Report No. FAA-RD-72-39

STATISTICAL ANALYSIS OF METEOROLOGICAL PARAMETERS DURING FOG AT 45 U.S. AIRPORTS

AD744134

John K. Marut Edward Van Duyne Frank V. Melewicz
Kenneth A. Kraus Frank G. Coons

Weather and Flight Service Station Branch
Systems Research and Development Service
Federal Aviation Administration
Washington, D.C. 20591

MAY 1972
FINAL REPORT

Availability is unlimited. Document may be released to the National Technical Information Service, Springfield, Virginia 22151, for sale to the public.

Prepared for

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Systems Research & Development Service
Washington, D.C. 20591

NATIONAL TECHNICAL INFORMATION SERVICE

263

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
FAA-RD-72-39		

4. Title and Subtitle	5. Report Date
Statistical Analysis of Meteorological Parameters During Fog at 45 U. S. Airports	May 1972
	6. Performing Organization Code RD-451
7. Author(s) John K. Marut Frank V. Melewicz Kenneth A. Kraus Frank G. Coons Edward Van Duyne	8. Performing Organization Report No.
9. Performing Organization Name and Address Department of Transportation Federal Aviation Administration Weather and FSS Branch, SRDS Washington, D. C. 20591	10. Work Unit No. 081-261-032 11. Contract or Grant No.
12. Sponsoring Agency Name and Address Systems Research and Development Service Federal Aviation Administration 800 Independence Avenue, S.W. Washington, D. C. 20591	13. Type of Report and Period Covered Final Report 14. Sponsoring Agency Code

15. Supplementary Notes

16. Abstract

Pertinent climatological data are analyzed for fog conditions (prevailing visibility 1/2 mile and less without precipitation) at 45 U. S. airports for the ten year period 1956-1965. These data are considered essential for use in the design of systems to disperse and/or prevent fog at airports.

Tables and statistical values are included for: wind speed vs frequency, wind direction vs frequency, wind direction vs wind speed, visibility vs frequency, temperature vs frequency and cumulative totals for all airports. An additional analysis is included for fog at temperatures less than 33 deg. F. to include wind direction vs frequency, wind direction vs wind speed, wind rose data and temperature vs frequency. Monthly fog frequencies are stated for both cold and warm fog.

17. Key Words	18. Distribution Statement
Fog, Fog Climatology, Fog Dispersal Systems, Warm Fog, Cold Fog, Fog Modification	Availability is unlimited. Document may be released to the National Technical Information Service, Springfield, Virginia 22151, for sale to the public.

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	263	$3.00 P.C. $0.95 M.F.

Form DOT F 1700.7 (8-69)

STATISTICAL ANALYSIS OF METEOROLOGICAL PARAMETERS DURING FOG AT 45 U. S. AIRPORTS

The systems engineering approach to the development of fog dispersal systems at airports requires quantitative data on the fog environment. These data are considered essential for use in the design of systems to disperse and/or prevent fog at airports.

A computer program was developed to extract pertinent climatological data obtained during fog conditions (prevailing visibility 1/2 mile and less without precipitation) at 45 U. S. airports for the ten year period, 1956 - 1965 inclusive. Data were extracted from duplicates of records received from the National Climatic Center, Asheville, North Carolina.

Included in the fog classification are: fog, ice fog and ground fog with or without haze and/or smoke but without precipitation. The analyzed data includes both hourly and special observations. Each station has a summation of the hourly observations, total observations and the observations with smoke and/or haze. The average number of fog hours per year with visibility 1/2 mile or less can be obtained by dividing the number of hourly observations by ten (the number of years). The fog summation gives the number of observations of fog with liquid and frozen precipitation, although these observations were not included in the analysis.

Wind data is of most importance, particularly for locating ground-based fog dispersal systems, in relation to the runway and approach zones. Since the late 1950's, the F-420 (Series A through C) wind measuring instruments have been used almost exclusively in developing the data base for winds. The threshold speed for this instrument is 1.75 to 2.0 knots depending upon the mechanical condition of the instrument. The speed accuracy is $\pm$ 0.5 knots in the one to ten knot speed range. The consequence of the comparatively high threshold speed is to skew the data toward a greater percentage of calm conditions than actually exist during fogs. The wind direction accuracy is $\pm$ 5.0 degrees. The comments on speed and direction accuracy may be academic if the instrument has been moved or the measurement elevation changes appreciably during the ten years of data collection. Normally the wind data are collected approximately 20 feet above the field elevation. It is generally agreed that this is not the most desirable level at which to measure wind speeds if one is trying to determine the speed of movement of the fog. For a detailed discussion on the F-420 we recommend "Notes on Wind Measurement," by H. H. Crouser, August 1967, Technical Memorandum WBTM EDL-2. Temperature data are accurate to $\pm$ 0.5° F.

Fog parameters are analyzed individually and correlated selectively to each other for each of the 45 airports. A cumulative total for 39 airports is included. The statistical mean, mode, median, standard deviation and skew are computed.

Preceding page blank

The following airports are included in this study:

1.	Milwaukee, Wi.	MKE
2.	Minneapolis, Mn.	MSP
3.	Denver, Co.	DEN
4.	Burbank, Ca.	BUR
5.	Los Angeles, Ca.	LAX
6.	Oakland, Ca.	OAK
7.	San Francisco, Ca.	SFO
8.	Salt Lake City, Ut.	SLC
9.	Portland, Or.	PDX
10.	Seattle, Wa.	SEA
11.	Kansas City, Mo.	MCI
12.	Miami, Fl.	MIA
13.	New Orleans, La.	MSY
14.	Houston, Tx.	IAH
15.	Philadelphia, Pa.	PHL
16.	Washington (National), D.C.	DCA
17.	Atlanta, Ga.	ATL
18.	Birmingham, Al.	BHM
19.	Nashville, Tn.	BNA
20.	Dallas, Tx.	DAL
21.	Anchorage, Ak.	ANC
22.	Baltimore, Md.	BAL
23.	Washington (Dulles), D. C.	IAD
24.	Cincinnati, Oh.	CVG
25.	Dayton, Oh	DAY
26.	Indianapolis, In.	IND
27.	Louisville, Ky.	SDF
28.	New York, N. Y.	JFK
29.	Pittsburgh, Pa.	PIT
30.	Chicago, Il.	ORD
31.	Detroit, Mi.	DTW
32.	St. Louis, Mo.	STL
33.	New York (La Guardia), N. Y.	LGA
34.	Buffalo, N. Y.	BUF
35.	Newark, N. J.	EWR
36.	Boston, Ma.	BOS
37.	Hartford (Windsor Locks), Ct.	BDL
38.	Rochester, N. Y.	ROC
39.	Syracus, N. Y.	SYR
40.	Cleveland, Oh.	CLE
41.	Columbus, Oh.	CMH
42.	Spokane, Wa.	GEG
*43.	Boise, Id.	BOI
*44.	Reno, Nv.	RNO
*45.	Medford, Or.	MFR

* These airports have only cold fog analysis from hourly observations.

INDEX OF AIRPORTS

	PAGE
MKE	6
MSP	12
DEN	18
BUR	24
LAX	30
OAK	36
SFO	42
SLC	48
PDX	54
SEA	60
MCI	66
MIA	72
MSY	78
IAH	84
PHL	90
DCA	96
ATL	102
BHM	108
BNA	114
DAL	120
ANC	126
BAL	133
IAD	139
CVG	145
DAY	151
IND	157
SDF	163
ØFK	169
PIT	175
ORD	181
DTW	187
STL	192
LGA	198

	PAGE
BUF	204
EWR	210
BOS	216
BDL	222
ROC	228
SYR	234
CLE	240
CMH	246
GEG	252
BOI	256
RNO	258
MFR	260

Cumulative Totals - Page 262

MKE

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	118	16	167	168	181	216	172	160	132	85	90	49	39	18	80

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 5.85 KNOTS
MODE 5.00 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 3.55 KNOTS
SKEW 0.24

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMULATIVE FREQUENCY	118	134	469	866	1198	1415	1554	1611	1691

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	118	101	296	140	70	90	100	166	113	108	88	97	47	59	36	31	31

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	15	29	0	2	4	7	19	6	3	0	1	1	0	0	1	0
10-12	0	8	47	19	2	8	16	27	14	16	10	12	5	1	3	0	0
WIND 7-9	0	29	96	29	16	17	30	44	16	22	19	23	10	12	5	5	4
SPEED 4-6	0	31	96	69	37	30	29	41	50	38	33	31	13	25	19	11	16
KNOTS 1-3	0	18	28	23	13	31	18	35	27	29	26	30	18	21	9	14	11
CALM	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

MKE

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	73	186	457	13	567	2	67	0	321
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.78/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.44/16
SKEW -0.09

TEMPERATURE VS. FREQUENCY

FREQ.	9	1	0	0	10	10	28	32	48	73	60	87	80	81	90	101	95	144	95	87	102	69	74	55	65	56	41	53	35	3	7
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 45.99 °F.
MODE 47.50 °F.
MEDIAN 47.50 °F.
STD. DEV. 11.84 °F.
SKEW -0.04

HOURLY OBSERVATIONS 826 SPECIAL OBS. 865 TOTAL OBSERVATIONS 3849 FOG WITH SMOKE AND/OR HAZE 503

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	25	11	29	17	8	8	4	1	14	20	29	19	11	8	4	1	2
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	1	1	1	1	0	1	0	1	0	0	5
NNE	0	1	0	2	3	5	2	2	3	6	3	0	0	2
NE	0	0	0	0	3	6	5	0	0	0	2	1	0	0
ENE	0	0	2	0	1	4	1	0	0	0	0	0	0	0
E	0	0	1	2	2	3	0	0	0	0	0	0	0	0
ESE	0	0	1	1	0	0	1	1	0	0	0	0	0	0
SE	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SSE	0	0	4	2	6	2	0	0	0	0	0	0	0	0
S	0	0	1	6	5	2	2	0	0	1	0	1	1	1
SSW	0	0	6	1	2	2	1	0	3	5	6	2	1	0
SW	0	0	1	2	0	2	0	4	2	3	3	1	1	0
WSW	0	0	0	1	2	0	2	3	0	0	2	0	0	1
W	0	0	0	2	0	2	0	2	2	0	0	0	0	0
WNW	0	0	1	0	2	1	0	0	0	0	0	0	0	0
NW	0	0	0	1	0	0	0	0	0	0	0	0	0	0
NNW	0	0	1	0	0	1	0	0	0	0	0	0	0	0
CALM	25													

WIND SPEED

MKE

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.5	0.9	0.5	0.5	0.5	2.4	5.2
NNE	0.5	0.9	3.8	1.9	4.3	1.4	0.9	13.7
NE	0.0	0.0	4.3	2.4	0.0	1.4	0.0	8.1
ENE	0.0	0.9	2.4	0.5	0.0	0.0	0.0	3.8
E	0.0	1.4	2.4	0.0	0.0	0.0	0.0	3.8
ESE	0.0	0.9	0.0	0.9	0.0	0.0	0.0	1.9
SE	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
SSE	0.0	2.8	3.8	0.0	0.0	0.0	0.0	6.6
S	0.0	3.3	3.3	0.9	0.5	0.5	0.9	9.5
SSW	0.0	3.3	1.9	0.5	3.8	3.8	0.5	13.7
SW	0.0	1.4	0.9	1.9	2.4	1.9	0.5	9.0
WSW	0.0	0.5	0.9	2.4	0.0	0.9	0.5	5.2
W	0.0	0.9	0.9	0.9	0.9	0.0	0.0	3.8
WNW	0.0	0.5	1.4	0.0	0.0	0.0	0.0	1.9
NW	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5
NNW	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.9
CALM								11.8
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 72 99 40

<28 28 TO 31 32
TEMPERATURE (F)

CHECK COUNT 211
FOG WITH LP 33
FOG WITH FP 33
ALL FOG CASES 275
PURE FOG 120
REC.OBS. 100

FOG WITH SMOKE AND/OR HAZE 46

MKE

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	11	4	0	0	0	0	0	15
1957	0	0	0	0	0	2	0	0	0	0	0	0	2
1958	0	0	0	0	0	0	5	0	0	0	0	0	5
1959	0	0	0	0	0	1	0	1	16	0	0	0	18
1960	0	0	0	0	0	0	2	0	0	0	0	0	2
1961	0	0	0	0	0	4	0	9	0	0	0	0	13
1962	0	0	0	0	0	0	0	7	12	0	0	0	19
1963	0	0	0	0	0	3	0	0	0	0	0	0	3
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	4	0	0	0	0	0	0	4
TOTAL HRS	0	0	0	0	0	25	11	17	28	0	0	0	81
AVG HRS	0.0	0.0	0.0	0.0	0.0	2.50	1.10	1.70	2.80	0.0	0.0	0.0	8.10

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	11	8	4	24	23	5	0	7	0	4	16	22	124
1957	6	8	0	0	2	0	1	4	0	34	15	10	80
1958	2	7	0	14	16	0	0	1	2	8	1	7	58
1959	0	20	0	0	0	22	5	1	7	6	18	0	79
1960	0	3	3	8	8	0	0	2	12	11	27	0	74
1961	8	5	2	4	2	9	0	4	2	3	1	14	54
1962	1	1	0	8	7	0	0	0	7	21	0	8	53
1963	0	0	0	13	9	0	0	0	2	12	15	3	54
1964	3	0	8	7	12	20	1	0	3	18	0	0	72
1965	3	7	15	2	10	15	12	10	5	6	11	1	97
TOTAL HRS	34	59	32	80	89	71	19	29	40	123	104	65	745
AVG HRS	3.40	5.90	3.20	8.00	8.90	7.10	1.90	2.90	4.00	12.30	10.40	6.50	74.50

MSP

WIND SPEED VS. FREQUENCY

FREQUENCY	143	0	41	93	105	107	75	52	45	35	27	6	6	2	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 4.39 KNOTS
MODE 0.0 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 3.02 KNOTS
SKEW 1.46

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	143	143	277	489	616	696	729	737	737
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	143	21	7	9	22	35	67	116	53	75	50	64	24	18	12	12	9
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
10-12	0	1	0	0	2	1	5	9	4	2	2	9	1	0	1	1	1
WIND 7-9	0	4	2	1	0	7	21	31	17	20	9	9	3	2	2	2	2
SPEED 4-6	0	14	3	6	14	16	31	51	19	42	29	31	10	9	5	3	4
KNOTS 1-3	0	2	2	2	6	11	9	24	13	11	10	15	10	7	4	6	2
CALM	143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	13	75	141	42	212	1	80	0	173
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.34/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.47/16
SKEW 0.14

TEMPERATURE VS. FREQUENCY

FREQ.	40	24	25	19	13	17	19	32	61	49	57	16	18	24	10	42	27	12	34	25	31	8	25	18	49	13	3	12	12	2	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 36.88°F.
MODE 29.50°F.
MEDIAN 35.50°F.
STD. DEV. 15.50°F.
SKEW 0.60

HOURLY OBSERVATIONS 312 SPECIAL OBS. 425 TOTAL OBSERVATIONS 1376 FOG WITH SMOKE AND/OR HAZE 28

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	34	12	4	4	9	16	21	40	28	34	30	30	11	9	3	7	7
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	1	3	3	3	1	1	0	0	0	0	0
NNE	0	0	0	2	1	0	0	0	1	0	0	0	0	0
NE	0	0	0	2	1	0	0	1	0	0	0	0	0	0
ENE	0	0	1	0	2	3	3	0	0	0	0	0	0	0
E	0	0	1	3	6	2	0	0	1	2	1	0	0	0
ESE	0	0	0	1	3	4	2	4	2	1	4	0	0	0
SE	0	0	2	4	5	9	6	3	2	5	0	1	2	1
SSE	0	0	1	1	4	2	2	5	3	3	1	1	0	0
S	0	0	3	0	10	5	3	0	9	4	0	0	0	0
SSW	0	0	1	4	9	5	5	3	2	0	0	0	1	0
SW	0	0	2	5	10	7	0	1	2	0	3	0	0	0
WSW	0	0	1	3	1	4	2	0	0	0	0	0	0	0
W	0	0	3	2	2	1	0	1	0	0	0	0	0	0
WNW	0	0	0	3	0	0	0	0	0	0	0	0	0	0
NW	0	0	3	2	0	1	0	1	0	0	0	0	0	0
NNW	0	0	1	1	0	1	2	1	1	0	0	0	0	0
CALM	34													

CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.3	2.0	1.3	0.3	0.0	0.0	4.0
NNE	0.0	0.7	0.3	0.0	0.3	0.0	0.0	1.3
NE	0.0	0.7	0.3	0.3	0.0	0.0	0.0	1.3
ENE	0.0	0.3	1.7	1.0	0.0	0.0	0.0	3.0
E	0.0	1.3	2.7	0.0	1.0	0.3	0.0	5.4
ESE	0.3	0.3	2.3	2.0	1.0	1.3	0.0	7.0
SE	0.0	2.0	4.7	3.0	2.3	0.3	1.0	13.4
SSE	0.0	0.7	2.0	2.3	3.7	0.7	0.0	9.4
S	0.0	1.0	5.0	1.0	4.3	0.0	0.0	11.4
SSW	0.0	1.7	4.7	2.7	0.7	0.0	0.3	10.0
SW	0.0	2.3	5.7	0.3	0.7	1.0	0.0	10.0
WSW	0.0	1.3	1.7	0.7	0.0	0.0	0.0	3.7
W	0.0	1.7	1.0	0.3	0.0	0.0	0.0	3.0
WNW	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
NW	0.0	1.7	0.3	0.3	0.0	0.0	0.0	2.3
NNW	0.0	0.7	0.3	1.0	0.3	0.0	0.0	2.3
CALM								11.4
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	175	100	24
	<28	28 TO 31	32

TEMPERATURE (F)

CHECK COUNT 299
FOG WITH LP 34
FOG WITH FP 36
ALL FOG CASES 362
PURE FOG 275
REC.OBS. 128

FOG WITH SMOKE AND/OR HAZE 12

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	8	2	1	7	0	0	0	18
1957	0	0	0	0	0	14	0	4	0	0	0	0	18
1958	0	0	0	0	0	0	5	0	0	0	0	0	5
1959	0	0	0	0	0	4	3	3	2	0	0	0	12
1960	0	0	0	0	0	0	6	0	1	0	0	0	7
1961	0	0	0	0	0	2	0	6	0	0	0	0	8
1962	0	0	0	0	0	0	0	4	9	0	0	0	13
1963	0	0	0	0	0	3	4	2	0	0	0	0	9
1964	0	0	0	0	4	7	0	0	0	0	0	0	11
1965	0	0	0	0	3	5	0	6	2	2	0	0	18
TOTAL HRS	0	0	0	0	7	43	20	26	21	2	0	0	119
AVG HRS	0.0	0.0	0.0	0.0	0.70	4.30	2.00	2.60	2.10	0.20	0.0	0.0	11.90

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	2	0	1	2	0	0	0	0	0	0	0	5
1957	5	0	0	0	0	2	0	0	0	0	0	0	7
1958	0	0	0	3	0	0	1	2	0	0	8	3	17
1959	0	0	0	0	0	9	1	0	0	0	0	0	10
1960	5	10	0	4	3	0	0	0	0	3	0	0	25
1961	0	0	0	0	7	4	0	0	0	0	1	3	15
1962	0	7	0	5	6	0	0	0	1	1	0	3	23
1963	2	0	1	16	3	0	0	0	0	3	2	0	27
1964	0	0	2	12	17	0	0	0	0	0	9	0	40
1965	3	0	0	0	7	6	0	0	0	8	0	0	24
TOTAL HRS	15	19	3	41	45	21	2	2	1	15	20	9	193
AVG HRS	1.50	1.90	0.30	4.10	4.50	2.10	0.20	0.20	0.10	1.50	2.00	0.90	19.30

DEN

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	46	0	7	50	99	86	76	43	46	29	29	12	9	3	3

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 5.55 KNOTS
MODE 4.00 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 2.89 KNOTS
SKEW 0.54

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMULATIVE FREQUENCY	46	46	103	288	407	482	523	535	538

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	46	94	54	29	20	13	9	15	6	41	46	22	11	8	15	59	50

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

WIND SPEED KNOTS	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10-12	0	18	12	6	1	1	0	0	0	0	3	0	0	0	1	3	5
7-9	0	32	15	6	7	1	2	0	0	7	11	2	1	0	0	15	19
4-6	0	31	25	13	7	9	6	11	6	28	29	16	4	7	12	35	22
1-3	0	10	1	4	4	2	1	4	0	6	3	4	6	1	2	6	3
CALM	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	22	38	91	13	210	1	47	0	116
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.30/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.39/16
SKEW 0.13

TEMPERATURE VS. FREQUENCY

FREQ.	37	4	19	18	50	41	52	35	49	49	24	10	9	8	25	18	10	10	6	2	20	9	18	9	6	0	0	0	0	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 31.66 °F.
MODE 25.50 °F.
MEDIAN 29.50 °F.
STD. DEV. 12.36 °F.
SKEW 0.50

HOURLY OBSERVATIONS 194 SPECIAL OBS. 344 TOTAL OBSERVATIONS 1099 FOG WITH SMOKE AND/OR HAZE 10

DEN

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	33	54	38	20	17	10	7	8	5	37	34	15	6	3	7	34	26
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	5	5	5	7	6	12	3	10	0	0	1
NNE	0	0	0	1	7	2	5	3	8	0	4	7	0	1
NE	0	0	1	3	1	3	4	1	1	2	2	0	2	0
ENE	0	0	0	4	4	1	2	2	2	2	0	0	0	0
E	0	0	0	2	2	4	1	0	0	0	1	0	0	0
ESE	0	0	0	0	3	2	0	1	0	1	0	0	0	0
SE	0	0	0	0	3	2	3	0	0	0	0	0	0	0
SSE	0	0	0	0	4	1	0	0	0	0	0	0	0	0
S	0	0	0	4	7	6	13	2	3	2	0	0	0	0
SSW	0	0	1	2	9	7	3	6	1	2	2	0	1	0
SW	0	0	2	0	6	3	2	2	0	0	0	0	0	0
WSW	0	0	0	4	1	1	0	0	0	0	0	0	0	0
W	0	0	0	1	1	1	0	0	0	0	0	0	0	0
WNW	0	0	0	1	1	2	2	0	0	0	1	0	0	0
NW	0	0	2	1	11	6	5	3	2	1	2	0	1	0
NNW	0	0	0	2	2	4	6	2	1	3	3	1	1	1
CALM	33													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	1.4	2.8	3.7	4.2	2.8	0.3	15.3
NNE	0.0	0.3	2.5	2.3	2.3	3.1	0.3	10.7
NE	0.0	1.1	1.1	1.4	0.8	0.6	0.6	5.6
ENE	0.0	1.1	1.4	1.1	1.1	0.0	0.0	4.8
E	0.0	0.6	1.7	0.3	0.0	0.3	0.0	2.8
ESE	0.0	0.0	1.4	0.3	0.3	0.0	0.0	2.0
SE	0.0	0.0	1.4	0.8	0.0	0.0	0.0	2.3
SSE	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
S	0.0	1.1	3.7	4.2	1.4	0.0	0.0	10.5
SSW	0.0	0.8	4.5	2.5	0.8	0.6	0.3	9.6
SW	0.0	0.6	2.5	1.1	0.0	0.0	0.0	4.2
WSW	0.0	1.1	0.6	0.0	0.0	0.0	0.0	1.7
W	0.0	0.3	0.8	0.0	0.0	0.0	0.0	0.8
WNW	0.0	0.3	0.8	0.6	0.0	0.3	0.0	2.0
NW	0.0	0.8	4.8	2.3	0.8	0.6	0.3	9.6
NNW	0.0	0.6	1.7	2.3	1.1	1.1	0.6	7.3
CALM								9.3
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	234	96	24
TEMPERATURE (F)	<28	28 TO 31	32

CHECK COUNT 354
FOG WITH LP 56
FOG WITH FP 111
ALL FOG CASES 518
PURE FOG 347
REC.OBS. 132

FOG WITH SMOKE AND/OR HAZE 2

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	1	14	1	0	0	0	0	16
1957	0	0	0	4	0	0	0	4	1	0	0	0	9
1958	0	0	0	2	2	2	0	5	5	0	0	0	16
1959	0	0	0	3	0	0	2	11	0	0	0	0	16
1960	0	0	0	0	0	0	0	5	0	0	0	0	5
1961	0	0	0	0	7	4	0	1	2	0	0	0	14
1962	0	0	0	0	7	5	0	5	0	1	0	0	18
1963	0	0	0	0	2	1	0	5	3	0	0	0	11
1964	0	0	0	0	3	9	4	0	0	0	0	0	16
1965	0	0	0	0	0	0	0	1	3	0	0	0	4
TOTAL HRS	0	0	0	9	21	22	20	38	14	1	0	0	125
AVG HRS	0.0	0.0	0.0	0.90	2.10	2.20	2.00	3.80	1.40	0.10	0.0	0.0	12.50

DEN

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	2	0	0	2	0	0	0	0	3	0	0	7
1957	0	2	0	3	0	0	0	0	0	6	0	0	11
1958	2	0	0	3	0	0	0	0	1	0	0	2	8
1959	0	1	5	1	0	0	0	0	0	3	2	0	12
1960	0	0	0	0	0	0	0	0	0	1	2	0	3
1961	0	0	1	0	4	0	0	0	0	0	5	2	12
1962	0	0	2	0	0	0	0	0	0	0	0	0	2
1963	0	3	3	0	0	0	0	0	0	0	0	0	6
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	2	4	0	0	0	0	0	2	0	0	0	8
TOTAL HRS	2	10	15	7	6	0	0	0	3	13	9	4	69
AVG HRS	0.20	1.00	1.50	0.70	0.60	0.0	0.0	0.0	0.30	1.30	0.90	0.40	6.90

BUR

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	315	223	167	158	195	147	65	27	10	3	3	0	0	0	0

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 2.48 KNOTS
MODE 0.0 KNOTS
MEDIAN 2.00 KNOTS
STD. DEV. 2.11 KNOTS
SKEW 1.18

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMULATIVE FREQUENCY	315	538	863	1205	1297	1310	1313	1313	1313

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	315	59	19	18	45	122	157	59	46	69	37	45	26	42	70	89	95

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1
WIND 7-9	0	0	0	0	2	9	15	3	1	0	2	1	0	0	5	1	1
SPEED 4-6	0	26	7	4	12	49	72	31	25	23	5	10	7	15	31	37	53
KNOTS 1-3	0	33	12	14	31	64	69	25	20	46	30	34	19	27	34	50	40
CALM	315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	127	170	231	133	260	44	140	0	208
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.65/16
MODE 4.00/16
MEDIAN 3.00/16
STD. DEV. 2.53/16
SKEW -0.14

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	4	0	0	1	6	11	28	56	99	136	175	181	130	136	148	127	63	12	0	0	0	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 52.22 DEGREES(F)
MODE 51.50 DEGREES(F)
MEDIAN 51.50 DEGREES(F)
STD. DEV. 5.61 DEGREES(F)
SKEW 0.13

HOURLY OBSERVATIONS 592 SPECIAL OBS. 721 TOTAL OBSERVATIONS 2233 FOG WITH SMOKE AND/OR HAZE 109

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	1	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	3													

WIND SPEED

BUR WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	25.0	0.0	0.0	0.0	0.0	0.0	25.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								75.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	4	0
TEMPERATURE (F)	<28	28 TO 31	32

CHECK COUNT 4
FOG WITH LP 0
FOG WITH FP 0
ALL FOG CASES 4
PURE FOG 4
REC.OBS. 2

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	2	0	0	0	0	0	2
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	2	0	0	0	0	0	2
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.20

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	4	4	14	12	6	4	13	6	7	8	2	8	88
1957	0	0	1	0	13	0	0	16	0	5	0	2	37
1958	6	3	4	10	11	6	3	13	0	1	3	2	62
1959	0	1	2	23	7	0	18	0	6	3	0	1	61
1960	0	5	1	9	11	2	1	5	7	3	0	2	46
1961	0	2	0	11	4	22	0	3	1	1	0	2	46
1962	0	2	16	25	25	44	0	9	3	0	1	1	126
1963	0	0	0	2	4	0	3	23	0	0	0	0	32
1964	0	0	10	8	0	5	20	0	2	0	2	1	48
1965	0	1	0	5	16	0	2	16	0	1	3	0	44
TOTAL HRS	10	18	48	105	97	83	60	91	26	22	11	19	590
AVG HRS	1.00	1.80	4.80	10.50	9.70	8.30	6.00	9.10	2.60	2.20	1.10	1.90	59.00

LAX

WIND SPEED VS. FREQUENCY

FREQUENCY	760	4	230	534	762	575	370	174	107	33	23	4	6	0	5
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 3.62 KNOTS
MODE 4.00 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 2.43 KNOTS
SKEW -0.16

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	760	764	1528	2865	3409	3549	3576	3582	3587
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	760	55	50	109	275	486	395	235	112	99	38	67	191	402	160	96	57
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0
10-12	0	0	0	0	0	5	1	2	0	0	0	2	6	15	2	0	0
WIND 7-9	0	0	2	6	15	57	49	19	7	4	0	5	37	93	18	1	1
SPEED 4-6	0	26	27	66	188	308	257	153	61	54	25	34	106	226	96	50	30
KNOTS 1-3	0	29	21	37	72	116	88	61	44	41	13	26	40	65	44	45	26
CALM	760	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	440	576	600	348	699	118	387	0	419
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.31/16
MODE 4.00/16
MEDIAN 3.00/16
STD. DEV. 2.46/16
SKEW -0.28

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	62	100	188	337	508	643	515	319	406	269	154	72	3	0	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 54.70 °F.
MODE 53.50 °F.
MEDIAN 53.50 °F.
STD. DEV. 4.97 °F.
SKEW 0.24

HOURLY OBSERVATIONS 1477 SPECIAL OBS. 2110 TOTAL OBSERVATIONS 7293 FOG WITH SMOKE AND/OR HAZE 1479

LAX

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	0													

WIND SPEED

LAX WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								0.0
TOTAL								0.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 0 0 0

<26 28 TO 31 32

TEMPERATURE (F)

CHECK COUNT 0
FOG WITH LP 0
FOG WITH FP 0
ALL FOG CASES 0
PURE FOG 0
REL.OBS. 0

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	4	10	9	8	60	18	5	35	14	2	8	173
1957	2	2	18	3	4	15	2	7	11	12	3	14	93
1958	10	0	31	5	39	44	16	33	2	0	2	8	190
1959	1	0	2	15	33	13	54	4	41	3	1	0	167
1960	19	2	19	4	45	15	9	13	27	16	0	0	169
1961	0	1	10	11	19	87	12	20	13	1	2	3	179
1962	0	10	8	26	43	37	26	22	5	70	0	5	252
1963	0	0	4	0	25	27	9	24	0	5	0	0	100
1964	0	0	0	34	1	25	0	0	0	5	2	6	73
1965	10	4	6	23	1	3	7	8	1	16	1	1	81
TOTAL HRS	42	23	108	136	218	326	153	136	135	142	13	45	1477
AVG HRS	4.20	2.30	10.80	13.60	21.80	32.60	15.30	13.60	13.50	14.20	1.30	4.50	147.70

Reproduced from best available copy.

