
F. Gasoline Handling						
G. Total Transportation	95.98	48.71	63.51	21.67	14.03	4714.49

Particulate

REGION: Northeast

Miscellaneous Area Sources	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
A. Forest Fires	272.2	96.6	86.3	539.0	126.0	57.8	682.8	144.3	106.4	42.5
B. Agricultural, Silvicultural and Landclearing Burning	1000.0	477.95	317.0	484.9	623.4	120.5	614.4	742.48	145.1	603.4
C. Grove Protection										
D. Total Miscellaneous	1272.2	574.55	403.3	1023.9	749.4	178.3	1297.1	886.8	251.5	645.9
Grand Total	2440.43	606.38	487.67	3516.71	1183.82	206.71	12792.92	1049.21	278.4	2467.99
A. Area	1601.36	606.38	485.82	1088.91	863.02	206.71	4985.25	905.21	278.40	726.79
B. Point	839.27	0.00	1.85	2427.80	320.80	0.00	7808.46	144.00	0.00	1741.20

POLLUTANT: Particulate

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putnam
VI Miscellaneous Area Sources										
A. Forest Fires	80.9	84.0	48.3	45.3	54.0	166.5	60.3	368.5	574.96	232.4
B. Agricultural, Silvicultural and Landclearing Burning	214.9	415.6	685.7	94.4	768.0	227.0	125.8	979.2	517.3	853.5
C. Grove Protection								612		120
D. Total Miscellaneous	295.8	499.6	733.0	139.7	822.0	393.5	186.1	1959.7	1092.26	1205.9
II Grand Total	307.26	568.38	756.46	147.75	1255.14	399.11	240.56	3658.59	6267.25	16028.59
A. Area	307.26	568.38	756.46	147.75	1209.65	399.11	240.56	2241.59	1167.75	1305.19
B. Point	0.00	0.00	0.00	0.00	45.49	0.00	0.00	1417.00	5099.50	14723.40

POLLUTANT: Particulate

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Wakulla	TOTALS				
II Miscellaneous Area Sources										
A. Forest Fires	176.4	113.4	88.0	73.0	48.3					
B. Agricultural, Silvicultural and Landclearing Burning	908.14	561.1	183.4	268.2	685.7					
C. Grove Protection										
D. Total Miscellaneous	1084.54	674.5	271.4	341.2	734.0	17716.25				
II Grand Total	1273.05	1140.69	9840.91	366.04	825.67	68106.63				
A. Area	1200.05	758.69	341.11	366.04	750.47	23507.91				
B. Point	73.00	382.00	9499.80	0.00	75.20	44598.77				

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Sulfur Oxides

REGION: Northeast

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										1080.0
b. Point										
2. Distillate Oil										
a. Area	29.08	3.07	5.02	8.17	6.09	1.48	192.7	1.25	1.85	7.83
b. Point										
3. Residual Oil										
a. Area	93.26	8.23	13.02	28.54	22.5	4.9	470.8	3.97	6.3	34.8
b. Point										
4. Natural Gas*										
a. Area	0.09	0.01	0.01	0.03	0.02		0.45		0.01	0.03
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	1.19	0.16	0.28	0.28	0.19	0.06	11.09	0.05	0.07	0.11
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area							125.4			
b. Point				52.0			710.0	67.0		
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Sulfur Oxides

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putnam
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil.										
a. Area	0.91	1.73	2.28	0.71	27.24	0.63	2.89	18.1	6.25	11.3
b. Point										
3. Residual Oil										
a. Area	3.16	6.9	7.8	2.57	91.73	3.0	1.2	61.45	18.36	32.3
b. Point										
4. Natural Gas*										
a. Area		0.01	0.01		0.09		0.01	0.06	0.02	0.03
b. Point										
5. Combination										
a. Area										
b. Point					261.4					
B. Commercial										
1. Distillate Oil										
a. Area	0.03	0.04	0.08	0.02	1.02		0.06	0.67	0.29	0.55
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area		9.2								
b. Point										42.0 / 6130.0
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Sulfur Oxides

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Nakulla					
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	11.76	11.27	3.21	1.82	1.46					
b. Point										
3. Residual Oil										
a. Area	27.35	13.85	12.14	7.22	5.6					
b. Point										
4. Natural Gas*										
a. Area	0.03	0.01	0.01	0.01	0.01					
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.7	0.61	0.09	0.05	0.04					
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point					94.9					
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Sulfur Oxides

REGION: Northeast

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
6. Wood or Bark										
a. Area	18.98					1.1				
b. Point										
7. Combination										
a. Area							13.9			
b. Point							6101.0			
D. Total Fuel Combustion	142.6	11.47	18.33	89.02	28.8	7.54	7625.34	72.27	8.23	1122.77
II. Power Plants										
A. Coal										
B. Distillate Oil			0.05							
C. Residual Oil							33908.5			
D. Natural Gas										
E. Combination	510.4									
F. Total Power Plants	510.4		0.05				33908.5			
III. Process Emissions										
A. Chemical							245.6			
B. Food and Agriculture				41.0			99.8			
C. Metallurgical										
D. Mineral	103.16			740.0			146.8			52.2
E. Wood							1403.5			
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	103.16			781.0			1895.7			52.2
IV. Solid Waste Disposal										
A. Incineration										
1. Area	2.2		0.15	0.25			13.95			0.3
2. Point										
B. Open Burning										
1. Area							13.90			
2. Point										
C. Total Solid Waste Disposal	2.2		0.15	0.25			27.85			0.3
V. Transportation										
A. Motor Vehicles										
1. Gasoline	110.0	11.5	23.2	19.9	43.6	10.4	496.2	5.4	10.3	22.8
2. Diesel	67.62	7.0	14.13	12.09	26.6	6.3	302.5	3.3	6.28	13.78
B. Off-Highway Usage										
C. Aircraft							412.0			
D. Railroads	25.7		3.0				770.7			34.1
E. Vessels							264.65			
F. Gasoline Handling										
G. Total Transportation	203.32	18.5	40.33	31.99	70.2	16.7	2246.05	8.7	16.58	70.48

POLLUTANT: Sulfur Oxides

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putn
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point									13279.0	
D. Total Fuel Combustion	4.10	17.88	10.17	3.30	381.48	3.63	4.16	80.28	13345.92	6174.
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination					810.0					2730.
F. Total Power Plants					810.0					2730.
III. Process Emissions										
A. Chemical										
B. Food and Agriculture		6006.4								
C. Metallurgical									333.0	
D. Mineral					26.3			84.0		
E. Wood									2765.0	1535.0
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions		6006.4			26.3			84.0	3098.0	1535.0
IV. Solid Waste Disposal										
A. Incineration										
1. Area		0.14			2.6			2.0	0.1	0.5
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal		0.14			2.6			2.0	0.1	0.5
V. Transportation										
A. Motor Vehicles										
1. Gasoline	4.3	24.1	8.5	2.96	98.5	2.0	21.8	102.5	26.5	32.3
2. Diesel	2.59	14.64	5.13	1.78	60.0	1.2	13.28	62.49	16.12	19.6
B. Off-Highway Usage										
C. Aircraft					86.6					
D. Railroads					26.9					
E. Vessels								7.4	0.17	5.4
F. Gasoline Handling										
G. Total Transportation	6.89	38.74	13.63	4.74	272.0	3.2	35.08	172.39	42.79	57.38

POLLUTANT: Sulfur Oxides — REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Wakulla	TOTALS
6. Wood or Bark						
a. Area						
b. Point						
7. Combination						
a. Area		13.0				
b. Point			1570.0			
D. Total Fuel Combustion	39.84	38.74	1585.45	9.1	101.81	30926.41
II. Power Plants						
A. Coal						
B. Distillate Oil						
C. Residual Oil						
D. Natural Gas						
E. Combination		966.0			1515.2	
F. Total Power Plants		966.0			1515.2	40440.15
III. Process Emissions						
A. Chemical						
B. Food and Agriculture						
C. Metallurgical						
D. Mineral		100.6			78.9	
E. Wood			1639.0			
F. Petroleum Storage						
G. Petrochemical Operations						
H. Total Process Emissions		100.6	1639.0		78.9	15400.26
IV. Solid Waste Disposal						
A. Incineration						
1. Area		0.2	0.2			
2. Point						
B. Open Burning						
1. Area						
2. Point						
C. Total Solid Waste Disposal		0.2	0.2			36.49
V. Transportation						
A. Motor Vehicles						
1. Gasoline	41.4	21.0	27.7	9.3	6.0	
2. Diesel	25.24	12.8	16.88	5.7	3.69	
B. Off-Highway Usage						
C. Aircraft						
D. Railroads		0.05	0.75			
E. Vessels						
F. Gasoline Handling						
G. Total Transportation	66.64	33.85	45.33	15.0	9.69	3540.21

Sulfur Oxides

REGION: Northeast

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection										
D. Total Miscellaneous										
Grand Total	961.68	29.97	58.86	902.26	99.0	24.24	45703.44	80.97	24.81	1245.76
A. Area	348.12	29.97	58.81	69.26	99.0	24.24	3088.24	13.97	24.81	113.56
B. Point	613.56	0.0	0.05	833.00	0.0	0.00	42615.20	67.00	0.00	1132.20

POLLUTANT: Sulfur Oxides

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putnam
I Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning								297.0		
C. Grove Protection										
D. Total Miscellaneous								297.0		
II Grand Total	10.99	6063.16	23.80	8.04	1492.38	6.83	39.24	635.67	16486.81	10497.06
A. Area	10.99	56.76	23.80	8.04	394.68	6.83	39.24	551.67	67.81	102.06
B. Point	0.00	6006.40	0.00	0.00	1097.70	0.00	0.00	84.00	16419.00	10395 .00

UNIT: Sulfur Oxides

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Wakulla	TOTALS				
Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection										
D. Total Miscellaneous						297.00				
Grand Total	106.48	1139.39	3269.98	24.10	1705.60	90640.52				
A. Area	106.48	72.79	60.98	24.10	16.60	5412.81				
B. Point	0.00	1066.60	3209.00	0.00	1689.00	85227.71				

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										1314.0
2. Distillate Oil										
a. Area	19.19	2.12	3.52	5.69	4.24	1.02	133.8	0.87	1.29	5.4
b. Point										
3. Residual Oil										
a. Area	1.62	0.14	0.23	0.5	0.4	0.08	8.17	0.07	0.11	0.6
b. Point										
4. Natural Gas*										
a. Area	2.97	0.26	0.41	0.91	0.72	0.13	15.0	0.13	0.2	1.11
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.03		0.01	0.01	0.01		0.31			
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Including Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Carbon Monoxide REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Nassau	Putnam	St. Johns
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	0.65	1.2	1.58	0.5	18.84	0.42	2.0	4.34	7.87	7.14
b. Point										
3. Residual Oil										
a. Area	0.05	0.12	0.14	0.04	1.6	0.05	0.2	0.32	0.56	0.47
b. Point										
4. Natural Gas*										
a. Area	0.1	0.22	0.25	0.08	2.92	0.10	0.38	0.59	1.03	0.87
b. Point										
5. Combination										
a. Area					1.1					
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area					0.03			0.01	0.02	0.02
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area									4.1	
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Excludes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Carbon Monoxide

REGION: Northeast

	Suwannee	Taylor	Union	Wakulla	Marion					
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	5.77	2.2	1.29	1.0	12.59					
b. Point										
3. Residual Oil										
a. Area	0.24	0.21	0.13	0.1	1.07					
b. Point										
4. Natural Gas*										
a. Area	0.44	0.39	0.23	0.18	1.96					
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.02				0.02					
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Carbon Monoxide

REGION: Northeast

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
6. Wood or Bark										
a. Area	18.98					2.19				6.9
b. Point							0.3			
7. Combination							271.6			
a. Area										
b. Point										
D. Total Fuel Combustion	42.79	2.52	4.17	7.02	5.37	3.42	429.18	1.07	1.60	1321.11
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil							8.4			
D. Natural Gas										
E. Combination										
F. Total Power Plants							8.4			
III. Process Emissions										
A. Chemical										
B. Food and Agriculture	10.44									
C. Metallurgical							0.15			
D. Mineral							449.9			
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	10.44						450.05			
IV. Solid Waste Disposal										
A. Incineration										
1. Area	18.4		0.6	1.0	1.35		53.95			2.7
2. Point			84.6		536.6			2633.5		
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	18.4		85.2	1.0	537.95		53.95	2633.5		2.7
V. Transportation										
A. Motor Vehicles										
1. Gasoline	72600.0	4765.4	9578.9	8211.1	18035.5	428.7	324778.7	2220.0	4276.8	9358.8
2. Diesel	471.86	48.84	98.58	84.37	185.6	44.1	2111.0	22.8	43.81	96.20
B. Off-Highway Usage										
C. Aircraft							6174.24			
D. Railroads	27.6		3.2				829.9			36.8
E. Vessels							20.0			
F. Gasoline Handling										
G. Total Transportation	73099.46	4814.24	9680.68	8295.47	18221.1	472.8	333913.84	2242.8	4320.61	9491.80

POLLUTANT: Carbon Monoxide

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Nassau	Putnam	St. John
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area								414.3		
b. Point										
D. Total Fuel Combustion	0.80	1.54	1.97	0.62	24.49	0.57	2.58	419.56	13.58	8.5
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas					1.0				26.3	
E. Combination										
F. Total Power Plants					1.0				26.3	
III. Process Emissions										
A. Chemical		0.35								
B. Food and Agriculture										
C. Metallurgical										
D. Mineral										
E. Wood								15724.8	1009.2	
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions		0.35						15724.8	1009.2	
IV. Solid Waste Disposal										
A. Incineration					21.9			0.8	4.6	
1. Area									2146.3	
2. Point		185.9								
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal		185.9			21.9			0.8	2150.9	
V. Transportation										
A. Motor Vehicles										
1. Gasoline	1763.7	9949.0	3518.6	1225.4	64474.4	826.0	9014.4	10939.0	13352.5	17118.4
2. Diesel	18.06	102.13	35.82	12.43	418.9	8.3	92.66	112.5	137.36	176.14
B. Off-Highway Usage										
C. Aircraft										
D. Railroads					550.4					
E. Vessels					29.0			0.19	5.8	
F. Gasoline Handling										
G. Total Transportation	1781.76	10051.13	3554.42	1237.83	65472.7	834.3	9107.06	11051.69	13495.66	17294.54

POLLUTANT: Carbon Monoxide

REGION: Northeast

	Suwannee	Taylor	Union	Wakulla	Marion	TOTALS
6. Wood or Bark						
a. Area	9.0					
b. Point						
7. Combination						
a. Area	1.32					
b. Point		166.1				
D. Total Fuel Combustion	10.32	168.9	1.65	1.28	15.64	30926.41
II. Power Plants						
A. Coal						
B. Distillate Oil						
C. Residual Oil						
D. Natural Gas	0.25			1.33		
E. Combination						
F. Total Power Plants	0.25			1.33		40440.15
III. Process Emissions						
A. Chemical					876.0	
B. Food and Agriculture						
C. Metallurgical						
D. Mineral						
E. Wood		9018.8				
F. Petroleum Storage						
G. Petrochemical Operations						
H. Total Process Emissions		9018.8			876.0	15400.26
IV. Solid Waste Disposal						
A. Incineration						
1. Area	1.7	1.33				
2. Point	33.8	2236.9			16.6	
B. Open Burning						
1. Area						
2. Point						
C. Total Solid Waste Disposal	35.5	2238.23			16.6	36.49
V. Transportation						
A. Motor Vehicles						
1. Gasoline	8688.5	11446.0	3860.0	2503.1	42362.7	
2. Diesel	89.4	117.8	39.7	25.75	436.0	
B. Off-Highway Usage						
C. Aircraft						
D. Railroads	0.05	0.81			8.0	
E. Vessels						
F. Gasoline Handling						
G. Total Transportation	8777.95	11564.61	3899.7	2528.85	42806.7	3540.21

