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London Weather Centre Memorandum No.9

Some Ten Year Averages for London Weather Centre

by I. JENKINS B.Sc.

There is an increasing demand at London Weather Centre for values of various meteorological parameters and how they compare with "average". In the absence of standard 30 year normals and in view of the increase in sunshine in Central London in the last 10 years, <sup>(1)</sup> a selection of averages has been extracted for the 10 years 1958 to 1967. It has been found that this period is acceptable to most enquirers.

The means and extremes have been calculated regarding the four sites as one position and neglecting the differences in height of the roofs of the buildings where the instruments were exposed.

It should be noted that Met.0.3 regard the anemometer records for Victory House as suspect and they have not been used by Shellard.<sup>(2)</sup> Nevertheless to maintain a continuity, the records have been included in this paper although they tend to bias the figures to a lower average.

During the ten years covered by this paper, London Weather Centre (London Forecast Office) has occupied three sites, while observations have been made from four roof tops.

Victory House was the site of the London Forecast Office in 1958, but at the end of July 1959 the office moved to Princes House and the name was changed to London Weather Centre. On 10th January 1965, the site was moved to Penderel House and since that time although the temperature and visibility have been taken here, the anemometer and rain gauge are sited on the roof of State House nearby.

/Details

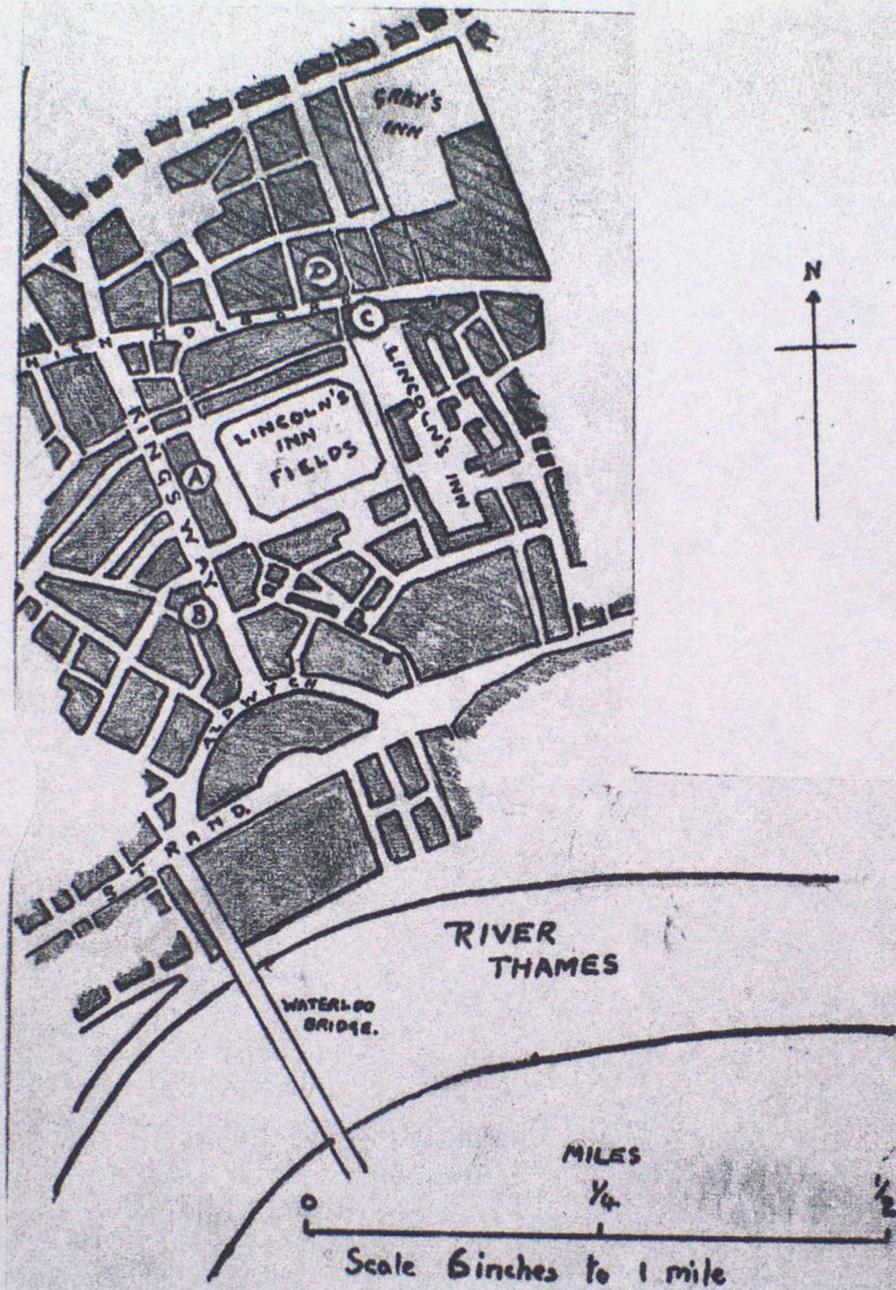
Details of the heights of instruments at the various buildings are as follows:

Height (ft)	Victory House	Princes House	Penderel House	State House
<u>Roof</u>				
above sea level	189	167	172	253
above street level	138	102	95	176
<u>Anemometer</u>				
above roof level	42 (Dines P.T.A.)	41 (Electrical)	-	53 (Electrical)
<u>Thermometer Screen</u>				
above roof level	4	4	4	4
<u>Raingauge</u>				
above roof level	1½	1½	-	1½
<u>Sunshine Sphere</u>				
above roof level	3½	3½	-	3½

References

- JENKINS, I. Increase in averages of sunshine in Greater London. Weather 1969. Vol 24. No. 2. p.52.
- SHELLARD, H. C. Tables of surface wind speed and direction over the United Kingdom. Met.O.792. HMSO. London. 1968.

Sites of London Weather Centre in the period 1958 to 1967.



KEY

- A Victory House
- B Princes House
- C Penderel House
- D State House

Temperature

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	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
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Average Mean

°C	4.6	5.8	7.4	10.0	13.1	16.3	17.7	17.4	16.1	12.6	8.3	5.9	11.3
°F	40.3	42.5	45.4	50.0	55.5	61.3	63.8	63.3	60.9	54.6	47.0	42.6	52.3

Maximum Temperature

Average Maximum

°C	6.4	7.9	10.4	13.3	16.8	20.3	21.3	20.9	19.1	15.3	10.4	7.8	14.2
°F	43.5	46.3	50.7	55.9	62.2	68.5	70.3	69.7	66.3	59.5	50.7	46.0	57.5

Average number of days with maximum temperature

above 80°F	-	-	-	-	0.1	0.7	1.3	1.1	0.1	-	-	-	3.3
above 75°F	-	-	-	-	1.3	3.5	5.7	3.5	1.9	0.3	-	-	16.2
above 70°F	-	-	0.4	0.3	3.9	10.1	12.7	12.0	5.9	1.0	-	-	46.3
above 65°F	-	-	0.7	1.7	7.6	19.8	25.3	35.3	15.5	3.0	-	-	98.9
below 50°F	24.9	17.3	12.5	5.0	0.4	-	-	-	-	2.4	12.9	21.9	97.3
below 45°F	16.3	11.5	6.8	1.9	-	-	-	-	-	-	2.5	12.1	51.1
below 40°F	8.3	5.0	2.3	0.1	-	-	-	-	-	-	0.4	4.7	20.8
below 35°F	2.8	1.1	0.1	-	-	-	-	-	-	-	-	1.3	5.3
below 32°F	1.4	0.2	-	-	-	-	-	-	-	-	-	-	1.6

Extreme Maximum Temperature

°F	59	65	75	74	82	85	92	87	83	79	64	65	92
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Mean of extreme maximum temperatures

°F	54	57	63	69	76	79	81	80	77	70	61	56	84
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Temperature (cont)

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Jan.   Feb.   March   April   May   June   July   Aug.   Sept.   Oct.   Nov.   Dec.   Year

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Minimum Temperature

Average Minimum

°C	2.8	3.8	4.6	6.6	9.5	12.4	14.1	13.8	12.5	9.9	6.3	4.0	8.3
°F	37.0	38.8	40.2	43.8	49.1	54.3	57.3	56.9	54.5	49.8	43.3	39.2	47.0

Average number of days with minimum temperature

above 70°F	-	-	-	-	-	-	0.1	-	-	-	-	-	0.1
above 65°F	-	-	-	-	-	-	0.3	0.3	0.1	-	-	-	0.7
above 60°F	-	-	-	-	0.1	1.7	5.9	5.8	2.1	0.3	-	-	15.9
above 55°F	-	-	-	0.1	2.5	11.2	21.0	19.6	11.9	3.5	-	0.1	69.9
above 50°F	0.3	0.6	0.3	2.6	10.7	25.4	30.0	29.7	25.0	14.1	3.8	1.2	143.7
below 45°F	26.0	22.1	23.1	14.6	4.2	0.6	-	-	0.1	4.8	16.9	25.0	137.4
below 40°F	20.1	15.7	12.6	5.8	0.3	0.1	-	-	-	0.7	7.6	15.8	78.7
below 35°F	10.9	7.7	5.8	0.8	-	-	-	-	-	-	1.9	7.2	34.3
below 32°F	6.6	3.3	2.7	-	-	-	-	-	-	-	0.9	3.9	17.4
below 30°F	3.6	1.4	1.2	-	-	-	-	-	-	-	0.2	2.3	8.7
below 25°F	1.1	0.1	-	-	-	-	-	-	-	-	-	0.2	1.4

