

Howarden

C. Y. 27
Flint.

50

Obs. J. Moffatt Exp.
Dec - 1.

260 ft + m.s.l.

YEAR - -	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	MEANS.
January - -	1.10	3.10	3.70	2.60	1.60	.30	2.80	2.80	.20	.60	
February - -	1.00	1.00	2.90	.70	1.10	1.40	1.30	.90	.40	2.20	
March - - -	1.10	3.40	.60	1.70	.70	1.80	.90	2.40	1.00	2.80	
April - - -	1.70	1.50	.30	1.70		.40	1.60	2.90	3.60	3.80	
May - - - -	1.70	1.80	2.10	1.30	5.10	1.20	2.30	2.90	2.30	1.70	
June - - - -	1.70	2.40	4.40	4.00		3.10	1.80	3.20	2.40	2.50	
July - - - -	2.90	2.40	2.80	6.30	1.00	5.80	2.80	2.10	1.60	4.00	
August - - -	3.50	2.10	4.20	2.50	2.30	2.30	2.50	4.80	1.60	2.60	
September -	1.40	2.00	5.20	2.00	.70	.70	4.10	2.00	2.20	2.40	
October - - -	1.80	2.40	3.50	3.10	1.80	3.30	2.40	1.90	2.70	3.40	
November -	2.30	2.40	5.90	1.40	2.80	.30	1.70	1.80	1.60	2.20	
December -	1.80	0.50	3.80	1.00	2.90	1.20	1.70	.40	2.10	2.30	
TOTALS -	22.00	25.00	39.40	28.30	20.50	21.80	25.90	28.10	21.70	30.50	26.270

1854 info through illness

Nex. Sta. No. 54-549002

NGR: SJ (33) 312658

all 76 ms.

Hamardden

60

Flat.

D Moffat.

+ Ground 0.0 + Sea Level 260 ft.

See - 1.

YEAR - -	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	MEANS.
January - -	2.45	.20	1.92	3.02	1.11	1.95	2.36	2.87	2.09	3.26	2.123
February - -	.50	1.81	.58	.46	1.35	1.75	2.88	1.36	2.05	2.75	1.549
March - - -	2.45	1.85	3.10	.50	3.32	1.54	1.80	2.29	2.32	2.04	2.121
April - - -	.90	1.26	2.28	.90	1.62	.73	.82	3.36	1.66	1.80	1.533 -
May - - - -	1.95	.42	4.39	.70	2.32	2.83	.90	1.83	1.78	5.56	2.276
June - - - -	4.16	3.08	2.31	1.70	1.65	1.22	2.85	.73	.15	.93	1.886
July - - - -	1.38	3.28	2.38	.89	.67	1.19	2.49	4.49	.43	.73	1.793
August - - -	4.95	1.31	3.22	2.17	1.32	4.37	3.63	1.11	2.80	1.31	2.619
September -	1.40	2.76	3.25	2.88	2.13	.11	5.53	1.34	2.20	5.15	2.675
October - - -	2.00	1.59	3.00	4.97	2.69	3.07	1.43	3.99	2.22	3.16	2.812 +
November -	1.96	2.44	1.37	2.74	2.10	2.36	3.01	1.07	3.24	3.56	2.385
December -	3.70	1.82	2.57	2.05	1.39	.84	2.04	2.97	6.67	2.66	2.671
TOTALS -	27.80	21.82	30.37	23.06	21.67	21.96	29.82	27.41	27.61	32.91	26.443

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

Hyp. Sta. No. 54 - 549002

NGR: 35 (33) 312658

alt 76 ans

RAINFALL AT *Hawarden* [*Chester*]Lat. Lon. County of *Flinch*Rain Gauge, by Observer *Dr. Miffatt*

No. - 1.

Diameter	8	.				.	.	.	.
Height	6	.	5	3		5	.	.	.		
Altitude	270	.				.	.	.	.
YEAR	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	2.32	2.29	3.24	2.16		3.06	.93	5.09	2.73	.86	
February.....	1.33	2.07	2.65	.89		1.89	2.73	2.14	1.32	2.60	
March.....	1.05	1.25	3.64	3.44		.90	2.57	2.51	1.18	1.11	
April.....	1.30	2.13	3.40	.92		.54	3.11	2.89	1.49	3.62	
May.....	1.02	1.56	1.93	1.90		2.15	.37	2.25	3.83	1.94	
June.....	.78	2.00	4.65	1.21		2.02	1.60	.84	2.57	5.01	
July.....	.58	3.23	6.76	1.48	2.57	4.04	1.69	4.20	.59	3.83	
August.....	2.32	1.02	2.40	3.27	2.14	3.00	3.10	5.72	4.39	6.62	
September.....	1.90	4.29	4.88	4.34	1.99	4.47	5.11	2.84	2.96	2.62	
October.....	4.41	4.38	7.02	2.56	3.04	5.58	3.00	2.84	3.19	1.29	
November.....	2.60	1.61	4.01	2.01	3.08	3.79	4.64	3.54	2.80	1.35	
December.....	2.88	1.59	3.90	.89	3.50	.99	5.27	2.59	2.16	1.70	
TOTALS.....	23.29	28.22	48.48	25.07		32.43	34.12	37.45	29.21	32.55	