OAK

WIND SPEED VS. FREQUENCY

FREQUENCY	634	3	10	150	292	214	91	54	26	5	2	3	0	0	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 2.66 KNOTS
MODE 0.0 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 2.53 KNOTS
SKEW 1.05

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	634	637	797	1303	1448	1479	1484	1484	1484
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	634	84	26	29	23	57	40	74	63	101	30	35	40	70	60	74	44
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	2	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1
WIND 7-9	0	7	1	0	0	5	2	14	11	13	2	3	4	11	5	5	2
SPEED 4-6	0	63	17	7	18	39	30	49	43	72	24	26	29	51	46	49	34
KNOTS 1-3	0	12	8	22	5	13	8	11	8	16	4	6	7	7	9	20	7
CALM	634	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	491	138	186	59	303	8	71	0	228
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/	3/	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 2.82/16
MODE 0.0 /16
MEDIAN 2.00/16
STD. DEV. 2.82/16
SKEW 1.00

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	0	3	4	13	40	63	105	229	283	222	139	128	123	70	51	1	5	0	5	0	0	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 47.16 °F.
MODE 45.50 °F.
MEDIAN 47.50 °F.
STD. DEV. 5.14 °F.
SKEW 0.32

HOURLY OBSERVATIONS 771 SPECIAL OBS. 713 TOTAL OBSERVATIONS 3399 FOG WITH SMOKE AND/OR HAZE 275

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	1	0	0	0	0	0	0	0	0	0
NE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	1													

WIND SPEED

OAK

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	33.3	0.0	0.0	0.0	0.0	33.3
NE	0.0	33.3	0.0	0.0	0.0	0.0	0.0	33.3
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								33.3
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 0 3 0

<28 28 TO 31 32
TEMPERATURE (F)

CHECK COUNT 3
FOG WITH LP 0
FOG WITH FP 0
ALL FOG CASES 3
PURE FOG 0
REC.OBS. 2

FOG WITH SMOKE AND/OR HAZE 2

OAK

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	2	0	0	0	0	0	2
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	2	0	0	0	0	0	2
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.20

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	6	43	28	5	0	0	0	0	82
1957	0	0	0	5	4	3	11	25	3	0	0	0	51
1958	0	0	0	8	16	23	35	3	0	0	0	0	85
1959	0	0	0	0	0	2	20	0	7	0	0	0	29
1960	0	0	0	17	13	36	8	3	5	0	0	0	82
1961	1	0	0	2	5	33	33	1	0	0	0	0	75
1962	0	0	2	47	16	134	19	19	0	0	0	0	237
1963	0	0	0	1	17	11	19	12	0	0	0	0	60
1964	0	0	0	6	0	0	0	8	5	0	0	0	19
1965	0	0	2	3	10	2	25	3	0	4	0	0	49
TOTAL HRS	1	0	4	89	87	287	198	79	20	4	0	0	769
AVG HRS	0.10	0.0	0.40	8.90	8.70	28.70	19.80	7.90	2.00	0.40	0.0	0.0	76.90

SFO

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	525	0	35	355	333	236	86	59	37	13	17	2	7	1	1

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 3.10 KNOTS
MODE 0.0 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 2.52 KNOTS
SKEW 1.23

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMULATIVE FREQUENCY	525	525	915	1484	1629	1679	1698	1706	1707

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	525	76	89	126	87	104	78	89	52	100	52	73	32	41	102	57	24

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
10-12	0	0	1	1	0	0	0	1	0	0	0	0	0	0	13	9	1
WIND 7-9	0	4	14	9	4	1	4	8	5	3	1	1	0	5	28	19	3
SPEED 4-6	0	46	56	75	46	64	46	50	29	65	33	39	16	17	40	19	12
KNOTS 1-3	0	24	18	41	37	39	28	30	18	32	18	33	16	19	19	10	8
CALM	525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

SFO

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	282	188	390	53	416	4	176	0	198
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.19/16
MODE 4.00/16
MEDIAN 2.00/16
STD. DEV. 2.49/16
SKEW -0.32

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	0	0	0	3	16	43	54	187	336	349	291	173	140	78	30	4	3	0	0	0	0	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 47.99 °F.
[illegible] -7.59 °F.
[illegible] -7.50 °F.
[illegible] -.11 °F.
SK 0.1[illegible]

HOURLY OBSERVATIONS 632 SPECIAL OBS. 1075 TOTAL OBSERVATIONS 3431 FOG WITH SMOKE AND/OR HAZE 244

SFO

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	0													

WIND SPEED

SFO

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33-DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								0.0
TOTAL								0.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	0	0
TEMPERATURE (F)	<28	28 TO 31	32

CHECK COUNT 0
FOG WITH LP 0
FOG WITH FP 2
ALL FOG CASES 2
PURE FOG 0
REC.OBS. 0

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0		0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SFO

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	3	2	6	37	24	5	0	0	0	0	77
1957	0	0	0	10	0	6	5	18	8	0	0	0	47
1958	0	0	0	2	15	24	29	4	0	0	0	0	74
1959	0	0	0	2	2	2	8	0	3	1	0	0	18
1960	0	0	0	13	2	28	12	0	4	0	0	0	59
1961	0	0	0	2	6	32	52	3	0	0	0	0	95
1962	0	0	1	26	5	114	7	14	1	0	0	0	168
1963	0	0	0	1	5	6	8	15	0	0	0	0	35
1964	0	0	0	2	4	0	1	10	1	0	0	0	18
1965	0	0	2	0	8	0	25	5	0	1	0	0	41
TOTAL HRS	0	0	6	60	53	249	171	74	17	2	0	0	632
AVG HRS	0.0	0.0	0.60	6.00	5.30	24.90	17.10	7.40	1.70	0.20	0.0	0.0	63.20

SLC

WIND SPEED VS. FREQUENCY

FREQUENCY	307	140	123	216	288	197	93	39	24	12	16	4	2	0	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 3.10 KNOTS
MODE 0.0 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 2.37 KNOTS
SKEW 1.31

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	307	447	786	1271	1403	1439	1459	1461	1461
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	307	141	38	35	14	21	23	93	114	178	64	73	54	76	66	77	87
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	5	1	0	0	0	0	11	3	0	0	0	0	0	0	0	2
WIND 7-9	0	9	3	3	0	0	3	11	24	13	0	0	0	3	1	4	1
SPEED 4-6	0	60	13	20	6	3	11	47	69	111	34	35	26	28	31	42	42
KNOTS 1-3	0	67	21	12	6	18	9	24	18	54	30	38	28	45	34	31	42
CALM	307	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	508	116	256	18	319	4	79	0	161
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 2.56/16
MODE 0.0 /16
MEDIAN 2.00/16
STD. DEV. 2.63/16
SKEW 0.97

TEMPERATURE VS. FREQUENCY

FREQ.	120	64	117	107	93	209	221	248	142	89	27	19	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 23.67 °F.
MODE 27.50 °F.
MEDIAN 25.50 °F.
STD. DEV. 5.55 °F.
SKEW -0.65

HOURLY OBSERVATIONS 761 SPECIAL OBS. 700 TOTAL OBSERVATIONS 2124 FOG WITH SMOKE AND/OR HAZE 182

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	299	136	37	34	14	21	22	86	103	170	63	68	54	75	66	75	85
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	21	17	27	26	26	7	4	2	3	3	2	0	0
NNE	0	9	6	6	10	1	2	1	1	0	1	0	0	0
NE	0	2	1	9	11	7	1	2	0	1	0	0	0	0
ENE	0	2	0	6	3	3	0	0	0	0	0	0	0	0
E	0	8	2	8	2	0	1	0	0	0	0	0	0	0
ESE	0	1	5	3	4	2	4	2	1	0	0	0	0	0
SE	0	7	8	9	19	15	6	5	5	1	7	2	2	0
SSE	0	5	4	9	19	24	15	11	10	3	3	0	0	0
S	0	11	11	32	46	34	25	6	4	1	0	0	0	0
SSW	0	7	9	14	24	9	3	0	0	0	0	0	0	0
SW	0	7	7	22	19	10	3	0	0	0	0	0	0	0
WSW	0	9	6	13	16	10	0	0	0	0	0	0	0	0
W	0	15	10	20	19	8	0	3	0	0	0	0	0	0
WNW	0	10	11	13	20	4	7	1	0	0	0	0	0	0
NW	0	9	8	12	19	17	6	1	1	2	0	0	0	0
NNW	0	15	16	10	21	13	7	1	0	0	2	0	0	0
CALM	299													

CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	1.5	3.1	3.7	0.8	0.4	0.4	0.0	9.8
NNE	0.6	0.9	0.8	0.2	0.1	0.1	0.0	2.6
NE	0.1	0.7	1.3	0.2	0.1	0.0	0.0	2.4
ENE	0.1	0.4	0.4	0.0	0.0	0.0	0.0	1.0
E	0.6	0.7	0.1	0.1	0.0	0.0	0.0	1.5
ESE	0.1	0.6	0.4	0.4	0.1	0.0	0.0	1.6
SE	0.5	1.2	2.4	0.8	0.4	0.6	0.1	6.1
SSE	0.4	0.9	3.0	1.8	0.9	0.2	0.0	7.3
S	0.8	3.0	5.7	2.2	0.4	0.0	0.0	12.1
SSW	0.5	1.6	2.1	0.2	0.0	0.0	0.0	4.5
SW	0.5	2.1	2.1	0.2	0.0	0.0	0.0	4.8
WSW	0.6	1.3	1.8	0.0	0.0	0.0	0.0	3.8
W	1.1	2.1	1.9	0.2	0.0	0.0	0.0	5.3
WNW	0.7	1.7	1.7	0.6	0.0	0.0	0.0	4.7
NW	0.6	1.4	2.6	0.5	0.2	0.0	0.0	5.3
NNW	1.1	1.8	2.4	0.6	0.0	0.1	0.0	6.0
CALM								21.2
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	1060	316	32
	<28	28 TO 31	32

TEMPERATURE (F)

CHECK COUNT 1410
FOG WITH LP 6
FOG WITH FP 177
ALL FOG CASES 1594
PURE FOG 1229
REC.OBS. 741

FOG WITH SMOKE AND/OR HAZE 75

SLC

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	1	0	0	0	0	1
1957	0	0	0	0	7	39	8	4	0	0	0	0	58
1958	0	0	0	0	9	5	7	0	0	2	0	0	23
1959	0	0	0	0	0	0	3	0	0	0	0	0	3
1960	0	0	0	0	0	0	36	2	1	0	0	0	39
1961	0	0	0	0	0	8	0	3	0	0	0	0	11
1962	0	0	0	0	0	124	99	108	5	0	0	0	336
1963	0	0	0	0	21	24	1	5	0	0	0	0	51
1964	0	0	0	0	4	0	11	1	1	0	0	0	17
1965	0	0	0	0	0	96	94	0	0	0	0	0	190
TOTAL HRS	0	0	0	0	41	296	259	124	7	2	0	0	729
AVG HRS	0.0	0.0	0.0	0.0	4.10	29.60	25.90	12.40	0.70	0.20	0.0	0.0	72.90

SLC

SLC

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	1	0	0	1
1957	0	0	0	3	2	0	0	5	0	0	0	0	10
1958	0	0	0	0	0	4	1	3	0	0	0	0	8
1959	0	0	0	0	0	0	3	0	0	0	0	0	3
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	1	0	0	0	0	0	0	1
1963	0	0	0	0	1	0	0	0	0	0	0	0	1
1964	0	0	0	0	0	0	0	0	0	5	0	0	5
1965	0	0	0	0	0	3	1	0	0	0	0	0	4
TOTAL HRS	0	0	0	3	3	8	5	8	0	6	0	0	33
AVG HRS	0.0	0.0	0.0	0.30	0.30	0.80	0.50	0.80	0.0	0.60	0.0	0.0	3.30

PDX

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	1415	23	132	427	768	572	278	119	42	18	8	1	0	0	0

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 2.78 KNOTS
MODE 0.0 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 2.43 KNOTS
SKEW 1.15

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMULATIVE FREQUENCY	1415	1438	1997	3337	3734	3794	3803	3803	3803

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	1415	96	43	37	21	112	208	140	90	90	57	121	214	399	352	261	145

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	1	0	0	0	0	0	0	0	1	0	0	0	1	1	5	0
WIND 7-9	0	1	2	0	0	8	21	6	3	9	2	2	5	31	49	29	11
SPEED 4-6	0	72	25	22	12	82	145	91	58	44	29	71	154	284	242	176	111
KNOTS 1-3	0	24	15	15	9	22	42	43	29	36	26	48	55	83	60	51	23
CALM	1415	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	505	476	916	130	942	31	252	0	551
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.30/16
MODE 4.00/16
MEDIAN 3.00/16
STD. DEV. 2.52/16
SKEW -0.28

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	17	39	97	252	389	439	360	457	320	303	231	213	209	198	101	84	45	40	8	1	0	0	0	0	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 38.94 °F.
MODE 37.50 °F.
MEDIAN 37.50 °F.
STD. DEV. 7.31 °F.
SKEW 0.20

HOURLY OBSERVATIONS 1863 SPECIAL OBS. 1940 TOTAL OBSERVATIONS 5317 FOG WITH SMOKE AND/OR HAZE 597

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	257	30	14	8	4	21	42	32	18	19	8	36	53	91	65	66	30
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND.DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	2	0	4	9	12	3	0	0	0	0	0	0	0
NNE	0	0	2	3	3	4	1	1	0	0	0	0	0	0
NE	0	1	3	1	1	0	2	0	0	0	0	0	0	0
ENE	0	0	0	3	1	0	0	0	0	0	0	0	0	0
E	0	0	2	2	11	5	0	1	0	0	0	0	0	0
ESE	0	0	0	5	13	11	8	5	0	0	0	0	0	0
SE	0	0	5	7	12	5	2	1	0	0	0	0	0	0
SSE	0	0	0	5	8	0	4	1	0	0	0	0	0	0
S	0	0	2	9	6	1	1	0	0	0	0	0	0	0
SSW	0	0	1	4	3	0	0	0	0	0	0	0	0	0
SW	0	1	2	9	13	10	0	1	0	0	0	0	0	0
WSW	0	1	1	13	18	16	4	0	0	0	0	0	0	0
W	0	0	5	10	37	16	16	4	1	2	0	0	0	0
WNW	0	0	2	7	15	9	12	12	4	3	1	0	0	0
NW	0	0	5	3	12	26	11	1	4	0	3	1	0	0
NNW	0	0	0	4	4	11	7	3	1	0	0	0	0	0
CALM	257													

CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.3	0.5	2.6	0.4	0.0	0.0	0.0	3.8
NNE	0.0	0.6	0.9	0.3	0.0	0.0	0.0	1.8
NE	0.1	0.5	0.1	0.3	0.0	0.0	0.0	1.0
ENE	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.5
E	0.0	0.5	2.0	0.1	0.0	0.0	0.0	2.6
ESE	0.0	0.6	3.0	1.6	0.0	0.0	0.0	5.3
SE	0.0	1.5	2.1	0.4	0.0	0.0	0.0	4.0
SSE	0.0	0.6	1.0	0.6	0.0	0.0	0.0	2.3
S	0.0	1.4	0.9	0.1	0.0	0.0	0.0	2.4
SSW	0.0	0.6	0.4	0.0	0.0	0.0	0.0	1.0
SW	0.1	1.4	2.9	0.1	0.0	0.0	0.0	4.5
WSW	0.1	1.8	4.3	0.5	0.0	0.0	0.0	6.7
W	0.0	1.9	6.7	2.5	0.4	0.0	0.0	11.5
WNW	0.0	1.1	3.0	3.0	0.9	0.1	0.0	8.2
NW	0.0	1.0	4.8	1.5	0.5	0.5	0.0	8.3
NNW	0.0	0.5	1.9	1.3	0.1	0.0	0.0	3.8
CALM								32.4
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	91	466	237
TEMPERATURE (F)	<28	28 TO 31	32

CHECK COUNT 794
FOG WITH LP 1
FOG WITH FP 1
ALL FOG CASES 796
PURE FOG 691
REC.OBS. 413

FOG WITH SMOKE AND/OR HAZE 61

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	11	27	5	12	0	0	0	0	55
1957	0	0	0	0	23	0	0	11	1	0	0	0	35
1958	0	0	0	0	0	1	0	1	5	0	0	0	7
1959	0	0	0	0	4	13	0	4	0	0	0	0	21
1960	0	0	0	0	2	16	44	2	4	0	0	0	68
1961	0	0	0	0	2	1	2	0	0	0	0	0	5
1962	0	0	0	0	1	4	6	1	6	0	0	0	18
1963	0	0	0	0	1	14	5	0	1	0	0	0	21
1964	0	0	0	0	25	0	3	16	0	0	0	0	44
1965	0	0	0	0	0	16	2	3	0	0	0	0	21
TOTAL HRS	0	0	0	0	69	92	67	50	17	0	0	0	295
AVG HRS	0.0	0.0	0.0	0.0	6.90	9.20	6.70	5.00	1.70	0.0	0.0	0.0	29.50

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	3	18	14	28	48	3	12	1	3	0	0	130
1957	0	0	0	32	50	77	0	9	1	12	4	0	185
1958	0	0	0	46	9	41	4	7	9	7	0	0	123
1959	0	0	11	47	41	38	15	2	6	0	0	2	162
1960	0	0	14	32	19	60	23	16	24	11	3	0	202
1961	0	2	13	29	8	26	21	7	6	0	0	0	112
1962	0	0	8	49	17	84	54	16	11	1	0	0	240
1963	1	0	12	24	3	10	30	49	15	0	0	0	144
1964	0	0	14	55	14	19	2	16	0	9	0	0	129
1965	0	0	2	46	24	8	40	21	0	0	0	0	141
TOTAL HRS	1	5	92	374	213	411	192	155	73	43	7	2	1568
AVG HRS	0.10	0.50	9.20	37.40	21.30	41.10	19.20	15.50	7.30	4.30	0.70	0.20	156.80

SEA

WIND SPEED VS. FREQUENCY

FREQUENCY	732	48	243	461	502	585	564	391	348	190	175	67	50	30	66
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 4.91 KNOTS
MODE 0.0 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 3.30 KNOTS
SKEW 1.49

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	732	780	1484	2571	3526	4064	4306	4386	4452
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	732	639	454	398	150	207	224	313	104	266	229	210	92	115	61	114	144
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	40	33	4	0	0	4	5	0	2	3	5	0	0	0	0	0
10-12	0	107	65	17	3	4	14	19	2	10	18	16	4	0	1	2	10
WIND 7-9	0	189	130	103	23	38	44	86	28	66	70	60	16	8	7	25	36
SPEED 4-6	0	229	180	202	80	96	97	145	53	130	95	86	45	60	33	56	62
KNOTS 1-3	0	74	46	72	44	69	65	58	21	58	43	43	27	47	20	29	36
CALM	732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	256	677	1457	74	1316	8	89	0	575
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.20/16
MODE 2.00/16
MEDIAN 2.00/16
STD. DEV. 2.26/16
SKEW 0.53

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	2	19	63	133	364	396	452	454	385	304	224	262	288	276	327	274	152	45	10	21	1	0	0	0	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 41.62 °F.
MODE 37.50 °F.
MEDIAN 39.50 °F.
STD. DEV. 7.97 °F.
SKEW 0.52

HOURLY OBSERVATIONS 2264 SPECIAL OBS. 2188 TOTAL OBSERVATIONS 7071 FOG WITH SMOKE AND/OR HAZE 284

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	118	41	41	68	39	42	55	92	18	15	14	8	3	2	4	14	7
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	3	2	10	4	5	3	4	6	2	1	0	1
NNE	0	0	2	2	2	3	5	8	5	4	5	2	1	2
NE	0	0	2	10	12	15	12	13	3	0	1	0	0	0
ENE	0	0	3	4	13	10	6	2	1	0	0	0	0	0
E	0	1	3	7	11	5	6	5	3	1	0	0	0	0
ESE	0	2	5	12	4	13	10	4	2	1	1	1	0	0
SE	0	0	3	13	15	22	13	8	9	2	4	0	1	2
SSE	0	1	0	2	1	5	4	2	2	1	0	0	0	0
S	0	1	2	5	1	1	1	1	3	0	0	0	0	0
SSW	0	0	2	6	0	3	2	0	1	0	0	0	0	0
SW	0	0	0	2	2	1	2	0	0	1	0	0	0	0
WSW	0	0	0	2	1	0	0	0	0	0	0	0	0	0
W	0	0	1	0	1	0	0	0	0	0	0	0	0	0
WNW	0	0	1	0	1	2	0	0	0	0	0	0	0	0
NW	0	0	1	1	3	7	0	2	0	0	0	0	0	0
NNW	0	0	2	0	1	3	0	1	0	0	0	0	0	0
CALM	118													

WIND SPEED

SEA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.9	2.4	1.4	1.7	0.5	0.2	7.1
NNE	0.0	0.7	0.9	2.2	1.5	1.2	0.5	7.1
NE	0.0	2.1	4.6	4.3	0.5	0.2	0.0	11.7
ENE	0.0	1.2	4.0	1.4	0.2	0.0	0.0	6.7
E	0.2	1.7	2.8	1.9	0.7	0.0	0.0	7.2
ESE	0.3	2.9	2.9	2.4	0.5	0.3	0.0	9.5
SE	0.0	2.8	6.4	3.6	1.9	0.7	0.5	15.8
SSE	0.2	0.3	1.0	1.0	0.5	0.0	0.0	3.1
S	0.2	1.2	0.3	0.3	0.5	0.0	0.0	2.6
SSW	0.0	1.4	0.5	0.3	0.2	0.0	0.0	2.4
SW	0.0	0.3	0.5	0.3	0.2	0.0	0.0	1.4
WSW	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.5
W	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.3
WNW	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.7
NW	0.0	0.3	1.7	0.3	0.0	0.0	0.0	2.4
NNW	0.0	0.3	0.7	0.2	0.0	0.0	0.0	1.2
CALM								20.3
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	38	329	214
	<28	28 TO 31	32

TEMPERATURE (F)

CHECK COUNT 581
FOG WITH CP 7
FOG WITH FP 24
ALL FOG CASES 612
PURE FOG 581
REC.OBS. 303

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	6	18	1	7	0	0	0	0	32
1957	0	0	0	0	0	0	1	2	0	0	0	0	3
1958	0	0	0	0	2	0	0	0	0	0	0	0	2
1959	0	0	0	0	0	18	0	2	0	0	0	0	20
1960	0	0	0	0	5	22	0	0	0	0	0	0	27
1961	0	0	0	0	15	0	30	0	1	0	0	0	46
1962	0	0	0	0	1	3	0	0	0	0	0	0	4
1963	0	0	0	0	0	17	12	0	0	0	0	0	29
1964	0	0	0	0	0	9	0	2	0	0	0	0	11
1965	0	0	0	0	0	16	0	0	0	0	0	0	16
TOTAL HRS	0	0	0	0	29	103	44	13	1	0	0	0	190
AVG HRS	0.0	0.0	0.0	0.0	2.90	10.30	4.40	1.30	0.10	0.0	0.0	0.0	19.00

SE.