Extreme Minimum Temperature

°F	20	21	25	32	37	39	47	49	43	36	27	23	20
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Mean of extreme minimum temperatures

°F	26	30	31	36	41	47	50	51	47	40	33	28	25
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Rainfall

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Jan.   Feb.   March   April   May   June   July   Aug.   Sept   Oct.   Nov.   Dec.   Year

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Average Rainfall

inches	1.55	1.19	1.33	1.88	1.74	2.24	1.99	2.26	2.30	2.32	2.09	2.26	23.15
millimetres	39.5	30.1	33.8	47.8	44.2	56.9	50.5	57.4	58.4	59.1	53.1	57.3	588.1

Average number of days with rainfall above certain limits

Above

ins.	mm												
1.80	45.8	---											
1.70	43.2	0.1   -											
1.60	40.7	0.1   0.1											
1.50	38.1	0.1   0.1											
1.40	35.6	-   0.1   0.1											
1.30	33.1	-   0.2   -   0.1   0.1											
1.20	30.5	0.1   0.3   0.1   0.1   0.2											
1.10	28.0	0.1   0.4   0.2   0.1   0.3   -											
1.00	25.4	0.1   0.4   0.2   0.1   0.3   0.1											
0.90	22.9	-   0.1   0.5   0.3   0.2   0.3   -   0.1											
0.80	20.4	0.1   0.1   -   0.6   0.5   0.5   0.3   0.2   0.1   -											
0.70	17.8	-   0.2   0.2   0.1   0.6   0.5   0.5   0.4   0.2   0.2   0.1											
0.60	15.3	-   0.2   0.3   0.3   0.4   0.9   0.7   0.8   0.8   0.3   0.5   0.5											
0.50	12.7	0.1   0.2   0.5   0.5   0.9   1.4   0.8   1.0   1.1   0.4   0.9   0.6											
0.40	10.2	0.3   0.3   0.5   0.6   1.2   2.0   1.2   1.3   1.7   1.2   1.3   1.5											
0.30	7.7	1.1   0.9   1.1   1.5   1.7   2.3   1.9   2.0   2.5   2.7   2.0   2.2											
0.20	5.1	2.5   1.9   2.1   3.5   2.7   3.3   3.3   3.3   3.6   3.8   2.9   3.7											
0.10	2.6	4.9   4.0   3.8   5.4   4.9   4.9   5.0   5.1   5.7   6.7   6.0   7.0											
0.01	0.1	13.7   10.7   10.7   13.1   11.7   10.0   11.8   12.6   11.1   13.0   14.7   15.9											
with any rain		22.0   17.9   19.3   20.8   19.0   16.2   18.7   19.9   16.7   19.6   22.6   22.3											
with no rain		9.0   10.3   11.7   9.2   12.0   13.8   12.3   11.1   13.3   11.4   7.4   8.7											





Sunshine

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
<u>Average Sunshine</u>													
mean hrs per day	1.53	2.05	3.65	4.16	6.27	6.92	6.11	5.78	5.07	3.57	1.93	1.47	4.05
<u>Total</u> hours	47	58	113	125	194	204	189	179	152	111	58	45	1475

Average number of days with duration of bright sunshine above certain limits

Hours		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Over	16						-	-						
	15					-	0.3	0.1						0.4
	14				-	0.3	2.4	1.0	-					3.7
	13				0.1	1.5	3.8	2.7	0.6					8.7
	12			-	0.2	4.0	5.8	3.5	2.1	-				15.6
	11			0.3	0.8	5.9	7.7	4.5	3.8	0.5				23.5
	10			0.6	2.0	8.1	8.7	5.9	5.4	2.0	-			32.7
	9		-	2.5	3.3	9.4	10.8	7.8	7.2	4.9	0.8	-		46.7
	8	-	0.4	4.2	5.5	11.5	12.4	9.9	9.8	7.9	2.8	0.2		64.6
	7	0.2	2.6	5.9	8.3	13.6	14.1	12.2	12.1	10.1	5.9	1.2	-	86.2
	6	1.2	3.7	7.8	9.8	15.5	16.0	14.8	14.9	12.4	7.9	3.1	0.9	108.0
	5	3.0	5.0	10.6	12.0	17.9	18.7	17.2	16.9	15.3	11.3	4.1	3.2	135.2
	4	4.8	6.3	13.1	13.9	19.8	20.5	18.9	18.7	17.5	14.1	6.0	5.2	158.8
	3	6.5	8.5	15.8	16.4	21.5	22.2	21.8	21.5	20.0	15.9	8.4	6.6	185.1
	2	9.4	9.9	17.7	18.2	23.7	24.3	24.1	23.8	21.7	18.2	10.6	8.9	210.5
	1	13.2	12.0	20.2	20.9	25.1	26.1	27.3	26.6	24.0	20.4	14.7	11.9	242.2

with any sunshine

	18.1	17.7	25.2	25.3	28.5	28.1	30.0	29.7	27.3	24.4	19.7	17.0		291.0
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with no sunshine

	12.9	10.5	5.8	4.7	2.5	1.9	1.0	1.3	2.7	6.6	10.3	14.0		74.2
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Fog

Jan. Feb. March April May June July Aug. Sept Oct. Nov. Dec. Year

Average number of days with visibility below 550 yards, 220 yards and 110 yards at 3 hourly intervals G.M.T.

Less than 500 metres (550 yards) at

0001	1.5	0.3	0.1	0.1	0.1	-	-	-	0.1	0.4	1.1	1.1	4.8
0300	1.8	0.7	0.1	0.2	0.1	-	-	-	0.4	1.2	0.8	1.3	6.6
0600	1.2	1.0	0.5	0.2	-	0.1	-	-	0.6	2.0	1.4	1.6	8.6
0900	1.3	0.6	0.5	-	-	-	-	-	0.2	1.1	1.2	1.0	5.9
1200	1.8	0.4	0.2	0.1	-	-	-	-	-	0.2	0.3	1.0	4.0
1500	1.2	0.2	0.1	0.1	-	-	-	-	-	-	0.3	0.9	2.8
1800	0.9	0.1	0.1	-	-	-	-	-	-	0.3	0.2	1.0	2.6
2100	1.0	0.3	0.1	-	-	-	-	-	0.1	0.4	0.5	1.2	3.6

Less than 200 metres (220 yards) at

0001	0.5	0.1	0.1	-	-	-	-	-	-	0.1	0.3	0.4	1.5
0300	0.3	0.1	-	-	0.1	-	-	-	-	0.5	0.4	0.5	1.9
0600	0.6	0.1	0.2	0.1	-	-	-	-	0.1	1.2	0.5	0.6	3.4
0900	0.6	0.1	0.1	-	-	-	-	-	-	0.2	0.2	0.5	1.7
1200	0.5	-	-	-	-	-	-	-	-	-	-	0.4	0.9
1500	0.4	0.1	-	-	-	-	-	-	-	-	0.1	0.4	1.0
1800	0.2	-	-	-	-	-	-	-	-	0.1	0.2	0.4	0.9
2100	0.2	-	-	-	-	-	-	-	-	-	0.1	0.4	0.7

Less than 100 metres (110 yards) at

0001	0.2	0.1	0.1	-	-	-	-	-	-	0.1	0.3	0.4	1.2
0300	0.2	-	-	-	-	-	-	-	-	-	0.2	0.3	0.7
0600	0.2	-	0.1	0.1	-	-	-	-	-	0.5	0.3	0.5	1.7
0900	0.2	0.1	-	-	-	-	-	-	-	-	-	0.3	0.6
1200	0.1	-	-	-	-	-	-	-	-	-	-	0.2	0.3
1500	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2
1800	-	-	-	-	-	-	-	-	-	-	-	0.3	0.3
2100	0.1	-	-	-	-	-	-	-	-	-	-	0.3	0.4

Snow and/or Sleet falling, Thunder and Hail

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Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
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Days with sleet and/or snow falling

5.0	4.5	3.5	0.8	0.1	-	-	-	-	-	0.7	2.8	17.4
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Days with thunder heard

0.3	0.2	0.6	1.2	1.8	2.3	2.9	2.3	0.9	0.4	0.4	0.2	13.5
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Days with hail

0.2	0.1	0.8	1.0	0.1	0.1	0.2	-	0.2	-	0.2	0.3	3.2
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Wind (a)

Average Number of Hours with Wind from (Degrees True)

Direction

Speed mph	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	Total
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JANUARY

Calm or less than 4 m.p.h. with no definable direction													21.3
1 - 4	5.5	8.6	6.3	4.4	6.8	4.9	4.6	5.8	7.9	7.7	7.4	6.7	76.6
5 - 7	19.8	13.9	6.9	7.0	6.5	9.7	8.7	12.9	18.7	16.6	16.0	14.1	150.8
8 - 12	20.3	30.1	20.0	14.8	12.9	13.5	19.7	34.6	36.3	27.8	18.3	15.1	263.4
13 - 18	9.9	25.7	20.5	8.7	4.2	4.3	15.6	43.0	28.6	18.9	8.6	3.4	191.4
19 - 24	0.1	1.6	3.3	3.2	0.2	0.3	3.5	5.9	8.5	4.9	0.2	0.2	31.9
25 - 31	-	0.5	0.5	0.4	-	-	0.1	2.3	1.8	0.6	-	-	6.2
32 - 38	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1
Total	55.6	80.4	57.5	38.5	30.6	32.7	52.2	104.5	101.8	76.6	50.5	39.5	