1877 A wall 8ft high & at least 20ft distant

Hgt. No. No. 54- 549002

NGR: ST (33) 312658

alt 76m

RAINFALL AT *Hawarden [Chester]*

Lat. _____

Lon. _____

 County of *Flint*

Rain Gauge, by _____

 Observer *D. Moffat*
Dec - 1

Diameter	<i>8</i>										
Height	<i>0.6</i>										
Altitude	<i>270</i>										
Year	<i>1880</i>	<i>1881</i>	<i>1882</i>	<i>1883</i>	<i>1884</i>	<i>1885</i>	<i>1886</i>	<i>1887</i>	<i>1888</i>	<i>1889</i>	MEANS.
January	<i>.39</i>										
February	<i>1.87</i>										
March	<i>1.67</i>										
April	<i>1.10</i>										
May	<i>1.77</i>										
June	<i>3.78</i>										
July	<i>5.59</i>										
August	<i>1.80</i>										
September	<i>2.04</i>										
October	<i>5.76</i>										
November	<i>1.79</i>										
December	<i>4.07</i>										
TOTALS	<i>31.53</i>										

*1880. Hawarden Church 500 yards E.N.E.
 Wall 8ft high 18ft W*

Nyck Sta. No. 54-549002

NGR: SJ (33) 312658

all 76 in.

RAINFALL AT *Stawarden*

Lat.

Lon.

 County of *Leinst*

Rain Gauge, by

 Observer *D. Burlingham*
Dec - 1.

Diameter					5						
Height					1						
Altitude					250			245 J			
Year	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	MEANS.
January						1.58	3.64	2.91	1.06	.62	
February						3.70	1.29	.59	.82	2.07	
March					2.65	1.16	2.20	1.29	2.15	2.46	
April					1.27	2.02	1.76	.94	1.08	3.17	
May					1.20	2.03	6.14	2.02	.82	2.23	
June					1.88	2.81	1.11	1.62	2.05	1.00	
July					3.04	.90	2.91	3.71	7.10	3.37	
August					1.05	1.65	.99	2.67	3.55	3.63	
September...					1.75	3.36	2.64	3.02	.94	2.38	
October					1.34	6.12	4.60	3.03	1.27	3.48	
November...					2.51	3.02	2.67	1.35	5.38	1.96	
December...					2.09	1.01	4.29	2.46	1.69	2.27	
TOTALS						28.76	34.24	25.61	27.91	28.64	

Stawarden Church 200 yards E

1886 Tree 11 ft. high 13 ft. W.

Bush 2 ft. 6 in. High 7 ft. S.

50 RAINFALL AT Hawarden

Lat.

Lon.

County of

Flint

Rain Gauge, by

Observer

Dr Burlingham

Dec - 1

Diameter	5											
Height	1 0											
Altitude	245 T											
Year	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	MEANS.	
January	3.32	1.56	3.51	1.47								
February ....	.74	.21	1.60	3.26								
March	1.68	1.32	1.46	.91								
April	1.60	1.96	1.34	.70								
May	2.22	3.42	2.64	1.53								
June	3.48	5.83	3.58	1.70								
July	2.37	2.36	2.17	2.44								
August	4.18	4.41	3.27	2.17								
September...	.93	3.18	3.94	2.30								
October	2.58	3.45	7.62	2.09								
November....	6.62	2.76	2.10	1.30								
December	1.21	4.02	2.67	3.28								
TOTALS	30.93	34.48	35.90	23.15	No Rpl							

1890 Hawarden Church 200 yards E
 Gooseberry Bush 2 ft 6 in high 7 ft E
 Apple Tree 21 " high 13 ft W

RAINFALL AT Hawarden

Lat. _____

Lon. _____

County of Flint

Rain Gauge, by _____

Observer M. S. & L. R. Co.Dec - 1.

Diameter				9							
Height				36							
Altitude			35								
Year	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	MEANS.
January			1.10	.77	1.42	2.97	.86	1.24	1.27	3.44	
February ....			.98	2.10	1.84	.17	.84	2.06	1.76	1.44	
March .....			.77	.61	1.23	2.04	2.94	2.22	.68	.89	
April .....			.84	.51	1.30	1.34	1.11	2.07	1.79	2.25	
May			1.94	1.56	2.47	.48	.31	1.25	4.39	1.82	
June			2.67	1.39	1.87	1.29	2.80	2.06	1.60	2.48	
July			1.77	1.91	3.15	3.10	1.89	.31	.57	2.12	
August			3.82	2.19	2.83	1.77	2.24	3.45	3.68	1.13	
September....			2.16	1.94	.79	1.16	3.55	3.55	1.17	3.09	
October			4.98	1.70	2.88	4.51	3.70	1.87	3.27	2.85	
November....			1.47	1.15	1.62	2.45	.84	2.80	1.50	1.63	
December			1.11	2.86	1.97	2.14	3.10	2.26	1.62	2.36	
TOTALS	22.50	25.00	23.61	18.69	23.37	23.42	24.18	25.14	23.30	25.50	23.47

Gauge in a very exposed position & believed to catch too little.
 1893 June Gauge moved owing to construction of new line.