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	9	11	55	8	83	78	2	22	4	11	0	0	283
1957	6	16	4	33	59	22	0	30	3	0	4	0	177
1958	6	8	19	48	3	23	18	1	6	1	6	4	143
1959	3	0	15	39	46	74	12	17	0	0	0	1	207
1960	0	3	25	40	7	62	0	0	41	0	3	0	181
1961	5	8	15	34	4	5	39	0	0	1	3	6	120
1962	10	3	27	59	32	41	20	5	9	1	10	4	221
1963	1	14	31	10	1	64	80	40	8	0	0	2	251
1964	1	8	33	56	86	30	3	16	1	0	0	8	242
1965	4	2	37	35	15	10	102	15	0	7	15	7	249
TOTAL HRS	45	73	261	362	336	409	276	146	72	21	41	32	2074
AVG HRS	4.50	7.30	26.10	36.20	33.60	40.90	27.60	14.60	7.20	2.10	4.10	3.20	207.40

SEA

MCI

WIND SPEED VS. FREQUENCY

FREQUENCY	47	1	31	57	73	45	40	32	27	18	27	14	4	2	12
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 5.25 KNOTS
MODE 4.00 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 3.38 KNOTS
SKEW 0.37

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	47	48	136	254	326	371	412	418	430
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	93	39	25	37	31	48	20	16	12	54	21	43	15	10	1	7	3
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	2	3	0	2	1	2	1	1	1	0	0	1	0	0	0	0
10-12	0	10	3	1	2	9	3	1	0	5	3	2	0	0	0	2	0
WIND 7-9	0	6	9	12	8	10	8	0	0	7	4	5	2	3	0	1	2
SPEED 4-6	0	15	5	15	18	16	7	6	7	23	5	22	9	6	1	2	1
KNOTS 1-3	0	6	4	9	1	12	0	10	4	14	9	14	3	1	0	2	0
CALM	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	9	39	140	14	174	3	5	0	46
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.42/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 1.98/16
SKEW -0.29

TEMPERATURE VS. FREQUENCY

FREQ.	3	3	2	3	2	9	0	9	44	56	52	21	33	17	6	12	24	8	15	11	15	24	5	1	7	10	15	9	11	3	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 41.42 °F.
MODE 31.50 °F.
MEDIAN 37.50 °F.
STD. DEV. 13.12 °F.
SKEW 0.76

HOURLY OBSERVATIONS 418 SPECIAL OBS. 12 TOTAL OBSERVATIONS 846 FOG WITH SMOKE AND/OR HAZE 0

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	12	4	2	5	8	15	12	1	7	26	8	22	8	1	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	1	0	0	2	0	0	0	0	0	0	0	1
NNE	0	0	0	0	1	0	1	0	0	0	0	0	0	0
NE	0	0	0	0	1	1	2	1	0	0	0	0	0	0
ENE	0	0	0	0	1	1	2	1	1	0	1	1	0	0
E	0	0	0	0	3	0	2	2	2	2	4	0	0	0
ESE	0	0	0	0	0	2	2	4	1	0	0	3	0	0
SE	0	0	0	0	0	0	1	0	0	0	0	0	0	0
SSE	0	0	1	0	1	4	1	0	0	0	0	0	0	0
S	0	0	0	6	3	1	5	2	2	0	3	2	1	1
SSW	0	0	1	3	2	0	0	0	0	0	1	1	0	0
SW	0	0	3	5	5	2	1	5	0	0	1	0	0	0
WSW	0	0	0	1	2	1	2	0	0	1	0	0	0	1
W	0	0	0	0	1	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	12													
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.8	1.5	0.0	0.0	0.0	0.8	3.1
NNE	0.0	0.0	0.8	0.8	0.0	0.0	0.0	1.5
NE	0.0	0.0	1.5	2.3	0.0	0.0	0.0	3.8
ENE	0.0	0.0	1.5	2.3	0.8	1.5	0.0	6.1
E	0.0	0.0	2.3	3.1	3.1	3.1	0.0	11.5
ESE	0.0	0.0	1.5	5.6	0.8	2.3	0.0	9.2
SE	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.8
SSE	0.0	0.8	3.8	0.8	0.0	0.0	0.0	5.3
S	0.0	4.6	3.1	5.3	1.5	3.8	1.5	19.8
SSW	0.0	3.1	1.5	0.0	0.0	1.5	0.0	6.1
SW	0.0	6.1	5.3	4.6	0.0	0.8	0.0	16.8
WSW	0.0	0.8	2.3	1.5	0.8	0.0	0.8	6.1
W	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								9.2
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	26	71	34
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 131
FOG WITH LP 57
FOG WITH FP 62
ALL FOG CASES 249
PURE FOG 131
REC.OBS. 128

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	2	15	0	0	0	0	0	17
1959	0	0	0	0	0	0	1	0	0	0	0	0	1
1960	0	0	0	0	0	0	12	0	0	0	0	0	12
1961	0	0	0	0	0	5	0	6	0	0	0	0	11
1962	0	0	0	0	0	0	0	6	0	0	0	0	6
1963	0	0	0	0	0	0	34	5	3	0	0	0	42
1964	0	0	0	0	0	3	0	0	0	0	0	0	3
1965	0	0	0	0	0	0	0	0	2	0	0	0	2
TOTAL HRS	0	0	0	0	0	10	62	17	5	0	0	0	94
AVG HRS	0.0	0.0	0.0	0.0	0.0	1.00	6.20	1.70	0.50	0.0	0.0	0.0	9.40

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	2	0	0	11	0	0	0	0	0	0	13
1958	0	5	0	0	0	10	2	0	5	1	0	1	24
1959	0	0	2	8	0	10	6	7	0	9	2	0	44
1960	0	0	0	0	0	0	37	21	0	0	0	0	58
1961	0	2	3	5	8	5	0	4	2	10	0	0	39
1962	4	0	2	2	0	11	6	3	0	0	2	7	37
1963	2	1	3	0	3	0	17	1	2	1	0	0	30
1964	0	0	12	11	13	5	1	0	0	5	0	0	47
1965	0	2	8	0	0	0	9	0	0	14	0	0	33
TOTAL HRS	6	10	32	26	24	52	78	36	9	40	4	8	325
AVG HRS	0.60	1.00	3.20	2.60	2.40	5.20	7.80	3.60	0.90	4.00	0.40	0.80	32.50

M.

WIND SP. D VS. FREQUENCY

FREQUENCY	108	0	73	70	89	64	75	28	30	8	12	3	0	0	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 3.83 KNOTS
MODE 0.0 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 2.66 KNOTS
SKEW 1.44

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	108	108	251	404	507	545	560	560	560
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	216	69	9	0	1	1	2	2	3	10	17	25	71	43	55	64	80
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	9	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4
WIND 7-9	0	13	0	0	0	0	0	1	0	0	2	2	7	2	4	10	25
SPEED 4-6	0	29	6	0	0	1	0	1	2	5	7	13	41	21	30	35	37
KNOTS 1-3	0	18	3	0	1	0	2	0	1	5	8	10	23	20	20	18	14
CALM	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

MIA

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	15	67	126	8	206	1	6	0	129
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.01/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.48/16
SKEW 0.00

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	22	34	28	46	91	129	85	67	23	25
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 6	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 64.67 °F.
MODE 65.50 °F.
MEDIAN 65.50 °F.
STD. DEV. 4.49 °F.
K -0.14

HOURLY OBSERVATIONS 213 SPECIAL OBS. 347 TOTAL OBSERVATIONS 910 FOG WITH SMOKE AND/OR HAZE 137

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	0													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM				0.0	0.0	0.0	0.0	0.0
								0.0
TOTAL								0.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 0 0 0

<28 28 TO 31 32

TEMPERATURE (F)

CHECK COUNT 0
FOG WITH LP 0
FOG WITH FP 0
ALL FOG CASES 0
PURE FOG 0
REC.OBS. 0

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	1	1	2	0	0	0	0	0	4
1957	0	0	0	0	1	10	17	2	10	0	0	0	40
1958	0	0	0	0	9	3	0	0	0	0	2	0	14
1959	0	0	0	0	0	0	9	0	2	0	0	0	11
1960	0	0	0	0	3	0	0	2	0	0	0	0	5
1961	0	0	3	0	4	0	3	0	0	4	0	0	14
1962	0	0	0	0	3	3	8	30	0	0	1	0	45
1963	0	0	2	0	9	6	20	3	0	3	0	0	43
1964	0	0	0	0	6	5	0	5	0	3	0	0	19
1965	0	0	0	3	0	4	5	0	6	0	0	0	18
TOTAL HRS	0	0	5	3	36	32	64	42	18	10	3	0	213
AVG HRS	0.0	0.0	0.50	0.30	3.60	3.20	6.40	4.20	1.80	1.00	0.30	0.0	21.30

MSY

WIND SPEED VS. FREQUENCY

FREQUENCY	613	9	128	361	451	342	261	193	136	48	47	6	13	2	2
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 3.85 KNOTS
MODE 0.0 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 2.79 KNOTS
SKEW 1.38

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	613	622	1111	1904	2358	2542	2595	2610	2612
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	1223	134	122	179	205	135	108	122	266	224	130	92	40	47	43	51	84
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
10-12	0	7	4	2	5	1	0	2	19	10	6	1	0	1	3	1	4
WIND 7-9	0	19	34	36	29	15	11	28	74	47	35	12	4	6	2	10	14
SPEED 4-6	0	54	49	90	108	90	65	69	159	135	61	47	22	20	25	29	31
KNOTS 1-3	0	54	35	51	62	29	32	23	32	32	28	30	14	20	13	11	32
CALM	613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

MSY

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	58	245	713	56	983	12	59	0	486
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.86/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.32/16
SKEW -0.06

TEMPERATURE VS. FREQUENCY

FREQ.	1	0	0	0	0	0	0	0	0	0	3	9	21	7	22	15	45	57	138	215	212	207	184	318	234	238	314	214	119	43	16
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 59.01 °F.
MODE 59.50 °F.
MEDIAN 59.50 °F.
STD. DEV. 7.24 °F.
SKEW -0.07

HOURLY OBSERVATIONS 1154 .. SPECIAL OBS. 1458 TOTAL OBSERVATIONS 3629 FOG WITH SMOKE AND/OR HAZE 1216

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	0													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								0.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 1 0 0

<28 28 TO 31 32
TEMPERATURE (F)

CHECK COUNT 1
FOG WITH LP 1
FOG WITH FP 0
ALL FOG CASES 2
PURE FOG 0
REC.OBS. 0

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	1	0	16	58	2	1	36	3	4	0	121
1957	0	0	0	0	17	26	58	29	11	1	1	0	143
1958	0	0	0	0	24	8	0	5	13	2	0	0	52
1959	4	0	0	15	20	0	24	49	1	14	2	0	129
1960	0	0	0	6	4	25	65	6	18	6	2	0	132
1961	0	0	3	6	17	33	13	16	2	5	0	3	98
1962	0	0	0	4	4	63	37	24	5	1	0	0	138
1963	0	0	0	6	19	5	35	7	13	4	0	0	89
1964	0	0	0	5	17	49	49	5	6	1	1	0	133
1965	0	0	0	7	26	27	18	23	11	7	0	0	119
TOTAL HRS	4	0	4	49	164	294	301	165	116	44	10	3	1154
AVG HRS	0.40	0.0	0.40	4.90	16.40	29.40	30.10	16.50	11.60	4.40	1.00	0.30	115.40

IAH

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	213	71	258	422	392	441	339	259	244	134	115	51	45	19	16

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 5.09 KNOTS
MODE 5.00 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 2.94 KNOTS
SKEW 0.03

WIND SPEEF VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMUALTIVE FREQUENCY	213	284	964	1797	2395	2773	2939	3003	3021

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	426	114	103	153	245	264	376	319	324	270	135	100	91	76	89	82	67

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	0	0	0	0	1	5	10	18	2	0	0	0	0	0	1	0
10-12	0	2	2	3	7	14	39	50	42	24	13	2	0	1	5	3	4
WIND 7-9	0	13	33	24	39	65	90	95	96	66	31	17	12	12	22	12	12
SPEED 4-6	0	57	41	66	116	111	166	112	108	101	64	50	43	35	39	31	30
KNOTS 1-3	0	42	27	60	83	75	74	52	60	77	27	31	36	26	23	35	21
CALM	213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	80	325	743	180	990	30	158	0	515
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.82/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.31/16
SKEW -0.08

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	4	2	0	0	14	8	19	45	65	66	149	146	177	176	236	315	423	307	263	273	172	117	44
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 59.92 °F.
MODE 61.50 °F.
MEDIAN 61.50 °F.
STD. DEV. 7.39 °F.
SKEW -0.21

HOURLY OBSERVATIONS 1464 SPECIAL OBS. 1557 TOTAL OBSERVATIONS 5143 FOG WITH SMOKE AND/OR HAZE 714

IAH

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	1	1	1	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	1	0	0	0	0	0	0	0	0
NW	0	0	1	0	0	1	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	0													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	16.7	33.3	0.0	0.0	0.0	0.0	0.0	50.0
WNW	0.0	0.0	16.7	0.0	0.0	0.0	0.0	16.7
NW	0.0	16.7	16.7	0.0	0.0	0.0	0.0	33.3
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								0.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 0 5 1

<28 28 TO 31 32
TEMPERATURE (F)

CHECK COUNT 6
FOG WITH LP 1
FOG WITH FP 6
ALL FOG CASES 12
PURE FOG 6
REC.OBS. 4

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	3	0	0	0	0	0	3
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	3	0	0	0	0	0	3
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.30

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	6	5	29	22	14	26	15	6	0	123
1957	0	0	2	5	13	7	63	42	19	2	0	1	154
1958	0	0	2	1	57	20	8	8	16	18	3	0	133
1959	0	0	5	14	29	9	20	35	17	8	8	0	145
1960	0	0	1	17	13	50	30	3	47	5	1	1	168
1961	0	0	6	4	15	31	18	21	15	3	0	0	113
1962	0	0	1	1	0	56	24	59	14	15	8	3	181
1963	0	0	0	10	13	5	24	8	34	1	0	0	95
1964	0	0	0	18	14	30	47	16	10	12	10	0	166
1965	0	0	3	27	60	17	19	18	25	10	4	0	183
TOTAL HRS	0	0	20	103	219	263	275	224	223	89	40	5	1461
AVG HRS	0.0	0.0	2.00	10.30	21.90	26.30	27.50	22.40	22.30	8.90	4.00	0.50	146.10

PHL

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	267	0	30	224	317	261	185	120	69	29	32	12	5	3	2

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 4.27 KNOTS
MODE 4.00 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 2.65 KNOTS
SKEW 0.10

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMUALTIVE FREQUENCY	267	267	521	1099	1404	1502	1546	1554	1556

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	534	34	24	30	115	101	85	74	60	108	93	182	219	66	56	31	11

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	0	0	0	3	0	0	0	0	0	1	0	1	0	0	0	0
10-12	0	0	0	1	10	12	1	1	1	0	3	7	12	1	0	0	0
WIND 7-9	0	1	2	3	26	31	11	6	4	6	14	51	49	11	2	1	0
SPEED 4-6	0	27	16	11	58	48	55	44	43	67	61	103	126	45	33	19	7
KNOTS 1-3	0	6	6	15	18	10	18	23	12	35	14	21	31	9	21	11	4
CALM	267	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

PHL

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	117	181	304	64	420	6	187	0	277
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.87/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.53/16
SKEW -0.05

TEMPERATURE VS. FREQUENCY

FREQ.	13	0	0	0	1	0	6	37	48	46	52	84	78	89	87	97	120	61	73	72	39	72	45	74	83	44	49	58	70	42	13
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 48.84 °F.
MODE 45.50 °F.
MEDIAN 47.50 °F.
STD. DEV. 12.81 °F.
SKEW 0.26

HOURLY OBSERVATIONS 660 SPECIAL OBS. 896 TOTAL OBSERVATIONS 4643 FOG WITH SMOKE AND/OR HAZE 1393

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	28	2	4	1	2	12	9	13	2	10	5	19	33	3	3	4	1
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	2	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	4	0	0	0	0	0	0	0	0	0
NE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	1	0	0	0	0	1	0	0	0	0
E	0	0	0	0	1	1	2	2	2	1	1	2	0	0
ESE	0	0	2	1	1	1	3	0	1	0	0	0	0	0
SE	0	0	0	4	3	1	3	1	1	0	0	0	0	0
SSE	0	0	0	0	2	0	0	0	0	0	0	0	0	0
S	0	0	1	4	4	0	0	1	0	0	0	0	0	0
SSW	0	0	0	3	0	0	1	0	0	0	1	0	0	0
SW	0	0	0	2	0	3	6	1	2	2	1	2	0	0
WSW	0	0	1	2	8	2	6	4	4	2	3	1	0	0
W	0	0	0	1	1	0	0	0	0	1	0	0	0	0
WNW	0	0	0	0	0	2	0	1	0	0	0	0	0	0
NW	0	0	0	2	0	2	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	1	0	0	0	0	0	0	0	0
CALM	28													

WIND SPEED

PHL WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3
NNE	0.0	0.0	2.6	0.0	0.0	0.0	0.0	2.6
NE	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7
ENE	0.0	0.0	0.7	0.0	0.7	0.0	0.0	1.3
E	0.0	0.0	1.3	2.6	2.0	2.0	0.0	7.9
ESE	0.0	2.0	1.3	2.0	0.7	0.0	0.0	6.0
SE	0.0	2.6	2.6	2.6	0.7	0.0	0.0	8.6
SSE	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3
S	0.0	3.3	2.6	0.7	0.0	0.0	0.0	6.6
SSW	0.0	2.0	0.0	0.7	0.0	0.7	0.0	3.3
SW	0.0	1.3	2.0	4.6	2.6	2.0	0.0	12.6
WSW	0.0	2.0	6.6	6.6	4.0	2.6	0.0	21.9
W	0.0	0.7	0.7	0.0	0.7	0.0	0.0	2.0
WNW	0.0	0.0	1.3	0.7	0.0	0.0	0.0	2.0
NW	0.0	1.3	1.3	0.0	0.0	0.0	0.0	2.6
NNW	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7
CALM								18.5
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	40	95	16
TEMPERATURE (F)	<28	28 TO 31	32

CHECK COUNT 151
FOG WITH LP 20
FOG WITH FP 84
ALL FOG CASES 253
PURE FOG 0
REC.OBS. 71

FOG WITH SMOKE AND/OR HAZE 71

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	1	0	0	10	0	0	0	0	11
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	1	0	8	0	0	0	0	9
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	3	5	7	0	0	0	0	15
1962	0	0	0	0	0	0	1	14	0	0	0	0	15
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	1	0	0	0	0	0	1
1965	0	0	0	0	0	3	8	0	0	0	0	0	11
TOTAL HRS	0	0	0	0	1	7	15	39	0	0	0	0	62
AVG HRS	0.0	0.0	0.0	0.0	0.10	0.70	1.50	3.90	0.0	0.0	0.0	0.0	6.20

PHL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	1	5	4	8	36	6	2	2	11	1	7	83
1957	0	0	5	3	2	1	15	14	0	8	2	11	61
1958	0	4	2	4	13	5	0	0	0	1	7	5	41
1959	0	0	10	2	8	22	4	7	8	2	0	0	63
1960	2	2	4	10	11	0	0	0	0	0	5	4	38
1961	4	0	1	16	8	9	12	29	3	0	14	4	100
1962	2	13	0	11	0	6	5	23	0	1	0	1	62
1963	0	2	9	27	2	0	20	3	5	0	0	3	71
1964	2	0	0	0	4	18	8	0	4	4	1	4	45
1965	4	3	4	1	0	3	0	16	0	0	3	0	34
TOTAL HRS	14	25	40	78	56	100	70	94	22	27	33	39	598
AVG HRS	1.40	2.50	4.00	7.80	5.60	10.00	7.00	9.40	2.20	2.70	3.30	3.90	59.80

DCA

WIND SPEED VS. FREQUENCY

FREQUENCY	180	14	19	147	177	153	122	92	43	16	14	0	0	0	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 4.07 KNOTS
MODE 0.0 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 2.54 KNOTS
SKEW 1.60

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	180	194	360	690	905	964	978	978	978
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	360	45	44	78	104	24	10	14	38	156	100	79	24	17	13	15	37
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	0	3	1	0	0	0	0	0	7	2	0	0	0	0	0	1
WIND 7-9	0	7	11	20	26	2	1	0	8	31	22	7	4	0	1	2	9
SPEED 4-6	0	30	22	47	61	14	4	0	21	97	55	41	13	7	5	9	21
KNOTS 1-3	0	8	8	10	17	8	5	8	9	21	21	31	7	10	7	4	6
CALM	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	3	58	202	118	259	43	156	0	139
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.21/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.11/16
SKEW 0.10

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	19	4	20	31	54	83	25	55	54	106	63	80	63	59	38	16	53	40	63	36	4	2	1	4	5
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 46.35 °F.
MODE 43.50 °F.
MEDIAN 45.50 °F.
STD. DEV. 10.15 °F.
SKEW 0.28

HOURLY OBSERVATIONS 352 SPECIAL OBS. 626 TOTAL OBSERVATIONS 2526 FOG WITH SMOKE AND/OR HAZE 76

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	12	0	0	2	0	0	0	1	5	20	17	11	3	1	1	0	1
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	2	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	1	0	0	0	0	0	0	0	0
S	0	1	0	2	1	1	0	0	0	0	0	0	0	0
SSW	0	2	0	4	6	1	1	2	1	3	0	0	0	0
SW	0	0	0	2	1	4	5	2	3	0	0	0	0	0
WSW	0	0	1	2	2	1	1	4	0	0	0	0	0	0
W	0	1	0	1	0	1	0	0	0	0	0	0	0	0
WNW	0	0	0	1	0	0	0	0	0	0	0	0	0	0
NW	0	1	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	12													

WIND SPEED

DCA

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
SSE	1.4	2.7	2.7	0.0	0.0	0.0	0.0	6.8
S	2.7	5.4	9.5	4.1	5.4	0.0	0.0	27.0
SSW	0.0	2.7	6.8	9.5	4.1	0.0	0.0	23.0
SW	0.0	4.1	4.1	6.8	0.0	0.0	0.0	14.9
WSW	1.4	1.4	1.4	0.0	0.0	0.0	0.0	4.1
W	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
WNW	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.4
CALM								16.2
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	23	38	13
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 74
FOG WITH LP 7
FOG WITH FP 117
ALL FOG CASES 198
PURE FOG 62
REC.OBS. 30

FOG WITH SMOKE AND/OR HAZE 4

DCA

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	1	0	0	0	0	0	1
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	1	0	0	0	0	0	0	1
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	13	0	7	0	0	0	0	20
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	1	0	0	0	0	1
1965	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL HRS	0	0	0	0	0	14	2	8	0	0	0	0	24
AVG HRS	0.0	0.0	0.0	0.0	0.0	1.40	0.20	0.80	0.0	0.0	0.0	0.0	2.40

DC.

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	1	0	0	3	5	24	0	0	0	6	5	0	44
1957	0	0	0	0	8	0	18	4	0	1	0	0	31
1958	0	0	1	6	7	0	0	0	0	2	0	0	16
1959	0	0	0	1	7	2	0	13	6	2	0	0	31
1960	0	0	0	8	3	1	2	0	0	0	2	0	16
1961	0	0	0	5	0	15	5	3	12	0	3	1	44
1962	0	0	0	0	1	0	4	27	1	0	1	0	34
1963	0	0	5	10	0	0	19	2	4	0	0	0	40
1964	0	0	0	0	1	28	4	0	9	4	1	0	47
1965	0	0	2	4	0	3	2	14	0	0	0	0	25
TOTAL HRS	1	0	8	37	32	73	54	63	32	15	12	1	328
AVG HRS	0.10	0.0	0.80	3.70	3.20	7.30	5.40	6.30	3.20	1.50	1.20	0.10	32.80

ATL

WIND SPEED VS. FREQUENCY

FREQUENCY	246	1	86	215	294	283	206	221	164	70	112	30	17	8	13
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 5.12 KNOTS
MODE 4.00 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 3.03 KNOTS
SKEW 0.37

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	246	247	548	1125	1552	1786	1928	1953	1966
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	492	27	15	97	212	376	154	128	77	89	57	82	100	131	74	68	33
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	2	2	5	6	0	0	2	0	1	0	0	0	0	3
10-12	0	0	0	4	30	47	14	10	2	4	0	9	13	5	11	7	3
WIND 7-9	0	5	1	24	59	104	49	25	23	14	11	22	28	30	18	28	14
SPEED 4-6	0	14	11	55	96	167	51	57	39	45	28	39	47	70	33	24	7
KNOTS 1-3	0	8	3	12	25	53	34	36	13	24	16	11	12	26	12	9	6
CALM	246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	24	74	427	103	664	29	92	0	553
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.58/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.41/16
SKEW 0.24

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	12	3	20	27	34	45	42	60	59	79	79	106	118	130	191	141	129	96	86	93	128	224	55	9
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 55.87 °F.
MODE 69.50 °F.
MEDIAN 55.50 °F.
STD. DEV. 10.44 °F.
SKEW -1.31

HOURLY OBSERVATIONS 725 SPECIAL OBS. 1241 TOTAL OBSERVATIONS 7962 FOG WITH SMOKE AND/OR HAZE 21

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	0	0	0	0	0	4	0	2	4	0	0	0	7	4	8	5	1
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	1	3	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	1	0	0	0	0	0	0	0
SSE	0	0	0	1	0	2	1	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	1	2	2	0	2	0	0	0	0	0
W	0	0	0	0	1	2	0	1	0	0	0	0	0	0
WNW	0	0	0	0	0	1	2	0	2	1	2	0	0	0
NW	0	0	0	0	0	1	0	1	1	1	1	0	0	0
NNW	0	0	0	0	0	0	1	0	0	0	0	0	0	0
CALM	0													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	11.4	0.0	0.0	11.4
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	2.9	0.0	2.9	0.0	0.0	0.0	5.7
SSE	0.0	2.9	5.7	2.9	0.0	0.0	0.0	11.4
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	8.6	5.7	5.7	0.0	0.0	20.0
W	0.0	0.0	8.6	2.9	0.0	0.0	0.0	11.4
WNW	0.0	0.0	2.9	5.7	8.6	5.7	0.0	22.9
NW	0.0	0.0	2.9	2.9	5.7	2.9	0.0	14.3
NNW	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9
CALM								0.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	8	15	12
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 35
FOG WITH LP 12
FOG WITH FP 0
ALL FOG CASES 47
PURE FOG 35
REC.OBS. 13

FOG WITH SMOKE AND/OR HAZE 0

ATL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	4	0	0	0	0	0	4
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	4	0	0	0	0	0	4
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	2	0	0	0	0	2
TOTAL HRS	0	0	0	0	0	0	8	2	0	0	0	0	10
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.20	0.0	0.0	0.0	0.0	1.00

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	2	1	3	2	8	10	4	28	6	1	1	0	66
1957	1	0	11	0	18	10	12	38	11	1	0	7	109
1958	9	3	4	0	3	6	4	0	1	4	0	0	34
1959	6	5	1	3	6	3	5	10	0	2	7	0	48
1960	1	1	10	4	6	6	24	0	8	3	3	1	67
1961	7	12	4	2	4	7	0	7	6	6	5	0	60
1962	0	1	2	4	2	15	14	10	13	9	3	1	74
1963	6	1	3	0	13	1	16	8	9	0	4	9	70
1964	19	5	0	3	9	35	6	7	9	4	2	0	99
1965	15	3	9	0	11	6	1	12	9	19	0	3	88
TOTAL HRS	66	32	47	18	80	99	86	120	72	49	25	21	715
AVG HRS	6.60	3.20	4.70	1.80	8.00	9.90	8.60	12.00	7.20	4.90	2.50	2.10	71.50

BHM

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	234	0	7	85	56	48	33	25	22	3	6	3	2	1	3

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 2.80 KNOTS
MODE 0.0 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 3.02 KNOTS
SKEW 0.93

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMUALTIVE FREQUENCY	234	234	326	430	488	513	522	525	528

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	468	35	29	25	10	14	6	10	14	4	10	11	8	21	29	36	32

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0
10-12	0	1	1	0	0	0	0	0	0	0	0	0	1	0	5	3	0
WIND 7-9	0	0	5	3	0	0	0	1	4	0	1	3	2	6	8	6	5
SPEED 4-6	0	21	8	13	4	4	2	3	8	1	7	5	2	12	9	17	21
KNOTS 1-3	0	7	15	9	6	10	4	6	2	3	2	3	3	3	5	8	6
CALM	234	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

BHM

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	84	46	75	0	132	0	9	0	182
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.23/16
MODE 8.00/16
MEDIAN 4.00/16
STD. DEV. 3.07/16
SKEW -1.23

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	0	14	6	7	17	54	16	26	18	24	43	33	36	43	23	22	18	26	22	23	19	34	4
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 53.00 °F.
MODE 39.50 °F.
MEDIAN 53.50 °F.
STD. DEV. 11.03 °F.
SKEW 1.22

HOURLY OBSERVATIONS 233 SPECIAL OBS. 295 TOTAL OBSERVATIONS 1127 FOG WITH SMOKE AND/OR HAZE 213

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	8	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	2	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	2	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	1	0	0	0	0	0	0	0	0	0
ENE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	8													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	14.3	0.0	0.0	0.0	0.0	0.0	14.3
NNE	0.0	14.3	0.0	0.0	0.0	0.0	0.0	14.3
NE	0.0	0.0	7.1	0.0	0.0	0.0	0.0	7.1
ENE	0.0	7.1	0.0	0.0	0.0	0.0	0.0	7.1
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								57.1
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	11	3
	<29	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 14
FOG WITH LP 0
FOG WITH FP 0
ALL FOG CASES 14
PURE FOG 0
REC.OBS. 7

FOG WITH SMOKE AND/OR HAZE 7

BHM

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	4	0	0	0	0	0	4
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	4	0	0	0	0	0	4
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.40

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	11	10	0	6	0	0	0	0	0	27
1957	0	0	5	2	2	0	2	3	0	0	0	0	14
1958	0	0	0	1	8	1	0	0	0	0	0	3	13
1959	0	0	1	0	0	0	1	0	0	0	0	3	5
1960	0	0	5	6	7	1	2	5	0	0	0	0	26
1961	5	0	0	1	1	2	0	0	3	0	2	4	18
1962	1	2	0	0	0	30	2	0	0	2	0	5	42
1963	0	1	5	0	10	1	4	0	8	0	0	1	30
1964	0	6	0	4	11	7	0	0	1	0	0	0	29
1965	10	0	0	0	2	0	0	6	4	0	3	0	25
TOTAL HRS	16	9	16	25	51	42	17	14	16	2	5	16	229
AVG HRS	1.60	0.90	1.60	2.50	5.10	4.20	1.70	1.40	1.60	0.20	0.50	1.60	22.90

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	357	25	53	111	104	70	20	15	8	4	4	2	2	0	0

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 2.12 KNOTS
MODE 0.0 KNOTS
MEDIAN 2.00 KNOTS
STD. DEV. 2.38 KNOTS
SKEW 0.89

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMUALTIVE FREQUENCY	357	382	546	720	755	767	773	775	775

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	714	45	33	47	23	29	18	39	16	38	14	12	13	14	17	38	22

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	0	0	0	0	0	0	0	1	1	0	0	0	3	3	0	0
WIND 7-9	0	2	1	3	0	0	0	1	2	5	1	0	0	1	2	8	1
SPEED 4-6	0	19	17	19	12	16	11	20	5	18	7	5	6	5	7	16	11
KNOTS 1-3	0	24	15	25	11	13	7	18	8	14	6	7	7	5	5	14	10
CALM	357	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

BN..

