

RAINFALL AT Petham, Kiteliffe

Observer _____

Rain { By
 Gauge { Diameter 5 in. Height above Ground, 5 ft. in. Above Mean Sea Level, 767 ft.

YEAR.....	1859	MEANS.
January.....		
February.....		
March.....		
April.....		
May	27	
June	2.66	
July	1.86	
August.....	6.52	
September.....	14.79	
October	3.71	
November.....	2.82	
December.....	2.88	
TOTALS		

RAINFALL AT Oldham W Works

Pilkthorne

James Taylor

Rain { By
Gauge }
Diameter 10.4 ft. in.

Height above Ground, 4. ft. in.

Above Mean Sea Level, 800. ft.

Crosley gauge

YEAR.....	1860	1861	1866	1867	1868	1869	MEANS.
January	3.45	2.23	5.70	4.01	3.94	2.52	
February	1.33	2.59	5.22	4.73	3.50	4.82	
March	3.15	2.42	1.84	1.88	3.99	.94	
April	1.39	1.87	1.52	5.28	1.72	1.79	
May	2.86	1.00	1.70	2.68	1.36	3.21	
June.....	6.46	2.05	5.04	1.87	3.7	1.14	
July	2.03	2.89	3.41	5.36	3.38	1.62	
August.....	3.71	4.03	5.38	2.39	3.42	1.90	
September ...	3.25	3.96	7.00	3.27	1.99	5.89	
October.....	6.14	3.45	3.33	4.00	6.10	3.87	
November.....	3.49	5.32	7.03	1.74	2.28	3.75	
December.....	2.22	3.51	6.34	4.05	8.49	4.90	
TOTALS.....	39.48	33.32	54.57	41.26	37.57	34.35	

C C C C

New Crosley g. fixed April 13th 1869

1862 Jan g. at Pilkthorne neglected

1865 Crosley g. replaced.

RAINFALL AT Milnrow Rietzorne Kitcliffe
 Lat..... Lon..... County of... Lancashire
 Rain Gauge, by..... Observer J. Taylor Esq.

Diameter	10	5								5
Height	6	4								5
Altitude	800									767
YEAR	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879 MEANS.
January	2.99	1.90	6.19	4.74	3.49	4.46	2.05	5.08	3.53	1.37
February	1.58	2.80	4.34	4.82	1.61	1.85	3.67	2.98	1.38	3.43
March	2.31	1.90	2.94	1.89	3.39	1.60	3.59	2.17	1.58	2.01
April	1.95	2.84	3.40	3.33	1.35	1.35	2.81	1.74	1.44	2.35
May	1.54	1.46	1.42	2.52	1.42	2.17	1.23	3.03	3.73	2.56
June	2.02	2.98	5.32	1.92	1.64	3.57	3.26	2.64	3.25	7.26
July	1.78	3.42	4.11	5.08	2.03	5.45	3.65	4.99	7.8	5.99
August	1.94	1.32	3.50	4.59	5.00	2.48	4.18	4.01	5.06	7.25
September	2.64	3.90	5.92	3.10	3.94	4.51	3.70	2.60	4.61	4.06
October	1.81	4.00	4.95	6.10	4.66	4.78	3.74	5.23	3.62	2.58
November	2.89	1.42	4.84	2.84	2.62	4.31	2.78	6.06	2.86	1.78
December	1.67	3.21	1.90	1.03	3.33	1.74	5.97	3.37	1.77	3.13
TOTALS	31.12	29.15	48.83	34.96	34.48	36.26	40.63	43.90	33.61	43.77 35.22

C C C

1879 rain return

1872 Gauge moved

1879. These figures are identical with those
 for New Years Bridge (Talbot W.R.). Oldham
 Hall (31.22) gives 35.22 for this year.

RAINFALL AT Milnrow, Piethorne Reservoir

Lat. _____

Lon. _____

County of Lancashire S.