90-91 computed from St. Burlington's gauge

RAINFALL AT

75
Hawarden

Lat.

Lon.

County of

Flint

Rain Gauge, by

Observer

Great Central Railway Co

Dec - 1.

Diameter ..	9										
Height	3.6										
Altitude ..	35										
Year	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	MEANS.
January ..	2.61	1.71	1.66	2.52	1.99	.46	4.20	1.18	1.59	1.51	1.943
February ..	3.40	1.15	1.94	1.38	3.37	.60	2.26	1.54	1.64	.73	1.821
March	1.26	1.72	1.47	3.77	1.50	2.88	2.14	1.72	3.31	2.34	2.211
April .....	.91	1.66	1.91	1.77	.57	1.58	.64	.99	3.73	2.04	1.580
May	1.51	.99	3.41	2.54	1.69	.70	1.89	2.86	2.62	1.03	1.924
June	1.53	1.73	1.30	1.01	1.06	3.92	.99	3.33	1.86	2.77	1.950
July	2.67	2.96	1.27	3.19	1.27	2.50	.73	2.36	2.34	1.81	2.110
August	6.39	2.25	3.41	2.83	3.98	4.40	2.58	1.76	2.98	2.67	3.325
September ..	.38	1.10	.74	3.86	1.63	1.21	.95	.33	4.37	2.26	1.683
October	3.74	2.77	3.45	6.82	.93	2.02	3.77	4.95	1.72	3.31	3.348
November ..	3.21	3.06	1.52	2.54	1.61	3.22	2.06	2.30	2.09	.85	2.246
December ..	2.57	3.49	2.22	1.48	2.66	.58	3.29	1.90	1.39	4.97	2.445
TOTALS ..	30.18	24.59	24.30	33.71	22.06	24.27	25.60	25.22	29.64	26.29	26.586

Hab

RAINFALL at HawardenCounty of FlintObserver Great Central Railway CoRiver Basin Dec 1

Rain Gauge, by

Diameter ...	9										
Height	3.6										
Altitude ...	35										
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.
January ...	2.14	.50	3.92	3.06	1.42	2.84	.74	2.03	1.50	2.67	
February ...	2.41	1.61	1.01	.84	1.88	2.71	3.07	1.24	1.71	1.33	
March .....	.66	.96	2.68	3.67	2.14	1.08	2.02	2.00	.57	5.18	
April	2.59	.59	.32	3.08	.45	1.06	1.53	1.27	1.29	1.46	
May	1.82	1.52	1.98	2.47	1.55	1.67	2.60	2.93	3.34	.57	
June	2.76	3.19	3.07	1.55	2.67	.77	.94	1.82	2.68	1.22	
July	3.57	.63	2.39	2.21	5.32	2.70	1.45	.78	2.78	1.19	
August	2.81	2.43	5.27	2.73	1.59	3.63	1.77	6.50	2.03	3.62	
September ..	.08	3.72	.90	1.42	2.21	1.24	2.08	.85	5.86	1.89	
October ...	2.79	2.20	2.90	2.95	1.05	1.95	4.31	4.69	1.65	3.32	
November ...	5.53	1.85	2.43	1.61	3.00	3.28	2.51	2.20	1.75	2.35	
December ...	3.66	3.84	1.51	1.99	5.58	3.91	1.89	1.14	4.44	4.57	
TOTALS ...	30.82	23.04	28.28	27.58	28.86	26.84	24.91	27.45	29.60	29.37	27.685

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.

RAINFALL at HawardenCounty of HertObserver Great Central Railway Co.River Basin Sec 1

Rain Gauge, by _____

Diameter ...	9"											
Height	3-6											
Altitude ...	35											
Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	MEANS.	
January ...	2.99	3.08	3.69									
February ...	2.47	2.23	2.29									
March	3.90	1.03	1.93									
April	4.04	.79	1.84									
May	2.35	1.32	.87									
June	2.24	.23	1.22									
July	4.93	.57	2.82									
August	1.42	2.68	2.36									
September...	2.22	.67	2.35									
October	1.95	2.34	.41									
November...	.41	2.28	1.10									
December...	1.57	2.41	3.43									
TOTALS	29.89	17.63	23.81									

Position of Station on reduced Ordnance Survey }
Map, 2 miles to 1 inch Series

No. of Map _____

Reference No. _____

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge	Direction from gauge