POLLUTANT: Carbon Monoxide

REGION: Northeast

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
VI Miscellaneous Area Sources										
A. Forest Fires	880.8	312.5	279.3	1743.9	407.7	187.0	2208.9	466.9	344.4	137.4
B. Agricultural, Silvicultural and Landclearing Burning	5882.0	2811.5	1865.0	2852.5	3667.5	120.5	3613.5	4370.5	853.5	3549.5
C. Grove Protection										
D. Total Miscellaneous	6762.8	3124.0	2144.3	4596.4	4075.2	307.5	5822.4	4837.4	1197.9	3686.9
VII Grand Total	79933.89	7940.76	11914.35	12899.89	22839.62	783.72	340677.82	9714.77	5520.11	14502.51
A. Area	79923.45	7940.76	11829.75	12899.89	22303.02	783.72	339947.77	7081.27	5520.11	13188.51
B. Point	10.44	0.00	84.60	0.00	536.60	0.00	730.05	2633.50	0.00	1314.00

POLLUTANT: Carbon Monoxide

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Nassau	Putnam	St. Johns
VI Miscellaneous Area Sources										
A. Forest Fires	261.7	271.8	156.1	146.4	174.9	530.6	195.3	1860.2	751.9	570.6
B. Agricultural, Silvicultural and Landclearing Burning	1264.0	2445.0	4033.5	505.0	4518.0	1335.5	740.0	3043.0	5021.0	5342.0
C. Grove Protection									141.0	
D. Total Miscellaneous	1525.7	2716.8	4189.6	651.4	4692.9	1866.1	935.3	4903.2	5913.9	5912.6
II Grand Total	3308.26	12955.72	7745.99	1889.85	70212.99	2700.97	10044.94	32100.05	22609.54	23215.64
A. Area	3308.26	12769.47	7745.99	1889.85	70211.99	2700.97	10044.94	15960.95	19427.74	23215.64
B. Point	0.00	186.25	0.00	0.00	1.00	0.00	0.00	16139.10	3181.80	0.00

POLLUTANT: Carbon Monoxide

REGION: Northeast

	Suwannee	Taylor	Union	Wakulla	Marion	TOTALS				
VI Miscellaneous Area Sources										
A. Forest Fires	366.9	284.7	236.0	156.1	1192.2					
B. Agricultural, Silvicultural and Landclearing Burning	3300.5	1029.0	1578.0	4033.5	5760.0					
C. Grove Protection					720.0					
D. Total Miscellaneous	3667.4	1313.7	1814.0	4189.6	7672.2	88519.20				
VII Grand Total	12491.42	24304.24	5715.35	6721.06	51387.14	794130.56				
A. Area	12457.37	12882.44	5715.35	6719.73	50494.54	756963.44				
B. Point	34.05	11421.80	0.00	1.33	892.60	37167.12				

EMISSION INVENTORY SUMMARY (BY COUNTY)

LUPANT: Hydrocarbon

REGION: Northeast

I. Fuel Combustion	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										36.5
2. Distillate Oil										
a. Area	12.1	1.3	1.15	3.27	2.5	0.62	80.3	0.52	0.77	3.22
b. Point										
3. Residual Oil										
a. Area	0.97	0.09	0.13	0.3	0.23	0.05	4.9	0.04	0.06	0.36
b. Point										
4. Natural Gas*										
a. Area	1.19	0.10	0.17	0.36	0.29	0.05	6.0	0.05	0.08	0.44
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.5	0.07	0.12	0.12	0.07	0.02	4.62	0.02	0.03	0.05
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area							2.4			
b. Point										
3. Residual Oil										
a. Area				6.73			6.2			
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Hydrocarbon

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putnam
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	0.39	0.72	0.95	0.29	11.37	0.26	1.22	7.54	2.6	4.68
b. Point										
3. Residual Oil										
a. Area	0.03	0.07	0.08	0.03	0.95	0.03	0.13	0.64	0.2	0.34
b. Point										
4. Natural Gas*										
a. Area	0.04	0.09	0.10	0.03	1.17	0.04	0.15	0.78	0.23	0.41
b. Point										
5. Combination										
a. Area					14.05					
b. Point					33.9					
B. Commercial										
1. Distillate Oil										
a. Area	0.01	0.02	0.03	0.01	0.43	0.02	0.02	0.28	0.12	0.23
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										62.0
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Hydrocarbon

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Wakulla					
1. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	4.86	3.45	1.34	0.77	0.61					
b. Point										
3. Residual Oil										
a. Area	0.28	0.14	0.13	0.08	0.06					
b. Point										
4. Natural Gas*										
a. Area	0.35	0.18	0.15	0.09	0.07					
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.29	0.26	0.04	0.02	0.02					
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area					4.9					
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Hydrocarbon

REGION: Northeast

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
6. Wood or Bark										
a. Area	18.98					2.19	6.9			
b. Point										
7. Combination										
a. Area							20.3			
b. Point							426.7			
D. Total Fuel Combustion	33.74	1.56	1.57	10.78	3.09	2.93	558.32	0.63	0.94	40.57
II. Power Plants										
A. Coal										
B. Distillate Oil			0.4							
C. Residual Oil							1001.0			
D. Natural Gas										
E. Combination	71.4									
F. Total Power Plants	71.4		0.4				1001.0			
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral	1.06			9.4			16.6			
E. Wood							14.1			
F. Petroleum Storage							10283.7			
G. Petrochemical Operations										
H. Total Process Emissions	1.06			9.4			10314.4			
IV. Solid Waste Disposal										
A. Incineration										
1. Area	8.5		7.8	1.0	1.35		53.95			1.24
2. Point					47.7					222.8
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	8.5		7.8	1.0	49.05		53.95			224.04
V. Transportation										
A. Motor Vehicles										
1. Gasoline	11868.9	916.7	1842.8	1579.6	3469.6	824.7	53096.0 **	427.1	822.8	1800.4
2. Diesel	91.67	9.49	19.15	16.39	36.06	8.59	410.09	4.43	8.51	18.69
B. Off-Highway Usage										
C. Aircraft							2423.7			
D. Railroads	19.7		2.3				592.8			26.3
E. Vessels							26.9			
F. Gasoline Handling	582.4	60.5	121.7	104.3	229.1	54.5	2605.2	28.2	54.3	118.9
G. Total Transportation	12562.67	986.69	1985.95	1700.29	3734.76	887.79	59154.69	459.73	885.61	1964.29

** - The predicted emissions in Duval County from automobiles will be 33,026 tons in 1975 (from figure 63, page 150 of the plan). Reduction of emissions from other sources is not expected since there are no specific hydrocarbon emission limitations.

POLLUTANT: Hydrocarbon

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putnam
6. Wood or Bark										
a. Area										
b. Point									506.9	
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	0.47	4.76	1.16	0.36	61.87	0.35	1.52	9.24	510.05	67.6
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas					104.9					
E. Combination										2632.0
F. Total Power Plants					104.9					2632.0
III. Process Emissions										
A. Chemical		22.6						273.8		
B. Food and Agriculture										
C. Metallurgical										
D. Mineral								11.5		
E. Wood										
F. Petroleum Storage										2.3
G. Petrochemical Operations										
H. Total Process Emissions		22.6						285.3		2.3
IV. Solid Waste Disposal										
A. Incineration										
1. Area		15.73			10.2			7.7	0.4	2.11
2. Point										181.6
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal		15.73			10.2			7.7	0.4	183.71
V. Transportation										
A. Motor Vehicles										
1. Gasoline	339.3	1913.9	676.9	235.7	10540.5	158.9	1734.2	8149.6	2104.4	2568.7
2. Diesel	3.51	19.84	6.96	2.42	81.37	1.6	18.0	84.71	21.85	26.68
B. Off-Highway Usage										
C. Aircraft					37.3					
D. Railroads					20.7					
E. Vessels								5.7	0.13	4.13
F. Gasoline Handling	22.4	126.4	44.5	15.6	517.2	10.5	114.5	538.2	139.0	169.6
G. Total Transportation	365.21	2060.14	728.36	253.72	11197.07	171.0	1866.70	17018.22	2265.38	2769.11

POLLUTANT: Hydrocarbon

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Wakulla	TOTALS
6. Wood or Bark						
a. Area		0.56				
b. Point						
7. Combination						
a. Area		1.42				
b. Point			279.4			
D. Total Fuel Combustion	5.78	6.01	281.06	0.96	5.66	1611.04
II. Power Plants						
A. Coal						
B. Distillate Oil						
C. Residual Oil						
D. Natural Gas						
E. Combination		42.1			161.7	
F. Total Power Plants		42.1			161.7	4013.50
III. Process Emissions						
A. Chemical						
B. Food and Agriculture						
C. Metallurgical						
D. Mineral		0.66			1.08	
E. Wood			12.5			
F. Petroleum Storage						
G. Petrochemical Operations						
H. Total Process Emissions		0.66	12.5		1.08	10649.30
IV. Solid Waste Disposal						
A. Incineration						
1. Area		3.7	0.6			
2. Point			189.3			
B. Open Burning						
1. Area						
2. Point						
C. Total Solid Waste Disposal		3.7	189.9			755.68
V. Transportation						
A. Motor Vehicles						
1. Gasoline	3293.2	1671.5	2201.9	742.6	481.5	
2. Diesel	34.22	17.37	22.89	7.7	5.0	
B. Off-Highway Usage						
C. Aircraft						
D. Railroads		0.04	0.58			
E. Vessels						
F. Gasoline Handling	217.5	110.4	145.4	49.0	31.8	
G. Total Transportation	3544.92	1799.31	2370.77	799.3	518.3	132049.98

UNITS: Tons/Year

REGION: Northeast

Hydrocarbon	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
Miscellaneous Area Sources										
A. Forest Fires	192.2	68.2	60.9	380.5	89.0	40.8	482.0	101.9	75.1	30.0
B. Agricultural, Silvicultural and Landclearing Burning	1176.0	562.3	373.0	570.5	733.5	141.8	721.7	874.1	170.7	709.9
C. Grove Protection										
D. Total Miscellaneous	1368.2	630.5	433.9	951.0	822.5	182.6	1203.7	976.0	245.8	739.9
Grand Total	14045.57	1618.75	2429.62	2672.47	4609.4	1073.32	72286.06	1436.36	1132.35	2968.8
A. Area	13973.11	1618.75	2429.22	2663.07	4561.70	1073.32	60543.96	1436.36	1132.35	2709.50
B. Point	72.46	0.00	0.40	9.40	47.70	0.00	11742.10	0.00	0.00	259.30

** - Accounting for emission reduction from automobiles in 1975 and assuming no emission growth or reduction from other sources, the expected total emissions in 1975 will be 52,216 tons or approximately 28% reduction.

POLLUTANT: Hydrocarbon

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putnam
VI Miscellaneous Area Sources										
A. Forest Fires	57.1	59.3	34.1	32.0	38.2	117.5	42.6	260.1	405.9	164.0
B. Agricultural, Silvicultural and Landclearing Burning	252.3	489.0	806.7	111.0	903.6	267.1	148.0	1152.0	608.6	1004.2
C. Grove Protection								174.0		34.0
D. Total Miscellaneous	309.4	548.3	840.8	143.0	941.8	384.6	190.6	1586.1	1014.5	1202.2
II Grand Total	675.08	2651.53	1570.32	397.08	12315.84	555.95	2058.82	18900.56	3790.33	6856.98
A. Area	675.08	2628.93	1570.32	397.08	12177.04	555.95	2058.82	18621.26	3283.43	3979.08
B. Point	0.00	22.60	0.00	0.00	138.80	0.00	0.00	285.30	506.90	2877.90

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Wakulla	TOTALS
Miscellaneous Area Sources						
A. Forest Fires	124.5	80.1	62.1	51.6	34.1	
B. Agricultural, Silvicultural and Landclearing Burning	1068.4	660.1	215.8	315.6	806.7	
C. Grove Protection						
D. Total Miscellaneous	1192.9	740.2	277.9	367.2	840.8	18134.40
Grand Total	4743.6	2591.98	3132.10	1167.46	1527.54	167213.87
A. Area	4743.6	2549.22	2650.90	1167.46	1364.76	150564.07
B. Point	0.00	42.76	481.20	0.00	162.78	16649.80

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Nitrogen Oxide REGION: Northeast

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										43.8
2. Distillate Oil										
a. Area	58.37	5.16	8.45	13.59	10.16	2.47	321.2	2.08	2.04	2.81
b. Point										
3. Residual Oil										
a. Area	3.9	0.34	0.54	1.2	0.94	0.2	19.6	0.17	0.26	1.45
b. Point										
4. Natural Gas*										
a. Area	8.17	0.72	1.14	2.5	1.97	0.35	41.25	0.35	0.55	3.05
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	9.92	1.35	2.32	2.37	1.56	0.48	92.41	0.44	0.57	0.92
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point							48.2			
3. Residual Oil										
a. Area							14.8	14.2		
b. Point				134.7			124.8			
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Nitrogen Oxide REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putnam
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	1.52	2.88	3.80	1.15	45.36	1.05	4.8	30.16	10.42	18.84
b. Point										
3. Residual Oil										
a. Area	0.13	0.3	0.33	0.1	3.82	0.13	0.5	2.6	0.77	1.35
b. Point										
4. Natural Gas*										
a. Area	0.28	0.61	0.68	0.23	8.04	0.26	1.05	5.38	1.61	2.83
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.29	0.34	0.70	0.20	8.53		0.50	5.61	2.44	4.6
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area									7.94	
b. Point										1240.7
4. Natural Gas										
a. Area		6.3								
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Nitrogen Oxide

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Makulla					
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	19.59	13.79	5.3	3.06	2.44					
b. Point										
3. Residual Oil										
a. Area	1.14	0.58	0.5	0.3	0.23					
b. Point										
4. Natural Gas*										
a. Area	2.4	1.21	1.06	0.63	0.49					
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	5.82	5.12	0.74	0.38	0.33					
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point		67.9			34.4					
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Nitrogen Oxide

REGION: Northeast

	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
6. Wood or Bark										
a. Area						2.19				
b. Point	94.9									34.4
7. Combination										
a. Area										
b. Point							4618.9			
D. Total Fuel Combustion	175.26	7.57	12.45	154.36	14.63	5.69	5281.16	17.24	3.42	86.43
II. Power Plants										
A. Coal										
B. Distillate Oil			102.8							
C. Residual Oil							21011.4			
D. Natural Gas										
E. Combination	703.9									
F. Total Power Plants	703.9		102.8				21011.4			
III. Process Emissions										
A. Chemical										
B. Food and Agriculture							17.5			
C. Metallurgical	0.2									
D. Mineral	21.1			188.3			128.2			7.9
E. Wood							282.5			
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	21.3			188.3			428.2			7.9
IV. Solid Waste Disposal										
A. Incineration										
1. Area	4.0		1.05	0.5	4.9		25.6	20.9		
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	4.0		1.05	0.5	4.9		25.6	20.9		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	6877.3	833.1	1674.7	1435.6	3153.2	749.5	30765.9	388.1	747.7	1636.2
2. Diesel	535.73	55.46	111.92	95.79	210.73	50.08	2396.7	25.9	49.74	109.23
B. Off-Highway Usage										
C. Aircraft							1080.1			
D. Railroads	29.6		3.4				889.2			39.4
E. Vessels							88.8			
F. Gasoline Handling										
G. Total Transportation	7442.63	888.56	1790.02	1531.39	3363.93	799.58	35220.7	414.0	797.44	1784.83

POLLUTANT: Nitrogen Oxide

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putnam
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point									3980.0	
D. Total Fuel Combustion	2.22	10.43	5.51	1.68	65.75	1.44	6.85	43.75	4003.18	1268.32
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas					1067.7					25661.7
E. Combination										
F. Total Power Plants					1067.7					25661.7
III. Process Emissions										
A. Chemical		129.1								
B. Food and Agriculture									55.6	
C. Metallurgical										
D. Mineral					6.63			48.45		
E. Wood										46.4
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions		129.1			6.63			48.45	55.6	46.4
IV. Solid Waste Disposal										
A. Incineration										
1. Area		1.43			4.8			3.6	0.2	17.5
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal		1.43			4.8			3.6	0.2	17.5
V. Transportation										
A. Motor Vehicles										
1. Gasoline	308.4	1739.4	615.2	214.2	6107.6	144.4	1576.0	7406.4	1912.5	2334.5
2. Diesel	20.5	115.95	40.67	14.12	475.6	9.4	105.2	495.1	127.7	156.0
B. Off-Highway Usage										
C. Aircraft					61.0					
D. Railroads					31.1			3.5	0.2	6.1
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	328.9	1855.35	655.87	228.32	6675.3	153.8	1681.2	7910.0	2040.4	2496.7

