

# RAINFALL AT *Liverpool Grassendale Parsonage*

Lat. ....

Lon. ....

County of

*Lancashire*

Rain Gauge, by

Observer

*J. Abraham Esq.*

Diameter. ....										5	
Height. ....										1	
Altitude. ....										50	
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....										1.61	
February. ....										2.55	
March. ....										1.19	
April. ....										2.14	
May. ....										2.41	
June. ....										5.01	
July. ....										3.77	
August. ....										6.06	
September. ....										2.90	
October. ....										1.62	
November. ....										1.38	
December. ....										1.77	
TOTALS ....										32.41	

1879 House 30' - high 24' W.  
Hedge 16' - " 19' N.  
Wall 8' 4" " 28' E.  
Wall 7' - " 10' S.

Grassendale church  $\frac{1}{2}$  mile E.S.E.

# RAINFALL AT *Liverpool L<sup>d</sup> Michaels Hamlet*

Lat. ....

Lon. ....

County of

*Lancashire*

Rain Gauge, by

Observer

*G. W. Jeavons Esq*

Diameter. ....										.5	
Height. ....										1.	
Altitude. ....										74	
Year. ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....										1.66	
February. ....										2.55	
March. ....										1.12	
April. ....										1.85	
May. ....										2.15	
June. ....										4.77	
July. ....										3.76	
August. ....										6.83	
September. ....										3.12	
October. ....										1.43	
November. ....										1.25	
December. ....										1.70	
TOTALS. ....										32.19	

1879 Hedge 5ft high with shrubs on other side 15-20ft  
high nearest point 37ft N.W. by W. Trees  
50 to 70ft high 85 to 90ft W.S.W.



# RAINFALL AT *Nest-Derby Sandfield*

Lat.....

Lon.....

County of...*Lancashire*...

.....Rain Gauge, by.....

Observer *W. W. Begg*

Diameter .....	. 8	.									
Height .....	1 .2	.									
Altitude .....	147	.									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	2.00	.20	4.30	1.00	2.42						
February.....	.56	.80	2.70	1.20	1.00						
March.....	.75	.20	2.80	1.50	1.40						
April.....	1.50	1.30	2.75	.40	.92						
May.....	.90	1.10	1.50	1.20	1.80						
June.....	1.40	2.80	6.20	1.70	.56						
July.....	.80	3.70	7.00	3.20	3.50						
August.....	2.00	1.30	2.30	3.10	3.75						
September.....	2.30	4.70	6.30	2.70	2.60						
October.....	<sup>+</sup> 6.00	<sup>+</sup> 5.90	6.42	3.84	3.90						
November.....	3.30	1.75	2.94	2.00	5.00						
December.....	2.70	2.00	4.36	.80	1.60						
TOTALS .....	24.21	25.75	49.57	22.64	28.45						

C C C



# RAINFALL AT *Liverpool Allerton Greenhill*

Lat.....

Lon.....

County of *Lancashire*

Rain Gauge, by.....

Observer...

*J. H. King*  
*Surf*

Diameter.....					5						
Height .....					1		1.2				
Altitude.....					125						
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....					2.74	3.96	1.11	4.66	3.25	1.71	
February.....					1.29	1.54	3.27	3.49	1.43	2.58	
March.....					1.80	.90	2.72	2.98	1.68	1.40	
April.....				<i>68</i>	1.34	.61	3.06	1.99	1.61	2.43	
May .....				<i>#</i>	2.03	1.92	2.57	.60	2.37	3.60	2.40
June.....					1.62	.96	3.12	2.92	1.60	3.37	5.02
July .....					4.05	3.58	4.03	2.41	5.45	.83	4.14
August.....					3.87	4.44	2.74	3.18	4.50	5.31	5.85
September.....					3.28	2.64	5.04	4.18	2.94	4.21	3.46
October.....					4.25	4.11	5.58	2.59	3.80	3.39	1.61
November.....					2.53	5.05	3.71	4.88	5.50	1.69	1.19
December.....					1.08	3.00	1.13	4.38	3.31	2.15	1.72
TOTALS .....					32.87	34.93	35.30	42.59	32.52	33.51	

*G. moved from Richmond Park Arnfield in April 173*  
*1878 a low hedge 10 yds distant*

*Allhallows church Allerton 200 yds N.*



RAINFALL AT *Narvington Aspley or Friars Green*

Lat. ....

Lon. ....

County of *Lancashire*Rain Gauge, by..... Observer *R. Vauter Esq.*

Diameter .....		.10									
Height .....		10.0						10.3			
Altitude .....		33.0	33 $\pi$								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....		1.30	4.51	2.95	2.80	3.80	1.42	4.28	3.22	1.74	
February.....		2.81	2.90	.64	1.05	.86	3.72	3.40	1.46	2.94	
March.....		7.08	2.60	3.68	2.04	.54	2.93	2.14	1.28	1.45	
April.....		3.04	2.83	.82	1.16	.42	2.43	2.27	1.73	2.91	
May.....		1.60	2.30	1.50	1.84	2.01	1.03	3.15	4.66	2.43	
June.....		3.42	5.30	1.61	1.29	3.01	2.64	1.45	3.48	3.83	
July.....		3.67	5.00	3.76	2.00	4.62	2.17	6.32	1.33	3.53	
August.....		1.98	3.31	3.23	4.15	2.47	3.02	4.18	5.36	4.53	
September.....		<sup>+</sup> 4.95	5.46	2.22	3.16	5.10	4.09	3.17	4.22	3.10	
October.....		4.75	5.54	3.77	3.77	5.31	2.28	3.23	3.15	1.56	
November.....		1.69	3.61	2.08	4.68	3.67	4.24	5.03	1.87	.91	
December.....		2.17	4.37	.83	3.05	1.11	4.64	2.93	2.49	1.75	
TOTALS .....		32.46	47.73	27.09	30.99	32.92	34.61	41.55	34.25	30.68	