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	78	146	154	11	222	1	34	0	129
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.38/16
MODE 4.00/16
MEDIAN 3.00/16
STD. DEV. 2.56/16
SKEW -0.24

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	2	7	12	2	15	17	14	16	27	17	22	56	34	23	46	56	47	16	15	36	46	28	51	37	49	47	36	1
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 51.88 °F.
MODE 41.50 °F.
MEDIAN 51.50 °F.
STD. DEV. 13.16 °F.
SKEW 0.79

HOURLY OBSERVATIONS 411 SPECIAL OBS. 364 TOTAL OBSERVATIONS 1581 FOG WITH SMOKE AND/OR HAZE 127
DISCARDS 0 DISCARD NO. 39

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	24	3	4	9	6	10	4	1	1	1	1	0	2	1	2	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	1	0	2	0	0	0	0	0	0	0	0
NNE	0	0	0	2	1	1	0	0	0	0	0	0	0	0
NE	0	1	1	5	1	1	0	0	0	0	0	0	0	0
ENE	0	0	0	3	1	2	0	0	0	0	0	0	0	0
E	0	0	1	6	1	2	0	0	0	0	0	0	0	0
ESE	0	0	0	1	1	2	0	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
S	0	0	0	1	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	2	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	1	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	1	0	1	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	24													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	1.4	2.9	0.0	0.0	0.0	0.0	4.3
NNE	0.0	2.9	2.9	0.0	0.0	0.0	0.0	5.8
NE	1.4	8.7	2.9	0.0	0.0	0.0	0.0	13.0
ENE	0.0	4.3	4.3	0.0	0.0	0.0	0.0	8.7
E	0.0	10.1	4.3	0.0	0.0	0.0	0.0	14.5
ESE	0.0	1.4	4.3	0.0	0.0	0.0	0.0	5.8
SE	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
SSE	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
S	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
SSW	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	2.9	0.0	0.0	0.0	0.0	2.9
W	0.0	0.0	0.0	0.0	0.0	1.4	0.0	1.4
WNW	0.0	0.0	0.0	0.0	0.0	1.4	1.4	2.9
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								34.8
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	31	35	3
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 69
FOG WITH LP 8
FOG WITH FP 32
ALL FOG CASES 107
PURE FOG 46
REC.OBS. 41

FOG WITH SMOKE AND/OR HAZE 11

BNA

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	3	0	0	0	0	0	3
1960	0	0	0	0	4	2	0	0	0	0	0	0	6
1961	0	0	0	0	0	0	3	0	0	0	0	0	3
1962	0	0	0	0	0	8	0	0	0	0	0	0	8
1963	0	0	0	0	0	0	1	0	0	0	0	0	1
1964	0	0	0	0	0	0	12	6	0	0	0	0	18
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	4	10	19	6	0	0	0	0	39
AVG HRS	0.0	0.0	0.0	0.0	0.40	1.00	1.90	0.60	0.0	0.0	0.0	0.0	3.90

BN:

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	6	0	8	4	12	0	6	0	0	0	0	36
1957	1	0	0	1	6	1	1	1	0	0	6	2	19
1958	0	1	4	6	8	5	1	0	2	6	2	1	36
1959	4	1	6	5	0	4	3	0	5	3	2	0	33
1960	16	6	4	15	5	0	4	0	0	1	2	3	56
1961	4	12	1	0	2	2	1	0	0	0	0	4	26
1962	3	2	5	0	0	7	0	3	0	1	2	0	23
1963	0	12	0	0	38	0	12	1	1	0	0	0	64
1964	6	7	4	20	0	0	1	0	6	0	1	0	45
1965	1	0	8	1	16	0	0	0	0	0	4	4	34
TOTAL HRS	35	47	32	56	79	31	23	11	14	11	19	14	372
AVG HRS	3.50	4.70	3.20	5.60	7.90	3.10	2.30	1.10	1.40	1.10	1.90	1.40	37.20

DAL

WIND SPEED VS. FREQUENCY

FREQUENCY	36	2	25	62	60	53	21	25	30	11	23	4	9	5	3
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 5.07 KNOTS
MODE 3.00 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 3.19 KNOTS
SKEW 0.65

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	36	38	125	238	284	325	352	366	369
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	72	14	5	18	11	11	10	53	34	41	11	35	18	17	13	24	18
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	2	3	2	0	0	0	0	0	0	1
10-12	0	2	0	0	0	0	3	11	10	7	0	0	0	0	2	0	1
WIND 7-9	0	1	3	0	1	1	1	16	14	11	4	4	1	1	2	6	0
SPEED 4-6	0	5	0	3	6	10	5	14	6	17	6	20	11	6	6	13	6
KNOTS 1-3	0	6	2	15	4	0	1	10	1	4	1	11	6	10	3	5	10
CALM	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

DAL

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	37	26	89	8	107	2	10	0	90
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.92/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.69/16
SKEW -0.03

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	3	0	4	5	18	10	20	29	56	32	16	19	42	35	9	45	16	4	10	0	2	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 50.06 °F.
MODE 45.50 °F.
MEDIAN 49.50 °F.
STD. DEV. 7.97 °F.
SKEW 0.57

HOURLY OBSERVATIONS 165 SPECIAL OBS. 204 TOTAL OBSERVATIONS 937 FOG WITH SMOKE AND/OR HAZE 4

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13
N	0	0	0	2	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	1	0	0	0	0	0	0	0	0	0	0	0
CALM	0													

WIND SPEED

DAL

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	66.7	0.0	0.0	0.0	0.0	0.0	66.7
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	33.3	0.0	0.0	0.0	0.0	0.0	33.3
CALM								0.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	3	0
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 3
FOG WITH UP 5
FOG WITH FP 0
ALL FOG CASES 8
PURE FOG 3
SMOKE 1

FOG WITH SMOKE AND OR HAZE 0

DAL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	1	0	0	0	0	1
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	0	1	0	0	0	0	1
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.10

DAL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	8	0	1	0	0	0	0	0	9
1957	0	0	0	2	1	4	4	9	1	0	0	0	21
1958	0	0	0	8	0	9	0	0	3	1	2	0	23
1959	0	0	0	0	0	4	3	7	0	0	0	0	14
1960	0	0	0	8	0	0	8	0	2	0	0	0	18
1961	0	0	0	1	3	14	5	0	0	0	0	0	23
1962	0	0	0	2	0	3	0	4	0	3	0	0	12
1963	0	0	0	0	1	0	0	0	0	0	0	0	1
1964	0	0	0	12	0	5	3	2	0	0	0	0	22
1965	0	0	1	0	14	0	5	0	0	1	0	0	21
TOTAL HRS	0	0	1	33	27	39	29	22	6	5	2	0	164
AVG HRS	0.0	0.0	0.10	3.30	2.70	3.90	2.90	2.20	0.60	0.50	0.20	0.0	16.40

ANC

WIND SPEED VS. FREQUENCY

FREQUENCY	965	209	443	777	421	212	95	61	29	6	7	0	0	0	0
WIND SPEED (KNOTS)	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

STATISTICAL RESULTS

MEAN 2.33 KNOTS
MODE 0.0 KNOTS
MEDIAN 2.00 KNOTS
STD. DEV. 2.00 KNOTS
SKEW 1.17

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	965	1174	2394	3027	3184	3219	3226	3226	3226
WIND SPEED (KNOTS)	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND DIRECTION VS. FREQUENCY

FREQUENCY	965	175	[illegible]	231	256	205	169	217	90	128	62	78	87	139	104	126	91
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	3	1	2	0	0	0	0	0	0	0	0	0	0	1	0	0
WIND 7-9	0	11	29	28	3	2	0	0	0	3	0	2	0	1	4	7	6
SPEED 4-6	0	74	94	76	59	71	53	35	33	33	15	21	15	47	30	37	36
KNOTS 1-3	0	87	79	125	94	132	116	182	57	92	47	55	72	91	69	82	49
CALM	965	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

ANC

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	18	213	844	231	1107	193	197	0	423
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
		-	-	-	-	-	-	-	-
		16	8	16	4	16	8	16	2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.69/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.05/16
SKEW -0.05

TEMPERATURE VS. FREQUENCY

FREQ.	1360	244	168	215	157	111	146	111	112	104	175	57	39	43	30	35	30	14	9	10	11	19	4	2	0	0	0	0	0	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 20.50 DEGREES(F)
MODE 13.50 DEGREES(F)
MEDIAN 15.50 DEGREES(F)
STD. DEV. 9.60 DEGREES(F)
SKEW 0.78

Reproduced from best available copy.

HOURLY OBSERVATIONS 1092 SPECIAL OBS. 2134 TOTAL OBSERVATIONS 4356 FOG WITH SMOKE AND/OR HAZE 3

ANC VISIBILITY VS. FREQUENCY
NOTE 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	18	213	844	231	1107	193	197	0	423
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.89/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.05/16
SKEW -0.05

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	0	0	0	0	1	3	5	4	3	0	14	8	10	18	40	68	75	109	146	144	127	163	20[illegible]
	<-47	-47 TO -46	-45 TO -44	-43 TO -42	-41 TO -40	-39 TO -38	-37 TO -36	-35 TO -34	-33 TO -32	-31 TO -30	-29 TO -28	-27 TO -26	-25 TO -24	-23 TO -22	-21 TO -20	-19 TO -18	-17 TO -16	-15 TO -14	-13 TO -12	-11 TO -10	-9 TO -8	-7 TO -6	-5 TO -4	-3 TO -2	-1 TO 0	1 TO 2	3 TO 4	5 TO 6	7 TO 8	9 TO 10	11 TO 12

TEMPERATURE (F)

FREQ.	239	244	168	215	157	111	146	111	112	104	175	57	39	43	30	35	30	14	9	10	11	19	4	2	0	0	0	0	0	0	0
	13 TO 14	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	7[illegible]

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 17.30 DEGREES(F)
MODE 15.50 DEGREES(F)
MEDIAN 15.50 DEGREES(F)
STD. DEV. 13.12 DEGREES(F)
SKEW 0.12

HOURLY OBSERVATIONS 1092 SPECIAL OBS. 2134 TOTAL OBSERVATIONS 4357 FOG WITH SMOKE AND/OR HAZE 3

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	931	122	149	190	135	184	160	204	79	111	50	68	71	113	79	86	63
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	11	26	16	20	14	9	3	2	1	0	0	0	0
NNE	0	7	15	34	35	19	11	12	5	1	1	0	0	0
NE	0	23	31	54	27	21	6	8	7	1	2	0	0	0
ENE	0	11	21	55	28	14	3	3	0	0	0	0	0	0
E	0	21	43	58	42	12	6	2	0	0	0	0	0	0
ESE	0	17	39	56	34	13	1	0	0	0	0	0	0	0
SE	0	27	54	74	22	9	0	0	0	0	0	0	0	0
SSE	0	4	15	32	18	10	0	0	0	0	0	0	0	0
S	0	8	26	48	19	4	4	2	0	0	0	0	0	0
SSW	0	6	17	21	7	4	1	0	0	0	0	0	0	0
SW	0	3	18	36	6	4	2	0	0	0	0	0	0	0
WSW	0	8	18	32	10	3	0	0	0	0	0	0	0	0
W	0	15	24	36	23	8	1	1	0	0	0	0	0	0
WNW	0	9	24	22	15	5	2	1	1	0	0	0	0	0
NW	0	19	17	30	10	4	2	2	2	0	0	0	0	0
NNW	0	11	20	10	11	4	4	2	1	0	0	0	0	0
CALM	931													
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

Reproduced from best available copy.

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

Reproduced from best available copy.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.4	2.2	1.2	0.4	0.1	0.0	0.0	4.4
NNE	0.2	2.1	1.9	0.6	0.2	0.0	0.0	5.3
NE	1.0	3.2	1.7	0.5	0.3	0.1	0.0	6.8
ENE	0.4	2.7	1.5	0.2	0.0	0.0	0.0	4.8
E	0.7	3.6	1.9	0.3	0.0	0.0	0.0	6.6
ESE	0.6	3.4	1.7	0.0	0.0	0.0	0.0	5.7
SE	1.0	5.2	1.1	0.0	0.0	0.0	0.0	7.3
SSE	0.1	1.7	1.0	0.0	0.0	0.0	0.0	2.8
S	0.3	2.0	0.8	0.2	0.0	0.0	0.0	4.0
SSW	0.2	1.4	0.4	0.0	0.0	0.0	0.0	2.0
SW	0.1	1.9	0.4	0.1	0.0	0.0	0.0	2.4
WSW	0.3	1.8	0.5	0.0	0.0	0.0	0.0	2.5
W	0.6	2.2	1.1	0.1	0.0	0.0	0.0	4.0
WNW	0.3	1.0	0.7	0.1	0.0	0.0	0.0	2.6
NW	0.7	1.7	0.5	0.1	0.1	0.0	0.0	3.1
NNW	0.4	1.1	0.5	0.2	0.0	0.0	0.0	2.2
CALM								33.2
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	2525	218	58
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 2801
FOG WITH LP 29
FOG WITH FP 283
ALL FOG CASES 3113
PURE FOG 2798
REC.OBS. 917

FOG WITH SMOKE AND/OR HAZE 1

ANC

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	3	1	30	21	10	0	0	0	0	65
1957	0	0	0	0	6	33	82	44	0	0	0	0	165
1958	0	0	0	0	8	29	60	9	3	6	0	0	115
1959	0	0	0	3	2	5	1	35	0	1	0	0	47
1960	0	0	0	0	0	6	12	30	4	0	0	0	52
1961	0	0	0	6	16	12	27	5	0	0	0	0	66
1962	0	0	0	1	12	9	40	36	10	0	0	0	108
1963	0	0	0	0	8	13	112	18	0	0	0	0	151
1964	0	0	0	2	[illegible]	[illegible]	[illegible]	0	9	0	0	0	27
1965	[illegible]	[illegible]	[illegible]	0	56	13	4	27	0	0	0	0	100
TOTAL FOG	[illegible]	[illegible]	[illegible]	[illegible]	112	157	365	[illegible]	26	7	0	0	896
AVG FOG	[illegible]	0.0	0.0	1.50	11.20	15.70	36.50	21.40	2.60	0.70	0.0	0.0	89.60

ANC

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	1	0	0	0	0	0	0	0	0	0	0	1
1957	0	0	2	0	1	0	6	0	0	0	0	0	9
1958	4	2	11	0	0	0	0	0	1	3	4	0	25
1959	0	1	4	3	2	0	0	0	0	0	0	0	10
1960	1	0	15	6	0	1	0	0	0	0	0	0	23
1961	0	3	0	4	0	4	11	0	0	7	0	0	29
1962	0	0	0	1	0	3	0	0	0	0	0	0	4
1963	0	0	5	0	0	0	47	0	0	0	0	0	52
1964	0	1	3	0	1	0	0	0	0	0	3	0	8
1965	0	5	9	0	5	2	0	0	13	0	1	0	35
TOTAL HRS	5	13	49	14	9	10	64	0	14	10	8	0	196
AVG HRS	0.50	1.30	4.90	1.40	0.90	1.00	6.40	0.0	1.40	1.00	0.80	0.0	19.60

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	344	0	19	152	254	303	159	120	98	38	41	3	4	2	9

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 4.26 KNOTS
MODE 0.0 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 2.91 KNOTS
SKEW 1.46

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMUALTIVE FREQUENCY	344	344	515	1072	1351	1487	1531	1537	1546

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	344	38	23	87	109	124	70	90	50	61	47	86	101	144	76	64	32

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	0	0	1	2	3	0	4	0	1	0	0	0	0	0	0	0
10-12	0	3	0	1	19	9	0	8	1	1	0	3	0	1	1	1	0
WIND 7-9	0	5	6	26	22	31	19	12	5	18	15	17	28	29	13	6	4
SPEED 4-6	0	17	12	45	59	66	42	53	39	31	25	63	63	95	48	36	22
KNOTS 1-3	0	13	5	14	7	15	9	13	5	10	7	3	10	19	14	21	6
CALM	344	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	133	182	337	88	419	13	127	0	247
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.62/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.47/16
SKEW -0.15

TEMPERATURE VS. FREQUENCY

FREQ.	2	0	2	5	3	8	8	19	36	49	82	99	83	100	81	110	62	95	68	67	40	62	70	63	62	51	49	70	57	31	12
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 46.36 °F.
MODE 43.50 °F.
MEDIAN 4[illegible] °F.
STD. DEV. 1[illegible] °F.
SKEW 0.[illegible]

HOURLY OBSERVATIONS 787 SPECIAL OBS. 759 TOTAL OBSERVATIONS 4211 FOG WITH SMOKE AND/OR HAZE 118

BAL

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	10	3	9	4	10	8	1	0	2	5	9	9	22	6	12	1
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	3	4	2	1	0	0	0	0	0	0	0	0
NNE	0	0	0	1	1	0	0	0	1	0	0	0	0	0
NE	0	0	0	3	0	2	3	1	0	0	0	0	0	0
ENE	0	0	0	0	2	1	1	0	0	0	0	0	0	0
E	0	0	0	1	1	4	0	0	0	1	3	0	0	0
ESE	0	0	0	3	0	1	1	3	0	0	0	0	0	0
SE	0	0	0	0	0	1	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	2	0	0	0	0	0
SSW	0	0	0	0	2	1	0	2	0	0	0	0	0	0
SW	0	0	0	1	1	4	2	0	1	0	0	0	0	0
WSW	1	0	0	1	1	1	3	1	2	0	0	0	0	0
W	0	0	0	0	2	7	0	3	2	2	0	0	0	0
WNW	0	0	1	2	0	1	0	0	2	0	0	0	0	0
NW	0	0	1	0	2	1	0	0	0	0	0	0	0	0
NNW	0	0	1	0	0	0	0	0	0	0	0	0	0	0
CALM	21													

WIND SPEED

B.L WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	5.3	2.3	0.0	0.0	0.0	0.0	7.6
NNE	0.0	0.8	0.8	0.0	0.8	0.0	0.0	2.3
NE	0.0	2.3	1.5	3.0	0.0	0.0	0.0	6.8
ENE	0.0	0.0	2.3	0.8	0.0	0.0	0.0	3.0
E	0.0	0.8	3.8	0.0	0.8	2.3	0.0	7.6
ESE	0.0	2.3	0.8	3.0	0.0	0.0	0.0	6.1
SE	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5
SSW	0.0	0.0	2.3	1.5	0.0	0.0	0.0	3.8
SW	0.0	0.8	3.8	1.5	0.8	0.0	0.0	6.8
WSW	0.0	0.8	1.5	3.0	1.5	0.0	0.0	6.8
W	0.0	4.5	6.8	2.3	3.0	0.0	0.0	16.7
WNW	0.0	2.3	0.8	0.0	1.5	0.0	0.0	4.5
NW	0.0	6.8	2.3	0.0	0.0	0.0	0.0	9.1
NNW	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.8
CALM								15.9
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	32	78	22
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 132
FOG WITH LP 11
FOG WITH FP 82
ALL FOG CASES 224
PURE FOG 114
REC.OBS. 67

FOG WITH SMOKE AND/OR HAZE 6

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	1	3	0	0	0	0	4
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	3	2	5	0	0	0	0	10
1960	0	0	0	0	0	1	0	1	0	0	0	0	2
1961	0	0	0	0	0	2	0	0	0	0	0	0	2
1962	0	0	0	0	0	3	0	15	0	0	0	0	18
1963	0	0	0	0	0	0	7	0	0	0	0	0	7
1964	0	0	0	0	0	0	4	0	0	0	0	0	4
1965	0	0	0	0	0	0	7	0	0	0	0	0	7
TOTAL HRS	0	0	0	0	0	9	21	24	0	0	0	0	54
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.90	2.10	2.40	0.0	0.0	0.0	0.0	5.40

BAL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	2	2	10	3	14	46	7	7	15	13	7	1	127
1957	0	0	21	0	8	2	21	11	2	6	4	0	75
1958	1	8	9	8	11	13	1	3	0	4	4	2	64
1959	5	2	4	8	12	14	5	6	6	9	2	0	73
1960	5	1	8	4	8	0	8	0	2	0	0	0	36
1961	4	0	0	6	1	25	2	6	20	0	8	10	84
1962	8	0	0	0	0	0	4	22	0	2	11	0	47
1963	0	0	4	10	8	2	36	0	13	4	3	2	82
1964	1	0	4	1	4	33	11	3	6	13	2	7	85
1965	0	1	12	3	6	16	0	19	2	1	0	0	60
TOTAL HRS	26	14	72	43	72	151	95	79	66	52	41	22	733
AVG HRS	2.60	1.40	7.20	4.30	7.20	15.10	9.50	7.90	6.60	5.20	4.10	2.20	73.30

IAD

WIND SPEED VS. FREQUENCY

FREQUENCY	232	0	17	182	144	110	43	33	16	4	12	1	2	0	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 3.16 KNOTS
MODE 0.0 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 2.49 KNOTS
SKEW 1.27

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	232	232	431	685	761	781	794	796	796
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	232	140	46	22	19	16	15	12	27	65	47	26	13	8	21	32	55
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	3	0	0	0	0	0	0	1	5	4	1	0	0	0	0	1
WIND 7-9	0	11	4	0	0	1	0	0	5	13	8	3	0	1	0	1	6
SPEED 4-6	0	68	31	16	12	7	13	7	13	27	28	16	3	4	16	14	22
KNOTS 1-3	0	58	11	6	7	8	2	5	8	20	7	6	10	3	5	17	26
CALM	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	18	99	150	124	169	20	141	0	75
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.76/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.14/16
SKEW -0.11

TEMPERATURE VS. FREQUENCY

FREQ.	8	0	7	7	9	1	7	0	12	15	47	63	27	33	53	56	75	106	17	7	24	28	8	34	41	15	7	19	31	17	22
TEMPERATURE (F)	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

STATISTICAL RESULTS

MEAN 47.14 °F.
MODE 47.50 °F.
MEDIAN 45.50 °F.
STD. DEV. 13.02 °F.
SKEW -0.03

HOURLY OBSERVATIONS 321 SPECIAL OBS. 475 TOTAL OBSERVATIONS 2236 FOG WITH SMOKE AND/OR HAZE 18

FIRST CARD 1- 6-63

IAD

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	20	7	5	3	2	0	3	2	0	2	5	2	0	0	1	3	11
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	4	0	3	0	0	0	0	0	0	0	0
NNE	0	0	0	1	4	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	1	2	0	0	0	0	0	0	0	0
ENE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	2	1	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	2	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	1	1	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	2	0	1	1	1	0
SW	0	0	0	1	0	0	0	0	0	0	1	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	1	0	0	0	0	0	0	0	0
NW	0	0	0	1	0	1	0	1	0	0	0	0	0	0
NNW	0	0	0	4	2	1	4	0	0	0	0	0	0	0
CALM	20													

WIND SPEED

IAD

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	6.1	4.5	0.0	0.0	0.0	0.0	10.6
NNE	0.0	1.5	6.1	0.0	0.0	0.0	0.0	7.6
NE	0.0	0.0	4.5	0.0	0.0	0.0	0.0	4.5
ENE	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	4.5	0.0	0.0	0.0	0.0	4.5
SE	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0
SSW	0.0	0.0	0.0	0.0	3.0	3.0	1.5	7.6
SW	3.0	1.5	0.0	0.0	0.0	1.5	0.0	3.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	1.5	0.0	0.0	0.0	0.0	1.5
NW	0.0	1.5	1.5	1.5	0.0	0.0	0.0	4.5
NNW	0.0	0.1	4.5	6.1	0.0	0.0	0.0	10.7
CALM								30.3
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 39 21 6

<28 28 TO 31 32
TEMPERATURE (F)

CHECK COUNT 66
FOG WITH LP 14
FOG WITH FP 26
ALL FOG CASES 106
PURE FOG 66
REC.OBS. 34

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	16	1	0	0	0	0	17
1964	0	0	0	0	0	0	4	1	0	0	0	0	5
1965	0	0	0	0	0	0	4	3	0	0	0	0	7
TOTAL HRS	0	0	0	0	0	0	24	5	0	0	0	0	29
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	2.40	0.50	0.0	0.0	0.0	0.0	2.90

IAD OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	4	2	12	26	4	6	35	2	4	0	0	1	96
1964	5	4	1	1	14	33	6	4	14	16	5	3	106
1965	4	3	21	15	0	22	4	16	3	0	1	1	90
TOTAL HRS	13	9	34	42	18	61	45	22	21	16	6	5	292
AVG HRS	1.30	0.90	3.40	4.20	1.80	6.10	4.50	2.20	2.10	1.60	0.60	0.50	29.20