Average number of hours with  
incomplete record 2.3

Total 744.0

FEBRUARY

Calm or less than 4 m.p.h. with no definable direction													16.8
1 - 4	6.3	2.9	2.8	3.1	4.0	4.2	5.5	5.2	7.6	5.0	4.8	4.2	55.6
5 - 7	12.9	14.7	10.9	6.5	13.9	6.9	6.6	13.1	18.2	15.5	14.8	13.9	147.9
8 - 12	21.2	27.3	31.2	25.2	13.5	6.0	11.0	27.2	23.6	22.2	15.1	13.2	236.7
13 - 18	8.1	11.0	24.7	10.8	8.4	4.5	11.9	32.7	33.8	18.6	6.7	2.2	173.4
19 - 24	-	0.7	2.9	0.5	0.3	-	4.1	10.0	11.5	5.5	1.0	0.2	36.7
25 - 31	-	-	-	-	-	-	1.4	4.0	2.2	1.7	0.1	-	9.4
32 - 38	-	-	-	-	-	-	0.1	-	-	-	-	-	0.1
Total	48.5	56.6	72.5	46.1	40.1	21.6	40.6	92.2	96.9	68.5	42.5	33.7	

Average number of hours with  
incomplete record 0.2

Total 676.8

Wind (a)

Average Number of Hours with Wind from (Degrees True)

Speed mph	Direction												Total
	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	
<u>MARCH</u>													
Calm or less than 4 m.p.h. with no definable direction													22.5
1 - 4	4.4	7.0	7.3	7.1	8.1	5.6	3.4	5.4	3.5	2.1	3.0	3.6	60.5
5 - 7	15.3	14.7	20.4	22.4	17.1	8.4	12.0	14.4	16.5	8.2	6.3	9.5	165.2
8 - 12	23.0	24.1	23.3	27.2	15.6	6.9	18.1	35.7	36.2	23.4	21.7	13.8	269.0
13 - 18	6.0	10.3	12.9	10.4	11.0	3.2	8.9	34.1	42.3	27.6	19.4	7.2	193.3
19 - 24	0.6	0.2	0.1	0.9	0.9	0.9	2.4	2.2	7.3	4.3	2.9	2.1	24.8
25 - 31	0.2	-	-	-	-	0.1	0.7	0.5	1.1	0.9	1.0	0.2	4.7
32 - 38	-	-	-	-	-	-	-	-	-	0.7	-	-	0.7
Total	49.5	56.3	64.0	68.0	52.7	25.1	45.5	92.3	106.9	67.2	54.3	36.4	

Average number of hours with  
incomplete record 3.3

Total 744.0

APRIL

Calm or less than 4 m.p.h. with no definable direction													25.0
1 - 4	5.5	7.9	7.3	5.3	3.6	4.4	3.7	4.5	3.7	7.4	4.1	6.3	63.7
5 - 7	17.3	15.9	19.4	12.5	9.4	8.6	9.7	13.4	13.5	10.5	9.9	13.0	153.1
8 - 12	19.5	27.0	28.0	20.6	6.4	7.6	19.9	39.3	34.8	28.1	14.0	8.2	253.4
13 - 18	13.9	28.9	16.4	12.4	2.4	1.2	10.6	39.1	34.1	23.7	8.8	5.7	197.2
19 - 24	1.1	3.0	2.7	0.4	0.1	-	2.4	5.0	4.0	2.8	3.6	1.2	26.3
25 - 31	0.2	0.1	-	-	-	-	0.5	0.1	0.1	-	0.2	0.1	1.3
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	57.5	82.8	73.8	51.2	21.9	21.8	46.8	101.4	90.2	72.5	40.6	34.5	

Average number of hours with  
incomplete record -

Total 720.0

Wind (a)

Average Number of Hours with Wind from

(Degrees True)

Speed mph	Direction												Total
	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	
<u>MAY</u>													
Calm or less than 4 m.p.h. with no definable direction													29.6
1 - 4	3.2	6.0	9.3	3.8	4.0	2.0	3.8	3.9	6.0	6.1	4.2	3.7	56.0
5 - 7	10.6	17.0	21.6	10.9	6.8	6.4	12.4	23.2	20.2	12.4	10.1	8.5	160.1
8 - 12	22.6	26.3	30.8	20.3	6.0	7.8	17.1	43.6	40.3	26.6	16.3	18.8	276.5
13 - 18	14.9	8.0	9.8	5.4	2.0	4.0	15.2	48.1	47.3	24.6	8.2	6.7	194.1
19 - 24	2.3	1.1	0.2	0.1	-	0.7	4.7	6.8	5.1	3.9	0.1	1.0	26.0
25 - 31	-	-	-	-	-	-	-	0.5	0.6	0.5	-	-	1.6
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	53.6	58.4	71.7	40.5	18.8	20.9	53.2	126.1	119.5	74.1	38.9	38.7	

Average number of hours with  
incomplete record

-

Total 744.0

JUNE

Calm or less than 4 m.p.h. with no definable direction													27.5
1 - 4	3.4	5.0	8.9	9.6	5.0	6.5	6.1	7.4	10.7	10.3	5.7	3.4	82.0
5 - 7	13.6	17.3	15.9	19.1	9.0	6.4	10.5	21.8	28.4	21.1	14.1	10.1	187.3
8 - 12	17.7	25.0	18.5	14.2	7.3	3.0	11.3	40.5	52.2	36.8	18.6	16.4	261.5
13 - 18	4.3	9.9	10.9	5.3	1.3	1.3	8.4	34.4	37.2	22.1	5.0	3.4	143.5
19 - 24	-	-	1.2	0.4	-	-	1.3	6.7	2.9	3.8	1.0	0.3	17.6
25 - 31	-	-	-	-	-	-	-	0.6	-	-	-	-	0.6
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	39.0	57.2	55.4	48.6	22.6	17.2	37.6	111.4	131.4	94.1	44.4	33.6	

Average number of hours with  
incomplete record

-

Total 720.0

Wind (a)

Average Number of Hours with Wind from

(Degrees True)

Direction

Speed mph	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	Total
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JULY

Calm or less than 4 m.p.h. with no definable direction													32.1
1 - 4	5.1	4.4	7.3	5.9	6.4	5.1	4.0	5.5	6.0	7.0	7.4	6.9	71.0
5 - 7	12.4	12.6	12.7	10.5	6.2	7.5	11.1	22.9	28.5	14.1	20.3	14.1	172.9
8 - 12	12.1	11.5	9.1	17.9	5.4	4.0	13.5	48.9	73.0	46.0	24.8	14.1	280.3
13 - 18	11.7	4.3	2.3	4.4	0.5	1.2	4.8	44.7	48.7	29.8	9.4	4.4	166.2
19 - 24	4.0	0.2	-	0.2	-	-	-	6.8	4.3	3.2	0.2	0.1	19.0
25 - 31	1.6	-	-	-	-	-	-	-	0.9	-	-	-	2.5
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	46.9	33.0	31.4	38.9	18.5	17.8	33.4	128.8	161.4	100.1	62.1	39.6	-

Average number of hours with  
incomplete record

Total

744.0

AUGUST

Calm or less than 4 m.p.h. with no definable direction													33.6
1 - 4	4.5	3.4	6.0	5.0	5.7	5.7	6.0	10.4	8.2	6.9	8.5	5.3	75.6
5 - 7	7.2	10.9	12.8	11.3	9.8	6.7	8.8	26.2	28.4	19.6	14.1	13.2	169.0
8 - 12	10.6	14.0	15.6	15.2	9.8	5.6	14.7	57.0	68.0	41.3	22.1	8.7	282.6
13 - 18	5.5	3.6	3.2	6.7	3.1	1.7	7.8	46.8	47.5	30.3	6.6	2.4	165.2
19 - 24	-	-	-	0.1	-	0.2	1.8	7.1	4.3	3.1	0.2	-	16.8
25 - 31	-	-	-	-	-	-	-	1.2	-	-	-	-	1.2
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	27.8	31.9	37.6	38.3	28.4	19.9	39.1	148.7	156.4	101.2	51.5	29.6	-

Average number of hours with  
incomplete record

Total

744.0

Wind (a)

Average Number of Hours with Wind from (Degrees True)

Speed mph	Direction												Total
	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	

SEPTEMBER

Calm or less than 4 m.p.h. with no definable direction													51.3
1 - 4	3.3	9.7	10.9	8.0	5.9	4.8	3.7	6.5	2.7	3.7	3.9	3.0	66.1
5 - 7	8.6	19.0	21.6	24.3	9.3	8.2	12.5	21.7	21.8	9.3	7.6	7.7	171.6
8 - 12	9.4	16.7	29.2	29.0	9.3	8.2	20.7	51.4	48.4	24.1	10.0	8.9	265.3
13 - 18	6.5	2.9	9.6	11.3	1.4	4.3	8.3	33.8	38.2	18.2	2.8	5.4	142.7
19 - 24	2.0	0.1	-	0.6	-	0.6	1.5	4.5	6.1	2.8	0.3	0.4	18.9
25 - 31	-	-	-	-	-	0.3	0.7	1.2	1.0	0.2	-	-	3.4
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	29.8	48.4	71.3	73.2	25.9	26.4	47.4	119.1	118.2	58.3	24.6	25.4	

Average number of hours with  
incomplete record

0.7

Total

720.0

OCTOBER

Calm or less than 4 m.p.h. with no definable direction													47.0
1 - 4	2.3	4.4	9.2	7.8	8.1	7.3	6.0	7.0	8.6	3.1	2.4	2.9	69.1
5 - 7	6.3	14.4	16.3	19.1	15.4	16.0	18.4	20.6	18.7	14.2	15.1	11.7	186.2
8 - 12	11.2	11.7	20.8	23.8	15.1	10.2	26.7	43.6	45.7	29.3	18.5	8.8	265.4
13 - 18	7.0	6.6	10.8	6.6	4.6	4.0	17.6	29.3	34.7	19.1	11.9	2.3	154.5
19 - 24	-	1.9	0.2	0.1	-	0.6	1.9	6.4	2.9	1.6	1.4	1.3	18.3
25 - 31	-	-	-	-	-	-	-	1.8	1.6	0.1	-	-	3.5
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	26.8	39.0	57.3	57.4	43.2	38.1	70.6	108.7	112.2	67.4	49.3	27.0	