*S<sup>c</sup> Elphinst church  $\frac{3}{4}$  mile N.E.*



RAINFALL AT *Warrington Bewsey Street*

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer

*L W Reynolds Esq.*

Diameter .....	.5	.									
Height .....	1	:	.								
Altitude .....	40.	.	49' <sup>π</sup>								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	2.32	1.40	4.32	2.86	2.64	3.74	1.39	4.39	3.68	1.53	2.827
February.....	.78	2.96	2.64	.62	1.00	.81	3.44	3.98	1.50	2.84	2.057
March.....	2.20	1.11	2.65	3.32	2.08	.59	2.89	2.24	1.54	1.42	2.004
April.....	1.37	3.03	2.35	.83	1.15	.39	2.49	2.26	1.75	2.73	1.835
May.....	.82	1.81	1.96	1.51	1.83	2.01	.95	2.96	4.31	2.52	2.068
June.....	1.94	3.45	5.07	1.93	1.65	3.15	2.75	1.39	3.41	3.53	2.827
July.....	.48	4.10	4.79	3.88	1.99	4.56	2.21	6.44	1.20	3.66	3.331
August.....	1.50	3.25	3.41	3.35	3.91	2.73	3.23	4.22	5.06	4.90	3.556
September.....	3.06	2.85	5.37	2.09	2.25	4.73	3.86	3.06	4.08	3.29	3.664
October.....	6.99	4.53	6.35	3.74	3.84	4.95	2.27	3.32	3.26	1.63	3.988
November.....	2.88	1.53	3.63	2.08	5.12	3.57	4.35	5.24	1.88	.81	3.109
December.....	3.02	2.16	4.05	.85	2.78	1.13	4.58	3.17	2.55	1.90	2.619
TOTALS .....	27.36	34.18	45.59	27.06	30.24	32.36	34.41	42.67	34.22	30.76	33.885

1870 *g* in a large garden



# RAINFALL AT *Warrington Cemetery*

Lat..... Lon..... County of *Lancashire*  
 ..... Rain Gauge, by..... Observer *R. Vawser Esq. C.E.*

Diameter .....		<i>.10</i>									
Height .....		<i>.9 1.</i>									
Altitude .....		<i>327</i>									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....			<i>4.58</i>	<i>2.90</i>	<i>2.66</i>	<i>4.10</i>	<i>1.50</i>	<i>4.21</i>	<i>3.31</i>	<i>1.54</i>	
February.....			<i>2.95</i>	<i>.53</i>	<i>1.07</i>	<i>.80</i>	<i>3.79</i>	<i>3.82</i>	<i>1.45</i>	<i>2.54</i>	
March .....			<i>2.35</i>	<i>3.68</i>	<i>2.12</i>	<i>.57</i>	<i>2.78</i>	<i>2.25</i>	<i>1.32</i>	<i>1.37</i>	
April.....			<i>3.13</i>	<i>.96</i>	<i>1.15</i>	<i>.47</i>	<i>2.65</i>	<i>2.34</i>	<i>1.75</i>	<i>3.03</i>	
May .....			<i>2.46</i>	<i>1.34</i>	<i>1.88</i>	<i>2.07</i>	<i>.94</i>	<i>3.37</i>	<i>4.02</i>	<i>2.71</i>	
June.....			<i>5.43</i>	<i>2.04</i>	<i>1.32</i>	<i>3.10</i>	<i>3.29</i>	<i>1.58</i>	<i>3.47</i>	<i>4.34</i>	
July .....		<i>#</i>	<i>3.69</i>	<i>5.28</i>	<i>3.77</i>	<i>2.41</i>	<i>5.00</i>	<i>2.36</i>	<i>7.42</i>	<i>1.35</i>	<i>3.74</i>
August.....			<i>1.94</i>	<i>3.45</i>	<i>3.52</i>	<i>4.28</i>	<i>2.79</i>	<i>3.70</i>	<i>4.43</i>	<i>5.23</i>	<i>4.55</i>
September.....			<i>4.54</i>	<i>6.12</i>	<i>2.14</i>	<i>3.24</i>	<i>5.10</i>	<i>4.19</i>	<i>3.28</i>	<i>3.84</i>	<i>3.27</i>
October.....			<i>4.79</i>	<i>5.71</i>	<i>4.22</i>	<i>3.91</i>	<i>6.03</i>	<i>2.47</i>	<i>3.59</i>	<i>3.37</i>	<i>1.62</i>
November.....			<i>1.69</i>	<i>3.90</i>	<i>2.05</i>	<i>4.42</i>	<i>3.77</i>	<i>3.77</i>	<i>5.74</i>	<i>2.03</i>	<i>.97</i>
December.....			<i>2.25</i>	<i>4.34</i>	<i>.83</i>	<i>2.53</i>	<i>1.73</i>	<i>5.04</i>	<i>2.83</i>	<i>1.68</i>	<i>1.69</i>
TOTALS .....			<i>49.70</i>	<i>27.98</i>	<i>30.99</i>	<i>35.53</i>	<i>36.48</i>	<i>44.86</i>	<i>32.82</i>	<i>31.37</i>	

*S. Elphins church 1/3 mile S.W.*



RAINFALL AT *Liverpool Grove Park*

Lat.....

Lon.....

County of *Lancashire*

Rain Gauge, by.....

Observer *J. N. Darsie*

Diameter.....		.3										
Height.....	6	7	6									
Altitude.....	166	100	200				170	160				
YEAR.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	2.56	1.43	4.20	1.89	2.29	3.48	1.02	3.94	2.83	1.75	2.539	
February.....	.71	1.85	2.47	.53	1.23	1.00	3.00	3.27	.95	2.44	1.742	
March.....	1.51	.94	2.85	3.21	1.65	.62	2.18	2.55	1.50	1.08	1.809	
April.....	1.41	2.26	3.08	.58	1.21	.53	2.50	1.99	1.45	2.12	1.713	6.090
May.....	.88	1.64	1.77	1.61	1.90	2.01	.35	2.10	3.62	1.83	1.771	
June.....	1.14	2.22	5.55	1.47	.55	3.05	2.97	1.57	3.22	4.40	2.614	
July.....	.67	4.80	5.91	3.56	3.50	3.63	2.13	5.16	1.59	3.67	3.462	
August.....	1.99	1.60	1.54	3.38	3.53	2.63	3.70	4.55	4.38	6.55	3.385	
September.....	2.51	4.19	5.98	2.68	2.72	4.80	3.45	3.08	3.85	3.19	3.645	
October.....	6.76	5.87	5.56	3.84	3.64	5.25	2.50	3.45	3.33	1.42	4.162	16.590
November.....	3.17	1.95	2.70	2.00	4.20	3.38	4.18	5.42	1.36	1.05	2.941	
December.....	2.93	1.81	3.97	.80	2.35	.78	4.83	2.89	2.00	1.60	2.396	
TOTALS.....	26.24	30.56	45.58	25.52	28.77	31.16	32.81	39.97	30.08	31.10	32.179	9.499 6.590 15.580

1876 "I have also a large receiver that holds over 8 in with a funnel of the same size as the above which I empty once a month to check the smaller one, <sup>but the amount not recorded</sup> Gauge on lower ledge of roof of Conservatory



70

RAINFALL AT *Liverpool St James Cemetery*

Lat. .... Lon. .... County of *Lancashire*

Rain Gauge, by ..... Observer .....