Rain Gauge, by _____

Observer J. F. Bateman, Esq., F.R.S.

Mileage - Truelwell 3

Diameter	5'											
Height	4.0											
Altitude	600 T					767 T						
Year	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	MEANS.	
January54	.58	3.62	4.44	4.98	2.30	3.93	1.42	.97	1.84	2.462	
February	2.73	4.23	3.29	1.93	2.29	2.93	.57	.71	.29	1.51	2.048	
March	3.16	3.12	3.41	.43	1.88	1.79	2.42	1.29	1.95	1.71	2.116	
April	2.12	1.60	3.45	1.46	1.31	1.43	2.23	1.02	1.67	1.58	1.787	
May	2.32	4.75	2.22	.71	1.52	1.62	3.10	1.25	.62	1.50	1.961	
June	2.25	1.97	7.50	4.57	.81	2.36	1.40	.15	1.81	.55	2.387	
July	6.42	3.33	7.35	2.61	3.76	1.41	5.08	1.61	4.66	2.82	3.905	
August	1.83	4.36	3.22	2.87	1.90	1.23	2.07	1.22	3.26	4.86	2.682	
September	4.35	2.59	2.60	4.79	2.19	4.62	3.37	4.59	1.27	1.83	3.220	
October	1.56	3.04	3.75	5.26	1.94	4.19	4.66	1.81	1.66	3.20	3.107	
November	4.27	4.87	5.46	4.21	1.43	2.11	1.95	1.54	3.75	1.35	3.094	
December	4.66	4.03	2.62	3.09	4.36	1.66	4.13	2.05	2.65	2.58	3.183	
TOTALS	36.21	38.47	48.49	36.37	28.37	37.65	34.91	18.66	24.56	25.33	31.902?	

1880.

Annual values rejected from survey. (5° low)

RAINFALL AT Milnrow Pathome Kitchiff

2858

Lat.

Lon.

County of

Lancashire

Rain Gauge, by

Observer G. H. Hill Esq. C.I.

Mersey. Irwell 3

C. J. Battie Esq. C.I.

Diameter	5										
Height	4 0										
Altitude	767 T										
Year	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	MEANS.
January	4.94	3.31	1.90	1.70	4.43	3.01	1.99	1.78	3.44	6.52	3.302
February50	.33	1.33	8.87	6.01	.48	2.28	2.45	3.25	1.55	2.705?
March	2.65	1.26	.41	1.90	4.29	3.82	5.48	4.94	1.62	2.75	2.907
April92	1.23	.95	.55	1.88	2.42	1.61	3.60	2.37	3.66	1.919
May	2.44	2.77	3.47	2.21	2.75	.73	.59	1.72	3.54	3.42	2.364
June	3.11	.68	2.28	2.12	3.36	4.59	2.63	3.56	2.74	1.77	2.684
July	2.43	2.95	2.47	2.71	2.91	7.14	2.39	1.56	1.58	1.72	2.786
August	4.58	7.76	3.56	2.37	3.85	5.19	2.88	4.41	6.07	2.05	4.272
September....	1.24	2.07	4.69	3.74	3.0	1.92	7.44	4.49	.86	6.43	3.318
October.....	2.29	5.37	6.58	4.82	5.34	4.17	5.54	2.18	5.24	4.00	4.533
November....	4.33	2.69	4.11	3.10	2.71	3.63	1.64	5.45	2.76	1.74	2.216
December....	.32	5.80	3.59	4.49	4.06	4.67	6.02	6.28	4.85	2.57	4.265
TOTALS	29.75	36.22	35.34	38.58	41.89	41.77	40.44	42.42	38.32	38.18	38.291

Rejected William Watt (1922)

1890

Extract from letter from W. Watts dated 20-7-94 "Kitchiff gauge being placed on the crest of the embankment was never reliable & I have removed it to a more eligible site 300 yards NE of its old position but 3ft higher O.D. Its readings now correspond more correctly with those of Cold Greave gauge which I regard as occupying the most favourable site in the valley. Kitchiff reading for Feb 1893 is abnormal and in my opinion some spray from the reservoir got blown into it.