Average number of hours with  
incomplete record

-

Total

744.0

Wind (a)

Average Number of Hours with Wind from (Degrees True)

Speed mph	Direction												Total
	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	
<u>NOVEMBER</u>													
Calm or less than 4 m.p.h. with no definable direction													40.6
1 - 4	3.6	5.0	6.8	5.6	4.3	4.1	6.0	6.3	10.4	5.4	4.3	3.1	64.9
5 - 7	8.7	14.3	14.9	8.6	9.1	8.1	9.8	21.9	19.7	9.0	6.7	7.2	138.0
8 - 12	17.0	24.4	21.6	12.5	10.2	6.1	17.7	33.3	39.5	18.4	11.3	10.3	222.3
13 - 18	18.2	15.8	13.5	4.7	3.6	2.4	9.7	18.2	26.7	16.7	7.8	8.0	145.3
19 - 24	2.5	3.1	1.3	2.0	0.1	0.4	1.2	3.7	7.2	5.6	1.2	1.0	29.3
25 - 31	-	-	0.4	0.7	-	-	0.2	0.9	1.9	1.0	1.7	0.7	7.5
32 - 38	-	-	-	-	-	-	-	-	0.1	-	-	-	0.1
Total	50.0	62.6	58.5	34.1	27.3	21.1	44.6	84.3	105.5	56.1	33.0	30.3	
												Average number of hours with incomplete record	72.0
												Total	720.0

<u>DECEMBER</u>													
Calm or less than 4 m.p.h. with no definable direction													37.9
1 - 4	5.7	5.8	6.1	4.1	3.5	3.1	3.6	8.6	9.3	4.6	4.6	2.4	61.4
5 - 7	12.7	12.8	14.1	6.0	6.0	7.2	9.3	9.7	16.4	12.1	10.1	9.4	125.8
8 - 12	18.7	16.0	26.9	10.2	6.4	7.8	16.1	23.2	37.9	26.4	25.9	14.2	229.7
13 - 18	6.9	4.9	11.5	6.6	2.2	3.4	15.6	30.9	49.0	29.8	20.8	9.7	191.3
19 - 24	0.4	-	2.8	0.4	-	0.2	1.6	9.8	12.5	4.3	2.4	1.3	35.7
25 - 31	-	-	-	-	-	-	0.7	2.1	1.7	2.6	0.2	-	7.3
32 - 38	-	-	-	-	-	-	-	-	0.1	0.4	0.1	-	0.6
Total	44.4	39.5	61.4	27.3	18.1	21.7	46.9	84.3	126.9	80.2	64.1	37.0	
												Average number of hours with incomplete record	54.3
												Total	744.0

Wind (a)

Average Number of Hours with Wind from

(Degrees True)

Speed mph	Direction												Total
	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	

ANNUAL

Calm or less than 4 m.p.h. with no definable direction													385.2
1 - 4	52.8	70.1	88.2	69.7	65.4	57.7	56.4	76.5	84.6	69.3	60.3	51.5	802.5
5 - 7	145.4	175.5	187.5	158.2	118.5	100.1	129.8	221.8	249.0	163.6	145.1	131.4	1927.9
8 - 12	203.3	254.1	275.0	230.9	117.9	86.7	206.5	478.3	535.9	350.4	216.6	150.3	3106.1
13 - 18	112.9	131.9	146.1	93.3	44.7	35.5	134.4	435.1	468.1	279.4	116.0	60.8	2058.2
19 - 24	13.0	11.9	14.7	8.9	1.6	3.9	26.4	74.9	76.6	45.8	14.5	9.1	301.3
25 - 31	2.0	0.6	0.9	1.1	-	0.4	4.3	15.2	12.9	7.6	3.2	1.0	49.2
32 - 38	-	-	-	-	-	-	0.1	-	0.2	1.2	0.1	-	1.6
<b>Total</b>	529.4	646.1	712.4	562.1	348.1	284.3	557.9	1301.8	1427.3	916.3	555.8	405.3	

Average number of hours with  
incomplete record 132.8

Total 8764.8

Wind (b)

Percentage Number of Hours with Wind from (Degrees True)

Speed mph	Direction												Total
	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	
<u>JANUARY</u>													
Calm or less than 4 m.p.h. with no definable direction													2.9
1 - 4	0.7	1.1	0.8	0.6	0.9	0.7	0.7	0.8	1.2	1.0	1.0	0.9	10.3
5 - 7	2.7	2.0	0.9	0.9	0.9	1.3	1.2	1.7	2.5	2.2	2.1	1.9	20.3
8 - 12	2.8	4.0	2.7	2.0	1.7	1.8	2.6	4.7	4.9	3.7	2.5	2.0	35.4
13 - 18	1.3	3.4	2.8	1.2	0.6	0.6	2.0	5.8	3.8	2.5	1.2	0.5	25.7
19 - 24	0+	0.2	0.5	0.4	0+	0+	0.5	0.8	1.1	0.8	0+	0+	4.3
25 - 31	-	0.1	0.1	0.1	-	-	0+	0.2	0.2	0.1	-	-	0.8
32 - 38	-	-	-	-	-	-	-	-	-	0+	-	-	0+
Total	7.5	10.8	7.7	5.2	4.1	4.4	7.0	14.0	13.7	10.3	6.8	5.3	
Percentage number of hours with incomplete record													0.3

<u>FEBRUARY</u>													
Calm or less than 4 m.p.h. with no definable direction													2.5
1 - 4	0.9	0.4	0.4	0.5	0.6	0.6	0.9	0.8	1.1	0.7	0.7	0.6	8.2
5 - 7	1.9	2.2	1.6	0.9	2.1	1.0	0.9	2.0	2.7	2.3	2.2	2.1	21.9
8 - 12	3.2	4.0	4.6	3.7	2.0	0.9	1.6	4.0	3.5	3.3	2.2	2.0	35.0
13 - 18	1.2	1.7	3.7	1.6	1.2	0.7	1.8	4.7	5.0	2.7	1.0	0.3	25.6
19 - 24	-	0.1	0.4	0.1	0+	-	0.6	1.5	1.7	0.8	0.2	0+	5.4
25 - 31	-	-	-	-	-	-	0.2	0.6	0.3	0.3	0+	-	1.4
32 - 38	-	-	-	-	-	-	0+	-	-	-	-	-	0+
Total	7.2	8.4	10.7	6.8	5.9	3.2	6.0	13.6	14.3	10.1	6.3	5.0	
Percentage number of hours with incomplete record													0+

Wind (b)

Percentage Number of Hours with Wind from (Degrees True)

Speed mph	Direction												Total
	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	

MARCH

Calm or less than 4 mph with no definable direction													3.0
1 - 4	0.6	0.9	1.0	0.9	1.1	0.7	0.5	0.7	0.5	0.3	0.4	0.5	8.1
5 - 7	2.1	2.1	2.7	3.0	2.3	1.2	1.6	1.9	2.2	1.1	0.8	1.3	22.3
8 - 12	3.1	3.2	3.2	3.7	2.1	0.9	2.4	4.8	4.9	3.1	3.0	1.8	36.2
13 - 18	0.8	1.4	1.7	1.4	1.5	0.5	1.2	4.6	5.6	3.7	2.6	1.0	26.0
19 - 24	0.1	0+	0+	0.1	0.1	0.1	0.3	0.3	1.0	0.6	0.4	0.3	3.3
25 - 31	0+	-	-	-	-	0+	0.1	0.1	0.2	0.1	0.1	0+	0.6
32 - 38	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1
<b>Total</b>	<b>6.7</b>	<b>7.6</b>	<b>8.6</b>	<b>9.1</b>	<b>7.1</b>	<b>3.4</b>	<b>6.1</b>	<b>12.4</b>	<b>14.4</b>	<b>9.0</b>	<b>7.3</b>	<b>4.9</b>	

Percentage number of hours with incomplete record 0.4

APRIL

Calm or less than 4 mph with no definable direction													3.4
1 - 4	0.8	1.1	1.0	0.7	0.5	0.6	0.5	0.6	0.5	1.0	0.6	0.7	8.8
5 - 7	2.4	2.2	2.7	1.7	1.3	1.2	1.3	1.9	1.9	1.5	1.4	1.8	21.3
8 - 12	2.7	3.8	3.9	2.9	0.9	1.0	2.8	5.5	4.8	3.9	1.9	1.1	35.2
13 - 18	1.9	4.0	2.3	1.7	0.3	0.2	1.5	5.4	4.7	3.3	1.2	0.8	27.3
19 - 24	0.2	0.4	0.4	0.1	0+	-	0.3	0.7	0.6	0.4	0.1	0.2	3.8
25 - 31	0+	0+	-	-	-	-	0.1	0+	0+	-	0.1	0+	0.2
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>8.0</b>	<b>11.5</b>	<b>10.3</b>	<b>7.1</b>	<b>3.0</b>	<b>3.0</b>	<b>6.5</b>	<b>14.1</b>	<b>12.5</b>	<b>10.1</b>	<b>5.7</b>	<b>4.8</b>	

Percentage number of hours with incomplete record -

Wind (b)