POLLUTANT: Nitrogen Oxide

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Wakulla	TOTALS				
6. Wood or Bark										
a. Area		0.67								
b. Point										
7. Combination										
a. Area		8.6								
b. Point			1652.6							
D. Total Fuel Combustion	28.95	97.87	1660.20	3.11	37.89	12995.36				
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination		604.2			1848.1					
F. Total Power Plants		604.2			1848.1	50999.80				
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral		16.8			21.6					
E. Wood			249.11							
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions		16.8	249.11		21.6	1219.39				
IV. Solid Waste Disposal										
A. Incineration										
1. Area		0.7	17.5							
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal		0.7	17.5			102.68				
V. Transportation										
A. Motor Vehicles										
1. Gasoline	2992.9	1519.0	2001.1	674.9	437.6					
2. Diesel	200.0	101.5	133.76	45.0	29.24					
B. Off-Highway Usage										
C. Aircraft										
D. Railroads		0.53	0.87							
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	3192.9	1621.03	2135.63	719.9	466.84	86195.22				

UNIT:

REGION: Northeast

Nitrogen Oxide	Alachua	Baker	Bradford	Clay	Columbia	Dixie	Duval	Flagler	Franklin	Gadsden
Miscellaneous Area Sources										
A. Forest Fires	32.0	11.4	10.1	63.4	14.8	6.8	80.3	17.0	12.5	5.0
B. Agricultural, Silvicultural and Landclearing Burning	117.6	56.2	37.3	57.0	73.3	14.2	72.2	87.4	17.1	71.0
C. Grove Protection										
D. Total Miscellaneous	147.6	67.6	47.4	120.4	88.1	21.0	152.5	104.4	29.6	76.0
Grand Total	8494.69	963.73	1953.72	1994.95	3471.56	826.27	62119.56	556.54	830.46	1955.16
A. Area	7674.59	963.73	1850.92	1671.95	3471.56	826.27	35888.06	556.54	830.46	1869.06
B. Point	820.10	0.00	102.80	323.00	0.00	0.00	26231.50	0.00	0.00	86.10

POLLUTANT: Nitrogen Oxide

REGION: Northeast

	Gilchrist	Hamilton	Jefferson	Lafayette	Leon	Liberty	Madison	Marion	Nassau	Putnam
VI Miscellaneous Area Sources										
A. Forest Fires	25.2	9.9	5.7	5.3	6.4	19.6	7.1	43.4	67.6	27.4
B. Agricultural, Silvicultural and Landclearing Burning		48.9	80.7	11.1	90.3	26.7	14.8	115.2	60.9	100.4
C. Grove Protection								123.0		24.0
D. Total Miscellaneous	25.2	58.8	86.4	16.4	96.7	46.3	21.9	281.6	128.5	151.8
VII Grand Total	356.32	2055.11	747.78	246.40	7916.88	201.54	1709.95	8287.40	6227.88	29642.42
A. Area	356.32	1926.01	747.78	246.40	6842.55	201.54	1709.95	8238.95	2192.28	2693.62
B. Point	0.00	129.10	0.00	0.00	1074.33	0.00	0.00	48.45	4035.60	26948.80

Nitrogen Oxide

REGION: Northeast

	St. Johns	Suwannee	Taylor	Union	Wakulla	TOTALS				
Miscellaneous Area Sources										
A. Forest Fires	20.8	13.3	10.4	8.6	5.7					
B. Agricultural, Silvicultural and Landclearing Burning	106.8	66.0	21.6	31.6	80.7					
C. Grove Protection										
D. Total Miscellaneous	127.6	79.3	32.0	40.2	86.4	2133.70				
Grand Total	334.9.45	2419.9	4094.44	763.21	2460.83	153646.15				
A. Area	3349.45	1722.40	2192.73	763.21	556.73	89343.06				
B. Point	0.00	697.50	1901.71	0.00	1904.10	64303.09				

EMISSION INVENTORY SUMMARY

West Central Florida Intrastate AQCR

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Particulate

REGION: West Central Florida

	Citrus	Citrus **	Hardee	Hardee **	Hernando	Hernando*	Hills-** borough	Hills** borough	Levy	Levy **
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	4.63	4.68	2.8	2.8	3.82	3.82	183.1	183.1	3.89	3.89
b. Point										
3. Residual Oil										
a. Area	0.3	0.3	0.23	0.23	0.26	0.26	7.5	7.5	0.2	0.2
b. Point										
4. Natural Gas*										
a. Area	0.55	0.55	0.42	0.42	0.48	0.48	13.95	13.95	0.34	0.34
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.51	0.51	0.22	0.22	0.36	0.36	26.85	26.85	0.52	0.52
b. Point										
2. Residual Oil										
a. Area										
b. Point							25.0	25.0		
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area							85.0	85.0		
b. Point										
3. Residual Oil										
a. Area					4.8	4.8	39.0	39.0		
b. Point							545.0	545.0		
4. Natural Gas										
a. Area							48.0	48.0		
b. Point							38.0	38.0		
5. Process Gas										
a. Area							41.0	41.0		
b. Point										

* Includes Commercial Uses

** Emissions Achieved Applying Chapter 17-2 FAC

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Particulate

REGION: West Central Florida

	Manatee	Mantee **	Pasco	Pasco **	Pinellas	Pinellas*	Polk	Polk **	Sumter	Sumter**
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	21.28	21.28	16.6	16.6	151.4	151.4	65.44	65.44	4.11	4.11
b. Point										
3. Residual Oil										
a. Area	1.5	1.5	1.17	1.17	8.0	8.0	3.5	3.5	0.23	0.23
b. Point										
4. Natural Gas*										
a. Area	2.76	2.76	2.16	2.16	14.86	14.86	6.46	6.46	0.42	0.42
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	2.07	2.07	1.42	1.42	19.15	19.15	8.25	8.25	0.50	0.50
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area	5.45	5.45			4.5	4.5	6.5	6.5		
b. Point			117.9	117.9	35.8	35.8	26.4	26.4		
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

** Emissions Achieved Applying Chapter 17-2 FAC

POLLUTANT: Particulate

REGION: West Central Florida

	Citrus	Citrus**	Hardee	Hardee**	Hernando	Hernando*	Hills-** borough	Hills-** borough	Levy	Levy**
6. Wood or Bark										
a. Area							2.0	2.0		
b. Point									784.0	784.0
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	6.04	6.04	3.67	3.67	9.72	9.72	1054.4	1054.4	788.95	788.95
II. Power Plants										
A. Coal							5569.0	3625.77		
B. Distillate Oil										
C. Residual Oil							240.3	240.3		
D. Natural Gas										
E. Combination	3403.63	2319.40							38.25	38.25
F. Total Power Plants	3403.63	2319.40					5809.3	3866.07	38.25	38.25
III. Process Emissions										
A. Chemical							86.0	47.3		
B. Food and Agriculture					75.3	30.0	758.0	758.0		
C. Metallurgical							1356.0	1317.1		
D. Mineral					84.2	84.2	3069.0	2140.4	265.2	47.1
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions					159.5	114.2	5273.0	4262.8	265.2	47.1
IV. Solid Waste Disposal										
A. Incineration										
1. Area	1.93	1.93	0.95	0.95	1.81	1.81	58.0	58.0		
2. Point							1769.0	1769.0		
B. Open Burning										
1. Area										
2. Point							383.0	383.0		
C. Total Solid Waste Disposal	1.93	1.93	0.95	0.95	1.81	1.81	2210.0	2210.0		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	43.8	43.8	24.4	24.4	31.7	31.7	1119.5	1119.5	37.1	37.1
2. Diesel	6.96	6.96	4.03	4.03	5.05	5.05	178.21	178.21	5.89	5.89
B. Off-Highway Usage										
C. Aircraft							579.0	579.0		
D. Railroads										
E. Vessels					1.18	1.18	108.2	108.2		
F. Gasoline Handling							68.0	68.0		
G. Total Transportation	50.76	50.76	28.43	28.43	37.93	37.93	2232.91	2232.91	42.99	42.99

POLLUTANT: Particulate

REGION: West Central Florida

	Manatee	Manatee**	Pasco	Pasco **	Pinellas	Pinellas**	Polk	Polk**	Sumter	Sumter**
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area							20.1	20.1		
b. Point										
D. Total Fuel Combustion	33.06	33.06	139.25	139.25	233.71	233.71	136.65	136.65	5.26	5.26
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil					81.55	81.55	49.37	49.37		
D. Natural Gas					2094.9	2094.9	43.78	43.78		
E. Combination										
F. Total Power Plants					2176.45	2176.45	93.15	93.15		
III. Process Emissions										
A. Chemical	9.9	9.9			277.5	168.9	9404.9	1285.3		
B. Food and Agriculture	63.7	63.7	820.7	227.9	136.9	89.6	3496.8	747.1		
C. Metallurgical										
D. Mineral	76.9	76.9	91.0	43.7	131.3	57.7	970.5	439.5	6795.4	65.1
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	150.5	150.5	911.7	271.6	545.7	316.2	13482.5	2471.9	6795.4	65.1
IV. Solid Waste Disposal										
A. Incineration										
1. Area	15.6	15.6	5.56	5.56	86.42	86.42	34.5	34.5		
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	15.6	15.6	5.56	5.56	86.42	86.42	34.5	34.5		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	145.0	145.0	97.1	97.1	754.2	754.2	436.3	436.3	47.1	47.1
2. Diesel	23.06	23.06	15.46	15.46	120.06	120.06	69.46	69.46	74.49	74.49
B. Off-Highway Usage										
C. Aircraft										
D. Railroads	0.82	0.82			16.5	16.5	70.8	70.8	82.0	82.0
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	168.88	168.88	112.56	112.56	890.76	890.76	476.56	476.56	203.59	203.59

POLLUTANT: Particulate

REGION: West Central Florida

	TOTALS	**TOTALS								
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	2410.71	2410.71								
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination										
F. Total Power Plants	11520.78	8493.32								
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral										
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	27583.77	7699.40								
IV. Solid Waste Disposal										
A. Incineration										
1. Area										
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	2356.77	2356.77								
V. Transportation										
A. Motor Vehicles										
1. Gasoline										
2. Diesel										
B. Off-Highway Usage										
C. Aircraft										
D. Railroads										
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	4245.37	4245.37								

POLLUTANT: Particulate

REGION: West Central Florida

	Citrus	Citrus **	Hardee	Hardee**	Hernando	Hernando*	Hills-** borough	Hills-** borough	Levy	Levy **
VI Miscellaneous Area Sources										
A. Forest Fires	241.36	241.36	214.1	214.1	208.61	208.61	1282.68	1282.68	241.94	241.94
B. Agricultural, Silvicultural and Landclearing Burning	285.0	285.0	1548.55	1548.55	247.8	247.8	262.2	262.2	643.0	643.0
C. Grove Protection	42.0	10.0	261.0	65.0	111.0	27.0	2001.0	500		
D. Total Miscellaneous	568.36	536.36	2023.65	1827.65	567.41	483.41	3545.88	2044.88	884.94	884.94
VII Grand Total	4030.72	2914.49	2056.7	1860.70	776.37	647.07	20125.5	15671.06	2020.3	1802.23
A. Area	627.09	595.09	2056.70	1860.70	616.87	532.87	6666.19	5190.19	932.88	932.88
B. Point	3403.63	2319.40	0.00	0.00	159.50	114.20	13459.30	10480.87	1087.45	869.35

POLLUTANT: Particulate

REGION: West Central Region

	Manatee	Manatee**	Pasco	Pasco **	Pinellas	Pinellas**	Polk	Polk **	Sumter	Sumter **
VI Miscellaneous Area Sources										
A. Forest Fires	251.3	251.3	343.1	343.1	326.1	326.1	1262.12	1262.12	241.36	241.36
B. Agricultural, Silvicultural and Landclearing Burning	1817.9	1817.9	408.9	408.9	67.9	67.9	5991.1	5991.1	285.0	285.0
C. Grove Protection	39.0	10.0	34.3	9.0	21.0	6.0	2577.0	644.25	42.0	10.0
D. Total Miscellaneous	2108.2	2079.2	786.3	761.0	415.0	400.0	9830.22	7897.47	568.36	536.36
VII Grand Total	2476.24	2447.24	1955.37	1289.97	4358.04	4103.54	24053.58	11110.23	7572.61	810.31
A. Area	2325.74	2296.74	925.77	900.47	1590.09	1575.09	10451.53	8498.68	777.21	745.21
B. Point	50.50	150.50	1029.60	389.50	2757.95	2528.45	13602.05	2611.55	6795.40	65.10

POLLUTANT: Particulate

REGION: West Central Region

	TOTALS	**TOTALS								
VI. Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection										
D. Total Miscellaneous	21298.32	17451.27								
VII Grand Total	69415.72	42656.84								
A. Area	26970.07	23127.92								
B. Point	42445.65	19528.92								

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Sulfur Oxides

REGION: West Central Florida

	Citrus	Citrus **	Hardee	Hardee **	Hernando	Hernando*	Hills-** borough	Hills-** borough	Levy	Levy **
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	3.37	3.37	2.02	2.02	2.7	2.7	131.8	131.8	2.82	2.82
b. Point										
3. Residual Oil										
a. Area	8.5	8.5	6.6	6.6	7.5	7.5	216.7	216.7	5.64	5.64
b. Point										
4. Natural Gas*										
a. Area	0.02	0.02	0.01	0.01	0.02	0.02	0.44	0.44	0.01	0.01
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.25	0.25	0.1	0.1	0.17	0.17	12.89	12.89	0.25	0.25
b. Point										
2. Residual Oil										
a. Area										
b. Point							927.0	927.0		
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area							144	144		
b. Point							25	25		
3. Residual Oil										
a. Area							52.0	52.0		
b. Point					82.5	82.5	6652.0	6652.0		
4. Natural Gas										
a. Area							3.0	3.0		
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

** Emissions Achieved Applying Chapter 17-2 FAC

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Sulfur Oxides

REGION: West Central Florida

	Manatee	Manatee**	Pasco	Pasco**	Pinellas	Pinellas**	Polk	Polk **	Sumter	Sumter**
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	15.29	15.29	11.33	11.33	109.0	109.0	47.13	47.14	2.97	2.97
b. Point										
3. Residual Oil										
a. Area	42.5	42.5	33.6	33.6	230.8	230.8	100.4	100.4	6.56	6.56
b. Point										
4. Natural Gas*										
a. Area	0.09	0.09	0.07	0.07	0.47	0.47	0.20	0.20	0.01	0.01
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.99	0.99	0.68	0.68	9.19	9.19	3.96	3.96	0.24	0.24
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area	22.0	22.0			21.3	21.3	20.0	20.0		
b. Point	81.3	81.3	6160.5	6160.5	616.0	616.0	47.0	47.0		
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Sulfur Oxides

REGION: West Central Florida

	Citrus	Citrus**	Hardee	Hardee**	Hernando	Hernando**	Hills-borough**	Hills-borough**	Levy	Levy**
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	12.14	12.14	8.73	8.73	92.89	92.89	8164.83	8164.83	8.72	8.72
II. Power Plants										
A. Coal							264,778.3	68591.2		
B. Distillate Oil			1.7	1.7						
C. Residual Oil							12,714.7	5645.7		
D. Natural Gas										
E. Combination	57,122.5	27247.2							458.2	190.8
F. Total Power Plants	57,122.5	27247.2	1.7	1.7	0.0		277,493.0	74236.9	458.2	190.8
III. Process Emissions										
A. Chemical							22,427.0	10385.0		
B. Food and Agriculture					144.75	144.75	10.0	10.0		
C. Metallurgical										
D. Mineral					8290.7	8290.7				
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions					8435.45	8435.45	22.437.0	10395.0		
IV. Solid Waste Disposal										
A. Incineration										
1. Area	0.3	0.3	0.15	0.15	0.3	0.3	13.3	13.3		
2. Point										
B. Open Burning							24.0	24.0		
1. Area							1500.0	1500.0		
2. Point										
C. Total Solid Waste Disposal	0.3	0.3	0.15	0.15	0.3	0.3	1537.3	1537.3		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	21.9	21.9	12.7	12.7	15.9	15.9	559.75	559.75	18.6	18.6
2. Diesel	13.32	13.32	7.72	7.72	9.67	9.67	341.26	341.26	11.28	11.28
B. Off-Highway Usage										
C. Aircraft							323.0	323.0		
D. Railroads					3.08	3.08	281.3	281.3	0.01	0.01
E. Vessels							2037.0	2037.0		
F. Gasoline Handling										
G. Total Transportation	34.22	34.22	20.42	20.42	28.65	28.65	3542.31	3542.31	29.89	29.89