1893 New N.Y.C. Church 10 miles S.E.

Annual values rejected from survey. (5 low).

RAINFALL AT Milnrow Pishorne Hallcliffe

Lat.

Lon.

County of Lancashire South

Rain Gauge, by Casarotti
Observer C. J. Batley Esq. CL
Swardon

Jewell 3

Diameter ..	5										
Height ..	4.6										
Altitude ..	767										
Year ..	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	MEANS.
January ..	6.90	2.53	2.89	4.80	4.57	2.27	6.22	1.85	3.83	2.75	3.861
February ..	3.87	1.66	1.52	4.58	4.98	2.47	4.22	2.40	3.37	2.22	3.129
March ..	.71	4.08	2.62	6.30	2.70	4.73	3.98	3.57	3.25	3.53	3.547
April ..	2.95	2.95	2.09	2.65	3.32	3.78	1.80	2.72	2.45	4.23	2.894
May ..	1.80	1.99	2.95	4.06	3.62	.76	3.61	4.26	2.53	2.44	2.802
June ..	5.71	2.97	1.51	1.91	1.22	3.08	1.42	8.65	2.29	2.45	3.121
July ..	3.46	2.43	2.72	4.73	2.02	2.84	2.60	3.40	5.88	5.82	3.590
August ..	6.07	2.51	3.33	5.90	5.24	5.00	4.62	4.11	3.89	3.57	4.424
September ..	1.62	1.06	2.40	6.22	2.01	3.56	1.65	1.01	4.46	2.95	2.694
October ..	5.89	3.44	5.33	9.47	2.05	4.06	8.32	7.09	2.23	6.59	5.447
November ..	4.47	6.36	2.51	3.85	3.63	5.36	4.84	3.87	2.77	1.52	3.918
December ..	6.42	6.01	3.77	3.01	3.68	.90	3.91	5.11	3.30	7.78	4.392
TOTALS ..	49.87	37.99	33.64	57.48	39.04	38.84	47.19	48.04	40.25	45.85	43.810 4.5m

Hub

1900 New Hey Church 1/2 miles S.W.

Hills 250 ft high 1/2 miles N + S

New Hey Station 1/2 miles S.W.

† Inspected

Annual values rejected from survey (5 low)

RAINFALL at Milverton Pethorne Kitecliff

County of South Somerset Observer C. J. Battley Esq. C.E.River Basin Mersey, Inwell 3Station Rain Gauge, by Coartelli

Diameter ...	5											
Height	4.6											
Altitude ...	769 ft											
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.	
January ...	5.64	1.87	4.14	4.05	3.79	6.66	3.93	3.21	3.30	3.38		
February ...	4.87	5.21	2.37	1.62	3.31	4.95	5.59	1.04	6.85	1.21		
March	1.03	2.29	6.26	5.74	5.73	1.99	3.27	2.86	2.07	5.29		
April	3.57	2.83	1.22	5.45	1.62	1.86	2.73	2.13	1.49	1.89		
May	2.76	2.06	3.50	3.62	2.66	2.46	3.05	2.09	2.40	1.80		
June.....	5.32	3.34	5.40	2.75	3.35	.95	2.82	2.26	1.34	1.97		
July	4.79	.55	4.95	1.27	4.69	5.27	2.79	2.12	4.64	2.21		
August.....	6.16	3.18	7.27	2.55	3.70	5.08	3.75	8.12	3.29	3.66		
September ..	.26	3.84	1.57	1.90	2.84	.98	2.66	2.41	12.65	2.04		
October ...	4.05	3.40	5.04	2.33	2.75	2.43	8.25	7.71	3.90	3.18		
November ..	5.76	5.83	3.42	5.45	5.45	2.17	3.82	3.84	2.28	3.65		
December ...	5.10	6.80	5.96	2.83	7.50	8.04	3.35	2.43	9.06	7.60		
TOTALS ...	49.31	41.20	51.10	39.56	47.39	42.84	46.01	40.22	53.27	39.88		

1912 Hhds 2000 ft high 1/2 mile SSW
250

+ Imported

Rejected from Survey S. low.