Percentage Number of Hours with Wind from

(Degrees True)

Direction

Speed mph	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	Total
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MAY

Calm or less than 4 m.p.h. with no definable direction

4.0

1 - 4	0.4	0.8	1.3	0.5	0.5	0.3	0.5	0.5	0.8	0.8	0.6	0.5	7.5
5 - 7	1.4	2.3	2.9	1.5	0.9	0.9	1.7	3.1	2.7	1.7	1.3	1.1	21.5
8 - 12	3.1	3.5	4.2	2.7	0.8	1.0	2.3	5.8	5.5	3.6	2.2	2.5	37.2
13 - 18	2.0	1.1	1.3	0.7	0.3	0.5	2.0	6.5	6.4	3.3	1.1	0.9	26.1
19 - 24	0.3	0.2	0+	0+	-	0.1	0.7	0.9	0.6	0.5	0+	0.2	3.5
25 - 31	-	-	-	-	-	-	-	0.1	0.1	0+	-	-	0.2
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	7.2	7.9	9.7	5.4	2.5	2.8	7.2	16.9	16.1	9.9	5.2	5.2	

Percentage number of hours with  
incomplete record

-

JUNE

Calm or less than 4 m.p.h. with no definable direction

3.8

1 - 4	0.5	0.7	1.2	1.4	0.7	0.9	0.8	1.0	1.5	1.4	0.8	0.5	11.4
5 - 7	1.9	2.4	2.2	2.6	1.2	0.9	1.5	3.0	4.0	2.9	2.0	1.4	26.0
8 - 12	2.5	3.5	2.6	2.0	1.0	0.4	1.6	5.6	7.2	5.1	2.6	2.3	36.4
13 - 18	0.6	1.4	1.5	0.7	0.2	0.2	1.1	4.8	5.2	3.1	0.7	0.5	20.0
19 - 24	-	-	0.2	0.1	-	-	0.2	0.9	0.4	0.5	0.1	0+	2.4
25 - 31	-	-	-	-	-	-	-	0.1	-	-	-	-	0.1
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	5.5	8.0	7.7	6.8	3.1	2.4	5.2	15.4	18.3	13.0	6.2	4.7	

Percentage number of hours with  
incomplete record

-

Wind (b)

Percentage Number of Hours with Wind from (Degrees True)

Speed mph	Direction												Total
	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	
<u>JULY</u>													
Calm or less than 4 m.p.h. with no definable direction													4.3
1 - 4	0.7	0.6	1.0	0.8	0.9	0.7	0.6	0.7	0.8	0.9	1.0	0.9	9.6
5 - 7	1.7	1.7	1.7	1.4	0.8	1.0	1.5	3.1	3.8	1.9	2.7	1.9	23.2
8 - 12	1.6	1.5	1.2	2.4	0.7	0.5	1.8	6.5	9.9	6.2	3.4	1.9	37.6
13 - 18	1.6	0.6	0.3	0.6	0.1	0.2	0.6	6.0	6.5	4.0	1.3	0.6	22.4
19 - 24	0.5	0+	-	0+	-	-	-	1.0	0.6	0.5	0+	0+	2.6
25 - 31	0.2	-	-	-	-	-	-	-	0.1	-	-	-	0.3
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>6.3</b>	<b>4.4</b>	<b>4.2</b>	<b>5.2</b>	<b>2.5</b>	<b>2.4</b>	<b>4.5</b>	<b>17.3</b>	<b>21.7</b>	<b>13.5</b>	<b>8.4</b>	<b>5.3</b>	

Percentage number of hours with  
incomplete record

-

AUGUST

Calm or less than 4 m.p.h. with no definable direction													4.5
1 - 4	0.6	0.5	0.8	0.7	0.8	0.8	0.8	1.4	1.1	0.9	1.1	0.7	10.2
5 - 7	1.0	1.5	1.8	1.5	1.3	0.9	1.2	3.5	3.8	2.6	1.9	1.7	22.7
8 - 12	1.4	2.0	2.1	2.0	1.3	0.8	2.0	7.6	9.1	5.6	3.0	1.1	38.0
13 - 18	0.7	0.5	0.4	0.9	0.4	0.2	1.1	6.3	6.4	4.1	0.9	0.3	22.2
19 - 24	-	-	-	0+	-	0+	0.2	1.0	0.6	0.4	0+	-	2.2
25 - 31	-	-	-	-	-	-	-	0.2	-	-	-	-	0.2
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>3.7</b>	<b>4.3</b>	<b>5.1</b>	<b>5.1</b>	<b>3.8</b>	<b>2.7</b>	<b>5.3</b>	<b>20.0</b>	<b>21.0</b>	<b>13.6</b>	<b>6.9</b>	<b>3.8</b>	

Percentage number of hours with  
incomplete record

-

Wind (b)

Percentage Number of Hours with Wind from (Degrees True)

Speed mph	Direction												Total
	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	
<u>SEPTEMBER</u>													
Calm or less than 4 m.p.h. with no definable direction													7.1
1 - 4	0.5	1.4	1.5	1.1	0.8	0.7	0.5	0.9	0.4	0.5	0.5	0.4	9.2
5 - 7	1.2	2.6	3.0	3.4	1.3	1.1	1.7	3.0	3.0	1.3	1.1	1.1	23.8
8 - 12	1.3	2.3	4.1	4.0	1.3	1.1	2.9	7.1	6.7	3.4	1.4	1.2	36.8
13 - 18	0.9	0.4	1.3	1.6	0.2	0.6	1.2	4.7	5.3	2.5	0.4	0.7	19.8
19 - 24	0.3	0+	-	0.1	-	0.1	0.2	0.6	0.9	0.4	0+	0.1	2.6
25 - 31	-	-	-	-	-	0.1	0.1	0.2	0.1	0+	-	-	0.5
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	4.2	6.7	9.9	10.2	3.6	3.7	6.6	16.5	16.4	8.1	3.4	3.5	

Percentage number of hours with  
incomplete record 0.1

OCTOBER

Calm or less than 4 m.p.h. with no definable direction													6.2
1 - 4	0.4	0.6	1.2	1.1	1.1	1.0	0.8	0.9	1.2	0.4	0.3	0.3	9.3
5 - 7	0.8	1.9	2.3	2.6	2.1	2.2	2.4	2.8	2.5	2.0	2.0	1.6	25.0
8 - 12	1.5	1.6	2.8	3.2	2.0	1.3	3.6	5.8	6.1	3.9	2.5	1.2	35.7
13 - 18	0.9	0.9	1.5	0.9	0.6	0.5	2.4	3.9	4.7	2.6	1.6	0.3	20.8
19 - 24	-	0.2	0+	0+	-	0.1	0.3	0.9	0.4	0.2	0.2	0.2	2.5
25 - 31	-	-	-	-	-	-	-	0.3	0.2	0+	-	-	0.5
32 - 38	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	3.6	5.2	7.8	7.8	5.8	5.1	9.5	14.6	15.1	9.1	6.6	3.6	

Percentage number of hours with  
incomplete record -

Wind (b)

Percentage Number of Hours with Wind from (Degrees True)

Speed mph	Direction												Total
	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	
<u>NOVEMBER</u>													
Calm or less than 4 m.p.h. with no definable direction													5.6
1 - 4	0.5	0.7	0.9	0.8	0.6	0.6	0.8	0.9	1.4	0.8	0.6	0.4	9.0
5 - 7	1.2	2.0	2.1	1.2	1.3	1.1	1.4	3.0	2.7	1.3	0.9	1.0	19.2
8 - 12	2.4	3.4	3.0	1.7	1.4	0.8	2.5	4.7	5.5	2.6	1.6	1.4	31.0
13 - 18	2.5	2.2	1.9	0.6	0.5	0.3	1.3	2.5	3.7	2.2	1.1	1.2	20.1
19 - 24	0.3	0.4	0.2	0.3	0+	0.1	0.2	0.5	1.0	0.8	0.2	0.1	4.1
25 - 31	-	-	0.1	0.1	-	-	0+	0.1	0.3	0.1	0.2	0.1	1.0
32 - 38	-	-	-	-	-	-	-	-	0+	-	-	-	0+
Total	6.9	8.7	8.2	4.7	3.8	2.9	6.2	11.7	14.6	7.9	4.6	4.2	
Percentage number of hours with incomplete record													10.0

DECEMBER

Calm or less than 4 m.p.h. with no definable direction													5.1
1 - 4	0.8	0.8	0.8	0.5	0.5	0.4	0.5	1.2	1.3	0.6	0.6	0.3	8.3
5 - 7	1.7	1.7	1.9	0.8	0.8	1.0	1.2	1.3	2.2	1.6	1.4	1.3	16.9
8 - 12	2.5	2.1	3.7	1.4	0.8	1.0	2.2	3.0	5.2	3.5	3.5	1.9	30.8
13 - 18	0.9	0.7	1.5	0.9	0.3	0.5	2.1	4.2	6.6	4.0	2.8	1.3	25.8
19 - 24	0.1	-	0.4	0.1	-	0+	0.2	1.3	1.6	0.6	0.3	0.2	4.8
25 - 31	-	-	-	-	-	-	0.1	0.3	0.2	0.4	0+	-	1.0
32 - 38	-	-	-	-	-	-	-	-	0+	0.1	0+	-	0.1
Total	6.0	5.3	8.3	3.7	2.4	2.9	6.3	11.3	17.1	10.8	8.6	5.0	
Percentage number of hours with incomplete record													7.2

Wind (b)

Percentage Number of Hours with Wind from

(Degrees True)

	Direction												
Speed mph	350- 010	020- 040	050- 070	080- 100	110- 130	140- 160	170- 190	200- 220	230- 250	260- 280	290- 310	320- 340	Total