Diameter. ....								5			
Height. ....								1. 1			
Altitude. ....								150			
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January .....								4.66	3.50	1.49	
February. ....								3.24	.81	2.59	
March .....								2.65	1.76	1.06	
April .....								1.93	1.33	1.94	
May .....								2.22	3.90	2.03	
June .....								} 6.14	3.18	4.73	
July .....									1.36	2.77	
August .....								4.87	3.95	7.00	
September ....								3.43	3.90	3.38	
October .....								3.82	3.38	1.37	
November ....								4.78	1.57	1.17	
December ....								3.94	2.28	.94	
TOTALS .....								41.68	30.92	30.47	

RAINFALL AT *Stockport Heaton Moor*

70

Lat. .... Lon. .... County of *Lancashire*  
Rain Gauge, by ..... Observer *J. P. Lynall Esq*

Diameter. ....										5	
Height. ....										1.4	
Altitude. ....										236	
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....										1.55	
February. ....										2.79	
March. ....										1.33	
April. ....										1.92	
May. ....										2.10	
June. ....										4.50	
July. ....										3.25	
August. ....										5.39	
September. ....										2.20	
October. ....										2.40	
November. ....										1.18	
December. ....										2.32	
TOTALS. ....										30.93	

*St. Pauls Heaton Moor 1/4 mile NNE  
Garden rails 4ft 8ft SE*



RAINFALL AT *Natton on the Hill*

Lat.....

Lon.....

County of.....

*Lancashire*Rain Gauge, by *A. B. Z.* Observer *A. R. Anderson Esq*

Diameter .....		. 5									
Height .....		1. 11									
Altitude .....		80. 0	119.								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....		1.60	4.44	2.65	2.09	3.88	.89	5.16	3.08	1.66	
February.....		2.34	2.61	.58	1.30	1.11	3.03	3.23	1.62	2.84	
March.....		1.03	3.05	3.23	1.66	.71	2.18	2.57	1.49	1.20	
April.....		2.43	2.81	.52	1.09	.61	2.79	1.91	1.31	3.03	
May .....		1.52	1.55	1.41	1.91	2.21	.56	2.58	3.39	2.18	
June.....		2.43	5.17	1.38	.69	2.96	2.58	1.51	2.79	3.91	
July .....		4.51	6.25	3.56	4.00	4.33	2.45	5.16	1.05	3.46	
August.....		1.35	2.43	3.50	3.26	2.76	3.52	4.76	4.03	6.54	
September.....		4.14	7.16	3.17	2.42	5.05	4.07	2.92	4.02	3.00	
October.....		5.55	5.98	4.24	4.50	4.83	2.66	3.67	3.03	1.13	
November.....		2.03	2.88	2.00	4.36	3.12	4.46	5.53	2.06	1.12	
December.....		1.78	4.37	.81	2.70	1.06	4.77	3.79	2.14	1.75	
TOTALS .....		30.71	48.70	27.05	29.98	32.63	33.96	42.79	30.01	31.82	

1879 Railings 4 ft high 20 ft distant



# RAINFALL AT *Liverpool Walton on the Hill*

Lat. .... Lon. .... County of *Lancashire*

Rain Gauge, by ..... Observer *A. R. Anderson Esq.*

Diameter....								8	.	.	
Height ....								1	3	.	
Altitude ....								119	.	.	
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....								5.17	3.15	1.68	
February. ...								3.28	1.62	2.87	
March .....								2.58	1.54	1.19	
April .....								1.92	1.28	3.04	
May .....								2.60	3.39	2.19	
June .....								1.52	2.77	3.89	
July.....								5.14	1.06	3.45	
August ....								4.77	3.99	6.57	
September ..								2.96	4.03	2.96	
October ....								3.68	3.07	1.11	
November ..								5.52	2.11	1.11	
December ..								3.83	2.18	1.77	
TOTALS ..								42.97	30.18	31.83	



# RAINFALL AT *Liverpool. Arnfield Richmond*

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer.....

*J. H. Ling*

Diameter.....											
Height.....											
Altitude.....											
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				<i>2.54</i>							
February.....				<i>.65</i>							
March.....				<i>3.19</i>							
April.....				<i>.68</i>							
May.....											
June.....											
July.....											
August.....											
September.....											
October.....											
November.....											
December.....											
TOTALS.....											

*1873 f. moved to Greenhill Allerton in April*



RAINFALL AT *Heaton Chapel Roseleigh*

Lat..... Lon..... County of *Lancashire*  
..... Rain Gauge, by..... Observer *John Curtis Esq.*