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.
			New Hey	1/2 m	SW	New Hey	1/2 m	SW

RAINFALL at Milnrow, Piethorne, Kitchiffe newg.

County of S. Lancashire Observer C. J. Battley CE.

River Basin Mersey Drivell 3. Ordnance Survey 1:50,000.

Snowdon Rain Gauge, by Casella
M.O. (1926)

Diameter ...		5	5								
Height			10								
Altitude ...			766								
Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930 MEAN
January ...				4.80	3.65	4.09	5.78	5.47	13.17	2.81	7.87
February ...				7.40	1.50	7.56	4.15	2.11	6.11	.94	.91
March				2.67	2.04	1.92	1.95	5.77	3.61	1.51	2.78
April.....				4.06	2.37	3.16	2.34	4.30	1.28	1.60	4.02
May				4.62	6.08	4.99	5.31	1.69	1.75	4.33	2.50
June				1.18	3.54	.07	3.27	4.82	4.44	1.83	2.54
July				5.86	4.37	2.99	3.70	3.60	2.17	3.27	7.26
August			#	6.10	6.66	4.28	5.85	8.79	6.29	6.25	8.16
September...				3.93	4.93	6.07	3.94	3.77	6.52	.64	2.31
October.....				1.36	6.45	7.10	6.73	4.65	5.29	5.70	6.63
November...				3.64	7.94	2.87	3.96	7.04	5.65	7.82	10.03
December...				5.56	5.10	6.66	4.33	2.51	1.67	3.41	8.44
TOTALS...				6.11	52.91	48.02	50.32	55.68	59.75	49.96	58.94

1923. Hills 220ft. miles away 16 S + N.

Position of Station on reduced Ordnance Survey } No. of Map _____ Reference No. _____
Map, 2 miles to 1 inch Series }

Date.	Lat. N.	Long. W.	Railway Station.	Distance from gauge	Direction	Parish Church.	Distance from gauge
1923	53° 26' 28"	2° 33' 36"	New Hey	1.5 m	S.W.	New Hey	1.7 m S.W.

RAINFALL at Milnrow Pethorne Hulton

County of S. Lancashire) Observer C. J. Ballay Esq. B.E.

River Basin Mersey - Irwell 3

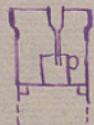
5.00
5.00
5.00
5.00 } Snowdon Rain Gauge, by Casartelli

Glass cover (Casartelli)

Diameter ...	5									MEANS.
Height	4.6									
Altitude ...	769									
Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
January ...	4.77	6.98	3.87	4.23	3.40	3.82				
February ...	4.27	51	5.16	6.88	1.21	7.19				
March	3.75	3.69	3.42	2.48	1.86	1.68				
April	5.70	1.56	3.27	3.80	2.09	2.91				
May	6.73	2.84	1.24	4.12	5.72	4.75				
June	2.75	30	2.81	7.3	3.29	.06				
July	10.04	2.14	5.54	5.57	4.00	2.83				
August	3.08	6.34	5.59	5.54	6.22	4.02				
September...	2.95	1.40	3.57	4.40	5.69	3.58				
October.....	1.80	3.93	1.10	5.58	6.76	6.44				
November...	2.24	2.66	3.41	7.41	2.71	3.70				
December...	4.28	6.88	4.90	4.78	6.38	3.91				
TOTALS...	52.36	39.23	43.92	56.02	49.33	44.89	#			

1920 Hills 250 ft. high 1/2 mi S+N

Inspectd 28.7.22. S. sunk in pedestal 4 ft. high, giving rise to risk of upflashing
 a good site at the bottom of a gentle hollow with no obstructions, about
 5 years ago a 1 ft. gauge nearly was found to agree well (? compensating
 error).