CVG

WIND SPEED VS. FREQUENCY

FREQUENCY	188	44	132	189	242	228	127	85	65	29	35	8	5	1	5
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 4.12 KNOTS
MODE 4.00 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 2.68 KNOTS
SKEW < 0.05

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	188	232	553	1023	1235	1329	1372	1378	1383
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	188	100	86	123	80	49	35	38	39	84	157	159	51	63	42	44	45
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	1	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0
10-12	0	3	4	2	3	3	1	0	1	7	11	6	1	1	4	1	0
WIND 7-9	0	11	14	11	14	6	3	2	5	20	37	24	7	2	6	6	11
SPEED 4-6	0	51	45	50	39	25	19	16	27	36	61	81	30	47	20	24	26
KNOTS 1-3	0	34	23	60	24	15	12	20	6	21	47	44	13	13	12	13	8
CALM	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	154	100	343	8	429	1	65	0	283
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.75/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.61/16
SKEW -0.10

TEMPERATURE VS. FREQUENCY

FREQ.	6	8	2	0	8	10	12	9	46	36	41	89	70	63	80	61	64	38	37	36	86	65	52	47	61	84	91	73	61	36	11
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 50.11 °F.
MODE 65.50 °F.
MEDIAN 51.50 °F.
STD. DEV. 13.66 °F.
SKEW -1.13

HOURLY OBSERVATIONS 646 SPECIAL OBS. 737 TOTAL OBSERVATIONS 3045 FOG WITH SMOKE AND/OR HAZE 320

CVG

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	11	11	10	12	3	1	2	3	0	12	17	32	6	8	5	3	1
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	1	3	1	3	2	0	0	1	0	0	0	0
NNE	0	0	0	0	3	3	1	2	0	1	0	0	0	0
NE	0	0	1	1	0	4	0	3	2	0	1	0	0	0
ENE	0	0	0	1	0	0	2	0	0	0	0	0	0	0
E	0	1	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	1	0	1	0	0	0	0	0	0	0	0
SE	0	0	0	1	1	0	0	0	1	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	1	1	0	2	2	1	1	2	1	0	1	0	0
SSW	0	2	5	2	2	2	0	3	1	0	0	0	0	0
SW	0	1	10	6	5	8	2	0	0	0	0	0	0	0
WSW	0	0	0	3	2	1	0	0	0	0	0	0	0	0
W	0	0	1	2	4	1	0	0	0	0	0	0	0	0
WNW	0	0	0	1	1	2	1	0	0	0	0	0	0	0
NW	0	0	0	1	2	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	1	0	0	0	0	0	0	0	0	0
CALM	11													

WIND SPEED

CVG

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	2.9	2.9	1.5	0.7	0.0	0.0	8.0
NNE	0.0	0.0	4.4	2.2	0.7	0.0	0.0	7.3
NE	0.0	1.5	2.9	2.2	1.5	0.7	0.0	8.8
ENE	0.0	0.7	0.0	1.5	0.0	0.0	0.0	2.2
E	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7
ESE	0.0	0.7	0.7	0.0	0.0	0.0	0.0	1.5
SE	0.0	0.7	0.7	0.0	0.7	0.0	0.0	2.2
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.7	0.7	2.9	1.5	2.2	0.7	0.0	8.8
SSW	1.5	5.1	2.9	2.2	0.7	0.0	0.0	12.4
SW	0.7	11.7	9.5	1.5	0.0	0.0	0.0	23.4
WSW	0.0	2.2	2.2	0.0	0.0	0.0	0.0	4.4
W	0.0	2.2	3.6	0.0	0.0	0.0	0.0	5.8
WNW	0.0	0.7	2.2	0.7	0.0	0.0	0.0	3.6
NW	0.0	0.7	1.5	0.0	0.0	0.0	0.0	2.2
NNW	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7
CALM								8.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	52	68	17
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 137
FOG WITH LP 45
FOG WITH FP 49
ALL FOG CASES 230
PURE FOG 111
REC.OBS. 69

FOG WITH SMOKE AND/OR HAZE 15

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	3	0	0	0	0	0	3
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	1	0	0	0	0	0	0	0	0	1
1959	0	0	0	3	0	18	5	0	0	0	0	0	26
1960	0	0	0	1	7	0	9	1	0	0	0	0	18
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	3	1	0	0	0	0	0	4
1963	0	0	0	0	3	0	3	0	0	0	0	0	6
1964	0	0	0	0	0	1	3	0	0	0	0	0	4
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	5	10	22	24	1	0	0	0	0	62
AVG HRS	0.0	0.0	0.0	0.50	1.00	2.20	2.40	0.10	0.0	0.0	0.0	0.0	6.20

CVG

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	7	1	12	12	23	2	1	5	0	0	0	0	63
1957	6	0	9	5	2	0	14	27	7	0	0	4	74
1958	19	15	6	7	4	5	3	4	2	3	3	14	85
1959	5	8	0	1	3	4	1	8	4	4	1	0	39
1960	8	21	9	13	16	0	14	0	0	2	10	13	106
1961	4	6	5	0	1	18	0	1	0	0	2	8	45
1962	8	2	5	0	7	4	1	0	4	0	8	3	42
1963	0	9	2	0	17	0	14	0	12	0	4	3	61
1964	6	4	0	4	3	10	0	0	3	1	0	0	31
1965	0	2	18	5	2	0	4	1	4	0	1	1	38
TOTAL HRS	63	68	66	47	78	43	52	46	36	10	29	46	584
AVG HRS	6.30	6.80	6.60	4.70	7.80	4.30	5.20	4.60	3.60	1.00	2.90	4.60	58.40

DAY

WIND SPEED VS. FREQUENCY

FREQUENCY	66	0	27	108	125	203	172	127	116	55	53	23	29	4	16
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 5.91 KNOTS
MODE 5.00 KNOTS
MEDIAN 6.00 KNOTS
STD. DEV. 2.87 KNOTS
SKEW 0.32

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULTIVE FREQUENCY	66	66	201	529	828	999	1075	1108	1124
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	66	106	54	54	35	32	36	106	105	123	85	67	37	35	36	50	98
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	4	0	0	0	0	0	0	0	3	2	0	2	1	2	3	3
10-12	0	14	3	0	3	0	6	15	10	16	16	3	1	1	3	6	8
WIND 7-9	0	38	21	6	3	5	6	26	42	45	24	21	11	12	10	5	23
SPEED 4-6	0	36	26	35	20	21	19	50	42	53	32	39	16	11	19	27	51
KNOTS 1-3	0	14	4	10	9	6	5	14	11	6	11	4	7	10	2	9	13
CALM	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	217	140	252	24	263	4	45	0	179
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.10/16
MODE 4.00/16
MEDIAN 2.00/16
STD. DEV. 2.65/16
SKEW -0.34

TEMPERATURE VS. FREQUENCY

FREQ.	26	13	11	4	12	8	7	31	55	33	57	124	57	40	77	41	32	17	37	24	68	26	21	37	28	57	86	57	18	17	3
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 45.64 °F.
MODE 35.50 °F.
MEDIAN 43.50 °F.
STD. DEV. 14.96 °F.
SKEW 0.68

HOURLY OBSERVATIONS 603 SPECIAL OBS. 521 TOTAL OBSERVATIONS 2675 FOG WITH SMOKE AND/OR HAZE 75

DAY

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	3	22	8	20	9	12	6	27	31	27	0	4	3	5	6	7	10
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	2	3	1	2	0	4	2	1	3	4
NNE	0	0	0	0	0	1	2	2	2	1	0	0	0	0
NE	0	0	0	1	0	10	6	2	1	0	0	0	0	0
ENE	0	0	0	2	0	3	2	2	0	0	0	0	0	0
E	0	0	1	2	2	3	3	1	0	0	0	0	0	0
ESE	0	0	1	1	0	3	1	0	0	0	0	0	0	0
SE	0	0	1	2	3	9	5	4	1	1	1	0	0	0
SSE	0	0	0	1	0	2	9	8	3	6	0	0	2	0
S	0	0	0	0	4	2	6	10	2	3	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	1	2	0	1	0	0	0	0	0	0	0
WSW	0	0	0	1	0	0	0	0	2	0	0	0	0	0
W	0	0	0	0	0	0	0	1	2	2	0	0	0	0
WNW	0	0	0	0	0	3	0	1	0	0	0	0	0	2
NW	0	0	0	1	0	2	1	0	0	0	0	1	1	1
NNW	0	0	1	0	0	2	3	1	0	1	1	1	0	0
CALM	3													

WIND SPEED

DAY

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	2.5	1.5	2.0	1.5	3.5	11.0
NNE	0.0	0.0	0.5	2.0	1.5	0.0	0.0	4.0
NE	0.0	0.5	3.0	4.0	0.5	0.0	0.0	10.0
ENE	0.0	1.0	1.5	2.0	0.0	0.0	0.0	4.5
E	0.0	1.5	2.5	2.0	0.0	0.0	0.0	6.0
ESE	0.0	1.0	1.5	0.5	0.0	0.0	0.0	3.0
SE	0.0	1.5	5.0	4.5	1.0	0.5	0.0	13.5
SSE	0.0	0.5	1.0	8.5	4.5	0.0	1.0	15.5
S	0.0	0.0	3.0	8.0	2.5	0.0	0.0	13.5
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.5	1.0	0.5	0.0	0.0	0.0	2.0
WSW	0.0	0.5	0.0	0.0	1.0	0.0	0.0	1.5
W	0.0	0.0	0.0	0.5	2.0	0.0	0.0	2.5
WNW	0.0	0.0	1.5	0.5	0.0	0.0	1.0	3.0
NW	0.0	0.5	1.0	0.5	0.0	0.5	1.0	3.5
NNW	0.0	0.5	1.0	2.0	0.5	1.0	0.0	5.0
CALM								1.5
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 93 100 7

<26 26 TO 31 32

TEMPERATURE (F)

CHECK COUNT 200
FOG WITH LP 42
FOG WITH FP 37
ALL FOG CASES 277
PURE FOG 169
REC.OBS. 106

FOG WITH SMOKE AND/OR HAZE 11

DAY

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	3	0	0	0	0	0	3
1957	0	0	0	0	0	0	6	7	0	0	0	0	13
1958	0	0	0	0	0	6	2	0	0	0	0	0	8
1959	0	0	0	0	0	2	8	0	1	0	0	0	11
1960	0	0	0	0	4	0	20	3	0	0	0	0	27
1961	0	0	0	0	0	2	0	0	0	0	0	0	2
1962	0	0	0	0	2	4	1	0	0	0	0	0	7
1963	0	0	0	0	0	3	4	4	0	0	0	0	11
1964	0	0	0	0	0	1	13	2	0	0	0	0	16
1965	0	0	0	0	0	0	4	0	0	0	0	0	4
TOTAL HRS	0	0	0	0	6	18	61	16	1	0	0	0	102
AVG HRS	0.0	0.0	0.0	0.0	0.60	1.80	6.10	1.60	0.10	0.0	0.0	0.0	10.20

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
DAY OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	6	0	5	5	26	11	4	7	6	0	1	5	76
1957	5	0	4	0	0	3	7	6	5	3	1	0	34
1958	16	2	0	5	6	8	2	1	0	2	0	7	49
1959	2	2	0	1	0	0	7	4	5	0	6	5	32
1960	0	12	6	7	13	0	28	0	0	0	5	4	75
1961	4	6	0	2	0	12	0	0	0	3	0	5	32
1962	3	3	4	9	1	0	1	0	22	0	3	0	46
1963	4	7	0	6	32	0	2	1	21	0	0	8	81
1964	9	1	6	5	8	5	2	0	2	0	3	0	41
1965	0	0	9	0	1	0	5	1	13	3	3	0	35
TOTAL HRS	49	33	34	40	87	39	58	20	74	11	22	34	501
AVG HRS	4.90	3.30	3.40	4.00	8.70	3.90	5.80	2.00	7.40	1.10	2.20	3.40	50.10

DAY

IND

WIND SPEED VS. FREQUENCY

FREQUENCY	183	9	93	192	182	138	114	97	90	36	26	16	10	4	7
WIND SPEED (KNOTS)	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

STATISTICAL RESULTS

MEAN 4.43 KNOTS
MODE 3.00 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 2.97 KNOTS
SKEW 0.48

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	183	192	477	797	1008	1134	1176	1190	1197
WIND SPEED (KNOTS)	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND DIRECTION VS. FREQUENCY

FREQUENCY	183	50	35	40	41	75	78	98	77	68	50	97	73	63	42	67	60
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

WIND DIRECTION VS. WIND SPEED

>12	0	0	1	0	0	0	0	3	0	1	3	0	1	0	0	2	0
10-12	0	0	0	1	1	2	6	16	2	2	4	0	0	0	1	11	6
WIND 7-9	0	8	12	7	6	17	19	35	18	13	7	27	13	9	5	15	12
SPEED 4-6	0	24	14	20	23	41	34	25	44	31	16	39	35	22	17	22	27
KNOTS 1-3	0	18	8	12	11	15	19	19	13	21	20	31	24	32	19	17	15
CALM	183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	68	125	296	14	384	4	68	0	238
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.87/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.50/16
SKEW -0.05

TEMPERATURE VS. FREQUENCY

FREQ.	58	1	0	11	8	8	21	33	54	71	60	108	53	73	23	21	34	43	26	48	34	19	24	25	57	65	88	35	53	37	6
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 45.82 °F.
MODE 35.50 °F.
MEDIAN 43.50 °F.
STD. DEV. 16.13 °F.
SKEW 0.64

HOURLY OBSERVATIONS 498 SPECIAL OBS. 699 TOTAL OBSERVATIONS 2578 FOG WITH SMOKE AND/OR HAZE 308

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	52	19	8	13	12	18	13	15	17	13	12	5	4	10	11	26	17
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	2	3	1	2	10	0	1	0	0	0	0	0	0
NNE	0	0	2	3	0	1	1	1	0	0	0	0	0	0
NE	0	1	2	4	3	1	2	0	0	0	0	0	0	0
ENE	0	0	2	1	3	1	2	2	1	0	0	0	0	0
E	0	0	4	4	4	3	2	1	0	0	0	0	0	0
ESE	0	0	2	3	3	0	0	0	0	0	0	3	2	0
SE	0	0	0	1	1	0	1	1	5	2	0	3	1	0
SSE	0	0	0	2	4	3	2	0	3	2	0	1	0	0
S	0	0	0	3	1	4	2	2	0	0	0	0	0	1
SSW	0	0	1	1	1	1	0	1	0	1	2	0	1	3
SW	0	0	1	2	1	0	0	0	1	0	0	0	0	0
WSW	0	0	0	2	0	0	0	1	0	0	0	0	0	1
W	0	0	1	4	4	0	1	0	0	0	0	0	0	0
WNW	0	0	7	1	1	0	2	0	0	0	0	0	0	0
NW	0	0	4	6	1	1	3	3	1	0	2	3	0	2
NNW	0	0	4	2	1	3	2	0	2	1	2	0	0	0
CALM	52													
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

IND

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.8	1.5	4.5	0.4	0.0	0.0	0.0	7.2
NNE	0.0	1.9	0.4	0.8	0.0	0.0	0.0	3.0
NE	0.4	2.3	1.5	0.8	0.0	0.0	0.0	4.9
ENE	0.0	1.1	1.5	1.5	0.4	0.0	0.0	4.5
E	0.0	3.0	2.6	1.1	0.0	0.0	0.0	6.8
ESE	0.0	1.9	1.1	0.0	0.0	1.1	0.8	4.9
SE	0.0	0.4	0.4	0.8	2.6	1.1	0.4	5.7
SSE	0.0	0.8	2.6	0.8	1.9	0.4	0.0	6.4
S	0.0	1.1	1.9	1.5	0.0	0.0	0.4	4.9
SSW	0.0	0.8	0.8	0.4	0.4	0.8	1.5	4.5
SW	0.0	1.1	0.4	0.0	0.4	0.0	0.0	1.9
WSW	0.0	0.8	0.0	0.4	0.0	0.0	0.4	1.5
W	0.0	1.9	1.5	0.4	0.0	0.0	0.0	3.8
WNW	0.0	3.0	0.4	0.8	0.0	0.0	0.0	4.2
NW	0.0	3.8	0.8	2.3	0.4	1.9	0.8	9.8
NNW	0.0	2.3	1.5	0.8	1.1	0.8	0.0	6.4
CALM								19.6
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	115	108	42
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 265
FOG WITH LP 23
FOG WITH FP 29
ALL FOG CASES 317
PURE FOG 175
REC.OBS. 115

FOG WITH SMOKE AND/OR HAZE 40

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	7	0	6	0	0	0	13
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	7	0	0	0	0	0	0	7
1959	0	0	0	0	0	10	5	0	1	0	0	0	16
1960	0	0	0	0	9	0	15	0	1	0	0	0	25
1961	0	0	0	0	0	0	0	4	0	0	0	0	4
1962	0	0	0	0	3	2	0	1	0	0	0	0	6
1963	0	0	0	0	5	0	2	0	2	0	0	0	9
1964	0	0	0	0	0	5	1	4	0	0	0	0	10
1965	0	0	0	0	0	0	7	0	0	0	0	0	7
TOTAL HRS	0	0	0	0	17	24	37	9	10	0	0	0	97
AVG HRS	0.0	0.0	0.0	0.0	1.70	2.40	3.70	0.90	1.00	0.0	0.0	0.0	9.70

IND

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	5	4	0	3	10	12	2	5	0	0	2	0	43
1957	3	5	5	0	6	8	4	13	2	1	0	0	47
1958	4	8	5	3	12	1	0	3	0	0	1	0	37
1959	8	12	1	0	0	0	4	6	5	0	6	3	45
1960	0	4	1	6	12	0	7	0	0	0	0	0	30
1961	4	10	0	5	6	13	0	2	2	0	0	11	53
1962	2	3	0	7	0	0	0	0	15	0	2	0	29
1963	1	3	1	3	16	0	0	1	11	4	3	5	48
1964	6	8	0	4	0	4	1	0	1	0	0	0	24
1965	0	0	9	0	13	0	12	9	0	0	0	2	45
TOTAL HRS	33	57	22	31	75	38	30	39	36	5	14	21	401
AVG HRS	3.30	5.70	2.20	3.10	7.50	3.80	3.00	3.90	3.60	0.50	1.40	2.10	40.10

SDF

WIND SPEED VS. FREQUENCY

FREQUENCY	237	12	63	156	81	55	22	7	4	4	4	1	2	0	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 2.36 KNOTS
MODE 0.0 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 2.24 KNOTS
SKEW 1.05

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	237	249	468	604	633	641	646	648	648
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	237	52	27	22	11	15	24	77	62	45	6	14	9	9	4	23	11
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	2	0	0	2	0	0	1	0	0	0	2	0	0	0	0	0
WIND 7-9	0	8	1	0	0	0	0	4	0	1	0	1	0	0	0	0	0
SPEED 4-6	0	18	19	10	3	3	8	24	21	18	5	3	4	1	2	13	6
KNOTS 1-3	0	24	7	12	6	12	16	46	41	26	1	8	5	8	2	10	5
CALM	237	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	40	154	84	54	180	0	31	0	105
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.44/16
MODE 4.00/16
MEDIAN 3.00/16
STD. DEV. 2.49/16
SKEW -0.22

TEMPERATURE VS. FREQUENCY

FREQ.	5	3	7	0	0	8	12	10	14	23	36	30	17	22	18	23	17	19	12	27	66	35	51	31	23	57	27	12	20	21	2
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 49.74 °F.
MODE 53.50 °F.
MEDIAN 53.50 °F.
STD. DEV. 13.76 °F.
SKEW -0.20

HOURLY OBSERVATIONS 304 SPECIAL OBS. 344 TOTAL OBSERVATIONS 1158 FOG WITH SMOKE AND/OR HAZE 207

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	29	9	1	1	0	1	5	9	10	4	0	1	3	1	3	3	2
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	1	2	1	0	0	0	1	1	1	1	0	1	0
NNE	0	0	1	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	1	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	2	3	0	0	0	0	0	0	0
SE	0	0	3	2	2	2	0	0	0	0	0	0	0	0
SSE	0	0	1	7	2	0	0	0	0	0	0	0	0	0
S	0	1	1	1	1	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	1	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	1	1	1	0	0	0	0	0	0	0	0
W	0	0	1	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	2	0	0	1	0	0	0	0	0	0	0	0
NW	0	0	1	0	0	2	0	0	0	0	0	0	0	0
NNW	0	0	0	1	1	0	0	0	0	0	0	0	0	0
CALM	29													
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

SDF

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	1.2	3.7	0.0	1.2	2.4	1.2	1.2	11.0
NNE	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
NE	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2
ESE	0.0	0.0	2.4	3.7	0.0	0.0	0.0	6.1
SE	0.0	6.1	4.9	0.0	0.0	0.0	0.0	11.0
SSE	0.0	9.8	2.4	0.0	0.0	0.0	0.0	12.2
S	1.2	2.4	1.2	0.0	0.0	0.0	0.0	4.9
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
WSW	0.0	1.2	2.4	0.0	0.0	0.0	0.0	3.7
W	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
WNW	0.0	2.4	1.2	0.0	0.0	0.0	0.0	3.7
NW	0.0	1.2	2.4	0.0	0.0	0.0	0.0	3.7
NNW	0.0	1.2	1.2	0.0	0.0	0.0	0.0	2.4
CALM								35.4
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	40	27	15
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 82
FOG WITH LP 0
FOG WITH FP 12
ALL FOG CASES 94
PURE FOG 22
REC.OBS. 42

FOG WITH SMOKE AND/OR HAZE 30

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	13	0	0	0	0	0	13
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	5	0	0	0	0	0	0	5
1960	0	0	0	0	5	0	2	0	0	0	0	0	7
1961	0	0	0	0	0	0	1	5	0	0	0	0	6
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	5	0	0	0	0	0	5
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	5	5	21	5	0	0	0	0	36
AVG HRS	0.0	0.0	0.0	0.0	0.50	0.50	2.10	0.50	0.0	0.0	0.0	0.0	3.60

SDF OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	6	1	13	10	21	8	0	0	0	0	0	0	59
1957	0	3	0	2	3	5	0	2	6	0	0	0	21
1958	1	7	6	2	4	0	0	0	0	0	0	6	26
1959	0	0	0	2	1	0	0	1	3	3	5	0	15
19[illegible]	0	15	6	8	15	0	0	0	0	0	7	8	59
196[illegible]	0	1	0	0	0	0	0	0	0	0	0	8	9
1962	[illegible]	0	3	5	0	0	0	0	0	0	0	0	11
1963	0	11	2	0	23	0	2	0	3	0	0	0	41
1964	3	1	2	7	0	0	3	0	0	0	0	0	16
1965	0	[illegible]	7	2	0	0	2	0	0	0	0	0	11
TOTAL HRS	13	39	39	38	67	13	7	3	12	3	12	22	268
AVG HRS	1.30	3.90	3.90	3.80	6.70	1.30	0.70	0.30	1.20	0.30	1.20	2.20	26.80

JFK

WIND SPEED VS. FREQUENCY

FREQUENCY	36	4	42	153	269	367	288	272	217	154	149	37	62	48	244
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 7.21 KNOTS
MODE 5.00 KNOTS
MEDIAN 7.00 KNOTS
STD. DEV. 3.43 KNOTS
SKEW 0.65

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	36	40	235	871	1431	1802	1988	2098	2342
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	36	91	101	97	138	131	149	178	272	564	210	164	95	34	13	23	46
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	2	0	2	1	4	11	64	177	20	9	1	0	0	1	0
10-12	0	3	2	3	11	14	11	23	34	83	27	16	14	0	1	2	4
WIND 7-9	0	28	21	25	26	20	40	60	84	163	69	50	35	4	4	2	12
SPEED 4-6	0	51	63	54	77	73	77	68	70	123	83	81	37	23	4	13	27
KNOTS 1-3	0	9	13	15	22	23	17	16	20	18	11	8	8	7	4	5	3
CALM	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	101	168	388	289	658	93	322	0	323
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.02/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.22/16
SKEW 0.01

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	1	9	21	68	121	80	108	125	154	156	138	90	137	81	138	88	92	84	111	112	114	115	104	95
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 52.96°F.
MODE 45.50°F.
MEDIAN 51.50°F.
STD. DEV. 11.96°F.
SKEW 0.62

HOURLY OBSERVATIONS 877 SPECIAL OBS. 1465 TOTAL OBSERVATIONS 6585 FOG WITH SMOKE AND/OR HAZE 124

JFK

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	1	0	2	7	7	0	1	1	0	1	0	5	4	0	0	2	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	1	0	1	0	0	0	0
NE	0	0	0	0	2	2	0	2	1	0	0	0	0	0
ENE	0	0	0	0	0	4	2	1	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	1	0	0	0	0	0	0	0
SE	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	1	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	2	0	0	0	3
WSW	0	0	0	0	0	0	0	0	0	0	2	1	0	1
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	2	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	1													

WIND SPEED

JFK WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	3.2	3.2	0.0	0.0	6.5
NE	0.0	0.0	12.9	6.5	3.2	0.0	0.0	22.6
ENE	0.0	0.0	12.9	9.7	0.0	0.0	0.0	22.6
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	3.2	0.0	0.0	0.0	3.2
SE	0.0	0.0	3.2	0.0	0.0	0.0	0.0	3.2
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	3.2	0.0	0.0	0.0	3.2
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	6.5	0.0	9.7	16.1
WSW	0.0	0.0	0.0	0.0	0.0	9.7	3.2	12.9
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	6.5	0.0	0.0	0.0	0.0	0.0	6.5
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								3.2
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	12	19
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 31
FOG WITH LP 0
FOG WITH FP 77
ALL FOG CASES 108
PURE FOG 31
REC.OBS. 13

FOG WITH SMOKE AND/OR HAZE 0

JFK

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	1	0	0	0	0	0	1
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	3	0	0	0	0	3
1963	0	0	0	0	0	0	0	2	0	0	0	0	2
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	1	5	0	0	0	0	6
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.50	0.0	0.0	0.0	0.0	0.60

JFK

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	4	3	7	5	6	17	33	1	0	6	0	7	89
1957	0	1	3	0	0	0	21	13	2	13	10	16	79
1958	6	0	2	13	18	0	7	0	0	25	7	6	84
1959	11	1	2	1	0	6	13	19	5	21	5	23	107
1960	0	4	0	5	6	0	1	7	6	7	4	23	63
1961	22	5	6	6	0	6	10	35	6	1	33	13	143
1962	0	8	0	5	5	18	4	25	0	6	1	0	72
1963	0	4	0	13	3	0	9	5	13	2	4	19	72
1964	9	8	0	1	9	35	8	0	19	10	7	3	109
1965	5	3	18	4	3	1	0	16	0	3	0	0	53
TOTAL HRS	57	37	38	53	50	83	106	121	51	94	71	110	871
AVG HRS	5.70	3.70	3.80	5.30	5.00	8.30	10.60	12.10	5.10	9.40	7.10	11.00	87.10

PIT

WIND SPEED VS. FREQUENCY

FREQUENCY	509	0	6	148	248	198	126	71	49	23	15	4	3	0	7
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 3.28 KNOTS
MODE 0.0 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 2.91 KNOTS
SKEW 1.13