ANNUAL

Calm or less than 4 m.p.h. with no definable direction													4.4
1 - 4	0.6	0.8	1.0	0.8	0.7	0.7	0.6	0.8	1.0	0.8	0.7	0.6	9.1
5 - 7	1.8	2.0	2.1	1.8	1.4	1.1	1.5	2.5	2.8	1.9	1.6	1.5	22.0
8 - 12	2.3	2.9	3.1	2.6	1.3	1.0	2.4	5.4	6.0	4.0	2.5	1.7	35.2
13 - 18	1.3	1.5	1.7	1.1	0.5	0.4	1.5	5.0	5.2	3.2	1.3	0.7	23.4
19 - 24	0.1	0.1	0.2	0.1	0+	0+	0.3	0.9	0.9	0.5	0.2	0.1	3.4
25 - 31	0+	0+	0+	0+	-	0+	0.1	0.2	0.1	0.1	0+	0+	0.5
32 - 38	-	-	-	-	-	-	0+	-	0+	0+	0+	-	0+
Total	6.1	7.3	8.1	6.4	4.0	3.2	6.4	14.9	16.2	10.5	6.3	4.6	

Percentage number of hours with  
incomplete record

2.0

Wind (c)

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
<u>Average number of days with gusts equal to or above</u>													
30 mph	11.3	10.7	12.1	10.5	11.4	7.3	7.2	8.7	7.7	8.2	9.6	14.0	118.7
40 mph	4.1	4.4	3.1	3.2	2.6	1.9	1.6	1.6	1.8	2.6	3.1	5.2	35.2
50 mph	1.6	1.6	1.3	0.5	0.1	0.1	-	0.1	0.5	0.5	1.4	2.0	9.7
55 mph	1.0	0.5	0.6	0.1	0.1	-	-	0.1	0.3	0.5	0.4	1.1	4.6
60 mph	0.4	0.2	0.1	0.1	0.1	-	-	-	0.1	0.1	0.1	0.7	1.9
65 mph	0.2	-	0.1	-	-	-	-	-	-	0.1	0.1	0.4	0.9
70 mph	0.1	-	-	-	-	-	-	-	-	-	-	0.1	0.2
Extreme gust (mph)													
	70	63	69	60	61	51	48	56	62	65	67	74	74
Mean of Extreme gusts (mph)													
	54	48	49	46	44	39	42	42	46	45	48	55	63

### Conclusions

The graphs (Figures II-IX) show a marked decrease at all the fixed hours in the number of occasions with visibilities below 500 metres and in the morning in the number of occasions with visibilities below 200 and 100 metres.

Although the increase in central heating in central London has probably had some effect in reducing the number of occasions of fog, it is suggested that the decrease in smoke pollution must also have played a part in this change.

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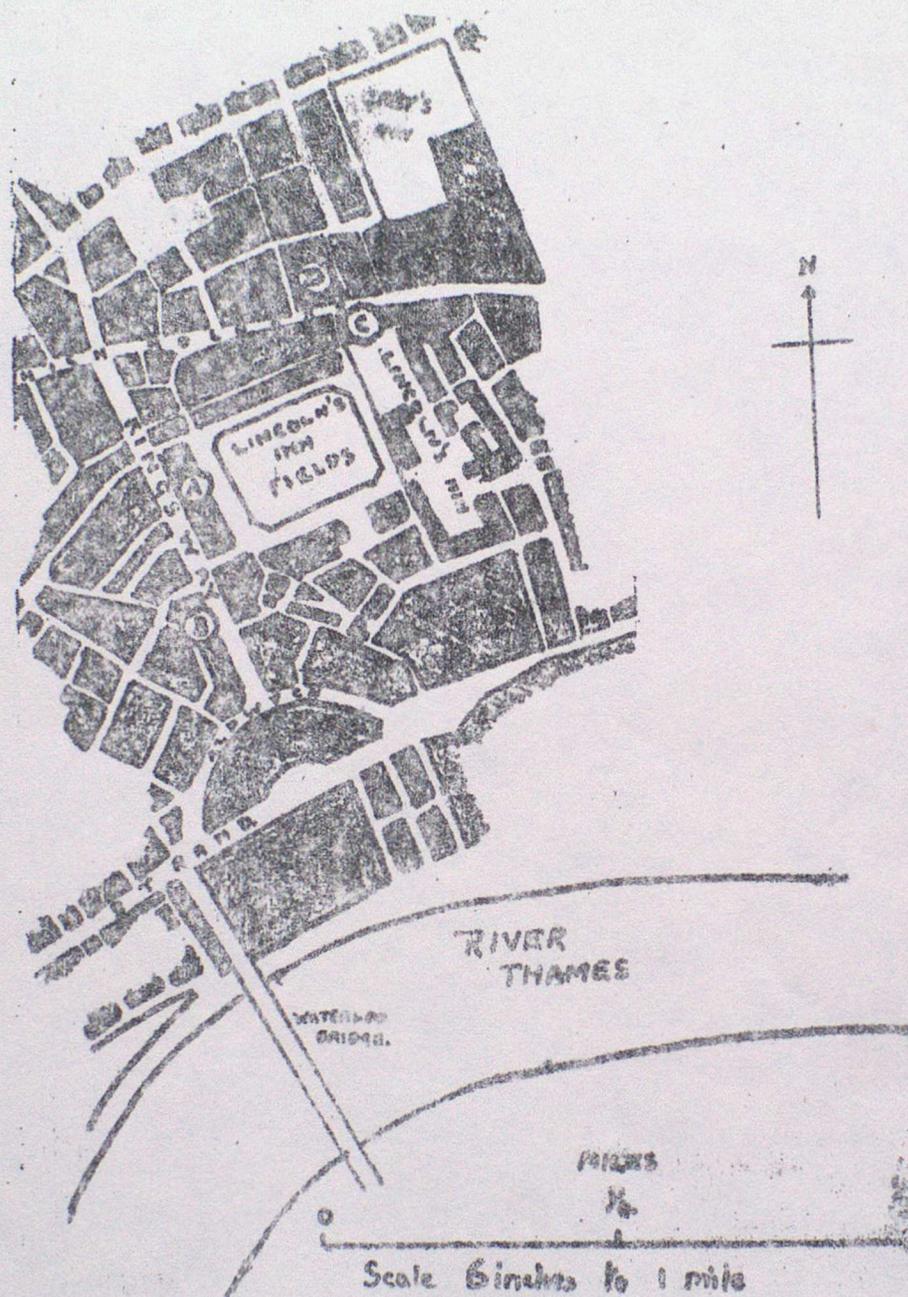
Jan 1970

TABLE 1

Number of Occasions at London Weather Centre with visibilities below certain values at fixed hours (GMT)

Period July to June.

	Years	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
<u>Below 500 metres</u>															
00		2	5	6	17	6	3	2	9	7	2	0	1	0	3
03		5	7	5	16	7	6	4	14	10	5	2	1	0	3
06		7	12	9	13	15	6	5	14	7	7	5	6	0	5
09		9	6	12	12	6	7	5	6	7	4	3	0	0	2
12		4	4	7	9	6	2	4	4	5	1	1	0	0	0
15		4	2	6	12	6	0	5	5	4	1	1	0	0	0
18		4	2	5	9	2	2	4	4	4	1	1	0	0	0
21		1	4	5	5	3	1	3	9	5	1	1	0	0	1
<u>Below 200 metres</u>															
00		2	3	3	6	1	1	0	4	2	0	0	0	0	0
03		3	5	2	6	2	1	1	4	3	1	2	0	0	1
06		4	5	3	6	9	1	1	5	3	2	4	0	0	0
09		3	2	3	4	2	1	2	2	3	1	1	0	0	2
12		2	1	0	2	1	0	1	3	0	0	0	0	0	0
15		1	2	0	3	1	0	1	4	0	1	1	0	0	0
18		1	1	1	2	1	0	1	3	0	0	0	0	0	0
21		1	1	1	1	3	0	0	3	0	1	0	0	0	0
<u>Below 100 metres</u>															
00		1	1	2	4	1	1	0	4	2	0	0	0	0	0
03		0	2	1	3	2	0	0	1	1	0	0	0	0	0
06		3	3	3	2	4	0	1	2	2	1	4	0	0	0
09		3	2	2	2	1	0	0	1	1	0	0	0	0	1
12		2	1	0	0	0	0	1	1	0	0	0	0	0	0
15		0	1	0	0	0	0	1	1	0	0	0	0	0	0
18		1	1	0	0	0	0	0	3	0	0	0	0	0	0
21		1	0	0	1	0	0	0	3	0	0	0	0	0	0

Sites of London Weather CentreKEY

- |   |                |                               |
|---|----------------|-------------------------------|
| A | Victory House  | until 1 June 1959             |
| B | Princes House  | July 1959 to 9th January 1965 |
| C | Penderel House | } 10th January 1965 to date   |
| D | State House    |                               |

MEAN ANNUAL NUMBER OF OCCASIONS AT LONDON WEATHER CENTRE WITH VISIBILITIES BELOW 500, 200 AND 100 METRES AT FIXED HOURS (G.M.T.). (5 year running means plotted on centre point of period).