Rejected from Survey 5° low.

Position of Station on reduced Ordnance Survey } No. of Map _____ Reference No. _____
 Map, 2 miles to 1 inch Series

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge	Direction from gauge
1920			New Hey	1/2 mi	S.W.	New Hey	1/2 mi	S.W.

RAINFALL at Milnrow (Pielthorpe, Kitcliffe)

County of South Lancashire

Observer C. J. Batley, Esq., C.E.

River Basin. Mersey, Irwell-3.

C. Bawdenfield, Eng. (1938)

Type of Gauge M.O.

Annual Average.....in. based on.....years obs. un-weighted. Period of average.....Ref.....

Ref.

660607/26

Diameter	S.										
Height	1.0										
Altitude	766										
Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	Means Total
January	6.91	6.27	3.50	4.00	1.86	4.85	4.38	6.81	6.28	2.27	16.13
February	6.93	3.9	4.70	3.85	6.12	3.07	5.96	2.07	5.82	2.66	38.07
March	4.41	2.94	4.15	3.29	2.06	3.29	2.94	1.21	3.42	3.67	27.38
April	3.99	4.31	2.39	3.06	4.35	1.84	2.56	1.62	2.58	2.97	28.66
May	3.89	5.94	1.80	3.39	1.10	1.54	2.42	4.97	2.05	1.12	27.72
June	6.31	1.04	3.33	2.68	5.56	5.92	2.43	4.83	3.62	1.02	36.74
July	5.38	4.86	3.73	3.35	2.17	4.45	2.31	5.00	7.27	5.59	44.11
August	6.59	1.57	1.52	3.62	2.04	2.63	2.62	4.55	2.36	2.15	29.65
September	4.62	5.44	2.22	4.82	7.70	5.77	1.98	1.88	1.63	5.11	40.87
October	2.84	8.40	5.05	5.42	9.97	5.67	2.45	11.29	3.26	5.21	59.66
November	8.95	3.62	2.48	3.02	7.01	6.97	2.94	5.70	7.94	8.54	57.17
December	2.43	2.50	1.66	6.83	3.67	4.60	3.43	6.09	4.20	4.77	39.18
TOTALS	57.75	47.28	35.53	43.53	53.61	50.60	36.41	55.12	50.43	45.08	475.34

Hill 220' high $\frac{1}{2}$ mile S - N.
1940 "

Position of Station on reduced Ordnance Survey Map, { *No. of Map*..... *Reference No.*.....
1 mile to 1 inch Series

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction	Parish Church.	Distance from gauge	Direction
1931			New Hey	1½ m.	S.E.	New Hey	1½ m.	S.E.

Station No. 2858

RAINFALL at Milnswood (Peltstone, Kingley) 41

County of South Lancashire Observer G. Bassfield Esq.

River Basin Mersey Gravel - 3

Type of Gauge M.O.

Annual Average rainfall, based on 20 years obs. ~~yearly weighted.~~ Period of average 1881-1915 Ref. I.W.S.