POLLUTANT: Sulfur Oxides

REGION: West Central Florida

	Manatee	Manatee**	Pasco	Pasco**	Pinellas	Pinellas**	Polk	Polk **	Sumter	Sumter**
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point							267.8	267.8		
D. Total Fuel Combustion	162.17	162.17	6206.18	6206.18	986.76	986.76	486.49	486.49	9.78	9.78
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil					805.0	785.0	2880.0	1954.0		
D. Natural Gas										
E. Combination					29,022.1	21176.0	2565.8	1735.5		
F. Total Power Plants	0.0	0.0	0.0	0.0	29,827.1	21961.0	5445.8	3689.5	0.0	
III. Process Emissions										
A. Chemical	7655.6	2555.0			264.5	264.5	65666.95	18460.3		
B. Food and Agriculture			1197.0	1197.0			1297.8	1297.8		
C. Metallurgical										
D. Mineral	18.6	18.6	83.2	83.2	93.0	93.0	361.5	361.5	811.5	811.5
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	7674.2	2573.6	1280.2	1280.2	357.5	357.5	67326.25	20119.60	811.5	811.5
IV. Solid Waste Disposal										
A. Incineration										
1. Area	2.6	2.6	0.9	0.9	11.6	11.6	5.75	5.75		
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	2.6	2.6	0.9	0.9	11.6	11.6	5.75	5.75		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	72.5	72.5	48.6	48.6	377.1	377.1	218.1	218.1	23.6	23.6
2. Diesel	44.16	44.16	29.6	29.6	229.4	229.4	133.0	133.0	14.34	14.34
B. Off-Highway Usage										
C. Aircraft										
D. Railroads	2.12	2.12			42.9	42.9	184.0	184.0	213.1	213.1
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	118.78	118.78	78.2	78.2	649.3	649.3	535.1	535.1	251.04	251.04

POLLUTANT: Sulfur Oxides

REGION: West Central Region

	TOTALS	TOTALS **							
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area									
b. Point									
D. Total Fuel Combustion	16138.69	16138.69							
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil									
D. Natural Gas									
E. Combination									
F. Total Power Plants	370348.30	127327.10							
III. Process Emissions									
A. Chemical									
B. Food and Agriculture									
C. Metallurgical									
D. Mineral									
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	108322.10	43972.85							
IV. Solid Waste Disposal									
A. Incineration									
1. Area									
2. Point									
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	1558.90	1558.90							
V. Transportation									
A. Motor Vehicles									
1. Gasoline									
2. Diesel									
B. Off-Highway Usage									
C. Aircraft									
D. Railroads									
E. Vessels									
F. Gasoline Handling									
G. Total Transportation	5288.01	5288.01							

POLLUTANT: Sulfur Oxides

REGION: West Central Florida

	Citrus	Citrus **	Hardee	Hardee**	Hernando	Hernando**	Hills-borough	Hills-borough **	Levy	Levy **
VI Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection	20	20	126	126	54	54	972	972		
D. Total Miscellaneous	20	20	126	126	54	54	972	972		
VII Grand Total	57,189.16	27313.86	157.00	157.00	8611.29	8611.29	314146.44	98848.34	496.81	229.41
A. Area	66.66	66.66	155.30	155.3	93.34	93.34	6612.44	5112.44	38.61	38.61
B. Point	57,122.50	27247.2	1.70	1.7	8517.95	8517.95	307534.00	93735.9	458.20	190.80

POLLUTANT: Sulfur Oxides

REGION: West Central Florida

	Manatee	Manatee**	Pasco	Pasco**	Pinellas	Pinellas**	Polk	Polk**	Sumter	Sumter**
VI Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning	189.0	189.0	166	166	10	10	1251	1251	20	20
C. Grove Protection										
D. Total Miscellaneous	189.0	189.0	166	166	10	10	1251	1251	20	20
VII Grand Total	8146.75	3046.15	7731.48	7731.48	31842.26	23976.16	75051.39	26087.44	1092.32	1092.32
A. Area	391.25	391.25	290.78	290.78	1041.66	1041.66	1963.54	1963.54	280.82	280.82
B. Point	7755.50	2654.90	7440.70	7440.70	30800.60	22934.50	73087.85	24123.90	811.50	811.50

POLLUTANT: Sulfur Oxides

REGION: West Central Florida

	TOTAL	TOTALS**							
VI. Miscellaneous Area Sources									
A. Forest Fires									
B. Agricultural, Silvicultural and Landclearing Burning									
C. Grove Protection									
D. Total Miscellaneous	2808.00	2808.00							
VII Grand Total	504464.90	197093.55							
A. Area	10934.40	9434.40							
B. Point	493530.50	187659.15							

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Carbon Monoxide

REGION: West Central Florida

	Citrus	Citrus**	Hardee	Hardee **	Hernando	Hernando**	Hills-** borough	Hills-** borough	Levy	Levy **
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	3.34	3.34	1.4	1.4	1.86	1.86	91.6	91.6	1.97	1.97
b. Point										
3. Residual Oil										
a. Area	0.15	0.15	0.11	0.11	0.13	0.13	3.76	3.76	0.1	0.1
b. Point										
4. Natural Gas*										
a. Area	0.57	0.57	0.44	0.44	0.51	0.51	14.68	14.68	0.36	0.36
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.01	0.01					0.36	0.36	0.01	0.01
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area							1	1		
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area							6	6		
b. Point										
4. Natural Gas										
a. Area							2	2		
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Carbon Monoxide

REGION: West Central Florida

	Manatee	Manatee**	Pasco	Pasco **	Pinellas	Pinellas**	Polk	Polk **	Sumter	Sumter **
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	10.63	10.63	7.85	7.85	75.7	75.7	32.76	32.76	2.06	2.06
b. Point										
3. Residual Oil										
a. Area	0.74	0.74	0.58	0.58	4.0	4.0	1.74	1.74	0.11	0.11
b. Point										
4. Natural Gas*										
a. Area	2.91	2.91	2.27	2.27	15.64	15.64	6.80	6.80	0.44	0.44
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.03	0.03	0.02	0.02	0.26	0.26	0.11	0.11	0.01	0.01
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area			1.9	1.9	0.38	0.38	0.04	0.04		
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Carbon Monoxide

REGION: West Central Florida

	Citrus	Citrus**	Hardee	Hardee **	Hernando	Hernando**	Hills-borough**	Hills-borough**	Levy	Levy**
6. Wood or Bark										
a. Area									13.05	13.05
b. Point										
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	4.07	4.07	1.55	1.55	2.5	2.5	119.4	119.4	15.49	15.49
II. Power Plants										
A. Coal							2101.0	2101.0		
B. Distillate Oil										
C. Residual Oil							2.0	2.0		
D. Natural Gas										
E. Combination	583.8	583.8							0.4	0.4
F. Total Power Plants	583.8	583.8					2103.0	2103.0	0.4	0.4
III. Process Emissions										
A. Chemical										
B. Food and Agriculture							1.0	1.0		
C. Metallurgical										
D. Mineral					1.2	1.2				
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions					1.2	1.2	1.0	1.0		
IV. Solid Waste Disposal										
A. Incineration										
1. Area	2.7	2.7	1.33	1.33	2.5	2.5	1507	1507	1	1
2. Point							134	134		
B. Open Burning										
1. Area										
2. Point							2036	2036		
C. Total Solid Waste Disposal	2.7	2.7	1.33	1.33	2.5	2.5	3677	3677	1	1
V. Transportation										
A. Motor Vehicles										
1. Gasoline	9043.5	9043.5	5250.3	5250.3	6558.3	6558.3	366356.6	366356.6	7671.7	7671.7
2. Diesel	92.5	92.5	53.88	53.88	67.49	67.49	2381.24	2381.24	78.74	78.74
B. Off-Highway Usage										
C. Aircraft							2902	2902	-	
D. Railroads					3.31	3.31	302.9	302.9	0.01	0.01
E. Vessels							13.0	13.0		
F. Gasoline Handling										
G. Total Transportation	9136.0	9136.0	5304.18	5304.18	6629.10	6629.10	371955.74	371955.74	7748.45	7748.45

POLLUTANT: Carbon Monoxide

REGION: West Central Florida

	Manatee	Manatee**	Pasco	Pasco**	Pinellas	Pinellas**	Polk	Polk**	Sumter	Sumter**
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	14.31	14.31	12.62	12.62	95.98	95.98	41.45	41.45	2.61	2.61
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil					0.19	0.19	0.47	0.47		
D. Natural Gas					5.8	5.8	1.16	1.16		
E. Combination										
F. Total Power Plants					5.99	5.99	1.63	1.63		
III. Process Emissions										
A. Chemical					0.17	0.17	2.49	2.49		
B. Food and Agriculture	0.14	0.14	0.58	0.58			1.12	1.12		
C. Metallurgical										
D. Mineral					0.3	0.3			0.4	0.4
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	0.14	0.14	0.58	0.58	0.47	0.47	3.61	3.61	0.4	0.4
IV. Solid Waste Disposal										
A. Incineration										
1. Area	21.7	21.7	7.73	7.73	96.8	96.8	47.9	47.9		
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	21.7	21.7	7.73	7.73	96.8	96.8	47.9	47.99		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	29952.0	29952.0	20070.6	20070.6	246821.8	246821.8	142777.5	142777.5	9732.4	9732.4
2. Diesel	308.16	308.16	206.63	206.63	1604.17	1604.17	928.04	928.04	100.06	100.06
B. Off-Highway Usage										
C. Aircraft										
D. Railroads	2.28	2.28			46.2	46.2	198.1	198.1	229.5	229.5
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	30252.44	30252.44	20277.23	20277.23	248472.17	248472.17	143903.64	143903.64	10061.96	10061.96

POLLUTANT: Carbon Monoxide

REGION: West Central Region

	TOTALS								
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area									
b. Point									
D. Total Fuel Combustion	309.98								
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil									
D. Natural Gas									
E. Combination									
F. Total Power Plants	2694.82								
III. Process Emissions									
A. Chemical									
B. Food and Agriculture									
C. Metallurgical									
D. Mineral									
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	7.40								
IV. Solid Waste Disposal									
A. Incineration									
1. Area									
2. Point									
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	3858.66								
V. Transportation									
A. Motor Vehicles									
1. Gasoline									
2. Diesel									
B. Off-Highway Usage									
C. Aircraft									
D. Railroads									
E. Vessels									
F. Gasoline Handling									
G. Total Transportation	853740.91								

POLLUTANT: Carbon Monoxide

REGION: West Central Region

	Citrus	Citrus**	Hardee	Hardee**	Hernando	Hernando**	Hills-borough	Hills-** borough	Levy	Levy **
VI Miscellaneous Area Sources.										
A. Forest Fires	780.9	780.9	692.5	692.5	674.9	674.9	4149.9	4149.9	782.87	782.87
B. Agricultural, Silvicultural and Landclearing Burning	1676.5	1676.5	9109.1	9109.1	1457.8	1457.8	1542.5	1542.5	3782.4	3782.4
C. Grove Protection	50.0	50.0	307	307	131	131	2351	2351		
D. Total Miscellaneous	2507.4	2507.4	10108.6	10108.6	2263.7	2263.7	8043.4	8043.4	4575.27	4575.27
VII Grand Total	12233.97	12233.97	15415.66	15415.66	8899.0	8899.0	385899.54	385899.54	12239.61	12239.61
A. Area	11650.17	11650.17	15415.66	15415.66	8897.80	8897.80	383661.54	383661.54	12239.21	12239.21
B. Point	583.80	583.80	0.00	0.00	1.20	1.20	2238.00	2238.00	0.40	0.40

POLLUTANT: Carbon Monoxide REGION: West Central Florida

	Manatee	Pasco	Pinellas	Polk	Sumter
VI Miscellaneous Area Sources					
A. Forest Fires	813.0	1109.9	1055.0	890.9	780.9
B. Agricultural, Silvicultural and Landclearing Burning	10693.3	2405.5	399.3	35241.5	1676.5
C. Grove Protection	458	403.0	25	3027	50.0
D. Total Miscellaneous	11964.3	3918.4	1479.3	39159.4	2506.4
VII Grand Total	42252.89	24216.56	250150.71	183157.63	12571.37
A. Area	42252.75	24215.98	250144.25	183152.39	12570.97
B. Point	0.14	0.58	6.46	5.24	0.40

POLLUTANT: Carbon Monoxide

REGION: West Central Florida

	TOTALS									
VI Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection										
D. Total Miscellaneous	86425.17									
VII Grand Total	947036.94									
A. Area	944200.72									
B. Point	2836.22									

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Hydrocarbon

REGION: West Central Florida

	Citrus	Hardee	Hernando	Hillsborough	Levy
I. Fuel Combustion					
A. Residential and Institutional Fuel					
1. Coal or Coke					
a. Area					
b. Point					
2. Distillate Oil					
a. Area	1.41	0.84	1.1	54.9	1.18
b. Point					
3. Residual Oil					
a. Area	0.08	0.07	0.08	2.25	0.06
b. Point					
4. Natural Gas*					
a. Area	0.23	0.18	0.20	5.87	0.14
b. Point					
5. Combination					
a. Area					
b. Point					
B. Commercial					
1. Distillate Oil					
a. Area	0.10	0.04	0.07	5.37	0.1
b. Point					
2. Residual Oil					
a. Area				97	
b. Point					
C. Industrial Fuel					
1. Coal or Coke					
a. Area					
b. Point					
2. Distillate Oil					
a. Area				17.0	
b. Point					
3. Residual Oil					
a. Area			0.62	19.0	
b. Point				64.0	
4. Natural Gas					
a. Area				101.0	
b. Point				91.0	
5. Process Gas					
a. Area				91.0	
b. Point					

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Hydrocarbon

REGION: West Central Florida

	Manatee	Pasco	Pinellas	Polk	Sumter
I. Fuel Combustion					
A. Residential and Institutional Fuel					
1. Coal or Coke					
a. Area					
b. Point					
2. Distillate Oil					
a. Area	6.37	4.71	45.44	19.64	1.23
b. Point					
3. Residual Oil					
a. Area	0.44	0.35	2.4	1.05	0.07
b. Point					
4. Natural Gas*					
a. Area	1.16	0.91	6.26	2.72	0.18
b. Point					
5. Combination					
a. Area					
b. Point					
B. Commercial					
1. Distillate Oil					
a. Area	0.41	0.28	3.83	1.65	0.1
b. Point					
2. Residual Oil					
a. Area					
b. Point					
C. Industrial Fuel					
1. Coal or Coke					
a. Area					
b. Point					
2. Distillate Oil					
a. Area					
b. Point					
3. Residual Oil					
a. Area			5.8	8.54	
b. Point		28.93			
4. Natural Gas					
a. Area					
b. Point					
5. Process Gas					
a. Area					
b. Point					

* Includes Commercial Uses

POLLUTANT: Hydrocarbon

REGION: West Central Florida

	Citrus	Hardee	Hernando	Hillsborough	Levy
6. Wood or Bark					
a. Area					13.05
b. Point					
7. Combination					
a. Area					
b. Point					
D. Total Fuel Combustion	1.82	1.13	2.07	548.39	14.53
II. Power Plants					
A. Coal					
B. Distillate Oil				194.0	
C. Residual Oil				630.0	
D. Natural Gas					
E. Combination	400.7				42.7
F. Total Power Plants	400.7			824.0	42.7
III. Process Emissions					
A. Chemical				176.0	
B. Food and Agriculture			1.1	1.0	
C. Metallurgical				869.0	
D. Mineral			8.06	40.0	
E. Wood					
F. Petroleum Storage				11822.0	
G. Petrochemical Operations					
H. Total Process Emissions			9.16	12908.0	
IV. Solid Waste Disposal					
A. Incineration					
1. Area	1.24	0.61	1.16	103	
2. Point				1603.0	
B. Open Burning				718.0	
1. Area					
2. Point					
C. Total Solid Waste Disposal	1.24	0.61	1.16	2424.0	
V. Transportation					
A. Motor Vehicles					
1. Gasoline	1739.8	1010.0	1261.7	59893.3	1475.9
2. Diesel	18.06	10.47	13.11	462.6	15.3
B. Off-Highway Usage					
C. Aircraft				2347.0	
D. Railroads			2.37	216.4	
E. Vessels					0.01
F. Gasoline Handling	114.89	66.7	83.3	2938.7	97.5
G. Total Transportation	1872.75	1087.17	1360.48	65858.0	1588.71