FIGURE II 0001

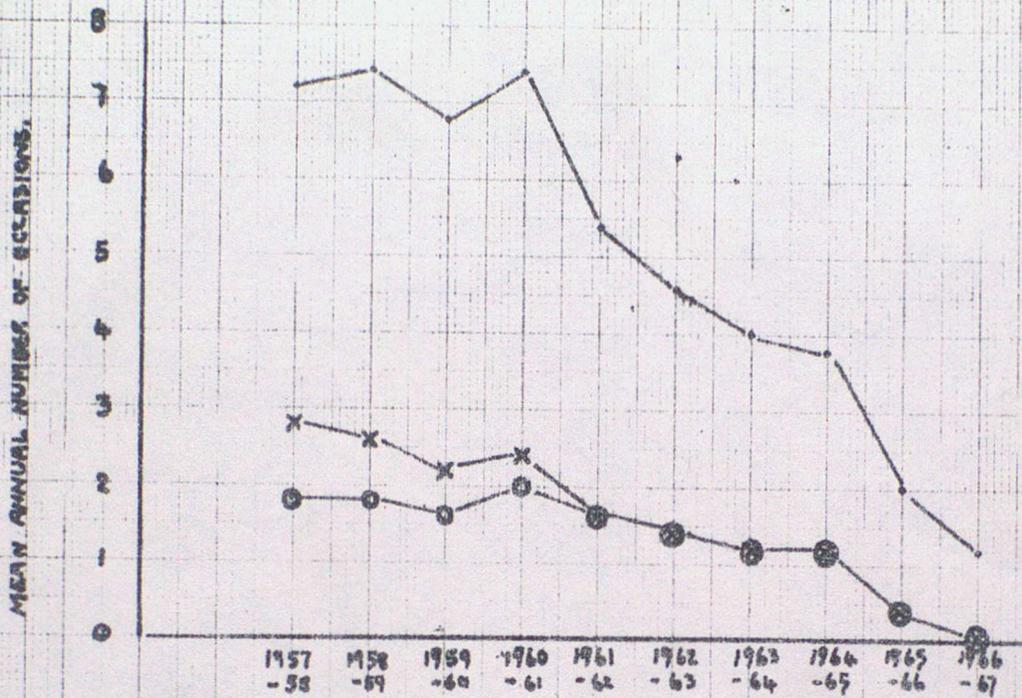
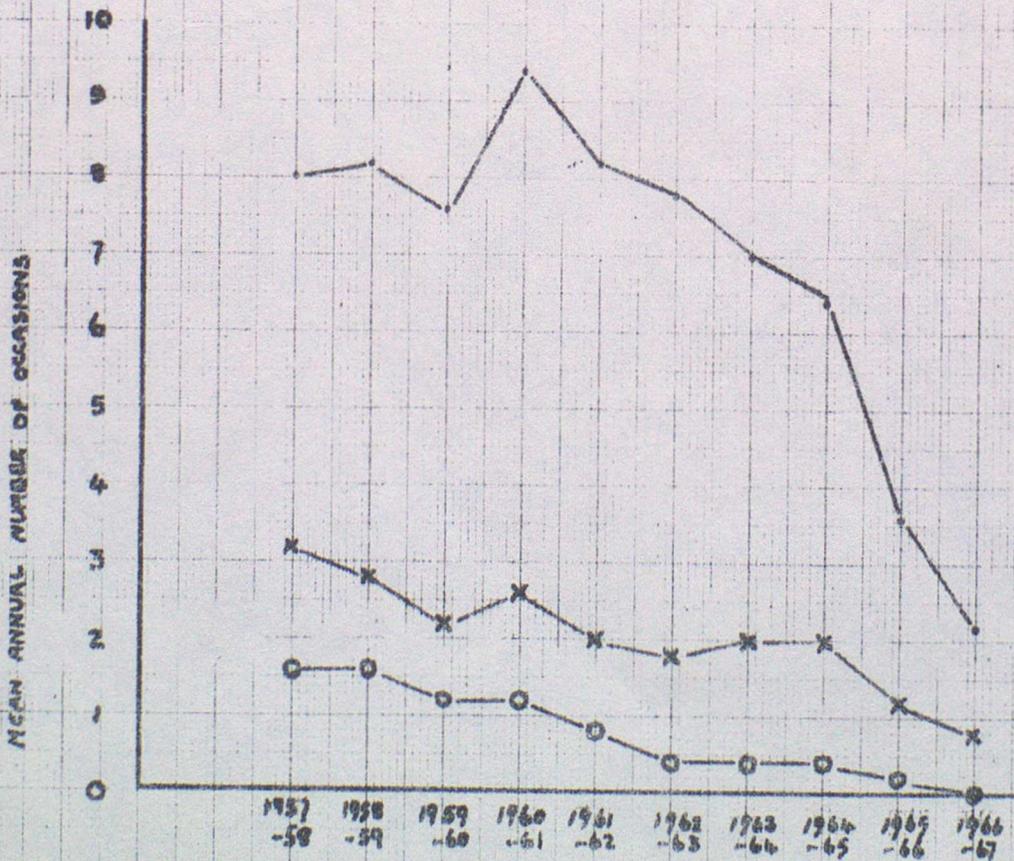


FIGURE III 0300



VISIBILITY LESS THAN —●— 500 metres  
 —X—X 200 metres  
 —○—○ 100 metres

MEAN ANNUAL NUMBER OF OCCASIONS AT LONDON WINTER CENTRE WITH VISIBILITIES BELOW 500, 200 AND 100 METRES AT FIXED HOURS (G.M.T.). (5 year running means plotted on centre point of period).

FIGURE IV 0600

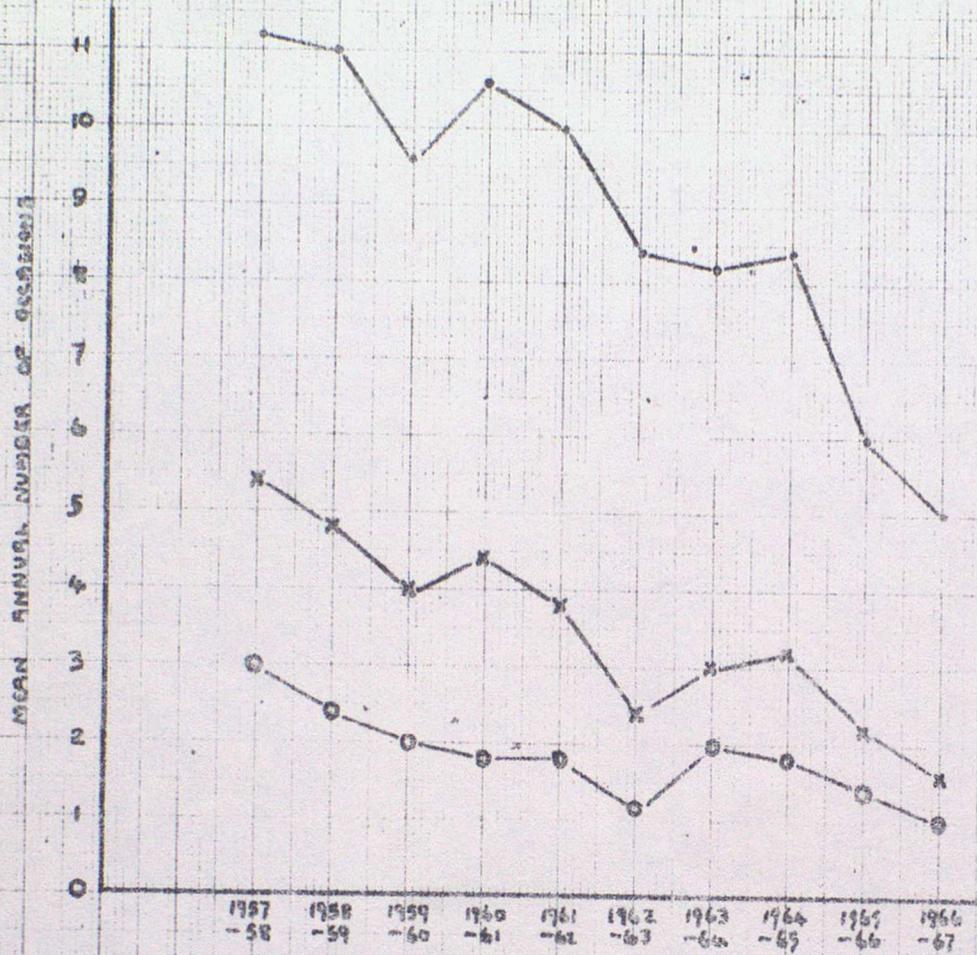
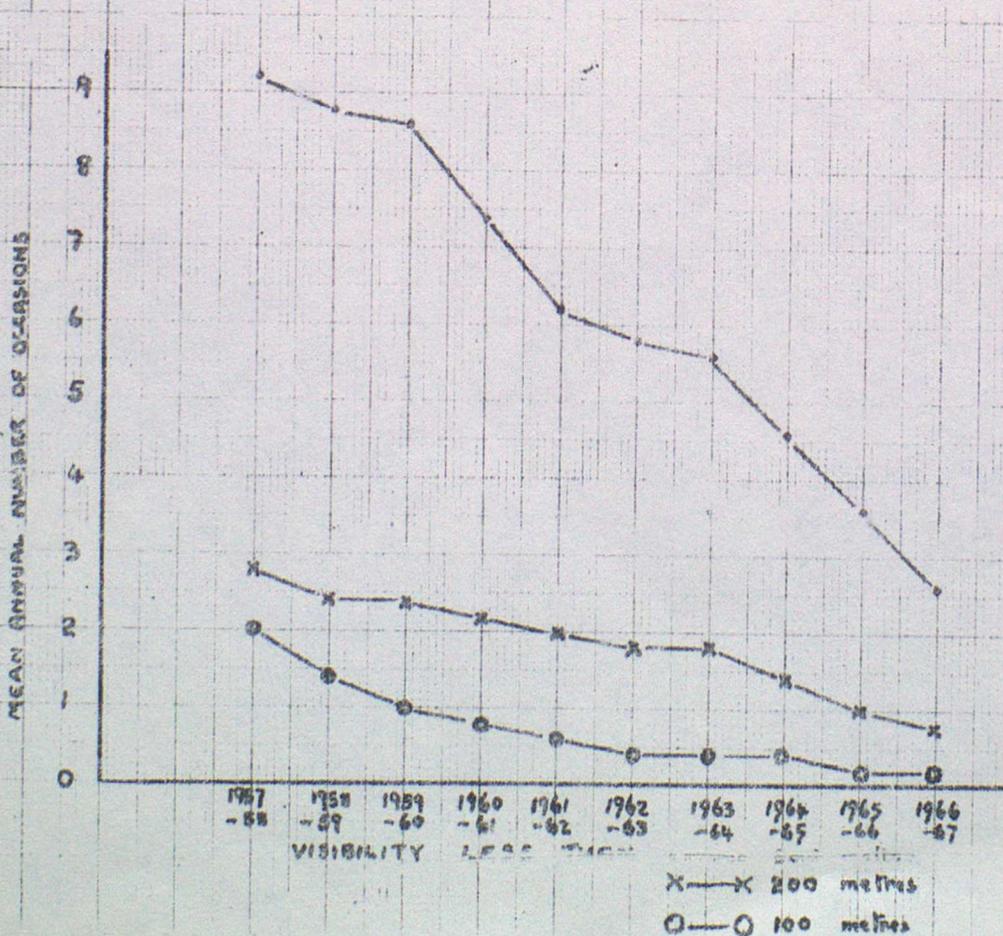