File No. 6120627/26

Diameter	5"		561	467							
Height	1' 0"				1						
Altitude	766'				741						
Year	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Means Totals
January	1.88	5.60	6.14	6.99	5.12	5.92	4.43	10.81	2.13	2.95	51.97
February	5.78	1.90	3.36	2.68	6.39	6.94	.79	3.67	3.24	6.07	40.82
March	5.31	3.21	1.61	.60	1.63	1.99	7.80	2.16	2.16	2.53	29.00
April	3.61	2.82	2.73	3.60	2.99	2.05	5.02	3.63	5.02	4.06	34.53
May	2.94	4.59	3.07	5.59	4.88	2.14	2.98	2.01	5.43	2.19	35.62
June	1.43	1.10	4.42	3.92	6.16	3.81	3.96	5.94	.82	2.71	34.27
July	2.48	4.29	2.90	4.73	2.11	5.58	3.88	3.15	2.57	4.56	35.55
August	4.66	5.44	5.90	4.24	3.00	6.14	.50	6.25	3.65	7.19	49.97
September	.74	2.68	4.76	5.60	3.47	8.30	3.81	3.47	1.60	7.60	42.03
October	5.33	6.11	3.47	5.66	7.11	1.26	1.34	3.32	5.64	3.03	42.30
November	3.21	1.34	3.61	8.97	.71	8.81	7.84	2.70	8.04	6.22	51.48
December	2.60	4.41	2.90	5.64	3.26	4.38	5.24	5.27	4.60	3.88	45.18
TOTALS	43.04	43.49	44.87	58.22	46.83	57.32	47.59	50.38	47.96	52.99	492.72

941 Hill 220' high 1/2 m. S.W.

Position of Station on reduced Ordnance Survey Map, } No. of Map Reference No.
1 mile to 1 inch Series

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction	Parish Church.	Distance from gauge	Direction
1941			New Hey	1 1/2 m.	S.W.	New Hey	1 1/2 m.	S.W.

Station No. 2858

51

RAINFALL at Milnrow (Pielthorne, Kitchliffe)

County of Lancashire

Observer G. Bradfield Esq.

River Basin Mersey - Irwell 3

Type of Gauge M.D.

Annual Average 16.05 in. based on 20 years obs unweighted. Period of average 1881 - 1915 Ref. I.W.B.
 " 44.03 " " 26 " - within 1931-57. 1916-50 File No. 660687/26

Diameter ...	5'		561	467								
Height ...	11 0"				1							
Altitude ...	140				51							
Year ...	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Means	Total
January ...	5.22	5.21	1.90	4.53	3.48	5.52	5.02	4.89	4.06	5.62	46.45	
February ...	3.65	1.50	2.87	3.72	2.99	1.67	3.74	6.70	-4.6	3.57	30.87	
March ...	5.70	3.01	2.35	3.27	2.61	1.64	4.18	2.78	2.41	1.47	29.42	
April ...	2.94	4.26	4.25	.94	2.51	4.38	.53	1.58	4.61	2.75	28.75	
May ...	2.65	2.98	3.44	3.88	4.49	2.01	2.01	4.85	2.69	2.07	31.07	
June84	3.80	2.85	4.03	3.55	3.65	2.48	6.10	3.12	1.87	32.29	
July ...	4.53	3.14	6.22	5.58	1.24	7.89	5.52	5.01	4.25	8.17	51.55	
August ...	6.56	4.56	5.53	7.73	1.18	12.73	5.84	6.83	.74	6.11	57.81	
September ...	3.65	4.37	3.65	6.98	3.29	4.48	6.06	5.77	.47	3.41	42.13	
October ...	1.49	6.97	2.72	8.97	2.69	3.22	7.08	5.15	4.63	5.91	48.83	
November ...	8.73	3.06	5.20	7.09	2.36	1.77	3.27	1.86	5.55	7.89	46.78	
December ...	8.26	4.65	2.17	7.18	6.81	5.24	5.05	5.08	8.42	5.00	57.36	
TOTALS ...	54.22	47.51	43.15	63.90	36.70	54.20	50.78	56.60	41.41	54.84	503.31	
	D	D	D	D	D	D	D	D	D	D		

1951 this 220' high at 1/2 mile S.E.

Position of Station on Ordnance One-Inch map : No. of Map National Grid Reference SD(3) 141233

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Parish Church.	Distance from gauge
1951			Newhey	1/2 m. S.W.	Newhey	1/2 m. S.W.

Summary of Earlier Records from 10-year Sheets :

Record D. or d		1910-19	1920-30	1931-40	1941-50	1951-60
		✓	Comp 1922 224-30	✓	✓	✓
		✓ last - 13, 19				