POLLUTANT: Hydrocarbon

REGION: West Central Florida

	Manatee		Pasco		Pinellas		Polk		Sumter
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area							37.64		
b. Point									
D. Total Fuel Combustion	8.38		35.18		63.73		71.24		1.58
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil					24.15		59.22		
D. Natural Gas					689.26		126.56		
E. Combination									
F. Total Power Plants					713.41		185.78		
III. Process Emissions									
A. Chemical					2.62		43.96		
B. Food and Agriculture	13.8				3.5		95.46		
C. Metallurgical									
D. Mineral					0.72		6.9		6.13
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	13.8				6.84		146.32		6.13
IV. Solid Waste Disposal									
A. Incineration									
1. Area	10.0		3.6		44.9		22.2		
2. Point									
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	10.0		3.6		44.9		22.2		
V. Transportation									
A. Motor Vehicles									
1. Gasoline	5762.1		3861.1		40351.3		23341.8		1872.3
2. Diesel	59.87		40.14		311.64		180.29		19.44
B. Off-Highway Usage									
C. Aircraft									
D. Railroads	1.63				33.0		141.5		163.9
E. Vessels									
F. Gasoline Handling	380.5		254.98		1979.85		1145.3		123.6
G. Total Transportation	6204.1		4156.22		42675.79		24808.89		2179.24

POLLUTANT: Hydrocarbon

REGION: West Central Florida

	TOTALS									
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	748.05									
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination										
F. Total Power Plants	2166.59									
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral										
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	13090.25									
IV. Solid Waste Disposal										
A. Incineration										
1. Area										
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	2507.71									
V. Transportation										
A. Motor Vehicles										
1. Gasoline										
2. Diesel										
B. Off-Highway Usage										
C. Aircraft										
D. Railroads										
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	151791.35									

POLLUTANT: Hydrocarbon

REGION: West Central Florida

	Citrus	Hardee	Hernando	Hills-borough	Levy
VI Miscellaneous Area Sources					
A. Forest Fires	170.4	151.1	147.3	905.4	170.8
B. Agricultural, Silvicultural and Landclearing Burning	335.3	1821.8	291.6	308.5	756.5
C. Grove Protection	12	74	31	570	
D. Total Miscellaneous	517.7	2046.9	469.9	1783.9	927.3
VII Grand Total	2794.21	3135.81	1842.77	84346.29	2573.24
A. Area	2393.51	3135.81	1833.61	68856.29	2530.54
B. Point	400.70	0.00	916	15490.00	42.70

POLLUTANT: Hydrocarbon

REGION: West Central Florida

	Manatee	Pasco	Pinellas	Polk	Sumter
VI Miscellaneous Area Sources					
A. Forest Fires	177.4	242.2	230.2	890.9	170.4
B. Agricultural, Silvicultural and Landclearing Burning	2138.7	481.1	79.9	7048.3	335.3
C. Grove Protection	111	97	6	734	12
D. Total Miscellaneous	2427.1	820.3	316.1	8673.2	517.7
VII Grand Total	8663.38	5015.3	43820.77	33907.63	2704.65
A. Area	8649.58	4986.37	43100.52	33537.89	2698.52
B. Point	13.80	28.93	720.25	369.74	6.13

POLLUTANT: Hydrocarbon

REGION: West Central Florida

	TOTALS									
VI Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection										
D. Total Miscellaneous	18500.10									
VII Grand Total	188804.05									
A. Area	171722.64									
B. Point	17081.41									

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Nitrogen Oxides REGION: West Central Florida

	Citrus	Citrus**	Hardee	Hardee**	Hernando	Hernando**	Hillsborough	Hillsborough**	Levy	Levy**
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	5.63	5.63	3.34	3.34	4.45	4.45	219.7	219.7	4.67	4.67
b. Point										
3. Residual Oil										
a. Area	0.35	0.35	0.27	0.27	0.31	0.31	9.0	9.0	0.02	0.02
b. Point										
4. Natural Gas*										
a. Area	1.58	1.58	1.23	1.23	1.4	1.4	40.38	40.38	0.99	0.99
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	2.06	2.06	0.86	0.86	1.45	1.45	107.4	107.4	2.07	2.07
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area							400	400		
b. Point							55	55		
3. Residual Oil										
a. Area					12.5	12.5	31	31		
b. Point							2214	2214		
4. Natural Gas										
a. Area							158	158		
b. Point							416	416		
5. Process Gas										
a. Area							266	266		
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Nitrogen Oxides

REGION: West Central Florida

	Manatee	Manatee**	Pasco	Pasco**	Pinellas	Pinellas**	Polk	Polk **	Sumter	Sumter**
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	25.49	25.49	18.88	18.88	181.65	181.65	78.6	78.6	4.82	4.82
b. Point										
3. Residual Oil										
a. Area	1.8	1.8	1.4	1.4	9.6	9.6	4.2	4.2	0.27	0.27
b. Point										
4. Natural Gas*										
a. Area	8.0	8.0	6.26	6.26	43.02	43.02	18.71	18.71	1.22	1.22
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	8.28	8.28	5.68	5.68	76.62	76.62	32.99	32.99	2.0	2.0
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area	12.28	12.28			24.09	24.09	11.7	11.7		
b. Point			578.59	578.59	93.24	93.24	158.7	158.7		
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Nitrogen Oxides

REGION: West Central Florida

	Citrus	Citrus **	Hardee	Hardee**	Hernando	Hernando**	Hills-borough	Hills-** borough	Levy	Levy**
6. Wood or Bark										
a. Area										
b. Point									65.2	65.2
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	9.62	9.62	5.70	5.70	20.11	20.11	3916.58	3916.58	72.95	72.95
II. Power Plants										
A. Coal							0121.0	26200.0		
B. Distillate Oil			19.16	19.16						
C. Residual Oil							3335	1538.9		
D. Natural Gas										
E. Combination	18500.9	12738.13							422.2	332.2
F. Total Power Plants	18500.9	12738.13	19.16	19.16			33456.0	27738.9	422.2	332.2
III. Process Emissions										
A. Chemical					160.65	160.65	732	732.0		
B. Food and Agriculture					21.9	21.9	43	43.0		
C. Metallurgical										
D. Mineral										
E. Wood							1	1.0		
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions					182.55	182.55	786.0	786.0		
IV. Solid Waste Disposal										
A. Incineration										
1. Area	0.6	0.6	0.3	0.3	0.55	0.55	24.3	24.3		
2. Point							2001	2001		
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	0.6	0.6	0.3	0.3	0.55	0.55	2025.3	2025.3		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	1581.1	1581.1	917.9	917.9	1146.6	1146.6	34704.5	34704.5	1341.3	1341.3
2. Diesel	105.53	105.53	61.17	61.17	76.63	76.63	2703.5	2703.5	89.4	89.4
B. Off-Highway Usage										
C. Aircraft							636.0	636.0		
D. Railroads										
E. Vessels					3.55	3.55	324.5	324.5	0.01	0.01
F. Gasoline Handling							867.0	867.0		
G. Total Transportation	1686.63	1686.63	979.07	979.07	1226.78	1226.78	39235.5	39235.5	1630.71	1630.71

POLLUTANT: Nitrogen Oxides

REGION: West Central Florida

	Manatee	Manatee**	Pasco	Pasco**	Pinellas	Pinellas**	Polk	Polk**	Sumter	Sumter**
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area							245.32	245.32		
b. Point										
D. Total Fuel Combustion	55.85	55.85	610.81	610.81	428.22	428.22	550.22	550.32	8.31	8.31
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas					14533.5	6377.1	3066.9	1943.5		
E. Combination										
F. Total Power Plants					14533.5	6377.1	3066.9	1943.5		
III. Process Emissions										
A. Chemical					52.38	52.38	771.88	771.88		
B. Food and Agriculture	58.65	58.65	173.48	173.48	69.93	69.93	1144.83	1144.83		
C. Metallurgical										
D. Mineral	24.2	24.2					93.69	93.69	122.64	122.64
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	82.85	82.85	173.48	173.48	122.31	122.31	2010.4	2010.4	122.64	122.64
IV. Solid Waste Disposal										
A. Incineration										
1. Area	4.8	4.8	1.7	1.7	21.3	21.3	10.5	10.5		
2. Point					1.97	1.97				
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	4.8	4.8	1.7	1.7	23.27	23.27	10.5	10.5		
V. Transportation										
A. Motor Vehicles										
1. Gasoline	5236.6	5236.6	3509.0	3509.0	23381.1	23381.1	13525.1	13525.1	1701.5	1701.5
2. Diesel	349.87	349.87	234.6	234.6	1821.3	1821.3	1053.6	1053.6	113.6	113.6
B. Off-Highway Usage										
C. Aircraft										
D. Railroads	2.45	2.45			49.5	49.5	212.3	212.3	245.9	245.9
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	5588.92	5588.92	3743.6	3743.6	25251.9	25251.9	14791.0	14791.0	3060.0	3060.0

POLLUTANT: Nitrogen Oxides

REGION: West Central Florida

	TOTALS	TOTALS**								
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	5678.37	5678.37								
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil										
D. Natural Gas										
E. Combination										
F. Total Power Plants	69998.66	49148.99								
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral										
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	3480.23	3480.23								
IV. Solid Waste Disposal										
A. Incineration										
1. Area										
2. Point										
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	2067.02	2067.02								
V. Transportation										
A. Motor Vehicles										
1. Gasoline										
2. Diesel										
B. Off-Highway Usage										
C. Aircraft										
D. Railroads										
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	97194.11	97194.11								

POLLUTANT: Nitrogen Oxides

REGION: West Central Florida

	Citrus	Citrus**	Hardee	Hardee**	Hernando	Hernando**	Hills-borough	Hills-** borough	Levy	Levy **
VI Miscellaneous Area Sources										
A. Forest Fires	28.4	28.4	25.2	25.2	24.5	24.5	150.9	150.9	28.4	28.4
B. Agricultural, Silvicultural and Landclearing Burning	33.5	33.5	182.2	182.2	29.2	29.2	30.8	30.8	75.6	75.6
C. Grove Protection	8	8.0	52	52	22	22	402.0	402.0		
D. Total Miscellaneous	69.9	69.9	259.4	259.4	75.7	75.7	583.7	583.7	104.0	104.0
VII Grand Total	20267.65	14504.88	1263.63	1263.63	1505.69	1505.69	80003.08	74285.98	2229.86	2082.41
A. Area	1766.75	1766.75	1244.47	1244.47	1323.14	1323.14	41075.08	41075.08	1742.46	1742.46
B. Point	18500.90	12738.13	19.16	19.16	182.55	182.55	38928.00	33210.90	487.40	397.40

POLLUTANT: Nitrogen Oxides

REGION: West Central Florida

	Manatee	Manatee**	Pasco	Pasco**	Pinellas	Pinellas**	Polk	Polk **	Sumter	Sumter**
VI Miscellaneous Area Sources										
A. Forest Fires	29.6	29.6	40.4	40.4	38.4	38.4	148.5	148.5	28.4	28.4
B. Agricultural, Silvicultural and Landclearing Burning	213.9	213.9	48.1	48.1	8.0	8.0	704.8	704.8	33.5	33.5
C. Grove Protection	78	78	69	69	4	4	517	517	8	8
D. Total Miscellaneous	321.5	321.5	157.5	157.5	50.4	50.4	1470.3	1470.3	69.9	69.9
II Grand Total	6053.92	6053.92	4687.09	4687.09	40409.6	32253.20	21899.32	20775.92	3260.85	3260.85
A. Area	5971.07	5971.07	3935.02	3935.02	25658.58	25658.58	16418.00	16418.00	3138.21	3138.21
B. Point	82.85	82.85	752.07	752.07	14751.02	6594.62	5481.32	4357.92	122.64	122.64

POLLUTANT: Nitrogen Oxides

REGION: West Central Florida

	TOTALS	TOTALS**								
VI Miscellaneous Area Sources										
A. Forest Fires										
B. Agricultural, Silvicultural and Landclearing Burning										
C. Grove Protection										
D. Total Miscellaneous	3162.30	3162.30								
II Grand Total	181580.69	160731.03								
A. Area	102272.78	102272.78								
B. Point	79307.91	58458.24								

EMISSION INVENTORY SUMMARY

Central Florida Intrastate AQCR

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Particulate

REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia				
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	56.54	20.56	90.13	6.5	20.3	44.23				
b. Point										
3. Residual Oil										
a. Area	4.06	1.22	6.07	0.44	1.5	3.0				
b. Point										
4. Natural Gas*										
a. Area	11.55	3.48	17.28	1.27	4.2	8.51				
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	6.04	2.68	10.38	0.73	2.12	5.09				
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Particulate

REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia	Total		
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area		10.9							
b. Point									
D. Total Fuel Combustion	78.19	38.84	123.86	8.94	28.12	60.83	338.78		
II. Power Plants									
A. Coal									
B. Distillate Oil			0.39						
C. Residual Oil									
D. Natural Gas									
E. Combination	750.02		9.73	8.71		321.0			
F. Total Power Plants	750.02		10.12	8.71		321.0	1089.83		
III. Process Emissions									
A. Chemical									
B. Food and Agriculture		946.5	1432.3	2.5	154.5	87.5			
C. Metallurgical	212.9								
D. Mineral			322.46			107.77			
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	212.9	946.5	1754.76	2.5	154.5	195.27	3266.43		
IV. Solid Waste Disposal									
A. Incineration									
1. Area	30.6	5.14	20.53	3.26	7.8	20.66	598.99		
2. Point			511.0						
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	30.6	5.14	531.53	3.26	7.8	20.66	598.99		
V. Transportation									
A. Motor Vehicles									
1. Gasoline	397.9	144.4	693.0	80.9	133.4	322.9			
2. Diesel	63.34	22.97	110.3	12.87	21.22	51.4			
B. Off-Highway Usage									
C. Aircraft	353.1		260.0						
D. Railroads		0.6	2.8		31.2				
E. Vessels									
F. Gasoline Handling									
G. Total Transportation	814.34	167.97	1066.1	93.77	185.82	374.3	2702.0		

POLLUTANT: Particulate

REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia	Total
VI Miscellaneous Area Sources							
A. Forest Fires	365.1	412.13	339.0	482.5	164.3	308.13	
B. Agricultural, Silvicultural and Landclearing Burning	344.6	506.14	319.97	455.3	110.75	1586.4	
C. Grove Protection	171	358	358	386	2	627	
D. Total Miscellaneous	880.7	1276.21	1016.97	1319.8	217.05	2521.53	7232.26
VII Grand Total	2766.75	2434.66	4503.34	1436.98	593.29	3493.59	15228.0
A. Area	1803.83	1488.16	2275.88	1425.77	438779	2977.32	10409.75
B. Point	962.92	946.50	2227.46	11.21	154.50	516.27	4818.86

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: SO_2 REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia				
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	40.71	14.79	64.92	4.66	14.59	31.84				
b. Point										
3. Residual Oil										
a. Area	116.9	35.23	1.75	12.84	42.54	86.15				
b. Point										
4. Natural Gas*										
a. Area	0.36	0.11	0.55	0.04	0.13	0.27				
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	2.9	1.28	4.98	0.35	1.02	2.44				
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: SO_2

REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia	Total		
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area									
b. Point		84.4							
D. Total Fuel Combustion	160.87	135.81	72.2	17.89	58.28	120.7	565.75		
II. Power Plants									
A. Coal									
B. Distillate Oil			1.12						
C. Residual Oil									
D. Natural Gas									
E. Combination	28235.8		390.45	14.8	6205.6				
F. Total Power Plants	28235.8		391.65	14.8	6205.6		34847.85		
III. Process Emissions									
A. Chemical									
B. Food and Agriculture		27.5		29.8					
C. Metallurgical									
D. Mineral	229.5				187.5				
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	229.5	27.5		29.8	187.5		474.3		
IV. Solid Waste Disposal									
A. Incineration									
1. Area	5.1	0.85	3.4	0.54	1.3	3.44	69.38		
2. Point			54.75						
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	5.1	0.85	58.15	0.54	1.3	3.44	69.38		
V. Transportation									
A. Motor Vehicles									
1. Gasoline	198.9	72.2	346.5	40.4	66.7	161.4			
2. Diesel	121.29	43.99	211.23	24.65	40.64	98.42			
B. Off-Highway Usage									
C. Aircraft	250.23		50.74						
D. Railroads		1.6	7.3		81.0				
E. Vessels									
F. Gasoline Handling									
G. Total Transportation	570.42	117.79	615.77	65.05	188.34	259.82	1817.19		