FIGURE V 0900



MEAN ANNUAL NUMBER OF OCCASIONS AT LONDON WEATHER CENTRE WITH VISIBILITIES BELOW 500, 200 AND 100 METRES AT FIXED HOURS (G.M.T.) (5 year running means plotted on centre point of period).

FIGURE VI 1200

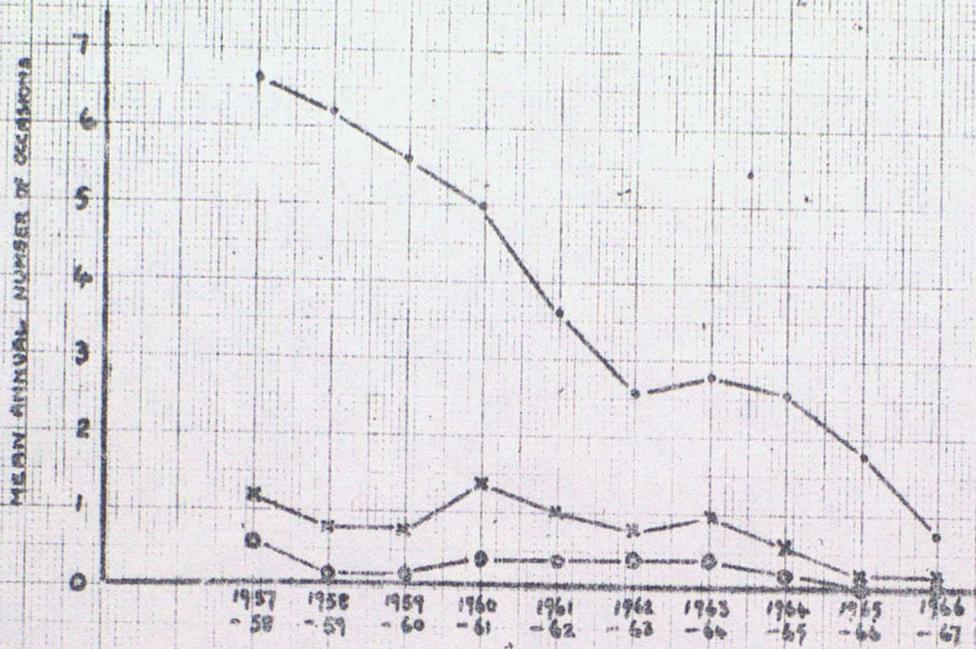
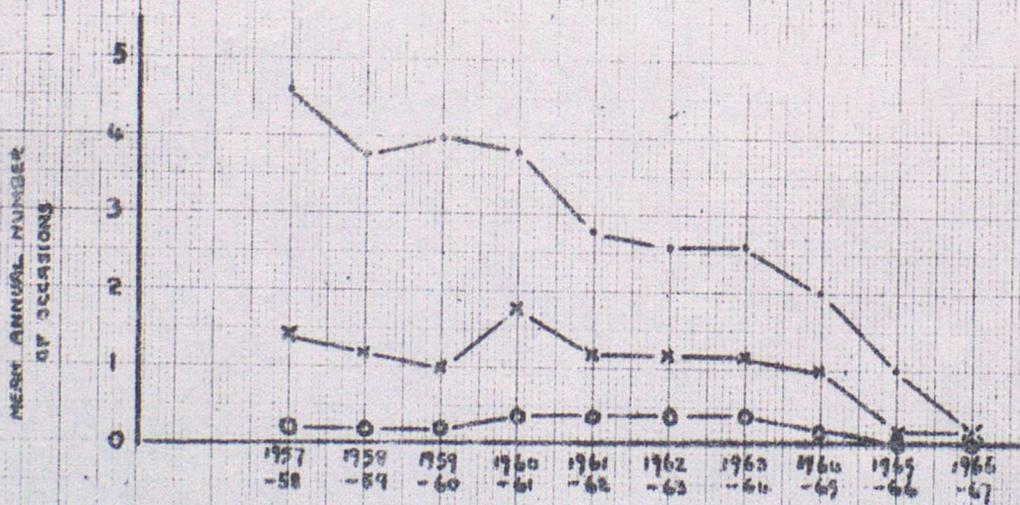


FIGURE VII 1500



VISIBILITY BELOW

- 500 metres
- x— 200 metres
- o— 100 metres

MEAN ANNUAL NUMBER OF OCCASIONS AT LONDON WEATHER CENTRE WITH VISIBILITIES BELOW 500, 200 AND 100 METRES AT FIXED HOURS (G.M.T.) (5 year running means plotted on centre point of period).

FIGURE VIII 1800

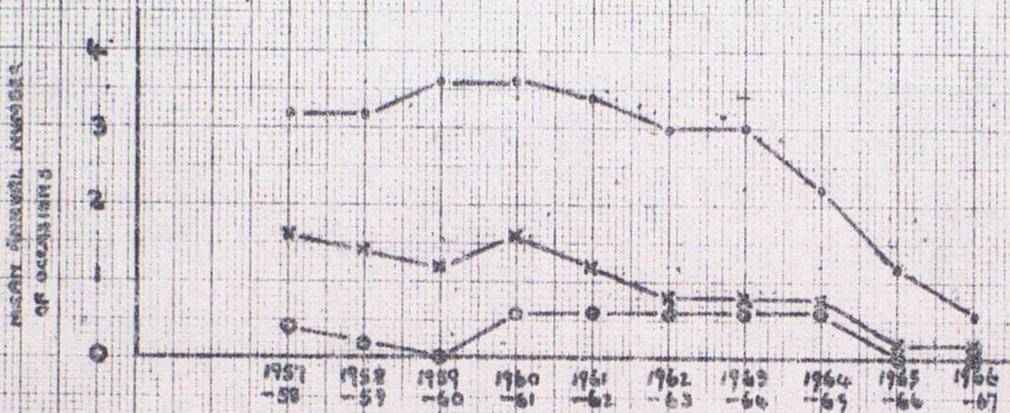
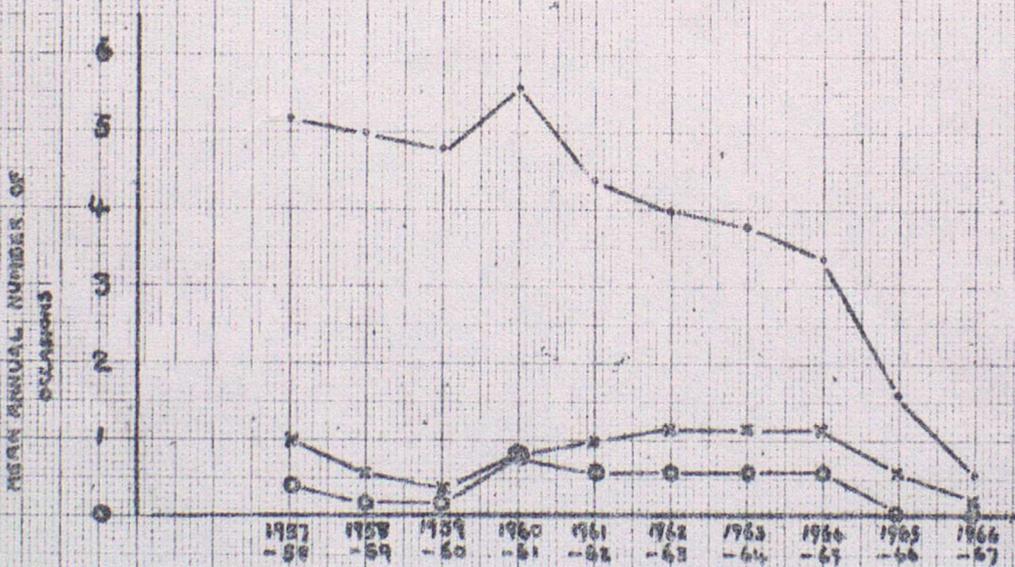


FIGURE IX 2100



VISIBILITY BELOW

- 500 metres
- x— 200 metres
- o— 100 metres