Diameter .....	<i>.0</i>	<i>.</i>									
Height .....	<i>2.3</i>	<i>.</i>									
Altitude .....	<i>235.</i>	<i>.</i>									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>3.45</i>	<i>1.33</i>	<i>3.98</i>	<i>2.82</i>	<i>3.16</i>	<i>4.22</i>	<i>2.09</i>	<i>5.05</i>			
February.....	<i>.93</i>	<i>2.47</i>	<i>2.81</i>	<i>.47</i>	<i>1.51</i>	<i>.94</i>	<i>4.04</i>	<i>4.47</i>			
March .....	<i>2.30</i>	<i>1.63</i>	<i>3.39</i>	<i>2.55</i>	<i>3.17</i>	<i>.71</i>	<i>4.08</i>	<i>2.72</i>			
April.....	<i>2.13</i>	<i>3.08</i>	<i>3.71</i>	<i>.70</i>	<i>1.25</i>	<i>1.12</i>	<i>3.83</i>	<i>2.04</i>			
May .....	<i>.92</i>	<i>2.28</i>	<i>3.33</i>	<i>2.14</i>	<i>1.92</i>	<i>1.85</i>	<i>1.50</i>	<i>3.51</i>			
June.....	<i>1.89</i>	<i>2.73</i>	<i>6.87</i>	<i>2.24</i>	<i>.87</i>	<i>3.30</i>	<i>3.50</i>	<i>2.69</i>			
July .....	<i>1.05</i>	<i>3.71</i>	<i>7.38</i>	<i>4.73</i>	<i>1.34</i>	<i>5.32</i>	<i>2.78</i>	<i>4.46</i>			
August.....	<i>1.44</i>	<i>1.55</i>	<i>3.59</i>	<i>4.46</i>	<i>3.40</i>	<i>5.48</i>	<i>3.55</i>	<i>4.73</i>			
September.....	<i>2.35</i>	<i>3.53</i>	<i>6.23</i>	<i>2.35</i>	<i>3.74</i>	<i>4.99</i>	<i>3.43</i>	<i>2.60</i>			
October.....	<i>6.72</i>	<i>3.93</i>	<i>5.08</i>	<i>3.66</i>	<i>4.43</i>	<i>5.93</i>	<i>2.51</i>	<i>3.92</i>			
November.....	<i>2.25</i>	<i>1.55</i>	<i>4.25</i>	<i>2.55</i>	<i>4.82</i>	<i>4.42</i>	<i>3.13</i>	<i>4.76</i>			
December.....	<i>2.48</i>	<i>2.56</i>	<i>3.65</i>	<i>1.08</i>	<i>3.10</i>	<i>1.39</i>	<i>3.85</i>	<i>4.73</i>			
TOTALS .....	<i>27.91</i>	<i>30.35</i>	<i>54.27</i>	<i>29.75</i>	<i>32.71</i>	<i>39.67</i>	<i>38.29</i>	<i>45.68</i>			

*1870 January to June the gauge was at Old Trafford*



# RAINFALL AT *Stockport Norris Hill, Heaton Norris*

Lat. ....

Lon. ....

County of

*Lancashire*

Rain Gauge, by .....

Observer

*J. Holden Esq*

Diameter. ....										5	
Height. ....										1.0	
Altitude. ....										233	
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....										1.33	
February. ....										2.58	
March. ....										1.20	
April. ....										1.85	
May. ....										1.90	
June. ....										4.59	
July. ....										3.48	
August. ....										5.14	
September. ....										2.64	
October. ....										2.06	
November. ....										1.01	
December. ....										2.00	
TOTALS ....										29.78	

*Christ Church Heaton Norris 1 mile E*

*House 25 ft. W*



# RAINFALL AT *Prescot Knowsley*

70

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer .....

*W. J. Green*

Diameter .....	.6											
Height .....	10.0	15.0										
Altitude .....	220.0											
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	2.46	1.61										
February.....	.70	2.57										
March.....	2.00	1.00										
April.....	1.60	2.55										
May.....	1.16	2.02										
June.....	1.80	3.09										
July.....	.80	5.59										
August.....	2.04	1.45										
September.....	2.70	3.35										
October.....	7.18	4.50										
November.....	3.09	2.14										
December.....	2.97	2.22										
TOTALS .....	28.50	32.17										

C C2



# RAINFALL AT Manchester Fern Bank Withington

Lat. ....

Lon. ....

County of Lancashire

Rain Gauge, by

Observer

J. King junr Esq

Gauge No I

Diameter. ....				5							
Height. ....				1.	-						
Altitude. ....				110							
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....				# 2.32	3.02	3.51	1.46	4.47	3.01	1.53	
February. ....				.38	1.80	.60	3.86	3.99	1.15	2.72	
March. ....				2.29	2.83	.56	3.46	2.16	1.56	1.38	
April. ....				.75	.83	.78	2.86	1.58	1.53	2.11	
May. ....				1.79	1.21	1.63	1.19	3.20	3.62	1.98	
June. ....				2.41	.98	2.94	3.66	1.99	2.56	4.94	
July. ....				3.68	1.60	4.45	2.82	4.97	1.42	3.32	
August. ....				4.17	3.61	4.11	2.63	4.94	4.88	5.24	
September. ....				2.11	3.29	4.66	3.74	2.42	4.36	2.90	
October. ....				3.59	2.97	4.47	2.40	3.63	3.23	2.08	
November. ....				2.17	4.12	3.62	3.10	4.65	2.23	.94	
December. ....				.67	2.39	.93	4.01	3.03	2.18	2.01	
TOTALS. ....				26.33	28.65	32.26	35.19	41.03	31.73	31.15	

40 feet NW of House 4 miles S. of Manchester  
 1873 Jan'y one day estimated gauge not being fixed, Oct.  
 one day & Nov. one day estimated g. blown over.



# RAINFALL AT Manchester Ferry Bank Widdington

70

Lat. .... Lon. .... County of Lancashire

Rain Gauge, by ..... Observer J. King Junr Esq

Gauge No II

Diameter. ....					5						
Height. ....					1 -						
Altitude. ....											
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....					3.00	3.48	1.47	4.49	3.08	1.51	
February. ....					1.77	.60	3.74	3.96	1.16	2.78	
March. ....					2.80	.58	3.48	2.15	1.53	1.39	
April. ....					.83	.80	2.81	1.54	1.49	2.08	
May. ....					1.20	1.62	1.16	3.11	3.60	1.99	
June. ....					1.01	2.91	3.63	1.97	2.49	4.84	
July. ....					1.60	4.41	2.80	4.91	1.41	3.26	
August. ....					3.55	4.09	2.59	4.92	4.87	5.15	
September. ....					3.30	4.63	3.71	2.41	4.32	2.86	
October. ....					2.95	4.46	2.42	3.69	3.27	2.11	
November. ....					4.11	3.65	3.13	4.68	2.22	.94	
December. ....					2.46	.94	4.09	3.08	2.21	2.02	
TOTALS ....					28.58	32.17	35.03	40.91	31.65	30.93	

Gauge 100ft NW of House

Widdington Church  $\frac{1}{2}$  mile N.E.