POLLUTANT: SO_2

REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia	Total
VI Miscellaneous Area Sources							
A. Forest Fires							
B. Agricultural, Silvicultural and Landclearing Burning							
C. Grove Protection	83	174	174	187	1	304	
D. Total Miscellaneous	83	174	174	187	1	304	923
II Grand Total	29284.69	455.95	1311.77	315.08	6642.02	687.96	38697.47
A. Area	819.39	344.05	865.37	270.48	248.92	687.96	3236.17
B. Point	28465.30	111.90	446.40	44.60	6393.10	0.00	35461.30

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Carbon Monoxide REGION: Central Florida

	Brevard		Lake		Orange		Osceola		Seminole	
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	28.27		10.28		45.06		2.25		10.15	
b. Point										
3. Residual Oil										
a. Area	2.03		0.6		3.04		0.22		0.74	
b. Point										
4. Natural Gas*										
a. Area	12.16		3.66		18.19		1.34		4.42	
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.08		0.04		0.14		0.01		0.03	
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Carbon Monoxide REGION: Central Florida

	Volusia									
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	22.11									
b. Point										
3. Residual Oil										
a. Area	1.5									
b. Point										
4. Natural Gas*										
a. Area	8.96									
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.07									
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Carbon Monoxide REGION: Central Florida

	Brevard	Lake	Orange	Osceola	Seminole
6. Wood or Bark					
a. Area					
b. Point					
7. Combination					
a. Area		0.15			
b. Point					
D. Total Fuel Combustion	42.54	14.73	66.43	3.82	15.34
II. Power Plants					
A. Coal					
B. Distillate Oil					
C. Residual Oil					
D. Natural Gas					
E. Combination	8.14		1.0		
F. Total Power Plants	8.14		1.0		
III. Process Emissions					
A. Chemical					
B. Food and Agriculture		0.27			
C. Metallurgical					
D. Mineral					
E. Wood					
F. Petroleum Storage					
G. Petrochemical Operations					
H. Total Process Emissions		0.27			
IV. Solid Waste Disposal					
A. Incineration					
1. Area	42.5	7.15	28.5	4.53	10.83
2. Point			36.5		
B. Open Burning					
1. Area					
2. Point					
C. Total Solid Waste Disposal	42.5	7.15	65.0	4.53	10.83
V. Transportation					
A. Motor Vehicles					
1. Gasoline	130199.4	29833.7	226778.1	16708.3	27572.1
2. Diesel	846.34	307.0	1473.9	172.0	283.6
B. Off-Highway Usage					
C. Aircraft	3144.6		902.4		
D. Railroads		1.7	7.9		87.2
E. Vessels					
F. Gasoline Handling					
G. Total Transportation	134190.34	30142.4	229162 .3	16880.3	27942.9

POLLUTANT: Carbon Monoxide

REGION: Central Florida

	Volusia	TOTALS
6. Wood or Bark		
a. Area		
b. Point		
7. Combination		
a. Area		
b. Point		
D. Total Fuel Combustion	32.64	175.50
II. Power Plants		
A. Coal		
B. Distillate Oil		
C. Residual Oil		
D. Natural Gas		
E. Combination	3.65	
F. Total Power Plants	3.65	12.79
III. Process Emissions		
A. Chemical		
B. Food and Agriculture		
C. Metallurgical		
D. Mineral	0.16	
E. Wood		
F. Petroleum Storage		
G. Petrochemical Operations		
H. Total Process Emissions	0.16	0.43
IV. Solid Waste Disposal		
A. Incineration		
1. Area	28.7	
2. Point		
B. Open Burning		
1. Area		
2. Point		
C. Total Solid Waste Disposal	28.7	158.71
V. Transportation		
A. Motor Vehicles		
1. Gasoline	105672.5	
2. Diesel	686.8	
B. Off-Highway Usage		
C. Aircraft		
D. Railroads		
E. Vessels		
F. Gasoline Handling		
G. Total Transportation	106359.3	544677.54

POLLUTANT: Carbon Monoxide

REGION: Central Florida

	Brevard	Lake	Orange	Osceola	Seminole
VI Miscellaneous Area Sources					
A. Forest Fires	1181.2	1333.4	1096.8	1560.9	379.9
B. Agricultural, Silvicultural and Landclearing Burning	2027.0	2977.3	1882.2	2678.5	651.5
C. Grove Protection	201	421	421	454	2.0
D. Total Miscellaneous	3409.2	4731.7	3400.0	4693.4	1033.4
VII Grand Total	137692.72	34896.25	232694.73	21582.05	29002.47
A. Area	137684.58	34895.98	232657.23	21582.05	29002.47
B. Point	8.14	0.27	37.50	0.00	0.00

POLLUTANT: Carbon Monoxide

REGION: Central

	Volusia		TOTALS							
VI Miscellaneous Area Sources										
A. Forest Fires	996.9									
B. Agricultural, Silvicultural and Landclearing Burning	9331.8									
C. Grove Protection	736									
D. Total Miscellaneous	11064.7		28332.40							
'II Grand Total	117489.15		573357.37							
A. Area	117485.34		573307.65							
B. Point	3.81		49.72							

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: HC

REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia				
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	16.94	6.19	27.06	1.95	6.11	13.25				
b. Point										
3. Residual Oil										
a. Area	1.22	0.37	1.82	0.13	0.44	0.9				
b. Point										
4. Natural Gas*										
a. Area	4.86	1.46	7.28	0.53	1.77	3.58				
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	1.21	0.54	2.08	0.15	0.42	1.02				
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: HC

REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia	Total		
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area		11.07							
b. Point									
D. Total Fuel Combustion	24.23	19.63	38.24	2.76	8.74	18.75	112.45		
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil									
D. Natural Gas									
E. Combination	887.1		102.2	2.2		371.91			
F. Total Power Plants	887.1		102.2	2.2		371.91	1363.41		
III. Process Emissions									
A. Chemical									
B. Food and Agriculture		18.0							
C. Metallurgical									
D. Mineral	2.32					3.33			
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	2.32	18.0				3.33	23.65		
IV. Solid Waste Disposal									
A. Incineration									
1. Area	19.73	3.3	13.23	2.1	5.0	13.3	111.41		
2. Point			54.75						
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	19.73	3.3	67.98	2.1	5.0	13.3	111.41		
V. Transportation									
A. Motor Vehicles									
1. Gasoline	21285.5	5739.3	37074.5	3214.3	5304.2	17275.7			
2. Diesel	164.4	59.6	286.3	33.4	55.1	133.4			
B. Off-Highway Usage									
C. Aircraft	827.0		637.6						
D. Railroads		1.2	5.6		62.3				
E. Vessels									
F. Gasoline Handling	1044.4	379.0	1819.1	212.3	350.3	847.6			
G. Total Transportation	23321.3	6179.1	39823.1	3460.0	5771.9	18256.7	96,812.1		

POLLUTANT: HC

REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia	Total
VI Miscellaneous Area Sources							
A. Forest Fires	257.7	290.9	239.3	340.6	82.9	217.5	
B. Agricultural, Silvicultural and Landclearing Burning	405.4	595.46	376.4	535.7	130.3	1866.36	
C. Grove Protection	48	102	102	110		178	
D. Total Miscellaneous	711.1	988.36	717.7	986.3	213.2	2261.86	5878.52
VII Grand Total	24965.78	7208.39	40749.22	4453.36	5998.84	20925.85	104301.44
A. Area	24076.36	7179.32	40592.27	4451.16	5998.84	20550.61	102849.56
B. Point	889.42	29.07	156.95	2.20	0.00	375.24	1452.88

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: NO_x REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia				
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	67.88	24.65	108.16	7.8	24.34	53.1				
b. Point										
3. Residual Oil										
a. Area	4.87	1.47	7.3	0.54	1.77	3.6				
b. Point										
4. Natural Gas*										
a. Area	33.43	10.07	50.03	3.67	12.16	24.63				
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	24.16	0.7	41.54	2.93	8.50	20.34				
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: NO_x REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia	Total
6. Wood or Bark							
a. Area							
b. Point							
7. Combination							
a. Area							
b. Point							
D. Total Fuel Combustion	130.34	36.89	207.03	14.94	46.77	101.67	537.64
II. Power Plants							
A. Coal							
B. Distillate Oil						51.35	
C. Residual Oil							
D. Natural Gas	12932.4		1137.0	23716.8		4710.3	
E. Combination							
F. Total Power Plants	12932.4		1137.0	23716.8		4761.65	42547.85
III. Process Emissions							
A. Chemical							
B. Food and Agriculture		129.81	65.3	6.0			
C. Metallurgical							
D. Mineral	46.5					66.57	
E. Wood							
F. Petroleum Storage							
G. Petrochemical Operations							
H. Total Process Emissions	46.5	129.81	65.3	6.0		66.57	314.18
IV. Solid Waste Disposal							
A. Incineration							
1. Area	9.35	1.6	6.3	1.0	2.38	6.3	99.93
2. Point			73.0				
B. Open Burning							
1. Area							
2. Point							
C. Total Solid Waste Disposal	9.35	1.6	79.3	1.0	2.38	6.3	99.93
V. Transportation							
A. Motor Vehicles							
1. Gasoline	12333.6	5215.9	21482.4	2921.2	4820.5	10010.2	
2. Diesel	960.9	348.5	1673.4	195.3	322.0	779.7	
B. Off-Highway Usage							
C. Aircraft	192.04		120.76				
D. Railroads		1.8	8.4		93.5		
E. Vessels							
F. Gasoline Handling							
G. Total Transportation	13486.54	5566.2	23284.96	3116.5	5236.0	10789.9	61480.1

POLLUTANT: NO_x

REGION: Central

	Brevard	Lake	Orange	Osceola	Seminole	Volusia	Total
VI Miscellaneous Area Sources							
A. Forest Fires	43.0	48.5	39.9	56.8	19.3	36.3	
B. Agricultural, Silvicultural and Landclearing Burning	40.5	59.5	37.6	53.6	13.0	186.6	
C. Grove Protection	34	72	72	77		125	
D. Total Miscellaneous	117.5	180.0	149.5	187.4	32.3	347.9	1014.6
VII Grand Total	26722.63	5914.5	24923.09	27042.64	5317.45	16073.99	105994.3
A. Area	13743.73	5784.69	23647.79	3319.84	5317.45	11247.77	63059.27
B. Point	12978.90	129.81	1275.30	23722.80	0.00	4828.22	42935.03

EMISSION INVENTORY SUMMARY

Southeast Florida Intrastate AQCR

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Particulate

REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie		
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	28.84	58.79	2.18	1.47	2.09	0.64	15.29	2.6		
b. Point										
3. Residual Oil										
a. Area	3.0	6.12	0.17	0.13	0.25	0.05	1.7	0.25		
b. Point										
4. Natural Gas*										
a. Area	22.25	45.49	1.29	1.01	1.89	0.40	12.51	1.82		
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	15.94	32.13	2.43	1.22	0.27	0.7	6.17	2.06		
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area		6.18								
b. Point										
3. Residual Oil										
a. Area		18.7								
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Particulate

REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie	TOTALS
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area									
b. Point							7202.5		
D. Total Fuel Combustion	70.03	67.41	6.07	3.83	4.50	1.79	7238.17	6.73	7398.53
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil					60.7				
D. Natural Gas									
E. Combination	1224.5	942.8					553.9		
F. Total Power Plants	1224.5	942.8			60.7		553.9		2781.90
III. Process Emissions									
A. Chemical							4.1		
B. Food and Agriculture		38.4						699.5	
C. Metallurgical		118.98			9.69		2.0		
D. Mineral	253.01	9102.23					308.66		
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	253.01	9259.61			9.69		314.76	699.5	10536.57
IV. Solid Waste Disposal									
A. Incineration									
1. Area		57.04	4.56	1.6	17.15	1.75	222.0	7.2	
2. Point	1624.15	880.56							
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	1624.15	937.60	4.56	1.6	17.15	1.75	222.0	7.2	2816.01
V. Transportation									
A. Motor Vehicles									
1. Gasoline	1190.9	2093.8	84.7	64.7	86.8	27.9	621.4	135.0	
2. Diesel	189.6	333.3	13.47	10.28	13.8	4.4	98.9	21.5	
B. Off-Highway Usage									
C. Aircraft	304.18	1985.3					182.26		
D. Railroads	0.8	66.0					1.2		
E. Vessels									
F. Gasoline Handling									
G. Total Transportation	1685.48	4478.40	98.17	74.98	100.60	32.30	903.76	156.5	7530.39

POLLUTANT: Particulate

REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie	TOTALS
VI Miscellaneous Area Sources									
A. Forest Fires	110.3	185.8	96.8	106.0	98.7	147.54	185.8	110.7	
B. Agricultural, Silvicultural and Landclearing Burning	33.5	56.4	1048.2	1148.2	29.9	1597.5	56.4	1198.0	
C. Grove Protection									
D. Total Miscellaneous	143.8	242.2	1145.0	1254.20	128.60	1745.04	242.20	1308.7	6209.74
VII Grand Total	5000.97	15928.02	1253.80	1334.61	321.24	1780.88	9474.79	2178.63	37272.94
A. Area	1899.31	4845.05	1253.80	1334.61	250.85	1780.88	1403.63	1479.13	14247.26
B. Point	3101.66	11082.97	0.00	0.00	70.39	0.00	8071.16	699.50	23025.68

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Sulfur Oxides

REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie		
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	20.79	42.34	1.59	1.06	1.50	0.47	11.01	1.9		
b. Point										
3. Residual Oil										
a. Area	86.2	176.2	5.0	3.9	7.3	1.56	48.5	7.06		
b. Point										
4. Natural Gas*										
a. Area	0.7	1.44	0.04	0.03	0.06	0.01	0.40	0.06		
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	7.65	15.42	1.17	0.59	0.13	0.34	2.96	1.0		
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point		58.5								
3. Residual Oil										
a. Area										
b. Point		541.0								
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Sulfur Oxides

REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie	TOTALS
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area									
b. Point							3848.3		
D. Total Fuel Combustion	115.34	834.90	7.80	5.58	8.99	2.38	3911.17	10.02	4896.18
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil					1404.0				
D. Natural Gas									
E. Combination	40394.5	37969.6					18565.0		
F. Total Power Plants	40394.5	37969.6			1404.0		18565.0		98333.10
III. Process Emissions									
A. Chemical									
B. Food and Agriculture		6.96							
C. Metallurgical		22.71							
D. Mineral	385.5	3331.58				413.9			
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	385.5	3361.25				413.9			4160.65
IV. Solid Waste Disposal									
A. Incineration									
1. Area		52.6					11		
2. Point	344.13								
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	344.13	52.6					11		407.73
V. Transportation									
A. Motor Vehicles									
1. Gasoline	595.5	1046.9	42.3	32.3	43.4	13.9	310.7	67.5	
2. Diesel	363.1	638.3	25.8	19.7	26.4	8.5	189.4	41.2	
B. Off-Highway Usage									
C. Aircraft	647.14	987.8					183.37		
D. Railroads	2.1	171.7					3.2		
E. Vessels									
F. Gasoline Handling									
G. Total Transportation	1607.84	2844.7	68.1	52.0	69.8	22.4	686.67	108.7	5460.21

POLLUTANT: Sulfur Oxides

REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie	TOTALS
VI Miscellaneous Area Sources									
A. Forest Fires									
B. Agricultural, Silvicultural and Landclearing Burning									
C. Grove Protection									
D. Total Miscellaneous									0.00
VII Grand Total	42847.31	45063.05	75.90	57.58	1482.79	438.68	23173.84	118.72	113257.87
A. Area	1723.18	3132.70	75.90	57.58	78.79	24.78	760.54	118.72	5972.19
B. Point	41124.13	41930.35	0.00	0.00	1404.00	413.90	22413.30	0.00	107285.68