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	509	509	663	1109	1306	1378	1397	1400	1407
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	509	81	53	55	51	73	49	65	40	39	33	61	77	64	41	76	41
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4	0	0
10-12	0	2	0	1	0	0	0	3	0	0	0	1	4	0	3	5	3
WIND 7-9	0	13	13	12	7	20	12	7	2	2	7	1[illegible]	14	3	2	9	9
SPEED 4-6	0	62	29	33	35	40	30	45	28	31	20	41	47	45	20	46	20
KNOTS 1-3	0	4	8	9	9	12	7	10	10	6	6	8	12	16	12	16	9
CALM	509	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	260	111	218	84	362	21	106	0	245
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.52/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.69/16
SKEW -0.18

TEMPERATURE VS. FREQUENCY

FREQ.	30	0	2	0	0	11	15	14	19	47	29	51	57	81	88	30	73	52	100	75	43	58	67	85	85	105	103	62	24	1	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 49.88 °F.
MODE 63.50 °F.
MEDIAN 51.50 °F.
STD. DEV. 12.88 °F.
SKEW -1.06

HOURLY OBSERVATIONS 595 SPECIAL OBS. 812 TOTAL OBSERVATIONS 4460 FOG WITH SMOKE AND/OR HAZE 503

PIT

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	52	2	3	1	3	11	7	4	2	1	4	6	15	17	2	5	3
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	2	0	0	0	0	0	0	0	0
NNE	0	0	0	1	1	0	0	1	0	0	0	0	0	0
NE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	1	1	1	0	0	0	0	0	0	0	0
E	0	0	0	0	0	2	2	1	1	1	0	0	0	0
ESE	0	0	0	0	2	1	2	0	2	0	0	0	0	0
SE	0	0	0	0	0	1	0	1	0	0	0	0	0	0
SSE	0	0	0	0	1	1	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	1	0	0	0	0	0	0
SSW	0	0	0	0	0	1	1	0	2	0	0	0	0	0
SW	0	0	0	0	2	3	1	0	0	0	0	0	0	0
WSW	0	0	0	5	4	3	0	0	0	2	1	0	0	0
W	0	0	0	4	7	5	1	0	0	0	0	0	0	0
WNW	0	0	0	1	0	0	0	0	0	0	0	1	0	0
NW	0	0	0	1	3	0	1	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	2	1	0	0	0	0	0
CALM	52													

WIND SPEED

PIT

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
NNE	0.0	0.7	0.7	0.7	0.0	0.0	0.0	2.2
NE	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7
ENE	0.0	0.7	1.4	0.0	0.0	0.0	0.0	2.2
E	0.0	2.9	1.4	2.2	1.4	0.0	0.0	8.0
ESE	0.0	0.0	2.2	1.4	1.4	0.0	0.0	5.1
SE	0.0	1.4	0.7	0.7	0.0	0.0	0.0	2.9
SSE	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
S	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7
SSW	0.0	0.0	0.7	0.7	1.4	0.0	0.0	2.9
SW	0.0	0.0	3.6	0.7	0.0	0.0	0.0	4.3
WSW	0.0	3.6	5.1	0.0	1.4	0.7	0.0	10.9
W	0.0	2.9	8.7	0.7	0.0	0.0	0.0	12.3
WNW	0.0	0.7	0.0	0.0	0.0	0.7	0.0	1.4
NW	0.0	0.7	2.2	0.7	0.0	0.0	0.0	3.6
NNW	0.0	0.0	0.0	1.4	0.7	0.0	0.0	2.2
CALM								37.7
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 62 52 24

<28 28 TO 31 32

TEMPERATURE (F)

CHECK COUNT 138
FOG WITH LP 24
FOG WITH FP 155
ALL FOG CASES 314
PURE FOG 70
REC.OBS. 53

FOG WITH SMOKE AND/OR HAZE 3

PIT

VATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
SERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	1	0	0	2	0	0	3
1957	0	0	0	0	0	0	0	5	2	0	0	0	7
1958	0	0	0	0	0	2	0	0	0	0	0	0	2
1959	0	0	0	0	0	7	0	0	0	0	0	0	7
1960	0	0	0	0	5	0	0	0	1	0	0	0	6
1961	0	0	0	0	5	0	0	4	0	0	0	0	9
1962	0	0	0	0	0	2	0	0	0	0	0	0	2
1963	0	0	0	0	0	0	4	0	0	0	0	0	4
1964	0	0	0	0	0	0	0	0	0	2	0	0	2
1965	0	0	0	0	0	0	3	0	0	0	0	0	3
TOTAL HRS	0	0	0	0	10	11	8	9	3	4	0	0	45
AVG HRS	0.0	0.0	0.0	0.0	1.00	1.10	0.80	0.90	0.30	0.40	0.0	0.0	4.50

PIT OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	6	0	7	5	15	6	1	0	0	3	7	8	58
1957	0	4	5	3	7	0	2	11	1	9	1	4	47
1958	13	17	8	27	0	5	2	3	0	0	3	0	78
1959	6	11	4	4	0	0	2	6	0	0	10	0	43
1960	8	6	24	0	4	0	16	0	0	3	8	0	69
1961	9	1	15	0	0	13	0	4	0	0	4	6	52
1962	1	3	13	15	8	2	1	3	0	1	0	6	53
1963	0	10	6	0	6	0	16	0	11	0	10	5	64
1964	7	5	5	0	10	3	0	2	0	6	0	6	44
1965	0	0	12	6	9	0	2	2	8	2	1	0	42
TOTAL HRS	50	57	99	60	59	29	42	31	20	24	44	35	550
AVG HRS	5.00	5.70	9.90	6.00	5.90	2.90	4.20	3.10	2.00	2.40	4.40	3.50	55.00

ORD

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	157	0	22	141	181	195	129	119	96	63	55	27	23	11	19

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 5.36 KNOTS
MODE 5.00 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 3.23 KNOTS
SKEW 0.11

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMUALTIVE FREQUENCY	157	157	320	696	944	1103	1185	1219	1238

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	157	89	122	71	45	48	27	33	25	119	78	88	61	77	72	69	56

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	4	7	0	1	6	0	6	1	1	1	0	0	0	0	0	3
10-12	0	7	21	11	2	8	2	1	2	14	10	21	3	0	0	0	3
WIND 7-9	0	20	43	23	15	15	10	4	6	39	25	26	15	8	10	10	9
SPEED 4-6	0	46	44	28	20	17	13	15	17	56	39	30	23	54	43	29	31
KNOTS 1-3	0	12	7	9	7	2	2	7	0	9	3	11	20	15	19	30	10
CALM	157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	149	99	245	45	383	5	78	0	234
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.73/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.58/16
SKEW -0.10

TEMPERATURE VS. FREQUENCY

FREQ.	55	6	8	10	8	4	6	30	49	39	74	95	73	77	58	41	30	51	81	59	79	62	46	33	18	48	58	17	15	8	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 44.21 °F.
MODE 35.50 °F.
MEDIAN 43.50 °F.
STD. DEV. 13.74 °F.
SKEW 0.63

HOURLY OBSERVATIONS 552 SPECIAL OBS. 686 TOTAL OBSERVATIONS 3928 FOG WITH SMOKE AND/OR HAZE 407

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	12	21	25	8	4	4	2	4	10	29	15	9	5	20	19	14	14
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	1	1	4	5	2	5	3	0	0	0
NNE	0	0	0	0	0	1	6	4	5	0	3	1	2	3
NE	0	0	0	0	1	1	1	3	1	1	0	0	0	0
ENE	0	0	0	0	0	0	2	2	0	0	0	0	0	0
E	0	0	1	0	0	0	2	1	0	0	0	0	0	0
ESE	0	0	0	1	1	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	1	2	1	0	0	0	0	0	0	0
SSE	0	0	0	0	1	5	1	1	1	0	0	0	0	1
S	0	0	1	0	4	9	4	3	2	3	2	0	0	1
SSW	0	0	0	2	3	1	3	1	0	2	2	0	0	1
SW	0	0	0	1	1	3	1	1	1	0	0	1	0	0
WSW	0	0	0	0	1	2	0	0	0	2	0	0	0	0
W	0	0	0	2	7	7	2	2	0	0	0	0	0	0
WNW	0	0	0	2	6	6	2	1	2	0	0	0	0	0
NW	0	0	2	3	2	3	1	1	2	0	0	[illegible]	0	0
NNW	0	0	0	2	3	5	0	3	1	0	0	0	0	0
CALM	12													

CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

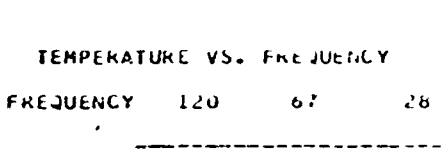
ORD

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.9	4.2	3.3	1.4	0.0	9.8
NNE	0.0	0.0	0.5	4.7	2.3	1.9	2.3	11.6
NE	0.0	0.0	0.9	1.9	0.9	0.0	0.0	3.7
ENE	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.9
E	0.0	0.5	0.0	1.4	0.0	0.0	0.0	1.9
ESE	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.9
SE	0.0	0.0	1.4	0.5	0.0	0.0	0.0	1.9
SSE	0.0	0.0	2.8	0.9	0.5	0.0	0.5	4.7
S	0.0	0.5	6.0	3.3	2.3	0.9	0.5	13.5
SSW	0.0	0.9	1.9	1.9	0.9	0.9	0.5	7.0
SW	0.0	0.5	1.9	0.9	0.5	0.5	0.0	4.2
WSW	0.0	0.0	1.4	0.0	0.9	0.0	0.0	2.3
W	0.0	0.9	6.5	1.9	0.0	0.0	0.0	9.3
WNW	0.0	0.9	5.6	1.4	0.9	0.0	0.0	8.8
NW	0.0	2.3	2.3	0.9	0.9	0.0	0.0	6.5
NNW	0.0	0.9	3.7	1.4	0.5	0.0	0.0	6.5
CALM								5.6
TOTAL								100.0

TEMPERATURE VS. FREQUENCY



CHECK COUNT 215
FOG WITH LP 19
FOG WITH FP 57
ALL FOG CASES 291
PURE FOG 113
REC.OBS. 88

FOG WITH SMOKE AND/OR HAZE 41

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	2	0	3	0	0	0	0	5
1957	0	0	0	0	0	3	0	0	0	0	0	0	3
1958	0	0	0	0	0	0	15	0	0	0	0	0	15
1959	0	0	0	0	0	0	0	0	4	0	0	0	4
1960	0	0	0	0	0	0	1	0	2	0	0	0	3
1961	0	0	0	0	1	3	0	14	0	2	0	0	20
1962	0	0	0	0	4	0	0	3	0	0	0	0	7
1963	0	0	0	0	0	0	1	12	2	0	0	0	15
1964	0	0	0	0	0	3	1	0	0	0	0	0	4
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	5	11	18	32	8	2	0	0	76
AVG HRS	0.0	0.0	0.0	0.0	0.50	1.10	1.80	3.20	0.80	0.20	0.0	0.0	7.60

ORD OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	8	0	11	24	41	24	0	4	3	5	7	0	127
1957	1	3	2	0	2	0	2	1	0	27	15	4	57
1958	14	12	0	1	6	9	0	6	0	0	0	1	49
1959	3	9	3	0	0	13	7	3	8	2	5	0	53
1960	0	1	3	0	7	0	0	0	10	3	6	0	30
1961	0	10	[illegible]	0	7	1	0	2	1	1	0	5	27
1962	0	2	0	5	4	0	4	0	4	3	1	5	28
1963	0	2	1	10	19	0	0	0	12	4	3	0	51
1964	5	0	0	2	0	12	2	0	4	3	0	4	32
1965	0	0	0	0	13	2	0	4	0	3	0	0	22
TOTAL HRS	31	39	20	42	99	61	15	20	42	51	37	19	476
AVG HRS	3.10	3.90	2.00	4.20	9.90	6.10	1.50	2.00	4.20	5.10	3.70	1.90	47.60

DTW

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	286	3	11	191	215	173	126	84	64	16	20	9	16	6	11

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 4.10 KNOTS
MODE 0.0 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 3.05 KNOTS
SKEW 1.34

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMULATIVE FREQUENCY	286	289	491	879	1089	1169	1198	1220	1231

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	286	50	71	60	37	43	41	55	46	62	112	123	82	53	45	46	19

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	1	3	3	2	0	2	0	0	2	1	3	0	0	0	0	0
10-12	0	2	1	2	1	4	0	1	1	5	11	15	2	0	1	1	0
WIND 7-9	0	4	8	5	6	9	6	9	8	10	29	29	17	17	3	3	1
SPEED 4-6	0	35	50	36	23	22	25	36	27	30	46	53	46	23	25	26	11
KNOTS 1-3	0	8	9	14	5	8	8	9	10	17	25	23	17	13	16	16	7
CALM	286	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

DTW

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	168	173	324	32	311	1	59	0	163
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.11/16
MODE 2.00/16
MEDIAN 2.00/16
STD. DEV. 2.40/16
SKEW 0.45

TEMPERATURE VS. FREQUENCY

FREQ.	25	4	7	18	30	27	16	9	36	35	113	101	73	52	61	39	58	63	32	26	14	14	25	69	61	77	76	36	18	8	6
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 45.97 DEGREES(F)
MODE 33.50 DEGREES(F)
MEDIAN 43.50 DEGREES(F)
STD. DEV. 14.72 DEGREES(F)
SKEW 0.78

HOURLY OBSERVATIONS 560 SPECIAL OBS. 671 TOTAL OBSERVATIONS 2266 FOG WITH SMOKE AND/OR HAZE 568

FIRST CARD 8- 7-58

DTW VISIBILITY VS. FREQUENCY
NOTE 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	168	173	324	32	311	1	59	0	163
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.11/16
MODE 2.00/16
MEDIAN 2.00/16
STD. DEV. 2.46/16
SKEW 0.45

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	1	0	3	0
	B-47	-47 TO -46	-45 TO -44	-43 TO -42	-41 TO -40	-39 TO -38	-37 TO -36	-35 TO -34	-33 TO -32	-31 TO -30	-29 TO -28	-27 TO -26	-25 TO -24	-23 TO -22	-21 TO -20	-19 TO -18	-17 TO -16	-15 TO -14	-13 TO -12	-11 TO -10	-9 TO -8	-7 TO -6	-5 TO -4	-3 TO -2	-1 TO 0	1 TO 2	3 TO 4	5 TO 6	7 TO 8	9 TO 10	11 TO 12

TEMPERATURE (F)

FREQ.	9	4	7	18	30	27	16	3	38	35	113	101	73	52	61	39	58	63	32	26	14	14	25	60	61	77	76	36	13	8	5
	13 TO 14	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 44.86 DEGREES(F)
MODE 33.50 DEGREES(F)
MEDIAN 43.50 DEGREES(F)
STD. DEV. 15.00 DEGREES(F)
SKEW 0.76

HOURLY OBSERVATIONS 560 SPECIAL OBS. 671 TOTAL OBSERVATIONS 2266 FOG WITH SMOKE AND/OR HAZE 568

FIRST CARD 3- 7-58

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	1	0	3	5	22	0	0	0	0	0	0	31
1959	0	0	0	0	0	1	5	0	3	0	0	0	9
1960	0	0	0	0	1	0	8	3	0	0	0	0	12
1961	0	0	0	0	0	3	3	2	0	0	0	0	8
1962	0	0	0	0	7	17	2	2	0	0	0	0	28
1963	0	0	0	1	0	0	1	0	0	0	0	0	2
1964	0	0	0	0	0	0	0	0	5	0	0	0	5
1965	0	0	0	0	0	0	0	5	0	0	0	0	5
TOTAL HRS	0	1	0	4	13	43	19	12	8	0	0	0	100
AVG HRS	0.0	0.10	0.0	0.40	1.30	4.30	1.90	1.20	0.80	0.0	0.0	0.0	10.00

DTW

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	1	0	0	0	0	0	0	1
1959	1	8	0	5	2	13	7	6	3	6	0	0	51
1960	0	6	21	11	17	0	18	0	0	4	0	0	77
1961	5	10	12	11	0	14	0	14	6	0	3	3	78
1962	4	5	5	7	0	2	0	10	4	0	0	0	37
1963	0	6	0	11	13	0	0	0	16	4	0	10	60
1964	3	11	12	4	10	7	11	0	12	0	3	9	82
1965	0	23	4	5	5	2	5	12	6	1	7	5	75
TOTAL HRS	13	69	54	54	47	39	41	42	47	15	13	27	461
AVG HRS	1.30	6.90	5.40	5.40	4.70	3.90	4.10	4.20	4.70	1.50	1.30	2.70	46.10

STL

WIND SPEED VS. FREQUENCY

FREQUENCY	103	2	17	101	99	86	43	53	53	24	28	9	8	4	7
WIND SPEED (KNOTS)	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

STATISTICAL RESULTS

MEAN 4.80 KNOTS
MODE 0.0 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 3.22 KNOTS
SKEW 1.49

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	103	105	223	408	504	581	618	630	637
WIND SPEED (KNOTS)	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND DIRECTION VS. FREQUENCY

FREQUENCY	103	13	18	30	20	26	70	45	45	39	16	26	25	51	49	42	18
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	0	0	0	1	0	0	1	5	1	0	0	0	0	1	2	0
10-12	0	0	1	1	0	4	4	5	7	0	1	1	0	6	1	10	4
WIND 7-9	0	5	8	10	5	5	13	16	11	16	4	3	6	6	6	9	5
SPEED 4-6	0	5	8	15	9	11	42	11	18	12	7	15	14	23	21	12	5
KNOTS 1-3	0	3	1	4	5	6	11	12	4	8	4	7	5	16	20	10	4
CALM	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

STL

VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	58	58	97	30	178	10	84	0	122
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.06/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.56/16
SKEW 0.02

TEMPERATURE VS. FREQUENCY

FREQ.	2	0	2	0	0	6	13	12	60	36	43	26	47	30	33	42	34	56	25	12	23	9	7	28	7	18	14	17	20	15	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 44.33°F.
MODE 29.50°F.
MEDIAN 43.50°F.
STD. DEV. 12.76°F.
SKEW 1.16

HOURLY OBSERVATIONS 267 SPECIAL OBS. 370 TOTAL OBSERVATIONS 1549 FOG WITH SMOKE AND/OR HAZE 219

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	14	0	2	12	8	9	23	14	13	8	0	4	9	4	6	4	1
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	1	0	0	0	0	1	0	0	0	0	0	0	0
NE	0	0	0	4	3	2	0	3	0	0	0	0	0	0
ENE	0	0	0	2	4	2	0	0	0	0	0	0	0	0
E	0	1	0	3	2	0	2	1	0	0	0	0	0	0
ESE	0	0	0	5	8	6	3	0	1	0	0	0	0	0
SE	0	0	2	2	3	3	0	1	2	1	0	0	0	0
SSE	0	0	0	1	0	1	1	2	3	0	3	0	1	1
S	0	0	0	5	0	1	0	1	0	0	0	0	0	1
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	1	1	0	1	0	1	0	0	0	0	0
WSW	0	0	0	0	0	4	2	2	1	0	0	0	0	0
W	0	0	0	0	0	1	0	2	1	0	0	0	0	0
WNW	0	0	1	0	2	2	0	0	1	0	0	0	0	0
NW	0	0	0	1	1	0	0	1	0	0	1	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	1	0
CALM	14													

WIND SPEED

STL WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.8	0.0	0.0	0.8	0.0	0.0	0.0	1.5
NE	0.0	3.1	3.8	2.3	0.0	0.0	0.0	9.2
ENE	0.0	1.5	4.6	0.0	0.0	0.0	0.0	6.1
E	0.8	2.3	1.5	2.3	0.0	0.0	0.0	6.9
ESE	0.0	3.8	10.7	2.3	0.8	0.0	0.0	17.6
SE	0.0	3.1	4.6	0.8	2.3	0.0	0.0	10.7
SSE	0.0	0.[illegible]	0.[illegible]	2.3	2.3	2.3	1.5	9.9
S	0.0	3.[illegible]	0.8	0.8	0.0	0.0	0.8	6.1
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.8	0.8	0.	0.8	0.0	0.0	3.1
WSW	0.0	0.0	3.1	3.1	0.8	0.0	0.0	6.9
W	0.0	0.0	0.8	1.5	0.8	0.0	0.0	3.1
WNW	0.0	0.8	3.1	0.0	0.8	0.0	0.0	4.6
NW	0.0	0.8	0.8	0.8	0.0	0.8	0.0	3.1
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8
CALM								10.7
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	34	86	11
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 131
FOG WITH LP 20
FOG WITH FP 37
ALL FOG CASES 187
PURE FOG 84
REC.OBS. 61

FOG WITH SMOKE AND/OR HAZE 23

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	5	0	0	0	0	0	0	5
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	3	0	0	0	0	0	0	3
1959	0	0	0	0	0	0	2	0	0	0	0	0	2
1960	0	0	0	0	0	0	11	7	2	0	0	0	20
1961	0	0	0	0	0	0	0	2	0	0	0	0	2
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	16	0	0	0	0	0	16
1964	0	0	0	0	0	5	0	0	0	0	0	0	5
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	13	29	9	2	0	0	0	53
AVG HRS	0.0	0.0	0.0	0.0	0.0	1.30	2.90	0.90	0.20	0.0	0.0	0.0	5.30

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	5	2	0	6	6	14	9	8	0	5	0	0	46
1957	0	2	0	0	1	12	10	20	0	0	0	0	45
1958	2	3	0	0	0	2	0	0	1	1	0	0	9
1959	0	0	0	0	0	1	8	2	0	0	1	2	14
1960	0	0	3	7	0	0	11	1	0	0	0	0	22
1961	0	2	1	6	2	1	0	0	0	0	3	1	16
1962	2	0	1	2	0	2	8	0	5	0	0	0	20
1963	0	0	4	0	15	0	0	0	1	0	0	0	20
1964	0	0	0	0	0	3	0	0	6	4	3	0	16
1965	0	0	2	1	0	0	0	1	0	2	0	0	6
TOTAL HRS	9	9	11	22	24	35	37	32	13	12	7	3	214
AVG HRS	0.90	0.90	1.10	2.20	2.40	3.50	3.70	3.20	1.30	1.20	0.70	0.30	21.40

WIND SPEED VS. FREQUENCY

FREQUENCY	75	1	14	63	85	110	114	90	104	66	79	46	52	24	48
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 6.95 KNOTS
MODE 6.00 KNOTS
MEDIAN 7.00 KNOTS
STD. DEV. 3.62 KNOTS
SKEW 0.26

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	75	76	153	348	552	722	847	923	971
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	75	48	130	295	130	63	18	16	39	62	25	35	8	0	5	12	10
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	6	16	23	2	0	0	0	10	10	1	4	0	0	0	0	0
10-12	0	5	26	81	20	1	2	0	8	12	4	10	1	0	0	1	6
WIND 7-[illegible]	0	11	48	99	35	12	4	7	7	19	7	6	1	0	2	2	0
SPEED 4-[illegible]	0	12	30	81	64	40	9	5	12	18	9	13	6	0	3	6	1
KNOTS 1-3	0	14	10	11	9	10	3	4	2	3	4	2	0	0	0	3	3
CALM	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

LG VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	36	126	104	93	197	53	160	0	142
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.00/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.36/16
SKEW -0.00

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	0	21	68	62	74	37	33	96	56	59	41	75	45	38	44	35	49	29	23	56	22	4	4
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	.1 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 48.96 °F.
MODE 43.50 °F.
MEDIAN 47.50 °F.
STD. DEV. 10.91 °F.
SKEW 0.50

HOURLY OBSERVATIONS 374 SPECIAL OBS. 597 TOTAL OBSERVATIONS 3624 FOG WITH SMOKE AND/OR HAZE 117

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	0	0	5	14	2	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	1	2	2	0	0	0	0	0	0
NE	0	0	0	0	1	1	0	2	0	2	0	3	2	3
ENE	0	0	0	0	0	1	0	0	0	0	1	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	0													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	4.8	19.0	0.0	0.0	0.0	23.8
NE	0.0	0.0	9.5	9.5	9.5	14.3	23.8	66.7
ENE	0.0	0.0	4.8	0.0	0.0	4.8	0.0	9.5
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								0.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	2	19
TEMPERATURE (F)	<28	28 TO 31	32

CHECK COUNT 21
FOG WITH LP 15
FOG WITH FP 76
ALL FOG CASES 112
PURE FOG 21
REC.OBS. 9

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	2	0	0	0	2
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	0	0	2	0	0	0	2
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.20

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	2	10	14	0	0	12	0	1	39
1957	1	1	0	0	0	0	4	3	0	3	1	5	18
1958	2	0	0	12	4	0	4	0	0	16	3	5	46
1959	1	0	0	0	0	4	6	17	12	6	5	9	60
1960	0	0	0	0	1	0	0	0	1	2	0	5	9
1961	7	0	5	0	0	3	17	11	2	0	28	0	73
1962	0	0	0	6	0	16	2	21	3	3	0	0	51
1963	0	0	0	0	1	0	8	0	6	0	2	3	20
1964	7	0	0	1	10	16	0	0	2	0	4	4	44
1965	0	0	0	1	3	0	0	8	0	0	0	0	12
TOTAL HRS	18	1	5	20	21	49	55	60	26	42	43	32	372
AVG HRS	1.80	0.10	0.50	2.00	2.10	4.90	5.50	6.00	2.60	4.20	4.30	3.20	37.20

BUF

WIND SPEED VS. FREQUENCY

FREQUENCY	26	0	33	75	119	133	137	69	60	51	56	24	32	25	61
WIND SPEED (KNOTS)	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

STATISTICAL RESULTS

MEAN 6.74 KNOTS
MODE 6.00 KNOTS
MEDIAN 6.00 KNOTS
STD. DEV. 3.43 KNOTS
SKEW 0.21

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	26	26	134	386	612	723	803	860	921
WIND SPEED (KNOTS)	CALM	<2	<4	<6	<6	<10	<12	<14	TOTAL

WIND DIRECTION VS. FREQUENCY

FREQUENCY	26	39	58	95	32	23	18	19	16	82	140	215	87	12	11	18	30
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

WIND DIRECTION VS. WIND SPEED

WIND SPEED KNOTS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	1	4	3	0	0	0	0	2	8	51	15	2	0	0	0
10-12	0	1	8	6	3	0	0	0	1	15	38	29	5	0	1	3
7-9	0	11	10	21	6	3	1	4	2	10	35	58	18	3	2	6
4-6	0	20	30	50	20	15	15	12	7	52	62	59	20	1	6	8
1-3	0	6	6	13	3	5	2	3	7	17	20	9	5	1	3	3
CALM	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

BUF VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	27	112	221	66	253	20	73	0	149
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.79/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.34/16
SKEW -0.09

TEMPERATURE VS. FREQUENCY

FREQ.	11	0	18	7	2	3	4	6	25	73	64	72	45	30	36	37	24	41	40	51	52	43	48	64	59	27	38	1	0	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 45.58 °F.
MODE 31.50 °F.
MEDIAN 47.50 °F.
STD. DEV. 12.65 °F.
SKEW 1.11

HOURLY OBSERVATIONS 423 SPECIAL OBS. 498 TOTAL OBSERVATIONS 3130 FOG WITH SMOKE AND/OR HAZE 261

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	6	11	15	22	6	3	1	1	0	9	24	32	9	3	3	0	-4
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	3	2	2	1	0	0	1	1	0	0	1
NNE	0	0	0	1	1	2	5	0	0	1	1	1	0	2
NE	0	0	2	0	4	3	4	1	3	4	1	0	0	0
ENE	0	0	0	1	3	0	1	0	0	1	0	0	0	0
E	0	0	0	1	1	1	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	1	0	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	3	1	5	0	0	0	0	0	0	0
SSW	0	0	1	2	5	11	0	3	1	0	0	0	1	0
SW	0	0	1	0	3	4	12	6	4	1	1	0	0	0
WSW	0	0	1	1	1	0	0	0	0	1	1	2	0	2
W	0	0	0	1	0	0	0	0	1	0	1	0	0	0
WNW	0	0	1	0	0	0	1	0	1	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	2	0	0	1	0	0	0	0	0	1	0
CALM	6													
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