# RAINFALL AT *Manchester Flixton* 70

Lat. .... Lon. .... County of *Lancashire*  
 Rain Gauge, by ..... Observer *Rev R. M. Reece*

Diameter...									.5		
Height ...									2.6		
Altitude ...									90?		
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....									3.83		
February....									1.65		
March.....									1.64		
April .....									1.78		
May .....									3.32		
June .....									3.44		
July.....									.73		
August ...									6.62		
September ..									4.43		
October ....								3.75	3.93		
November ..									2.50		
December ..									3.02		
TOTALS ..									36.89		

*1879 no repg*



# RAINFALL AT Manchester Old Trafford

Lat..... Lon..... County of Lancashire  
 ..... Rain Gauge, by..... Observer H. Vernon Esq.

Diameter .....	.8	.									
Height .....	2.7	.									
Altitude .....	106.	.	123	106							
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.13	3.30 <sup>?</sup>	4.26	3.14	3.53	3.57	1.74	5.01			
February.....	.85	2.73	3.02	.67	1.59	.74	3.98	4.29			
March.....	2.38	1.56	2.77	1.79	3.37	.82	3.70	2.43			
April.....	2.22	3.52	2.98	.51	1.00	.90	3.16	2.90			
May .....	- .75	2.07	2.14	1.91	1.39	2.07	1.08	2.86			
June.....	1.79	2.66	6.90	2.97	1.00	3.56	3.15	2.35			
July .....	.81	3.55	7.66	4.65	1.77	4.60	3.57				
August.....	1.65	1.60	2.78	4.20	4.34	5.00	3.07				
September.....	2.66	3.82	7.04	2.48	3.86	4.74	3.17				
October.....	+ 8.36	+ 4.51	4.40	4.44	3.76	4.45	2.60				
November.....	2.42	7.41	3.77	2.28	4.85	4.22	3.30				
December.....	2.53	2.50	2.97	.78	3.64	.82	4.44				
TOTALS .....	29.55	33.23	50.69	29.82	34.10	35.49	36.96				

*For obs for second gauge see sheet for Heaton Chapel Roseleigh*



# RAINFALL AT *Manchester Urmston Highfield Bank*

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *J. Armstrong*

Diameter....									.5	.	
Height ....									1.	.	
Altitude ....									80	.	
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....										1.63	
February....										2.89	
March.....										1.45	
April .....										2.79	
May .....										2.43	
June .....										4.89	
July.....									<sup># from 10</sup> 1.12	4.08	
August ....									5.19	5.18	
September ..									4.23	3.00	
October ....									3.73	1.95	
November ..									2.25	.95	
December ..									2.82	2.27	
TOTALS ..										33.51	

1878 House 22ft high 36ft distant & all trees are at a much greater distance than their own height

*S<sup>t</sup> Clement* ch. Manchester  $\frac{2}{3}$  mile S.W.



2021  
**70**  
Pumping Station

**RAINFALL AT** *St Helens The Eccleston Well*

Lat. \_\_\_\_\_ Lon. \_\_\_\_\_ County of *Lancashire*

Rain Gauge, by \_\_\_\_\_ Observer *D. M. F. Gaskin Esq*

Diameter. ....	12										
Height. ....	2.9										
Altitude. ....	268										
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....	2.40	.50	{7.00}	2.54	2.78	{4.00}	1.70	4.61	3.54	{4.00}	
February. ....	.60	.84		.02	1.07		3.60	4.50	1.77		
March. ....	1.92	.84	4.69	1.46	2.02	.63	2.34	2.43	1.13	1.42	
April. ....	1.47	2.41	2.77	1.88	1.01	.34	3.25	3.13	2.20	1.14	
May. ....	1.07	1.45	1.27	1.85	1.44	2.46	.42	2.69	4.34	1.58	
June. ....	1.47	2.84	5.56	1.69	.96	3.80	2.61	1.07	3.32	3.10	
July. ....	.81	4.07	7.46	3.53	2.65	3.26	2.74	5.32	1.40	4.53	
August. ....	1.96	1.44	3.33	3.01	3.24	3.35	3.50	6.16	4.87	5.51	
September. ....	2.99	3.83	7.03	1.52	2.43	5.65	3.96	3.01	5.06	3.77	
October. ....	7.31	5.71	5.40	4.24	4.26	5.81	2.90	3.46	3.94	2.07	
November. ....	2.78	1.10	2.91	2.31	4.50	4.10	4.96	2.50	3.94	.64	
December. ....	2.79	.02	3.97	.88	1.51	.78	4.38	2.90	(2.25)	.61	
TOTALS ....	27.57	25.05	(51.39)	24.93	27.87	(34.18)	36.36	41.78	(37.76)	(28.37)	

*Snow not properly measured*



RAINFALL AT *Gorton Reservoir*

Lat.....

Lon.....

County of *Lancashire*

Rain Gauge, by.....