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Carbon Monoxide REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie		
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	14.4	29.40	1.11	0.71	1.05	0.32	7.65	1.31		
b. Point										
3. Residual Oil										
a. Area	1.5	3.06	0.09	0.07	0.13	0.03	0.84	0.12		
b. Point										
4. Natural Gas*										
a. Area	23.42	47.88	1.36	1.06	1.99	0.42	13.17	1.92		
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.21	0.43	0.03	0.02		0.01	0.08	0.03		
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: **Carbon Monoxide** REGION: **Southeast**

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie	TOTALS
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area									
b. Point									
D. Total Fuel Combustion	39.53	80.77	2.59	1.86	3.17	0.78	21.74	3.38	153.82
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil					0.7				
D. Natural Gas									
E. Combination	32.32	9.0					6.7		
F. Total Power Plants	32.32	9.0			0.7		6.7		48.72
III. Process Emissions									
A. Chemical									
B. Food and Agriculture									
C. Metallurgical									
D. Mineral									
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions									0.00
IV. Solid Waste Disposal									
A. Incineration									
1. Area		196.95	6.33	2.2	23.8	2.43	53.54	10.0	
2. Point	229.4								
B. Open Burning									
1. Area							965.4		
2. Point									
C. Total Solid Waste Disposal	229.4	196.95	6.33	2.2	23.8	2.43	1018.94	10.0	1490.05
V. Transportation									
A. Motor Vehicles									
1. Gasoline	389732.1	685211.9	17507.2	13364.1	17929.5	5759.5	203370.3	27895.8	
2. Diesel	2533.4	4454.0	180.0	137.4	184.42	59.2	1321.8	281.1	
B. Off-Highway Usage									
C. Aircraft	4073.9	9020.27					1230.9		
D. Railroads	2.2	184.9					3.4		
E. Vessels									
F. Gasoline Handling									
G. Total Transportation	396341.6	698871.07	17687.2	13501.5	18113.92	5818.7	205926.4	28176.9	1384437.27

POLLUTANT: Carbon Monoxide

REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie	TOTALS
VI Miscellaneous Area Sources									
A. Forest Fires	357.0	601.2	313.3	343.1	319.4	477.4	601.2	358.0	
B. Agricultural, Silvicultural and Landclearing Burning	197.0	332.0	6166.0	6754.0	176.0	9397.0	332.0	7047.0	
C. Grove Protection									
D. Total Miscellaneous	554.0	933.2	6479.3	7097.1	495.4	9874.4	933.2	7405.0	33771.60
VII Grand Total	397196.85	700090.99	24175.42	20602.66	18636.99	15696.31	207906.98	35595.28	1419901.46
A. Area	396935.13	700081.99	24175.42	20602.66	18636.99	15696.31	207846.74	35595.28	1419569.82
B. Point	261.72	9.00	0.00	0.00	0.00	0.00	60.24	0.00	331.66

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Hydrocarbon

REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie		
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	7.62	17.67	0.65	0.42	0.63	0.17	4.58	0.81		
b. Point										
3. Residual Oil										
a. Area	0.9	1.84	0.05	0.04	0.08	0.02	0.5	0.07		
b. Point										
4. Natural Gas*										
a. Area	9.37	19.15	0.54	0.42	0.79	0.17	5.27	0.77		
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	3.19	6.43	0.49	0.24	0.05	0.14	1.23	0.41		
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area		1.2								
b. Point										
3. Residual Oil										
a. Area		3.7								
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Hydrocarbon

REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie	TOTALS
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area							34.9		
b. Point									
D. Total Fuel Combustion	21.08	49.99	1.73	1.12	1.55	0.80	46.48	2.06	124.51
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil						82.1			
D. Natural Gas									
E. Combination	3389.1	1058.9					721.3		
F. Total Power Plants	3389.1	1058.9				82.1	721.3		5251.40
III. Process Emissions									
A. Chemical							86.55		
B. Food and Agriculture								7.14	
C. Metallurgical									
D. Mineral	2.9						4.3		
E. Wood									
F. Petroleum Storage	17828.01	3593.3	170.94		62.9		3828.4	195.88	
G. Petrochemical Operations									
H. Total Process Emissions	17830.91	3593.3	170.94		62.9		3919.25	203.02	25780.32
IV. Solid Waste Disposal									
A. Incineration									
1. Area		134.72							
2. Point	344.13								
B. Open Burning									
1. Area							340.7		
2. Point									
C. Total Solid Waste Disposal	344.13	134.72					340.7		819.55
V. Transportation									
A. Motor Vehicles									
1. Gasoline	63714.8	112020.9	3368.0	2570.9	3449.2	1108.0	33247.7	5366.5	
2. Diesel	492.2	865.3	35.0	26.7	35.8	11.5	256.8	55.8	
B. Off-Highway Usage									
C. Aircraft	280.93	2601.9					148.9		
D. Railroads	1.6	132.1					2.4		
E. Vessels									
F. Gasoline Handling	3126.2	5496.4	222.4	169.8	227.8	73.2	1631.3	354.3	
G. Total Transportation	67615.73	121116.6	3625.4	2767.4	3712.8	1192.7	35287.1	5776.6	241094.33

POLLUTANT: Hydrocarbon

REGION: Southeast

	Broward	Dade	Indian River	Martin	Monroe	Okeechobee	Palm Beach	St. Lucie	TOTALS
VI Miscellaneous Area Sources									
A. Forest Fires	77.9	131.2	68.3	74.9	69.7	104.1	131.2	78.1	
B. Agricultural, Silvicultural and Landclearing Burning	39.4	66.4	1233.2	1350.8	35.2	1879.4	66.4	1409.4	
C. Grove Protection									
D. Total Miscellaneous	117.3	197.6	1301.5	1425.7	104.9	1983.5	197.6	1127.5	6455.60
VII Grand Total	89318.25	126151.11	5099.57	4194.22	3882.15	3258.80	40512.43	7109.18	279525.71
A. Area	67754.11	121498.91	4928.63	4194.22	3819.25	3176.70	35836.98	6906.16	248114.96
B. Point	21564.14	4652.20	170.94	0.00	62.90	82.10	4675.45	203.02	31410.75

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Nitrogen Oxide REGION: Southeast

	Broward	Broward**	Dade	Dade**	Indian River	Indian** River	Martin	Martin**	Monroe	Monroe**
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	34.58	34.58	70.57	70.57	2.62	2.62	1.8	1.8	2.51	2.51
b. Point										
3. Residual Oil										
a. Area	3.6	3.6	7.34	7.34	0.2	0.2	0.16	0.16	0.3	0.3
b. Point										
4. Natural Gas*										
a. Area	64.4	64.4	131.69	131.69	3.74	3.74	2.91	2.91	5.46	5.46
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	63.76	63.76	128.52	128.52	9.71	9.71	4.88	4.88	1.09	1.09
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area			24.7	24.7						
b. Point										
3. Residual Oil										
a. Area			74.8	74.8						
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

** Emissions Achieved Applying Chapter 17-2 FAC

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Nitrogen Oxide

REGION: Southeast

	Okeechobee	Okeechobee**	Palm Beach	Palm Beach**	St. Lucie	St. Lucie**				
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	0.78	0.78	18.31	18.31	3.14	3.14				
b. Point										
3. Residual Oil										
a. Area	0.07	0.07	2.0	2.0	0.3	0.3				
b. Point										
4. Natural Gas*										
a. Area	1.17	1.17	36.22	36.22	5.28	5.28				
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	2.8	2.8	24.69	24.69	8.24	8.24				
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Nitrogen Oxide

REGION: Southeast

	Broward	Broward**	Dade	Dade **	Indian River	Indian River**	Martin	Martin **	Monroe	Monroe**
6. Wood or Bark										
a. Area										
b. Point										
7. Combination										
a. Area										
b. Point										
D. Total Fuel Combustion	166.34	166.34	437.62	437.62	16.27	16.27	9.75	9.75	9.36	9.36
II. Power Plants										
A. Coal										
B. Distillate Oil										
C. Residual Oil									1724.6	739.1
D. Natural Gas	41809.9	22407.9	15811.7	7206.8						
E. Combination										
F. Total Power Plants	41809.9	22407.9	15811.7	7026.8					1724.6	739.1
III. Process Emissions										
A. Chemical										
B. Food and Agriculture										
C. Metallurgical										
D. Mineral	58.5	58.5					9.88	9.88		
E. Wood										
F. Petroleum Storage										
G. Petrochemical Operations										
H. Total Process Emissions	58.5	58.5					9.88	9.88		
IV. Solid Waste Disposal										
A. Incineration										
1. Area			179.6	179.6						
2. Point	458.85	458.85								
B. Open Burning										
1. Area										
2. Point										
C. Total Solid Waste Disposal	458.85	458.85	179.6	179.6						
V. Transportation										
A. Motor Vehicles										
1. Gasoline	36918.8	36918.8	64909.3	64909.3	3060.8	3060.8	2336.5	2336.5	3134.7	3134.7
2. Diesel	2876.3	2876.3	5056.9	5056.9	204.34	204.34	155.9	155.9	209.4	209.4
B. Off-Highway Usage										
C. Aircraft	286.08	286.08	1578.74	1578.74						
D. Railroads	2.4	2.4	198.1							
E. Vessels										
F. Gasoline Handling										
G. Total Transportation	40083.58	40083.58	71743.04	71743.04	3265.14	3265.14	2492.40	2492.40	3344.10	3344.1

POLLUTANT: Nitrogen Oxide — REGION: Southeast

	Okeechobee	Okeechobee**	PalmBeach	PalmBeach**	St. Lucie	St. Lucie**	TOTALS	TOTALS**
6. Wood or Bark								
a. Area								
b. Point								
7. Combination								
a. Area			544.5	544.5				
b. Point								
D. Total Fuel Combustion	4.82	4.82	625.72	625.72	16.96	16.96	1286.84	1286.84
II. Power Plants								
A. Coal								
B. Distillate Oil								
C. Residual Oil								
D. Natural Gas			9945.3	4638.2				
E. Combination								
F. Total Power Plants			9945.3	4638.2			69291.50	34992.00
III. Process Emissions								
A. Chemical								
B. Food and Agriculture					30.4	30.4		
C. Metallurgical								
D. Mineral			95.12	95.12				
E. Wood								
F. Petroleum Storage								
G. Petrochemical Operations								
H. Total Process Emissions			95.12	95.12	30.4	30.4	193.90	193.90
IV. Solid Waste Disposal								
A. Incineration								
1. Area								
2. Point								
B. Open Burning								
1. Area			68.1	68.1				
2. Point								
C. Total Solid Waste Disposal			68.1	68.1			706.55	706.55
V. Transportation								
A. Motor Vehicles								
1. Gasoline	1006.9	1006.9	19265.0	19265.0	4877.1	4877.1		
2. Diesel	67.2	67.2	1500.7	1500.7	326.0	326.0		
B. Off-Highway Usage								
C. Aircraft			171.3					
D. Railroads			3.6					
E. Vessels								
F. Gasoline Handling								
G. Total Transportation	1074.10	1074.10	20940.6	20940.6	5203.1	5203.1	148146.06	148146.06

POLLUTANT: Nitrogen Oxide

REGION: Southeast

	Broward	Broward**	Dade	Dade**	Indian River	Indian River **	Martin	Martin **	Monroe	Monroe **
VI Miscellaneous Area Sources										
A. Forest Fires	13.0	13.0	21.9	21.9	11.4	11.4	12.5	12.5	11.6	11.6
B. Agricultural, Silvicultural and Landclearing Burning	3.9	3.9	6.6	6.6	123.3	123.3	135.1	135.1	3.5	3.5
C. Grove Protection										
D. Total Miscellaneous	16.9	16.9	28.5	28.5	134.7	134.7	147.6	147.6	15.1	15.1
VII Grand Total	82594.07	63192.07	88200.46	79595.56	3416.11	3416.11	2659.63	2659.63	5093.16	4107.66
A. Area	40266.82	40266.82	72388.76	72388.76	3416.11	3416.11	2649.75	2649.75	3368.56	3368.56
B. Point	42327.25	22925.25	15811.70	7206.80	0.00	0.00	9.88	9.88	1724.60	739.10

POLLUTANT: Nitrogen Oxide

REGION: Southeast

	Okeechobee	Okeechobee**	PalmBeach	PalmBeach**	St. Lucie	St. Lucie**	TOTALS	TOTALS**
VI Miscellaneous Area Sources								
A. Forest Fires	17.4	17.4	21.9	21.9	13.0	13.0		
B. Agricultural, Silvicultural and Landclearing Burning	187.9	187.9	6.6	6.6	140.9	140.9		
C. Grove Protection								
D. Total Miscellaneous	205.3	205.3	28.5	28.5	153.9	153.9	730.40	730.40
VII Grand Total	1284.22	1284.22	31703.34	26396.24	5404.36	5404.36	220355.25	186055.75
A. Area	1284.22	1284.22	21118.42	21118.42	5373.96	5373.96	149866.60	149866.60
B. Point	0.00	0.00	10584.92	5277.82	30.40	30.40	70489.26	36189.15

EMISSION INVENTORY SUMMARY

Southwest Florida Intrastate AQCR

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Particulate

REGION:Southwest

	Charlotte		Collier		Desoto		Glades		Hendry	
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	3.08		3.80		2.20		0.38		1.60	
b. Point										
3. Residual Oil										
a. Area	0.27		0.37		0.13		0.03		0.12	
b. Point										
4. Natural Gas*										
a. Area	0.23		0.32		0.11		0.03		0.10	
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.20		0.17		0.25		0.04		0.15	
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point									99.5	
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Particulate

REGION: Southwest

	Highlands		Lee		Sarasota					
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	4.67		12.08		20.78					
b. Point										
3. Residual Oil										
a. Area	0.30		1.04		1.20					
b. Point										
4. Natural Gas*										
a. Area	0.25		0.88		1.01					
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.49		0.81		2.38					
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area	2.65									
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* [illegible] Industrial Uses

POLLUTANT: Particulate

REGION: Southwest

	Charlotte	Collier	Desoto	Glades	Hendry
6. Wood or Bark					
a. Area					
b. Point			28.6		
7. Combination					
a. Area					
b. Point				874.73	14121.0
D. Total Fuel Combustion	3.78	4.66	31.29	875.21	14222.47
II. Power Plants					
A. Coal					
B. Distillate Oil					
C. Residual Oil					
D. Natural Gas					
E. Combination					
F. Total Power Plants					
III. Process Emissions					
A. Chemical					
B. Food and Agriculture			174.0		9.68
C. Metallurgical					
D. Mineral	69.55	300.52	0.72		
E. Wood					
F. Petroleum Storage					
G. Petrochemical Operations					
H. Total Process Emissions	69.55	300.52	174.72		9.68
IV. Solid Waste Disposal					
A. Incineration					
1. Area	5.14	9.5	0.76	1.63	1.5
2. Point					
B. Open Burning					
1. Area					
2. Point					
C. Total Solid Waste Disposal	5.14	9.5	0.76	1.63	1.5
V. Transportation					
A. Motor Vehicles					
1. Gasoline	43.5	96.9	34.0	12.3	30.1
2. Diesel	6.91	15.42	5.4	1.95	4.79
B. Off-Highway Usage					
C. Aircraft					
D. Railroads				0.7	0.8
E. Vessels					
F. Gasoline Handling					
G. Total Transportation	50.41	112.32	39.4	14.95	35.69

POLLUTANT: Particulate

REGION: Southwest

	Highlands	Lee	Sarasota	TOTALS
6. Wood or Bark				
a. Area				
b. Point				
7. Combination				
a. Area				
b. , Point				
D. Total Fuel Combustion	4.62	14.81	25.37	15182.21
II. Power Plants				
A. Coal				
B. Distillate Oil				
C. Residual Oil		549.7		
D. Natural Gas				
E. Combination	108.16			
F. Total Power Plants	108.16	549.7		657.86
III. Process Emissions				
A. Chemical				
B. Food and Agriculture				
C. Metallurgical				
D. Mineral	75.35	59.18	65.6	
E. Wood				
F. Petroleum Storage				
G. Petrochemical Operations				
H. Total Process Emissions	75.35	59.18	65.6	754.60
IV. Solid Waste Disposal				
A. Incineration				
1. Area	1.34	16.84	17.8	
2. Point				
B. Open Burning				
1. Area				
2. Point				
C. Total Solid Waste Disposal	1.34	16.84	17.8	54.51
V. Transportation				
A. Motor Vehicles				
1. Gasoline	69.3	223.4	200.8	
2. Diesel	11.03	35.56	31.97	
B. Off-Highway Usage				
C. Aircraft				
D. Railroads		0.6	0.4	
E. Vessels				
F. Gasoline Handling				
G. Total Transportation	80.33	259.56	233.17	825.83