BUF WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	2.0	2.7	0.7	0.7	0.7	0.7	7.4
NNE	0.0	0.7	2.0	4.0	0.7	1.3	1.3	10.1
NE	0.0	1.3	4.7	3.4	4.7	0.7	0.0	14.8
ENE	0.0	0.7	2.0	0.7	0.7	0.0	0.0	4.0
E	0.0	0.7	1.3	0.0	0.0	0.0	0.0	2.0
ESE	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7
SE	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	2.7	3.4	0.0	0.0	0.0	6.0
SSW	0.0	2.0	10.7	2.0	0.7	0.0	0.7	16.1
SW	0.0	0.7	4.7	12.1	3.4	0.7	0.0	21.5
WSW	0.0	1.3	0.7	0.0	0.7	2.0	1.3	6.0
W	0.0	0.7	0.0	0.0	0.7	0.7	0.0	2.0
WNW	0.0	0.7	0.0	0.7	0.7	0.0	0.0	2.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	1.3	0.0	0.7	0.0	0.0	0.7	2.7
CALM								4.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	45	57	47
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 149
FOG WITH LP 27
FOG WITH FP 78
ALL FOG CASES 251
PURE FOG 130
REC.OBS. 83

FOG WITH SMOKE AND/OR HAZE 13

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	2	0	0	0	2
1958	0	0	0	0	0	1	0	1	0	1	0	0	3
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	2	0	12	0	0	3	0	0	17
1961	0	0	0	0	1	1	0	17	0	2	0	0	21
1962	0	0	0	0	0	1	1	0	4	6	0	0	12
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	1	0	0	1	0	0	0	2
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	3	4	13	18	7	12	0	0	57
AVG HRS	0.0	0.0	0.0	0.0	0.30	0.40	1.30	1.80	0.70	1.20	0.0	0.0	5.70

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	2	3	3	0	11	3	1	3	4	0	3	13	46
1957	9	4	0	5	7	0	0	0	13	7	14	0	59
1958	2	0	0	0	0	6	3	0	0	1	3	0	15
1959	4	0	0	0	1	9	0	0	0	0	8	0	22
1960	0	1	0	0	3	0	2	0	3	5	22	2	38
1961	6	2	0	3	0	2	0	3	3	9	3	19	52
1962	0	3	0	0	0	3	0	0	0	13	4	6	29
1963	1	2	4	0	0	0	0	0	19	0	2	3	32
1964	0	7	0	0	3	3	0	1	4	4	7	1	30
1965	3	1	0	0	5	0	0	1	4	23	1	5	43
TOTAL HRS	29	23	7	8	30	26	6	8	50	62	68	49	366
AVG HRS	2.90	2.30	0.70	0.80	3.00	2.60	0.60	0.80	5.00	6.20	6.80	4.90	36.60

EWR

WIND SPEED VS. FREQUENCY

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
FREQUENCY	47	40	120	91	199	211	148	117	92	29	20	9	3	0	0

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 4.83 KNOTS
MODE 5.00 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 2.37 KNOTS
SKEW -0.07

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
CUMUALTIVE FREQUENCY	47	87	298	708	973	1094	1123	1126	1126

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
FREQUENCY	47	27	84	121	50	96	73	33	63	97	130	159	73	37	12	10	14

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	0	11	11	1	0	3	0	0	1	0	3	0	1	1	0	0
WIND 7-9	0	7	30	42	5	17	19	4	16	20	24	37	12	3	1	0	1
SPEED 4-6	0	10	38	52	29	46	32	26	33	53	78	91	38	23	4	2	3
KNOTS 1-3	0	10	5	16	15	33	19	3	14	23	28	28	23	10	6	8	10
CALM	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

EWR VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	166	86	189	55	268	17	177	0	168
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.72/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.59/16
SKEW -0.11

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	6	0	16	16	52	43	95	101	104	84	92	43	23	52	51	60	44	37	36	68	21	31	16	11	19
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 48.16 °F.
MODE 41.50 °F.
MEDIAN 45.50 °F.
STD. DEV. 11.04 °F.
SKEW 0.60

HOURLY OBSERVATIONS 430 SPECIAL OBS. 696 TOTAL OBSERVATIONS 3544 FOG WITH SMOKE AND/OR HAZE 1017

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	2	1	4	8	0	0	0	0	0	6	10	3	0	2	2	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	1	0	0	0	0	0
NNE	0	0	0	0	0	0	1	0	0	1	2	0	0	0
NE	0	0	0	0	0	1	1	0	3	1	2	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	2	1	2	1	0	0	0	0	0	0	0
SSW	0	0	1	3	2	4	0	0	0	0	0	0	0	0
SW	0	0	1	0	1	0	0	1	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	1	0	0	0	1	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	2	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	2													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6
NNE	0.0	0.0	0.0	2.6	2.6	5.3	0.0	10.5
NE	0.0	0.0	2.6	2.6	10.5	5.3	0.0	21.1
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	5.3	7.9	2.6	0.0	0.0	0.0	15.8
SSW	0.0	10.5	15.8	0.0	0.0	0.0	0.0	26.3
SW	0.0	2.6	2.6	2.6	0.0	0.0	0.0	7.9
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	2.6	0.0	2.6	0.0	0.0	0.0	5.3
WNW	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.3
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								5.3
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	6	22	10
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 38
FOG WITH LP 9
FOG WITH FP 85
ALL FOG CASES 132
PURE FOG 0
REC.OBS. 13

FOG WITH SMOKE AND/OR HAZE 13

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	4	0	0	0	0	4
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	3	0	0	0	0	0	3
1964	0	0	0	0	0	1	0	0	0	0	0	0	1
1965	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL HRS	0	0	0	0	0	1	4	4	0	0	0	0	9
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.10	0.40	0.40	0.0	0.0	0.0	0.0	0.90

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	4	1	5	18	20	1	0	10	1	3	63
1957	0	0	3	0	0	0	18	2	0	5	7	4	39
1958	0	0	0	14	6	0	3	0	0	4	4	3	34
1959	2	1	0	0	0	0	5	6	5	16	0	12	47
1960	0	2	4	5	3	0	0	0	0	2	0	1	17
1961	0	0	0	7	0	2	13	12	2	0	12	1	49
1962	0	0	1	11	0	17	0	22	0	1	0	0	52
1963	0	0	0	6	0	0	14	0	9	0	0	2	31
1964	1	0	0	2	14	32	4	0	7	2	2	4	68
1965	0	0	0	6	5	0	0	10	0	0	0	0	21
TOTAL HRS	3	3	12	52	33	69	77	53	23	40	26	30	421
AVG HRS	0.30	0.30	1.20	5.20	3.30	6.90	7.70	5.30	2.30	4.00	2.60	3.00	42.10

WIND SPEED VS. FREQUENCY

FREQUENCY	36	13	43	125	151	185	227	202	164	93	92	47	32	20	28
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 6.45 KNOTS
MODE 6.00 KNOTS
MEDIAN 6.00 KNOTS
STD. DEV. 2.89 KNOTS
SKEW 0.15

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	36	49	217	553	982	1239	1378	1430	1458
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	36	52	71	82	156	270	183	120	72	94	64	43	12	51	45	42	55
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	1	1	2	4	12	17	1	0	5	3	0	0	0	1	0	1
10-12	0	5	2	7	25	53	31	6	6	10	5	11	1	0	7	0	2
WIND 7-9	0	19	26	26	51	92	40	45	18	27	16	14	1	17	20	29	16
SPEED 4-6	0	18	30	36	67	89	73	47	39	34	25	15	10	25	13	9	32
KNOTS 1-3	0	9	12	11	19	24	22	21	9	18	12	3	0	9	4	4	4
CALM	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

BOS VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	33	168	290	13	513	2	143	0	296
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.17/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.41/16
SKEW 0.07

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	7	10	42	41	84	68	87	47	54	80	59	63	88	81	91	103	96	126	87	94	42	18	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 51.09 °F.
MODE 61.50 °F.
MEDIAN 51.50 °F.
STD. DEV. 10.78 °F.
SKEW -0.39

HOURLY OBSERVATIONS 519 SPECIAL OBS. 939 TOTAL OBSERVATIONS 3866 FOG WITH SMOKE AND/OR HAZE 278

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	3	5	3	4	4	1	0	1	0	1	4	10	0	5	9	6	3
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	1	0	1	0	3	0	0	0	0	0
NNE	0	0	0	0	1	1	0	0	0	0	0	0	0	1
NE	0	0	0	1	0	2	0	0	1	0	0	0	0	0
ENE	0	0	0	0	2	2	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	1	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	1	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SSW	0	0	2	0	0	0	0	1	1	0	0	0	0	0
SW	0	0	0	1	0	0	0	0	1	2	1	2	3	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	3	2	0	0	0	0
WNW	0	0	0	2	0	1	0	1	3	1	1	0	0	0
NW	0	0	0	0	0	0	2	1	0	3	0	0	0	0
NNW	0	0	0	0	0	1	1	0	1	0	0	0	0	0
CALM	3													

WIND SPEED

BOS

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	1.7	1.7	5.1	0.0	0.0	8.5
NNE	0.0	3.0	3.4	0.0	0.0	0.0	1.7	5.1
NE	0.0	1.7	3.4	0.0	1.7	0.0	0.0	6.8
ENE	0.0	0.0	6.8	0.0	0.0	0.0	0.0	6.8
E	0.0	0.0	0.0	1.7	0.0	0.0	0.0	1.7
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	1.7	0.0	0.0	0.0	1.7
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	1.7	0.0	0.0	1.7
SSW	0.0	3.4	0.0	1.7	1.7	0.0	0.0	6.8
SW	0.0	1.7	0.0	0.0	5.1	5.1	5.1	16.9
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	8.5	0.0	0.0	8.5
WNW	0.0	3.4	1.7	1.7	6.8	1.7	0.0	15.3
NW	0.0	0.0	0.0	5.1	5.1	0.0	0.0	10.2
NNW	0.0	0.0	1.7	1.7	1.7	0.0	0.0	5.1
CALM								5.1
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	51	8
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 59
FOG WITH LP 22
FOG WITH FP 37
ALL FOG CASES 118
PURE FOG 34
REC.OBS. 20

FOG WITH SMOKE AND/OR HAZE 6

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	1	2	0	0	0	0	0	3
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	3	5	0	0	0	8
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	4	0	0	0	0	0	4
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	1	6	3	5	0	0	0	15
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.10	0.60	0.30	0.50	0.0	0.0	0.0	1.50

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	2	11	4	18	2	14	5	0	0	1	1	2	60
1957	0	0	8	7	2	0	0	0	0	1	3	2	23
1958	11	0	0	9	1	0	5	0	0	9	0	5	40
1959	3	10	6	6	10	0	7	1	0	6	16	1	66
1960	8	3	4	9	10	0	0	9	1	4	20	8	76
1961	8	14	14	7	0	2	2	30	0	0	11	12	100
1962	3	4	5	0	0	9	1	5	0	3	8	0	38
1963	6	7	10	0	0	2	0	0	4	0	0	1	30
1964	2	2	4	3	10	13	7	0	2	12	4	0	59
1965	0	3	2	0	1	0	2	3	0	1	0	0	12
TOTAL HRS	43	54	57	59	36	40	29	48	7	37	63	31	504
AVG HRS	4.30	5.40	5.70	5.90	3.60	4.00	2.90	4.80	0.70	3.70	6.30	3.10	50.40

BDL

WIND SPEED VS. FREQUENCY

FREQUENCY	452	10	250	383	350	224	98	71	35	21	17	9	16	10	17
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 3.34 KNOTS
MODE 0.0 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 2.74 KNOTS
SKEW 1.22

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	452	462	1095	1669	1838	1894	1920	1946	1963
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	452	262	74	61	20	21	24	66	105	351	81	102	59	63	42	84	76
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	2	18	2	5	0	0	0	0	0
10-12	0	3	2	0	0	0	0	2	3	23	2	6	0	0	0	0	1
WIND 7-9	0	24	2	6	0	0	0	1	15	57	6	10	2	1	0	0	3
SPEED 4-6	0	140	32	31	6	7	13	36	50	169	42	48	25	21	13	21	18
KNOTS 1-3	0	95	38	44	14	14	11	27	35	84	29	33	32	41	29	63	54
CALM	452	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

222

BDL

BDL

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	246	220	393	99	512	2	181	0	310
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.53/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.56/16
SKEW -0.18

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	4	15	54	37	69	113	67	118	72	54	72	64	84	63	85	102	70	106	94	67	136	126	127	67	62	28	7
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 49.31 °F.
MODE 61.50 °F.
MEDIAN 51.50 °F.
STD. DEV. 13.35 °F.
SKEW -0.91

HOURLY OBSERVATIONS 836 SPECIAL OBS. 1077 TOTAL OBSERVATIONS 4402 FOG WITH SMOKE AND/OR HAZE 2

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	91	65	14	12	1	4	6	8	9	22	6	8	14	11	3	9	9
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	8	14	9	17	10	3	1	2	1	0	0	0
NNE	0	0	5	5	1	1	0	2	0	0	0	0	0	0
NE	0	0	2	6	2	2	0	0	0	0	0	0	0	0
ENE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
E	0	0	2	0	2	0	0	0	0	0	0	0	0	0
ESE	0	0	0	1	2	3	0	0	0	0	0	0	0	0
SE	0	0	2	1	3	2	0	0	0	0	0	0	0	0
SSE	0	0	3	2	1	2	0	1	0	0	0	0	0	0
S	0	0	5	9	2	4	1	1	0	0	0	0	0	0
SSW	0	0	1	3	0	1	0	1	0	0	0	0	0	0
SW	0	0	4	0	2	0	1	0	1	0	0	0	0	0
WSW	0	0	6	7	0	1	0	0	0	0	0	0	0	0
W	0	0	0	3	5	2	1	0	0	0	0	0	0	0
WNW	0	0	2	1	0	0	0	0	0	0	0	0	0	0
NW	0	0	3	4	1	0	1	0	0	0	0	0	0	0
NNW	0	0	2	4	1	1	0	0	0	0	1	0	0	0
CALM	91													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	7.5	8.9	4.5	1.0	0.3	0.0	22.3
NNE	0.0	3.4	0.7	0.7	0.0	0.0	0.0	4.8
NE	0.0	2.7	1.4	0.0	0.0	0.0	0.0	4.1
ENE	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
E	0.0	0.7	0.7	0.0	0.0	0.0	0.0	1.4
ESE	0.0	0.3	1.7	0.0	0.0	0.0	0.0	2.1
SE	0.0	1.0	1.7	0.0	0.0	0.0	0.0	2.7
SSE	0.0	1.7	1.0	0.3	0.0	0.0	0.0	3.1
S	0.0	4.8	2.1	0.7	0.0	0.0	0.0	7.5
SSW	0.0	1.4	0.3	0.3	0.0	0.0	0.0	2.1
SW	0.0	1.4	0.7	0.3	0.3	0.0	0.0	2.7
WSW	0.0	4.5	0.3	0.0	0.0	0.0	0.0	4.8
W	0.0	1.0	2.4	0.3	0.0	0.0	0.0	3.8
WNW	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
NW	0.0	2.4	0.3	0.3	0.0	0.0	0.0	3.1
NNW	0.0	2.1	0.7	0.0	0.0	0.3	0.0	3.1
CALM								31.2
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

	<28	28 TO 31	32
FREQUENCY	92	144	56

TEMPERATURE (F)

CHECK COUNT 292
FOG WITH LP 40
FOG WITH FP 90
ALL FOG CASES 419
PURE FOG 292
REC.OBS. 159

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	4	12	9	0	0	3	0	0	28
1957	0	0	0	0	0	0	0	2	0	0	0	0	2
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	10	5	0	0	3	0	0	0	18
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	1	9	0	1	1	0	0	0	12
1962	0	0	0	0	0	21	0	7	0	0	0	0	28
1963	0	0	0	0	0	17	11	1	0	0	0	0	29
1964	0	0	0	0	0	10	0	0	0	0	0	0	10
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	15	74	20	11	4	3	0	0	127
AVG HRS	0.0	0.0	0.0	0.0	1.50	7.40	2.00	1.10	0.40	0.30	0.0	0.0	12.70

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	6	11	8	17	11	23	10	2	0	14	0	7	109
1957	1	1	1	7	1	0	20	11	0	8	0	5	55
1958	8	6	1	17	7	1	1	0	0	1	5	0	47
1959	16	8	10	3	4	4	8	0	1	5	3	22	86
1960	13	20	19	11	3	0	1	8	1	0	6	11	93
1961	14	7	20	15	0	3	0	21	1	1	2	7	91
1962	6	21	1	10	0	11	4	6	0	0	0	16	75
1963	2	11	13	17	0	0	1	1	4	0	6	4	59
1964	4	17	2	0	0	21	1	0	0	8	2	11	66
1965	5	13	7	11	16	3	12	6	0	2	0	3	78
TOTAL HRS	77	115	82	108	42	66	58	55	7	39	24	86	759
AVG HRS	7.70	11.50	8.20	10.80	4.20	6.60	5.80	5.50	0.70	3.90	2.40	8.50	75.90

ROC

WIND SPEED VS. FREQUENCY

FREQUENCY	66	15	56	59	89	70	52	40	22	19	12	3	3	2	2
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 4.20 KNOTS
MODE 3.00 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 2.72 KNOTS
SKEW 0.44

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	66	81	238	397	489	530	545	550	552
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	66	33	15	13	12	7	8	14	16	56	55	102	81	24	16	10	22
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1
10-12	0	1	0	3	2	0	0	0	0	0	0	1	0	0	4	1	6
WIND 7-9	0	10	8	4	1	1	0	0	0	4	6	24	16	2	4	1	3
SPEED 4-6	0	15	4	6	6	6	1	5	4	29	26	50	29	6	6	5	11
KNOTS 1-3	0	7	2	2	3	0	7	9	12	23	22	27	36	16	2	3	1
CALM	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

ROC

ROC VISIBILITY VS. FREQUENCY
NOTE; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	35	75	120	22	143	18	55	0	84
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.70/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.43/16
SKEW -0.12

TEMPERATURE VS. FREQUENCY

FREQ.	6	6	5	7	4	3	14	15	23	19	37	29	44	27	16	10	15	16	17	21	13	26	32	32	37	38	22	11	2	5	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 45.84 °F.
MODE 37.50 °F.
MEDIAN 45.50 °F.
STD. DEV. 14.25 °F.
SKEW 0.59

HOURLY OBSERVATIONS 310 SPECIAL OBS. 242 TOTAL OBSERVATIONS 1084 FOG WITH SMOKE AND/OR HAZE 15

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	26	7	4	1	2	0	1	1	1	9	8	11	18	4	2	3	4
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	1	0	0	1	0	2	3	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	2	2	0	0	0	0
NE	0	0	0	0	0	0	1	0	0	0	0	0	0	0
ENE	0	0	0	0	0	1	0	1	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	1	0	0	0	0	0	0	0	0
S	0	0	2	3	2	2	0	0	0	0	0	0	0	0
SSW	0	0	1	0	1	2	2	1	0	1	0	0	0	0
SW	0	0	3	2	1	3	1	1	0	0	0	0	0	0
WSW	0	1	1	5	2	4	4	1	0	0	0	0	0	0
W	0	1	0	2	1	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	1	1	0	0	0	0
NW	0	0	1	0	1	1	0	0	0	0	0	0	0	0
NNW	0	0	0	0	1	3	0	0	0	0	0	0	0	0
CALM	26													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	1.0	1.0	2.0	2.9	0.0	0.0	6.9
NNE	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9
NE	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
ENE	0.0	0.0	1.0	1.0	0.0	0.0	0.0	2.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
SE	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
SSE	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
S	0.0	4.9	3.9	0.0	0.0	0.0	0.0	8.8
SSW	0.0	1.0	2.9	2.9	1.0	0.0	0.0	7.8
SW	0.0	4.9	3.9	2.0	0.0	0.0	0.0	10.8
WSW	1.0	5.9	5.9	4.9	0.0	0.0	0.0	17.6
W	1.0	2.0	1.0	0.0	0.0	0.0	0.0	3.9
WNW	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0
NW	0.0	1.0	2.0	0.0	0.0	0.0	0.0	2.9
NNW	0.0	0.0	3.9	0.0	0.0	0.0	0.0	3.9
CALM								25.5
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	51	40	11
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 102
FOG WITH LP 25
FOG WITH FP 27
ALL FOG CASES 151
PURE FOG 102
REC.OBS. 59

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	1	0	0	0	1
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	1	0	0	2	2	0	0	5
1959	0	0	0	0	0	0	0	0	7	0	0	0	7
1960	0	0	0	0	0	0	13	0	0	0	0	0	13
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	1	0	0	2	2	0	0	5
1963	0	0	0	0	0	6	0	0	0	0	0	0	6
1964	0	0	0	0	1	2	0	0	2	0	0	0	5
1965	0	0	0	0	0	0	0	0	2	9	0	0	11
TOTAL HRS	0	0	0	0	1	10	13	0	16	13	0	0	53
AVG HRS	0.0	0.0	0.0	0.0	0.10	1.00	1.30	0.0	1.60	1.30	0.0	0.0	5.30

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	1	0	7	9	3	0	0	1	1	0	2	24
1957	5	0	0	3	10	0	0	0	0	5	0	0	23
1958	2	0	6	0	0	3	0	0	0	8	1	0	20
1959	5	3	0	0	0	2	0	0	2	0	0	0	12
1960	0	3	0	6	0	0	1	0	0	1	16	0	27
1961	1	13	4	0	0	5	0	2	0	1	0	14	40
1962	0	7	6	1	0	3	2	0	1	3	0	9	32
1963	0	2	4	0	0	0	0	0	2	1	2	0	11
1964	2	11	0	6	4	0	1	0	0	0	4	9	37
1965	1	6	2	1	0	0	0	0	1	16	0	4	31
TOTAL HRS	16	46	22	24	23	16	4	2	7	36	23	38	257
AVG HRS	1.60	4.60	2.20	2.40	2.30	1.60	0.40	0.20	0.70	3.60	2.30	3.80	25.70

SYR

WIND SPEED VS. FREQUENCY

FREQUENCY	51	7	53	60	42	31	32	18	10	3	3	0	2	2	4
WIND SPEED (KNOTS)	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

STATISTICAL RESULTS

MEAN 3.70 KNOTS
MODE 3.00 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 2.79 KNOTS
SKEW 0.25

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMUALTIVE FREQUENCY	51	58	171	244	294	307	310	314	318
WIND SPEED (KNOTS)	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND DIRECTION VS. FREQUENCY

FREQUENCY	51	18	7	11	15	53	29	21	6	3	6	5	17	28	22	18	8
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1	1	0
10-12	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	1	0
WIND 7-9	0	0	0	0	2	6	5	3	1	0	0	0	1	4	5	2	2
SPEED 4-6	0	9	1	5	4	24	14	7	2	1	0	1	8	10	10	9	0
KNOTS 1-3	0	9	6	6	9	18	10	11	3	2	6	4	8	13	4	5	6
CALM	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

234

SYR

SYR

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	34	47	55	20	73	8	31	0	45
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.51/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.50/16
SKEW -0.20

TEMPERATURE VS. FREQUENCY

FREQ.	17	0	2	2	0	0	1	5	17	4	26	18	8	14	13	23	12	28	20	18	2	14	8	16	25	10	9	1	5	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 44.85 °F.
MODE 47.50 °F.
MEDIAN 45.50 °F.
STD. DEV. 13.47 °F.
SKEW -0.20

DAILY OBSERVATIONS 162 SPECIAL OBS. 156 TOTAL OBSERVATIONS 694 FOG WITH SMOKE AND/OR HAZE 14

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	9	0	0	0	2	10	3	4	0	1	0	1	0	4	5	6	-3
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	1	0	1	0	0	0	0	0	0	0
E	0	0	0	2	2	3	2	1	0	0	0	0	0	0
ESE	0	0	0	3	0	0	0	0	0	0	0	0	0	0
SE	0	1	0	0	0	1	1	1	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	1	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	1	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	1	2	1	0	0	0	0	0	0	0	0	0
WNW	0	0	1	0	0	1	2	1	0	0	0	0	0	0
NW	0	0	1	0	0	2	1	1	0	0	0	0	0	1
NNW	0	2	0	1	0	0	0	0	0	0	0	0	0	0
CALM	9													
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	2.1	2.1	0.0	0.0	0.0	4.2
E	0.0	4.2	10.4	6.2	0.0	0.0	0.0	20.8
ESE	0.0	6.3	0.0	0.0	0.0	0.0	0.0	6.3
SE	2.1	0.0	2.1	4.2	0.0	0.0	0.0	8.3
SSE	0.0	0.0	0.	0.0	0.0	0.0	0.0	0.0
S	0.0	2.1	0.0	0.0	0.0	0.0	0.0	2.1
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	2.1	0.0	0.0	0.0	0.0	0.0	2.1
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	6.2	2.1	0.0	0.0	0.0	0.0	8.3
WNW	0.0	2.1	2.1	6.2	0.0	0.0	0.0	10.4
NW	0.0	2.1	4.2	4.2	0.0	0.0	2.1	12.5
NNW	4.2	2.1	0.0	0.0	0.0	0.0	0.0	6.2
CALM								16.8
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	22	26	0
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 48
FOG WITH LP 3
FOG WITH FP 37
ALL FOG CASES 87
PURE FOG 48
REC.OBS. 22

FOG WITH SMOKE AND/OR HAZE 0

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	10	0	0	0	10
1960	0	0	0	0	0	0	8	0	2	0	0	0	10
1961	0	0	0	0	0	0	0	1	0	0	0	0	1
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL HRS	0	0	0	0	0	0	9	1	12	0	0	0	22
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.90	0.10	1.20	0.0	0.0	0.0	2.20

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	2	0	0	9	11	4	0	0	1	0	0	1	28
1957	0	1	0	0	2	0	0	0	0	4	2	0	9
1958	0	0	0	0	3	0	0	0	0	1	3	0	7
1959	0	0	0	3	0	0	1	0	0	0	1	0	5
1960	0	0	0	0	0	0	0	1	2	2	7	0	12
1961	4	0	5	0	0	10	0	4	0	1	0	5	29
1962	0	0	2	0	0	0	0	0	0	0	0	0	2
1963	0	0	3	0	0	0	0	1	0	0	0	1	5
1964	2	2	8	0	1	1	0	0	0	0	0	7	21
1965	0	2	5	0	6	0	0	3	2	4	0	0	22
TOTAL HRS	8	5	23	12	23	15	1	9	5	12	13	14	140
AVG. HRS	0.80	0.50	2.30	1.20	2.30	1.50	0.10	0.90	0.50	1.20	1.30	1.40	14.00

WIND SPEED VS. FREQUENCY

FREQUENCY	49	1	13	100	151	131	127	103	63	37	45	16	26	12	18
WIND SPEED (KNOTS)	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

STATISTICAL RESULTS

MEAN 5.89 KNOTS
MODE 4.00 KNOTS
MEDIAN 6.00 KNOTS
STD. DEV. 3.01 KNOTS
SKEW 0.63

Reproduced from best available copy.