Observer

*J. H. Bateman Esq.*

Diameter .....											
Height .....											
Altitude .....	<i>263</i>										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>2.75</i>	<i>1.04</i>	<i>3.54</i>	<i>2.85</i>	<i>3.52</i>	<i>3.63</i>	<i>1.90</i>	<i>4.95</i>	<i>3.80</i>	<i>1.30</i>	<i>2.928</i>
February.....	<i>.71</i>	<i>2.48</i>	<i>2.68</i>	<i>.35</i>	<i>1.61</i>	<i>.63</i>	<i>3.57</i>	<i>3.88</i>	<i>1.08</i>	<i>2.82</i>	<i>1.981</i>
March.....	<i>2.10</i>	<i>1.55</i>	<i>2.62</i>	<i>2.28</i>	<i>3.27</i>	<i>.63</i>	<i>3.61</i>	<i>2.77</i>	<i>1.95</i>	<i>1.39</i>	<i>2.217</i>
April.....	<i>2.18</i>	<i>3.04</i>	<i>2.98</i>	<i>.33</i>	<i>.90</i>	<i>1.01</i>	<i>2.61</i>	<i>1.91</i>	<i>1.72</i>	<i>1.55</i>	<i>1.823</i>
May .....	<i>.88</i>	<i>1.89</i>	<i>2.49</i>	<i>1.85</i>	<i>1.41</i>	<i>1.71</i>	<i>1.11</i>	<i>3.26</i>	<i>2.71</i>	<i>1.90</i>	<i>1.921</i>
June.....	<i>1.48</i>	<i>3.26</i>	<i>6.57</i>	<i>2.38</i>	<i>.68</i>	<i>3.09</i>	<i>3.35</i>	<i>3.02</i>	<i>2.48</i>	<i>4.69</i>	<i>3.100</i>
July .....	<i>1.41</i>	<i>3.86</i>	<i>7.91</i>	<i>4.44</i>	<i>1.19</i>	<i>4.30</i>	<i>3.19</i>	<i>4.86</i>	<i>.71</i>	<i>3.59</i>	<i>3.546</i>
August.....	<i>1.74</i>	<i>1.49</i>	<i>2.54</i>	<i>4.29</i>	<i>3.38</i>	<i>3.25</i>	<i>2.92</i>	<i>4.80</i>	<i>5.88</i>	<i>5.15</i>	<i>3.544</i>
September.....	<i>2.68</i>	<i>3.48</i>	<i>6.24</i>	<i>2.08</i>	<i>4.32</i>	<i>4.61</i>	<i>3.62</i>	<i>2.64</i>	<i>5.18</i>	<i>2.60</i>	<i>3.745</i>
October.....	<i>8.61</i>	<i>3.84</i>	<i>4.42</i>	<i>4.27</i>	<i>3.50</i>	<i>4.48</i>	<i>2.50</i>	<i>3.91</i>	<i>3.63</i>	<i>2.50</i>	<i>4.166</i>
November.....	<i>2.30</i>	<i>1.38</i>	<i>3.38</i>	<i>2.00</i>	<i>4.52</i>	<i>3.97</i>	<i>3.15</i>	<i>5.19</i>	<i>2.31</i>	<i>1.22</i>	<i>2.942</i>
December.....	<i>2.09</i>	<i>2.27</i>	<i>2.64</i>	<i>.87</i>	<i>2.17</i>	<i>1.22</i>	<i>3.89</i>	<i>2.95</i>	<i>2.19</i>	<i>1.95</i>	<i>2.224</i>
TOTALS .....	<i>28.93</i>	<i>29.58</i>	<i>48.01</i>	<i>27.99</i>	<i>30.47</i>	<i>32.53</i>	<i>35.42</i>	<i>44.14</i>	<i>33.64</i>	<i>30.66</i>	<i>34.137</i>

C C C



RAINFALL AT *Manchester Plymouth Grove*

Lat.....

Lon.....

County of *Lancashire*

Rain Gauge, by.....

Observer

*J. J. Roberts Esq.*

Diameter .....	.8	.	.	.	.	.	.	5	.	.	.
Height .....	3.9	.	.	8.9	3.9	.	.	.	.	.	.
Altitude .....	150.	.	.	.	.	.	.	.	.	.	.
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.19	7.31	9.79	9.15	3.19	4.09	1.77	5.16	3.49	1.56	3.070
February.....	.75	2.74	3.01	.41	1.46	.64	3.81	4.00	1.39	3.03	2.124
March.....	2.18	1.56	2.95	2.44	3.39	.69	3.74	2.72	1.67	1.70	2.304
April.....	2.21	3.59	3.20	.60	.89	.92	2.91	1.87	1.69	1.98	1.986
May.....	.91	2.21	3.11	2.30	1.54	1.86	1.13	3.38	3.76	1.88	2.208
June.....	1.99	3.56	5.24	2.54	1.79	3.35	3.53	2.71	2.79	4.82	3.232
July.....	1.24	3.43	7.41	4.63	1.69	4.46	3.52	5.73	1.17	3.71	3.699
August.....	1.63	1.83	3.27	4.32	3.74	4.13	3.37	5.14	5.49	5.68	3.860
September.....	2.91	3.68	6.79	2.55	4.42	4.93	3.36	2.46	4.48	3.14	3.872
October.....	<sup>+</sup> 8.73	<sup>+</sup> 4.30	4.61	4.32	3.60	4.72	2.65	4.13	4.18	2.31	4.355
November.....	2.48	1.48	3.57	2.07	4.76	4.08	3.42	5.55	2.22	1.14	3.077
December.....	2.10	2.43	2.76	.76	2.59	1.14	4.65	3.26	2.44	2.40	2.453
TOTALS .....	30.32	32.12	49.71	30.09	33.06	35.01	37.86	46.11	34.77	33.35	36.240

C C C



RAINFALL AT *Helmshore* *N<sup>o</sup> Manchester*

Lat..... Lon..... County of... *Lancashire*  
..... Rain Gauge, by..... Observer... *J. Rawstron Esq*

Diameter.....											
Height .....					<i>13 -</i>						
Altitude.....					<i>751</i>						
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....											
February.....											
March.....											
April.....											
May .....											
June.....											
July .....											
August.....											
September.....											
October.....											
November.....											
December.....											
TOTALS .....					<i>#</i> <i>41.10</i>						



# RAINFALL AT Manchester Eccles

Lat.....

Lon.....

County of Lancashire

Rain Gauge, by.....

Observer J Mackereth Esq. RRS

Diameter .....	10	.									
Height .....	3	.					3.5	.			
Altitude .....	145	.				136	.	.			
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.13	1.41	4.10	3.81	3.26	3.47	1.85	5.28	3.36		
February.....	.95	2.93	2.85	.55	1.46	.83	3.99	4.19	1.44		
March.....	2.47	7.33	2.79	2.69	2.99	.78	3.67	2.46	1.57		
April.....	2.05	3.64	3.00	.70	.92	.76	3.13	2.07	1.72		
May.....	.90	1.98	2.55	2.05	1.96	2.68	1.08	3.06	4.17		
June.....	1.92	3.43	5.40	2.93	.89	3.90	2.83	1.90	3.66		
July.....	.77	3.43	7.33	4.32	2.13	5.62	3.25	5.52	1.36		
August.....	1.83	1.93	2.99	4.15	5.77	4.07	3.60	4.88	5.52		
September.....	2.34	4.35	6.53	2.31	3.48	5.49	3.75	2.41	4.44		
October.....	<sup>+</sup> 8.90	<sup>+</sup> 4.73	4.40	4.59	4.09	5.03	2.99	4.04	3.90	#	
November.....	2.76	1.52	3.43	2.26	5.11	4.10	3.21	5.54			
December.....	2.38	2.48	3.05	.77	3.17	1.16	5.01	3.83			
TOTALS .....	30.40	33.16	48.42	31.13	35.23	37.89	38.36	45.18			

C C C



# RAINFALL AT Manchester Eccles

Lat..... Lon..... County of Lancashire  
 ..... Rain Gauge, by..... Observer J Mackerrill Esq.