POLLUTANT: Particulate

REGION: Southwest

	Charlotte	Collier	Desoto	Glades	Hendry
VI Miscellaneous Area Sources					
A. Forest Fires	241.1	938.0	227.7	140.2	562.8
B. Agricultural, Silvicultural and Landclearing Burning	1743.9	303.79	1646.96	1518.3	182.2
C. Grove Protection		42.0			
D. Total Miscellaneous	1985.0	1283.79	1874.66	1658.5	745.0
VII Grand Total	2113.88	1710.79	2120.83	2550.29	15014.34
A. Area	2044.33	1410.27	1917.51	1675.57	784.16
B. Point	69.55	300.52	203.32	874.73	14230.18

POLLUTANT: Particulate

REGION: Southwest

	Highlands	Lee	Sarasota	TOTALS
VI Miscellaneous Area Sources				
A. Forest Fires	193.6	375.2	200.9	
B. Agricultural, Silvicultural and Landclearing Burning	2096.6	121.38	1453.3	
C. Grove Protection	532		4	
D. Total Miscellaneous	2822.2	496.58	1658.2	12523.93
VII Grand Total	3092.0	1396.67	2000.14	29998.94
A. Area	2908.49	787.79	1934.54	13462.66
B. Point	183.51	608.88	65.60	16536.29

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Sulfur Oxides

REGION: Southwest

	Charlotte	Collier	DeSoto	Glades	Hendry	Highlands	Lee	Sarasota		
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	2.22	2.70	1.69	0.33	1.16	3.36	8.69	14.96		
b. Point										
3. Residual Oil										
a. Area	7.90	10.87	3.73	1.04	3.40	8.43	30.0	34.4		
b. Point										
4. Natural Gas*										
a. Area	0.01	0.01	0.003	Neg.	0.003	0.007	0.027	0.031		
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.09	0.08	0.12	0.02	0.07	0.24	0.39	1.14		
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area						14.9				
b. Point					354.7					
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Sulfur Oxides

REGION: Southwest

	Charlotte	Collier	DeSoto	Glades	Hendry	Highlands	Lee	Sarasota	TOTALS
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area				651.24	241.9				
b. Point									
D. Total Fuel Combustion	10.22	13.66	5.54	652.63	601.23	26.93	39.11	50.53	1399.85
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil							19823.0		
D. Natural Gas						840.5			
E. Combination									
F. Total Power Plants						840.5	19823.0		20663.50
III. Process Emissions									
A. Chemical									
B. Food and Agriculture			225.8		4.69				
C. Metallurgical									
D. Mineral	116.3	1.7				172.5	46.5	62.0	
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	116.3	1.7	225.8		4.69	172.5	46.5	62.0	629.49
IV. Solid Waste Disposal									
A. Incineration									
1. Area	0.85	1.6	0.12	0.3	0.25	0.22	2.8	2.96	
2. Point									
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	0.85	1.6	0.12	0.3	0.25	0.22	2.8	2.96	9.10
V. Transportation									
A. Motor Vehicles									
1. Gasoline	21.8	48.46	17.0	6.1	15.0	34.7	111.7	100.4	
2. Diesel	13.24	29.53	10.35	3.73	9.16	21.13	68.1	61.22	
B. Off-Highway Usage									
C. Aircraft									
D. Railroads				1.9	2.2		1.6	0.9	
E. Vessels									
F. Gasoline Handling									
G. Total Transportation	35.04	77.99	27.35	11.73	26.36	55.83	181.4	162.52	578.22

POLLUTANT: Sulfur Oxides

REGION: Southwest

	Charlotte	Collier	DeSoto	Glades	Hendry	Highlands	Lee	Sarasota	TOTALS
VI Miscellaneous Area Sources									
A. Forest Fires									
B. Agricultural, Silvicultural and Landclearing Burning									
C. Grove Protection		20.0				258.0		2.0	
D. Total Miscellaneous		20.0				258.0		2.0	280.00
VII Grand Total	162.41	114.95	258.81	664.66	632.53	1353.98	20092.81	280.01	23560.16
A. Area	116.30	113.25	33.01	13.42	31.24	340.98	223.31	218.01	1089.52
B. Point	46.11	1.70	225.80	651.24	601.29	1013.00	19869.50	62.00	22470.64

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Carbon Monoxide

REGION: Southwest

	Charlotte	Collier	DeSoto	Glades	Hendry	Highlands	Lee	Sarasota		
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	1.54	1.92	1.36	0.27	0.96	2.86	6.89	12.92		
b. Point										
3. Residual Oil										
a. Area	0.14	0.20	0.06	0.02	0.06	0.15	0.52	0.60		
b. Point										
4. Natural Gas*										
a. Area	0.24	0.33	0.11	0.03	0.10	0.26	0.93	1.06		
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	Neg.	Neg.	Neg.	Neg.	Neg.	0.01	0.01	0.03		
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area					0.2					
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Carbon Monoxide

REGION: Southwest

	Charlotte	Collier	DeSoto	Glades	Hendry	Highlands	Lee	Sarasota	TOTALS
6. Wood or Bark									
a. Area			2.08						
b. Point									
7. Combination									
a. Area				0.3	0.1				
b. Point									
D. Total Fuel Combustion	1.92	2.45	3.61	0.62	1.42	3.28	8.35	14.61	36.26
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil							3.03		
D. Natural Gas						0.93			
E. Combination									
F. Total Power Plants						0.93	3.03		3.96
III. Process Emissions									
A. Chemical									
B. Food and Agriculture									
C. Metallurgical									
D. Mineral						0.8			
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions						0.8			0.80
IV. Solid Waste Disposal									
A. Incineration									
1. Area	7.15	13.2	1.05	2.3	2.11	1.86	23.4	24.7	
2. Point									
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	7.15	13.2	1.05	2.3	2.11	1.86	23.4	24.7	75.77
V. Transportation									
A. Motor Vehicles									
1. Gasoline	8990.3	20026.6	7029.6	2534.0	6213.9	14327.0	73098.1	65725.2	
2. Diesel	92.4	206.0	72.2	26.0	63.9	147.4	475.1	427.2	
B. Off-Highway Usage									
C. Aircraft									
D. Railroads				2.1	2.4		1.7	1.0	
E. Vessels									
F. Gasoline Handling									
G. Total Transportation	9082.7	20232.6	7101.8	2562.1	6280.2	14474.4	73574.9	66153.4	199462.10

POLLUTANT: Carbon Monoxide

REGION: Southwest

	Charlotte	Collier	DeSoto	Glades	Hendry	Highlands	Lee	Sarasota	TOTALS
VI Miscellaneous Area Sources									
A. Forest Fires	779.9	3034.9	736.6	453.6	1821.0	626.5	1214.0	650.0	
B. Agricultural, Silvicultural and Landclearing Burning	10258.0	1787.0	9688.0	8931.0	1072.0	12333.0	714.0	8549.0	
C. Grove Protection		50				625		5	
D. Total Miscellaneous	11037.9	4871.9	10424.6	9384.6	2893.0	13584.5	1928.0	9204.0	63328.50
VII Grand Total	20129.67	25120.15	17531.06	11949.62	9176.73	28065.07	75537.68	75396.71	262907.64
A. Area	20129.67	25120.15	17531.06	11949.62	9176.73	28064.04	75534.65	75396.71	262902.88
B. Point	0.00	0.00	0.00	0.00	0.00	1.73	3.03	0.00	4.76

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Hydrocarbon

REGION: Southwest

	Charlotte	Collier	DeSoto	Glades	Hendry	Highlands	Lee	Sarasota		
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	0.92	1.15	0.66	0.15	0.50	1.40	4.09	6.23		
b. Point										
3. Residual Oil										
a. Area	0.08	0.11	0.04	0.01	0.04	0.09	0.31	0.36		
b. Point										
4. Natural Gas*										
a. Area	0.10	0.13	0.05	0.01	0.04	0.10	0.37	0.42		
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.04	0.03	0.05	0.01	0.03	0.10	0.16	0.48		
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area					3.1					
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Including Commercial Uses

POLLUTANT: Hydrocarbon

REGION: Southwest

	Charlotte	Collier	DeSoto	Glades	Hendry	Highlands	Lee	Sarasota	TOTALS
6. Wood or Bark									
a. Area			2.08						
b. Point									
7. Combination									
a. Area				4.1	1.5				
b. Point									
D. Total Fuel Combustion	1.14	1.42	2.88	4.28	5.21	1.69	4.93	7.49	29.04
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil							378.5		
D. Natural Gas									
E. Combination						99.5			
F. Total Power Plants						99.5	378.5		486.00
III. Process Emissions									
A. Chemical									
B. Food and Agriculture		4.22							
C. Metallurgical									
D. Mineral	1.5					1.46	0.6	0.78	
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	1.5	4.22				1.46	0.6	0.78	8.56
IV. Solid Waste Disposal									
A. Incineration									
1. Area	3.3	6.1	0.5	1.05	0.98	0.86	10.85	11.5	
2. Point									
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	3.3	6.1	0.5	1.05	0.98	0.86	10.85	11.5	35.14
V. Transportation									
A. Motor Vehicles									
1. Gasoline	1729.5	3852.7	1352.3	487.5	1195.4	2756.2	11950.3	10745.0	
2. Diesel	17.9	40.0	14.0	5.1	12.4	28.6	92.3	83.0	
B. Off-Highway Usage									
C. Aircraft									
D. Railroads				1.5	1.7		1.2	0.7	
E. Vessels									
F. Gasoline Handling	114.2	254.4	89.3	32.2	78.9	182.0	586.3	527.2	
G. Total Transportation	1861.6	4147.1	1455.6	526.3	1288.4	2966.8	12630.1	11355.9	36231.80

POLLUTANT: Hydrocarbon

REGION: Southwest

	Charlotte	Collier	DeSoto	Glades	Hendry	Highlands	Lee	Sarasota	TOTALS
VI Miscellaneous Area Sources.									
A. Forest Fires	170.2	662.2	160.7	99.0	397.3	136.7	264.9	141.8	
B. Agricultural, Silvicultural and Landclearing Burning	2051.6	357.4	1937.6	1786.2	214.4	2466.6	142.8	1709.8	
C. Grove Protection		12.0				151.0		1.0	
D. Total Miscellaneous	2221.8	1031.6	2098.3	1885.2	611.7	2754.3	407.7	1852.6	12863.20
VII Grand Total	4089.34	5190.44	3557.28	2416.83	1906.29	5824.61	13432.68	13228.27	49645.74
A. Area	4087.84	5186.22	3557.28	2416.83	1906.29	5723.65	13053.58	13227.49	49159.18
B. Point	1.50	4.22	0.00	0.00	0.00	100.96	379.10	0.78	486.57

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Nitrogen Oxides REGION: Southwest

	Charlotte		Collier		Desoto		Glades		Hendry	
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	2.70		4.55		2.64		0.56		1.93	
b. Point										
3. Residual Oil										
a. Area	0.33		0.45		0.15		0.04		0.14	
b. Point										
4. Natural Gas*										
a. Area	0.666		0.92		0.32		0.09		0.29	
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	0.78		0.70		1.0		0.15		0.58	
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area										
b. Point									61.9	
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

EMISSION INVENTORY SUMMARY (BY COUNTY)

POLLUTANT: Nitrogen Oxides

REGION: Southwest

	Highlands		Lee		Sarasota					
I. Fuel Combustion										
A. Residential and Institutional Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area	5.60		14.46		14.80					
b. Point										
3. Residual Oil										
a. Area	0.35		1.25		1.43					
b. Point										
4. Natural Gas*										
a. Area	0.71		2.55		2.91					
b. Point										
5. Combination										
a. Area										
b. Point										
B. Commercial										
1. Distillate Oil										
a. Area	1.98		3.24		9.52					
b. Point										
2. Residual Oil										
a. Area										
b. Point										
C. Industrial Fuel										
1. Coal or Coke										
a. Area										
b. Point										
2. Distillate Oil										
a. Area										
b. Point										
3. Residual Oil										
a. Area	4.5									
b. Point										
4. Natural Gas										
a. Area										
b. Point										
5. Process Gas										
a. Area										
b. Point										

* Includes Commercial Uses

POLLUTANT: Nitrogen Oxides

REGION: Southwest

	Charlotte		Collier		Desoto		Glades		Hendry
6. Wood or Bark									
a. Area					10.04				
b. Point									
7. Combination									
a. Area							304.6		306.7
b. Point									
D. Total Fuel Combustion	4.47		6.62		14.15		305.44		371.54
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil									
D. Natural Gas									
E. Combination									
F. Total Power Plants									
III. Process Emissions									
A. Chemical									
B. Food and Agriculture					84.44				
C. Metallurgical									
D. Mineral	29.3		3.3						
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	29.3		3.3		84.44				
IV. Solid Waste Disposal									
A. Incineration									
1. Area	1.6		2.9		0.23		0.5		0.46
2. Point									
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	1.6		2.9		0.23		0.5		0.46
V. Transportation									
A. Motor Vehicles									
1. Gasoline	1571.8		3501.3		1229.0		443.0		1086.0
2. Diesel	104.9		233.9		82.0		29.6		72.6
B. Off-Highway Usage									
C. Aircraft									
D. Railroads									
E. Vessels							2.2		2.6
F. Gasoline Handling									
G. Total Transportation	1676.7		2735.2		1311.0		474.8		1161.20

POLLUTANT: Nitrogen Oxides

REGION: Southwest

	Highlands		Lee		Sarasota		TOTALS		
6. Wood or Bark									
a. Area									
b. Point									
7. Combination									
a. Area									
b. Point									
D. Total Fuel Combustion	13.14		21.5		28.66		765.52		
II. Power Plants									
A. Coal									
B. Distillate Oil									
C. Residual Oil									
D. Natural Gas									
E. Combination	1330.0		7947.9						
F. Total Power Plants	1330.0		7947.9				9277.90		
III. Process Emissions									
A. Chemical									
B. Food and Agriculture									
C. Metallurgical									
D. Mineral	37.75		11.7		15.6				
E. Wood									
F. Petroleum Storage									
G. Petrochemical Operations									
H. Total Process Emissions	37.75		11.7		15.6		182.09		
IV. Solid Waste Disposal									
A. Incineration									
1. Area	0.4		5.14		5.4				
2. Point									
B. Open Burning									
1. Area									
2. Point									
C. Total Solid Waste Disposal	0.4		5.14		5.4		16.63		
V. Transportation									
A. Motor Vehicles									
1. Gasoline	2504.8		6924.5		6226.1				
2. Diesel	167.4		539.4		485.0				
B. Off-Highway Usage									
C. Aircraft									
D. Railroads			1.8		1.1				
E. Vessels									
F. Gasoline Handling									
G. Total Transportation	2672.2		7465.7		6712.2		24209.00		

POLLUTANT: Nitrogen Oxides

REGION: Southwest

	Charlotte	Collier	Desoto	Glades	Hendry
VI Miscellaneous Area Sources					
A. Forest Fires	28.4	110.4	26.8	16.5	66.2
B. Agricultural, Silvicultural and Landclearing Burning	205.2	35.7	193.8	178.6	21.4
C. Grove Protection		8			
D. Total Miscellaneous	233.6	154.1	220.6	195.1	87.6
VII Grand Total	1945.67	2902.12	1630.42	975.84	1620.8
A. Area	1916.37	2898.82	1545.98	671.24	1252.20
B. Point	29.30	3.30	84.44	304.60	368.60

POLLUTANT: Nitrogen Oxides

REGION: Southwest

	Highlands		Lee		Sarasota		TOTALS			
VI Miscellaneous Area Sources										
A. Forest Fires	22.8		44.1		23.6					
B. Agricultural, Silvicultural and Landclearing Burning	246.7		14.28		171.0					
C. Grove Protection	107				0.8					
D. Total Miscellaneous	376.5		58.38		195.4		1521.28			
VII Grand Total	4429.99		15510.32		6957.26		35972.42			
A. Area	3062.24		7550.72		6941.66		25839.23			
B. Point	1367.75		7959.60		15.60		10133.19			