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	49	50	163	445	675	775	836	874	892
WIND SPEED (KNOTS)	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND DIRECTION VS. FREQUENCY

FREQUENCY	49	90	45	28	10	15	18	16	44	165	83	87	41	27	64	58	52
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

WIND DIRECTION VS. WIND SPEED

WIND SPEED KNOTS	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
>12	0	3	6	3	0	0	0	0	0	8	0	0	3	3	1	3	3
10-12	0	22	9	5	2	1	1	0	0	9	0	2	2	4	6	13	4
7-9	0	32	16	14	3	4	4	0	4	26	16	19	9	5	20	18	14
4-6	0	28	12	7	5	8	11	8	30	86	58	43	22	15	32	22	22
1-3	0	5	2	2	0	2	2	8	10	36	9	23	6	0	3	2	4
CALM	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CLE VISIBILITY VS. FREQUENCY
(1/2; 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	62	148	202	35	237	0	75	0	133
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

Reproduced from best available copy.

STATISTICAL RESULTS

MEAN 3.50/16
MODE 4.00/16
MEDIAN 3.00/16
STD. DEV. 2.45/16
SKEW -0.21

TEMPERATURE VS. FREQUENCY

FREQ.	25	0	0	11	0	0	0	38	12	47	60	68	61	41	72	53	22	34	41	45	55	48	34	30	43	26	22	17	3	0	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 44.44 °F.
MODE 41.50 °F.
MEDIAN 43.50 °F.
STD. DEV. 12.64 °F.
SKEW. 0.23

[illegible] OBSERVATIONS 342 SPECIAL OBS. 540 TOTAL OBSERVATIONS 2884 FOG WITH SMOKE AND/OR HAZE 146

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	5	10	8	1	0	0	1	0	6	38	16	8	6	4	13	14	7
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	2	3	3	0	1	1	0	0
NNE	0	0	0	0	1	0	1	1	0	0	0	1	1	3
NE	0	0	0	0	0	0	0	0	0	0	0	0	1	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	1	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	2	1	3	0	0	0	0	0	0	0
S	0	0	0	13	10	8	0	1	0	0	0	0	1	5
SSW	0	0	0	4	0	5	5	2	0	0	0	0	0	0
SW	0	0	0	1	2	2	0	1	2	0	0	0	0	0
WSW	0	0	0	1	3	2	0	0	0	0	0	0	0	0
W	0	0	0	0	2	1	0	1	0	0	0	0	0	0
WNW	0	0	0	0	0	4	4	2	1	1	0	1	0	0
NW	0	0	0	0	1	1	2	4	1	2	0	0	3	0
NNW	0	0	0	0	0	0	0	2	4	0	1	0	0	0
CALM	5													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	3.6	2.2	1.5	0.0	7.3
NNE	0.0	0.0	0.7	1.5	0.0	0.7	2.9	5.8
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	2.2	2.2	0.0	0.0	0.0	4.4
S	0.0	9.5	13.1	0.7	0.0	0.0	4.4	27.7
SSW	0.0	2.9	3.6	5.1	0.0	0.0	0.0	11.7
SW	0.0	0.7	2.9	0.7	1.5	0.0	0.0	5.8
WSW	0.0	0.7	3.6	0.0	0.0	0.0	0.0	4.4
W	0.0	0.0	2.2	0.7	0.0	0.0	0.0	2.9
WNW	0.0	0.0	2.9	4.4	1.5	0.7	0.0	9.5
NW	0.0	0.0	1.5	4.4	2.2	0.0	2.2	10.2
NNW	0.0	0.0	0.0	1.5	2.9	0.7	0.0	5.1
CALM								3.6
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	55	46	36
TEMPERATURE (F)	<28	28 TO 31	32

Reproduced from best available copy.

CHECK COUNT 137
FOG WITH LP 61
FOG WITH FP 85
ALL FOG CASES 277
PURE FOG 118
REC.OBS. 56

FOG WITH SMOKE AND/OR HAZE 9

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	6	0	0	0	0	0	6
1957	0	0	0	0	0	0	0	5	0	0	0	0	5
1958	0	0	0	0	0	0	0	0	2	0	0	0	2
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	8	7	10	0	0	0	25
1961	0	0	0	0	0	0	1	1	2	0	0	0	4
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	1	0	0	0	0	1
1965	0	0	0	0	0	0	3	0	0	0	0	0	3
TOTAL HRS	0	0	0	0	0	0	18	14	14	0	0	0	46
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	1.80	1.40	1.40	0.0	0.0	0.0	4.60

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	5	24	11	0	2	4	1	0	9	56
1957	6	9	0	2	1	0	0	0	1	0	4	0	23
1958	8	4	8	1	1	0	0	2	3	6	0	0	33
1959	0	0	0	0	0	0	0	1	0	0	5	0	6
1960	7	2	0	14	0	0	20	0	4	1	1	0	49
1961	0	5	0	3	0	0	0	4	3	1	0	6	22
1962	9	5	0	6	0	0	1	1	11	0	0	10	43
1963	0	0	0	0	1	0	1	0	14	0	4	0	20
1964	0	1	1	2	2	6	0	0	2	4	5	0	23
1965	0	0	6	7	2	0	1	0	9	6	0	0	31
TOTAL HRS	30	26	15	40	31	17	23	10	51	19	19	25	306
AVG HRS	3.00	2.60	1.50	4.00	3.10	1.70	2.30	1.00	5.10	1.90	1.90	2.50	30.60

WIND SPEED VS. FREQUENCY

FREQUENCY	453	19	132	169	164	119	79	38	25	16	10	4	1	1	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 2.68 KNOTS
MODE 0.0 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 2.59 KNOTS
SKEW 1.03

Reproduced from best available copy.

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULTIVE FREQUENCY	453	471	772	1055	1172	1213	1227	1229	1229
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	453	97	34	26	16	55	42	60	95	128	58	14	3	6	18	36	88
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
10-12	0	1	0	0	0	3	3	0	0	4	2	0	0	0	0	0	2
WIND 7-9	0	11	1	0	0	4	2	0	8	15	17	2	1	0	2	2	14
SPEED 4-6	0	61	16	9	6	18	17	20	45	70	20	8	1	1	8	17	45
KNOTS 1-3	0	24	17	17	10	29	20	40	42	39	19	4	1	5	8	17	27
CALM	453	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

CMH VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	262	138	264	24	269	14	54	0	184
POSITION	0	1	2	3	4	5	6	7	8
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.06/16
MODE 4.00/16
MEDIAN 2.00/16
STD. DEV. 2.65/16
SKEW -0.36

TEMPERATURE VS. FREQUENCY

FREQ.	39	6	9	4	4	4	20	32	12	39	79	34	35	96	53	51	77	42	32	55	31	21	41	49	86	77	74	68	30	28	0
	<15	15 TO 16	17 TO 18	19 TO 20	21 TO 22	23 TO 24	25 TO 26	27 TO 28	29 TO 30	31 TO 32	33 TO 34	35 TO 36	37 TO 38	39 TO 40	41 TO 42	43 TO 44	45 TO 46	47 TO 48	49 TO 50	51 TO 52	53 TO 54	55 TO 56	57 TO 58	59 TO 60	61 TO 62	63 TO 64	65 TO 66	67 TO 68	69 TO 70	71 TO 72	>72

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 48.13 °F.
MODE 39.50 °F.
MEDIAN 47.50 °F.
STD. DEV. 14.61 °F.
SKEW 0.58

HOURLY OBSERVATIONS 542 SPECIAL OBS. 688 TOTAL OBSERVATIONS 2397 FOG WITH SMOKE AND/OR HAZE 156

Reproduced from best available copy.

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	70	5	1	0	2	3	6	13	17	24	3	0	0	1	3	4	17
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	1	3	1	0	0	0	0	0	0	0	0
NNE	0	0	0	0	1	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	1	1	0	0	0	0	0	0	0	0	0	0
E	0	0	1	1	1	0	0	0	0	0	0	0	0	0
ESE	0	0	1	2	3	0	0	0	0	0	0	0	0	0
SE	0	0	7	1	4	1	0	0	0	0	0	0	0	0
SSE	0	0	5	2	5	5	0	0	0	0	0	0	0	0
S	0	0	3	7	5	5	3	1	0	0	0	0	0	0
SSW	0	0	0	3	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	1	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	2	1	0	0	0	0	0	0	0	0	0
NW	0	0	0	3	0	0	1	0	0	0	0	0	0	0
NNW	0	0	2	7	3	1	2	2	0	0	0	0	0	0
CALM	70													

WIND SPEED

Reproduced from best available copy.

CMH WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.6	2.4	0.0	0.0	0.0	0.0	3.0
NNE	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
E	0.0	1.2	0.6	0.0	0.0	0.0	0.0	1.8
ESE	0.0	1.8	1.8	0.0	0.0	0.0	0.0	3.6
SE	0.0	4.7	3.0	0.0	0.0	0.0	0.0	7.7
SSE	0.0	4.1	5.9	0.0	0.0	0.0	0.0	10.1
S	0.0	5.9	5.9	2.4	0.0	0.0	0.0	14.2
SSW	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.8
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6
WNW	0.0	1.2	0.6	0.0	0.0	0.0	0.0	1.8
NW	0.0	1.8	0.0	0.6	0.0	0.0	0.0	2.4
NNW	0.0	5.3	2.4	2.4	0.0	0.0	0.0	10.1
CALM								41.4
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	102	44	23
	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 169
FOG WITH LP 16
FOG WITH FP 65
ALL FOG CASES 248
PURE FOG 85
REC.OBS. 88

FOG WITH SMOKE AND/OR HAZE 42

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	2	0	4	0	0	0	0	0	6
1958	0	0	0	0	0	2	0	0	0	0	0	0	2
1959	0	0	0	0	0	6	3	4	4	0	0	0	17
1960	0	0	0	0	11	0	1	9	3	0	0	0	24
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	3	5	4	0	0	0	0	0	0	12
1963	0	0	0	0	3	4	3	0	0	0	0	0	10
1964	0	0	0	0	0	0	4	0	0	0	0	0	4
1965	0	0	0	0	0	0	4	0	0	0	0	0	4
TOTAL HRS	0	0	0	3	21	16	19	13	7	0	0	0	79
AVG HRS	0.0	0.0	0.0	0.30	2.10	1.60	1.90	1.30	0.70	0.0	0.0	0.0	7.90

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	12	1	9	1	18	7	3	3	6	0	0	7	67
1957	3	0	7	7	12	0	4	3	2	3	1	1	43
1958	16	13	4	8	0	6	0	0	0	4	1	3	55
1959	2	8	0	0	0	1	4	1	0	3	4	0	23
1960	7	7	11	7	7	0	15	0	0	7	0	4	65
1961	6	5	1	13	0	0	0	1	1	0	7	6	40
1962	0	5	10	4	1	0	0	0	0	0	0	0	20
1963	3	4	2	4	23	0	10	0	17	0	5	2	70
1964	0	4	12	3	15	0	1	0	0	6	0	5	46
1965	0	3	18	0	4	0	2	3	1	1	1	0	33
TOTAL HRS	49	50	74	47	80	14	39	11	27	24	19	28	462
AVG HRS	4.90	5.00	7.40	4.70	8.00	1.40	3.90	1.10	2.70	2.40	1.90	2.80	46.20

GEG

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

FREQUENCY	239	47	124	432	238	84	56	57	46	60	65	85	53	24	12	25	22
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS WIND SPEED

WIND DIRECTION VS WIND SPEED

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	2	20	16	4	3	0	2	0	0	0	0	0
NNE	0	0	7	47	23	23	16	5	2	1	0	0	0	0
NE	0	0	26	106	99	88	59	32	14	1	3	1	1	0
ENE	0	0	6	68	58	42	28	18	15	1	2	0	0	0
E	0	0	7	28	24	12	7	4	1	0	0	1	0	0
ESE	0	0	6	22	17	7	3	1	0	0	0	0	0	0
SE	0	1	1	27	7	6	5	6	4	0	0	0	0	0
SSE	0	0	3	8	6	8	10	6	1	2	1	1	0	0
S	0	0	4	10	13	11	6	8	6	0	1	0	1	0
SSW	0	0	1	12	8	18	9	4	8	2	1	0	0	2
SW	0	1	5	20	18	22	7	5	4	1	0	0	0	2
WSW	0	0	3	14	14	11	7	2	0	2	0	0	0	0
W	0	0	2	14	3	2	2	1	0	0	0	0	0	0
WNW	0	0	2	5	1	4	6	0	0	0	0	0	0	0
NW	0	0	2	12	8	3	0	0	0	0	0	0	0	0
NNW	0	0	0	13	4	2	3	0	0	0	0	0	0	0
CALM	239													

WIND SPEED

Reproduced from best available copy.

CHECK COUNT 8418
FOG WITH LP 177
FOG WITH FP 157
ALL FOG CASES 1972
PURE FOG 1580
FIRST CARD 1- 4-55
LAST CARD 12-31-64
DISCARDS 0 DISCARD NO. ***
TOTAL CARDS: 8418 CARDS ANALYZED: 1669

GEG

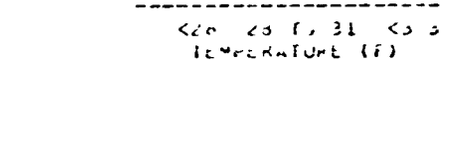
WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	1.3	1.2	0.2	0.1	0.0	0.0	2.8
NNE	0.0	3.2	2.8	1.3	0.2	0.0	0.0	7.4
NE	0.0	8.0	11.2	5.5	0.9	0.2	0.1	25.9
ENE	0.0	4.4	6.0	2.8	1.0	0.1	0.0	14.3
E	0.0	2.1	2.2	0.7	0.1	0.1	0.0	5.0
ESE	0.0	1.7	1.4	0.2	0.0	0.0	0.0	3.4
SE	0.1	1.7	0.8	0.7	0.2	0.0	0.0	3.4
SSE	0.0	0.7	0.8	1.0	0.2	0.1	0.0	2.8
S	0.0	0.8	1.4	0.8	0.4	0.1	0.1	3.6
SSW	0.0	0.8	1.6	0.8	0.6	0.1	0.1	3.9
SW	0.1	1.5	2.4	0.7	0.3	0.0	0.1	5.1
WSW	0.0	1.0	1.5	0.5	0.1	0.0	0.0	3.2
W	0.0	1.0	0.3	0.2	0.0	0.0	0.0	1.4
WNW	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.7
NW	0.0	0.8	0.7	0.0	0.0	0.0	0.0	1.5
NNW	0.0	0.8	0.4	0.2	0.0	0.0	0.0	1.3
CALM								14.3
TOTAL								100.0

Reproduced from best available copy.

TEMPERATURE VS. FREQUENCY



RESULTS FROM CARD DECK 144
MONTHLY FOG DISTRIBUTION FOR SPOKANE, WASHINGTON

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1955	0	0	0	0	3	44	97	21	2	2	0	0	169
1956	0	0	0	0	41	120	20	59	0	0	0	0	240
1957	0	0	0	0	16	9	30	36	9	0	0	0	100
1958	0	0	0	0	0	49	76	5	0	3	0	0	133
1959	0	0	0	3	10	93	14	17	0	0	0	0	137
1960	0	0	0	4	11	95	50	19	0	1	0	0	180
1961	0	0	0	26	30	48	45	4	2	0	0	0	155
1962	0	0	0	1	24	37	33	6	5	0	0	0	106
1963	0	0	0	0	0	40	60	42	6	1	0	0	149
1964	0	0	0	0	78	39	3	34	0	0	0	0	154
TOTAL HRS	0	0	0	34	213	574	428	243	24	7	0	0	1523
AVG HRS	0.0	0.0	0.0	3.40	21.30	57.40	42.80	24.30	2.40	0.70	0.0	0.0	152.30

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

Reproduced from best available copy.

GEG

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1955	3	0	0	42	19	6	17	0	0	1	0	0	88
1956	0	3	0	3	25	14	6	3	0	0	2	0	56
1957	0	0	3	33	4	4	1	3	16	0	3	0	67
1958	2	0	0	41	6	62	32	26	5	9	3	4	190
1959	0	0	8	17	3	2	6	2	0	2	2	0	42
1960	0	0	0	4	5	0	3	9	3	0	0	0	24
1961	0	0	0	26	22	17	3	11	0	0	6	0	85
1962	0	0	0	67	23	74	12	41	4	2	4	2	249
1963	0	0	7	7	2	3	0	55	3	8	0	0	85
1964	0	0	0	6	19	5	0	0	6	0	0	0	36
TOTAL HRS	5	3	18	266	128	187	80	150	37	22	20	6	922
AVG HRS	0.50	0.30	1.80	26.6	12.80	18.70	8.00	15.00	3.70	2.20	2.00	0.60	92.20

Reproduced from best available copy.

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

FREQUENCY	272	23	13	20	8	15	20	43	25	38	8	25	29	53	86	87	24
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS WIND SPEED

WIND DIRECTION VS WIND SPEED

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

N	0	0	3	13	1	3	1	0	1	1	0	0	0	0
NNE	0	0	3	3	2	4	1	0	0	0	0	0	0	0
NE	0	0	4	11	4	6	1	0	0	0	0	0	0	0
ENE	0	0	0	3	3	1	1	0	0	0	0	0	0	0
E	0	0	2	7	5	1	0	0	0	0	0	0	0	0
ESE	0	1	1	7	7	2	0	0	1	0	0	0	0	1
SE	0	0	6	13	10	7	5	2	0	0	0	0	0	0
SSE	0	0	1	7	11	3	2	0	1	0	0	0	0	0
S	0	0	3	17	10	5	2	1	0	0	0	0	0	0
SSW	0	0	1	6	1	0	0	0	0	0	0	0	0	0
SW	0	0	2	13	4	3	1	0	0	2	0	0	0	0
WSW	0	0	2	14	9	1	2	0	0	0	1	0	0	0
W	0	0	6	17	15	10	6	0	1	0	0	0	0	0
WNW	0	1	1	16	23	19	11	9	2	2	1	0	0	1
NW	0	0	12	24	18	15	8	5	2	1	1	0	1	0
NNW	0	0	2	6	11	4	1	0	0	0	0	0	0	0
CALM	272													
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WIND SPEED

Reproduced from best available copy.

BOI WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	2.0	0.5	0.1	0.3	0.0	0.0	2.9
NNE	0.0	0.8	0.6	0.1	0.0	0.0	0.0	1.6
NE	0.0	1.9	0.5	0.1	0.0	0.0	0.0	2.5
ENE	0.0	0.4	0.5	0.1	0.0	0.0	0.0	1.0
E	0.0	1.1	0.8	0.0	0.0	0.0	0.0	1.9
ESE	0.1	1.0	1.1	0.0	0.1	0.0	0.1	2.5
SE	0.0	2.4	2.2	0.9	0.0	0.0	0.0	5.4
SSE	0.0	1.0	1.8	0.3	0.1	0.0	0.0	3.2
S	0.0	2.5	1.9	0.4	0.0	0.0	0.0	4.8
SSW	0.0	0.9	0.1	0.0	0.0	0.0	0.0	1.0
SW	0.0	1.9	0.9	0.1	0.3	0.0	0.0	3.2
WSW	0.0	2.0	1.3	0.3	0.0	0.1	0.0	3.7
W	0.0	2.9	2.9	0.8	0.1	0.0	0.0	6.7
WNW	0.1	2.2	5.3	2.5	0.5	0.1	0.1	10.9
NW	0.0	4.6	4.2	1.6	0.4	0.1	0.1	11.0
NNW	0.0	1.0	1.9	0.1	0.0	0.0	0.0	3.0
CALM								34.5
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	507	216	769
	<26	26 TO 31	<33
	TEMPERATURE (F)		

Reproduced from best available copy.

CHECK COUNT 2947
FOG WITH LP. 16
FOG WITH FP 36
ALL FOG CASES 841
PURE FOG 767
FIRST CARD 1- 1-55
LAST CARD 0- 0- 0

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

FREQUENCY	164	10	14	23	14	17	17	26	21	28	20	26	14	9	8	13	9
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS WIND SPEED

WIND DIRECTION VS WIND SPEED

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	2	3	4	1	0	0	0	0	0	0	0	0	0
NNE	0	0	6	6	2	0	0	0	0	0	0	0	0	0
NE	0	2	6	13	2	0	0	0	0	0	0	0	0	0
ENE	0	4	5	4	3	0	0	0	0	0	0	0	0	0
E	0	1	7	7	2	0	0	0	0	0	0	0	0	0
ESE	0	3	6	5	2	1	0	0	0	0	0	0	0	0
SE	0	5	9	4	6	2	0	0	0	0	0	0	0	0
SSE	0	3	3	9	4	2	0	0	0	0	0	0	0	0
S	0	5	8	6	8	1	0	0	0	0	0	0	0	0
SSW	0	1	4	10	5	0	0	0	0	0	0	0	0	0
SW	0	7	6	7	6	0	0	0	0	0	0	0	0	0
WSW	0	0	6	4	4	0	0	0	0	0	0	0	0	0
W	0	2	1	3	1	2	0	0	0	0	0	0	0	0
WNW	0	1	2	2	3	0	0	0	0	0	0	0	0	0
NW	0	1	2	7	1	1	1	0	0	0	0	0	0	0
NNW	0	0	3	5	1	0	0	0	0	0	0	0	0	0
CALM	164													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.5	1.6	0.2	0.0	0.0	0.0	0.0	2.3
NNE	0.0	2.8	0.5	0.0	0.0	0.0	0.0	3.2
NE	0.5	4.4	0.5	0.0	0.0	0.0	0.0	5.3
ENE	0.9	1.6	0.7	0.0	0.0	0.0	0.0	3.2
E	0.2	3.2	0.5	0.0	0.0	0.0	0.0	3.9
ESE	0.7	2.5	0.7	0.0	0.0	0.0	0.0	3.9
SE	1.2	3.0	1.8	0.0	0.0	0.0	0.0	6.0
SSE	0.7	2.8	1.4	0.0	0.0	0.0	0.0	4.8
S	1.2	3.2	2.1	0.0	0.0	0.0	0.0	6.5
SSW	0.2	3.2	1.2	0.0	0.0	0.0	0.0	4.6
SW	1.6	3.0	1.4	0.0	0.0	0.0	0.0	6.0
WSW	0.0	2.3	0.9	0.0	0.0	0.0	0.0	3.2
W	0.5	0.9	0.7	0.0	0.0	0.0	0.0	2.1
WNW	0.2	0.9	0.7	0.0	0.0	0.0	0.0	1.8
NW	0.2	2.1	0.5	0.2	0.0	0.0	0.0	3.0
NNW	0.0	1.6	0.2	0.0	0.0	0.0	0.0	2.1
CALM								37.9
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	342	75	433
	<28	28 TO 31	<33

TEMPERATURE (F)

CHECK COUNT 968
FOG WITH LP 17
FOG WITH FP 21
ALL FOG CASES 470
PURE FOG 419
FIRST CARD 1- 4-55
LAST CARD 11-17-64

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

FREQUENCY	1536	90	53	32	16	11	23	46	43	39	21	31	23	22	27	58	31
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS WIND SPEED

WIND DIRECTION VS WIND SPEED

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	4	20	43	14	5	3	0	0	1	0	0	0
NNE	0	1	2	16	17	10	6	1	0	0	0	0	0	0
NE	0	0	2	6	17	3	1	1	0	0	0	0	0	0
ENE	0	0	1	5	8	2	0	0	0	0	0	0	0	0
E	0	0	1	2	5	1	2	0	0	0	0	0	0	0
ESE	0	0	1	8	12	1	1	0	0	0	0	0	0	0
SE	0	0	0	12	22	9	3	0	0	0	0	0	0	0
SSE	0	1	0	7	22	8	5	0	0	0	0	0	0	0
S	0	0	3	6	18	7	3	1	1	0	0	0	0	0
SSW	0	0	2	7	8	3	1	0	0	0	0	0	0	0
SW	0	0	0	11	14	5	0	0	0	1	0	0	0	0
WSW	0	0	2	7	10	1	2	1	0	0	0	0	0	0
W	0	0	0	9	12	1	0	0	0	0	0	0	0	0
WNW	0	0	3	7	16	1	0	0	0	0	0	0	0	0
NW	0	0	7	14	28	6	1	0	2	0	0	0	0	0
NNW	0	0	1	10	8	9	2	0	0	1	0	0	0	0
CALM	1536													

WIND SPEED

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	1.1	2.7	0.4	0.0	0.0	0.0	4.3
NNE	0.0	0.9	1.3	0.3	0.0	0.0	0.0	2.5
NE	0.0	0.5	1.0	0.1	0.0	0.0	0.0	1.5
ENE	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.8
E	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.5
ESE	0.0	0.4	0.6	0.0	0.0	0.0	0.0	1.1
SE	0.0	0.6	1.5	0.1	0.0	0.0	0.0	2.2
SSE	0.0	0.5	1.4	0.2	0.0	0.0	0.0	2.0
S	0.0	0.4	1.2	0.2	0.0	0.0	0.0	1.9
SSW	0.0	0.4	0.5	0.0	0.0	0.0	0.0	1.0
SW	0.0	0.5	0.9	0.0	0.0	0.0	0.0	1.5
WSW	0.0	0.4	0.5	0.1	0.0	0.0	0.0	1.1
W	0.0	0.4	0.6	0.0	0.0	0.0	0.0	1.0
WNW	0.0	0.5	0.8	0.0	0.0	0.0	0.0	1.3
NW	0.0	1.0	1.6	0.0	0.1	0.0	0.0	2.8
NNW	0.0	0.5	0.8	0.1	0.0	0.0	0.0	1.5
CALM								73.1
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 669 1176 2104

<28 28 TO 31 <33
TEMPERATURE (F)

CHECK COUNT 9637
FOG WITH LP 162
FOG WITH FP 61
ALL FOG CASES 2323
PURE FOG 215
FIRST CARD 1- 1-55
LAST CARD 12-31-64

CUMULATIVE TOTALS FOR ALL AIRPORTS

Fog with visibility ½ mile and less
No precipitation included
Source: NCC, NOAA, Card Deck 138
10 years of data
39 Airports (Anchorage, Detroit, Spokane, Boise, Reno and Medford not included)

WIND SPEED vs. FREQUENCY

Frequency	10606	756	3019	7053	8713	7792	5410	3880	2969	1529	1534	560	531	264	700
	Calm	1	2	3	4	5	6	7	8	9	10	11	12	13	Over 13

Wind Speed (knots)

Statistical Results:

Mean: 4.34 knots
Mode: 0
Std. Dev.: 3.15 knots
Skew: 1.38 knots
Median: 4.00 knots

VISIBILITY vs. FREQUENCY

Frequency	5326	6203	12008	2632	15316	653	4120	0	9058
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

Visibility (miles)

Statistical Results:

Mean: 3.61/16
Mode: 4.00/16
Std. Dev.: 2.50/16
Skew: -0.16
Median: 4.00/16

CUMULATIVE TOTALS FOR ALL AIRPORTS

TEMPERATURE vs. FREQUENCY

Frequency	517	139	238	217	238	406	605	883	1366	1943	2252	2570	2417	2354	2353	2604
	under 15	15 to 16	17 to 18	19 to 20	21 to 22	23 to 24	25 to 26	27 to 28	29 to 30	31 to 32	33 to 34	35 to 36	37 to 38	39 to 40	41 to 42	43 to 44

Temperature (F)

TEMPERATURE vs. FREQUENCY

Frequency	2959	2991	3[illegible]	3252	3194	2832	2401	2547	2561	2228	2122	1676	1351	725	305
	45 to 46	47 to 48	49 to 50	51 to 52	53 to 54	55 to 56	57 to 58	59 to 60	61 to 62	63 to 64	65 to 66	67 to 68	69 to 70	71 to 72	Over 72

Statistical Results:

Mean: 48.22 Degrees (F)
Mode: 51.5 Degrees (F)
Std. Dev.: 12.82 Degrees (F)
Skew: -0.26
Median: 49.5 Degrees (F)

GPO 929-905