Diameter .....	<input type="checkbox"/> 5										
Height .....	34										
Altitude .....	179						170				
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	2.36	.91	3.02	2.80	2.34	2.61	1.41	4.05	2.62		
February.....	61	2.14	2.21	.35	1.17	.59	3.23	3.45	1.15		
March.....	2.09	.64	2.17	2.14	2.30	.60	2.93	2.09	1.28		
April.....	1.79	3.21	2.59	.57	.67	.54	2.57	1.66	1.57		
May.....	.60	1.90	2.18	1.75	1.85	2.35	.99	2.63	3.84		
June.....	1.66	3.13	4.76	2.63	.70	3.33	2.47	1.54	3.19		
July.....	.57	2.87	6.95	3.79	1.82	5.31	2.91	4.56	1.28		
August.....	1.48	1.58	2.61	3.38	4.76	3.79	2.94	4.29	5.08		
September.....	1.75	3.93	5.71	1.89	2.77	4.92	3.33	2.13	3.81		
October.....	7.08	4.07	3.64	3.81	3.26	4.60	2.70	3.22	3.27		
November.....	2.17	1.15	2.45	1.76	4.25	3.46	2.88	4.17			
December.....	2.19	1.93	2.71	.53	2.31	.82	4.04	2.79			
TOTALS .....	24.35	27.46	41.00	25.40	28.20	32.92	32.40	36.58			

1878 Gauge moved to Bolton Sharples in Nov?



# RAINFALL AT *Salford Town Hall*

Lat.....

Lon.....

County of *Lancashire*

Rain Gauge, by.....

Observer *J Mackworth Esq.*

Diameter .....	5										
Height .....	7	8.0	12	11		11.6					
Altitude .....	115	116.0	120	119		117					
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	2.89	2.07	4.22	3.86	3.46	3.31					
February.....	2.85	2.42	3.11	3.36	1.53	58					
March.....	2.38	1.38	3.08	3.05	3.22	66					
April.....	1.92	3.69	2.99	73	1.18	94					
May.....	92	2.02	2.38	2.52	1.48	2.08					
June.....	1.96	3.08	6.62	2.62	1.05	3.81					
July.....	1.13	2.88	6.97	4.29	1.93	3.81					
August.....	1.67	1.88	3.48	4.66	3.70	5.01					
September.....	3.09	3.64	7.32	2.79	2.21	5.07					
October.....	9.58	4.58	4.45	4.44	2.61	4.63					
November.....	2.50	1.55	3.87	2.22	5.11	4.00					
December.....	2.20	2.28	2.71	78	3.43	1.13					
TOTALS .....	31.09	30.27	50.20	32.32	30.91	35.03	—				

C C e

1876. 6. N. O. 80



RAINFALL AT *Manchester Piccadilly*

Lat.....

Lon.....

County of.....

*Lancashire*

.....Rain Gauge, by.....

Observer

*M J B L R*

Diameter .....	.9	.										
Height .....	40	.										
Altitude .....	194	.							.	.		
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	2.63	- .96	4.06	2.93	3.68	4.41	1.43	4.86	3.78	1.64	3.038	
February.....	.82	2.49	1.82	.33	1.55	.60	3.26	3.68	1.18	3.02	1.875	
March .....	2.01	1.35	3.81	2.84	2.48	.50	3.65	2.57	1.91	1.64	2.276	
April.....	1.83	3.39	2.82	.28	.86	.68	2.92	1.70	1.45	1.89	1.982	
May .....	- .76	1.97	2.70	2.17	1.64	1.63	1.06	2.82	3.09	1.99	1.983	
June.....	1.40	2.73	5.18	2.41	1.61	3.20	3.46	1.98	2.73	4.67	2.937	
July .....	1.15	3.31	6.99	4.64	2.26	3.46	3.27	4.95	1.10	4.51	3.564	
August.....	1.72	1.59	3.07	4.28	2.96	5.19	3.29	4.65	5.53	5.31	3.759	
September.....	1.90	3.30	8.29	2.56	3.88	7.85	3.08	2.26	4.51	3.41	4.104	
October.....	<sup>+</sup> 9.02	<sup>+</sup> 4.49	5.18	3.83	3.06	3.12	2.37	4.24	3.79	2.57	4.167	
November.....	2.52	1.40	3.68	1.90	4.38	2.57	2.86	6.26	2.58	1.29	2.944	
December.....	1.91	2.20	2.90	.49	2.25	.53	4.10	3.58	2.70	2.28	2.294	
TOTALS .....	27.67	29.18	50.50	28.66	30.61	33.74	34.75	43.55	34.35	34.22	34.723	



RAINFALL AT *Manchester Fairfield*

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer

*M 18 1 R*

Diameter .....	.9	.									
Height .....	6	.									
Altitude .....	312	.									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.52	1.22	4.65	3.69	3.99	4.06	1.87	5.21	4.09	1.30	3.360
February.....	- .04	2.62	3.76	.41	1.65	.69	3.52	4.35	1.16	2.41	2.141
March.....	2.04	1.20	3.67	2.91	3.73	.55	3.50	2.75	1.83	1.39	2.357
April.....	2.16	3.57	3.31	.40	1.10	1.12	2.76	2.17	1.51	1.71	1.981
May .....	1.33	2.36	2.46	2.45	1.82	2.03	1.01	2.94	3.21	2.01	2.162
June.....	1.81	4.52	7.65	2.61	1.14	3.44	3.39	2.68	2.61	4.56	3.441
July .....	1.76	5.08	10.06	4.94	1.52	4.26	3.22	5.58	.56	3.81	4.079
August.....	2.06	2.01	2.90	4.77	3.44	2.84	3.45	4.72	6.01	5.49	3.769
September.....	3.06	3.54	7.60	2.59	4.54	4.79	3.58	2.65	4.25	2.98	3.958
October.....	10.52	5.47	5.06	5.12	3.57	4.52	2.56	3.81	3.29	2.34	4.626
November.....	2.74	1.84	4.46	2.26	4.39	4.21	3.40	5.46	2.66	1.28	3.270
December.....	1.60	2.87	2.85	.93	2.88	1.16	5.03	3.49	2.41	1.95	2.517
TOTALS .....	33.44	36.30	58.43	33.08	33.77	33.67	37.29	45.81	38.59	31.23	37.661

C C C



# RAINFALL AT *Manchester* *1<sup>st</sup> Bedes*

70

Lat. ....

Lon. ....

County of

*Lancashire*

Rain Gauge, by

Observer

*Rev<sup>d</sup> L. C. Casartelli*

Diameter....										.8	
Height ....										1.11	
Altitude ....										95	
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....									3.40	1.83	
February....									1.33	3.16	
March .....									1.57	1.95	
April .....									1.72	2.21	
May .....									4.79	2.21	
June .....									2.55	4.97	
July .....									1.28	4.47	
August ....									4.94	5.84	
September ..									4.55	3.76	
October ....									lost	2.44	
November ..									2.36	1.10	
December ..									1.69	2.54	
TOTALS ..									—	36.48	

*1878 October Record lost.*

*1879 House 30ft high 38ft E.  
Garden Wall 3ft 10in " 30 " S.  
Conservatory 15ft 30 " N.*



# RAINFALL AT *Liverpool Blundellsands Heath House*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *J. Melland Beade Esq*

Diameter . . .						5					
Height . . .						1					
Altitude . . .						36.75		35			
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .							.99	5.00	3.09	1.58	
February . . .							2.84	3.02	1.33	2.58	
March . . . . .							2.19	2.30	1.62	1.23	
April . . . . .							2.84	2.00	1.48	2.49	
May . . . . .							.54	2.97	3.33	2.01	
June . . . . .							1.99	1.50	2.15	4.34	
July . . . . .							2.29	5.48	.81	3.41	
August . . . .							3.03	4.32	4.23	5.77	
September . .							4.14	3.24	3.77	3.25	
October . . . .							2.53	3.27	2.74	1.48	
November . .						<del>2.96</del>	5.21	6.25	2.27	1.11	
December . .						1.00	4.66	3.79	2.13	1.97	
TOTALS . .							33.25	43.14	28.95	31.22	

*Lepton church 3½ miles E by N.*



# RAINFALL AT *St. Helens Rainford Hall*

Lat.....

Lon.....

County of... *Lancashire* .....

..... Rain Gauge, by.....

Observer .....

*G. M. Kibbin Esq.*

Diameter .....	5	.									
Height .....	9	.									
Altitude .....	147 <sup>3</sup>	.									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	2.64	1.56	4.76	2.92	3.47	3.65					
February.....	.93	3.29	2.88	.71	1.26	.96					
March.....	2.18	1.50	3.71	3.67	2.52	.65					
April.....	1.35	2.98	2.65	.78	1.46	.64					
May.....	1.34	1.63	1.81	2.06	1.75	2.13					
June.....	1.56	2.42	5.46	1.62	1.24	3.56					
July.....	.50	4.44	6.93	3.15	2.83	4.34					
August.....	2.22	7.32	3.28	4.30	4.15	3.49					
September.....	2.74	4.36	7.47	2.17	3.55	4.64					
October.....	<sup>+</sup> 7.53	<sup>+</sup> 5.86	5.74	4.89	4.28	5.32					
November.....	3.18	2.00	3.66	2.64	5.53	3.93					
December.....	3.05	2.03	4.43	1.16	3.17	1.01					
TOTALS .....	29.22	33.39	52.78	30.07	35.21	34.32					

c c c

1876 n.2.

all found to be



# RAINFALL AT *Manchester Newton Heath*

Lat. ....

Lon. ....

County of

*Lancashire*

Rain Gauge, by

Observer

*J. Warren*

Diameter . . .									.5		
Height . . .									1.		
Altitude . . .									288		
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .										1.69	
February . . .										3.50	
March . . . . .										2.02	
April . . . . .										2.13	
May . . . . .										1.73	
June . . . . .										5.14	
July . . . . .								#	70	4.50	
August . . . .									5.19	5.47	
September . .									5.65	2.90	
October . . . .									3.72	2.58	
November . .									2.35	1.57	
December . .									5.00	2.70	
TOTALS . .										35.93	

House 21 ft high 60 ft N.

All Saints  $\frac{1}{2}$  mile E.S.E.



RAINFALL AT *Oldham Brakes Clough*

Lat..... Lon..... County of... *Lancashire*  
..... Rain Gauge, by..... Observer *J Taylor Esq<sup>r</sup>*

Diameter .....	<input type="checkbox"/> 10				5						
Height .....	6				4.0						
Altitude .....	$\overline{950}$				950T						
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.59	1.10	5.33	4.49	4.65	5.72	2.23	6.37	4.79	1.25	
February.....	1.50	2.88	4.74	69	2.18	1.34	5.11	4.19	2.01	3.57	
March .....	2.78	7.08	3.44	2.91	4.37	.95	4.75	4.10	2.55	2.10	
April.....	2.27	4.34	4.35	49	1.76	1.79	3.01	3.07	2.06	2.66	
May .....	1.84	1.63	2.89	2.65	1.94	2.99	1.29	4.32	4.23	2.35	
June.....	2.11	2.93	8.01	2.37	1.60	4.58	3.80	3.56	3.83	6.61	
July .....	7.20	4.23	7.54	5.32	2.44	5.57	3.82	5.86	1.14	6.01	
August.....	2.29	1.99	4.05	5.84	5.91	4.58	5.43	5.27	6.89	6.99	
September.....	3.75	5.28	7.16	2.87	5.28	7.41	6.11	4.71	5.24	3.20	
October.....	11.21	4.53	5.61	6.22	5.65	6.27	3.59	6.31	4.31	3.23	
November.....	3.11	1.29	5.96	3.31	4.68	5.75	4.73	7.48	2.72	2.22	
December.....	2.21	2.48	2.83	1.26	3.38	1.78	7.79	4.22	2.06	3.26	
TOTALS .....	37.86	34.76	61.91	38.42	43.84	48.73	51.66	59.46	41.83	43.45	46.19

C C C

1873 A new gauge 5 in diameter 4 ft above ground  
was used from Oct<sup>r</sup>  
1879 No return



RAINFALL AT *Oldham Waterhouses*

Lat..... Lon..... County of... *Lancashire*  
..... Rain Gauge, by..... Observer *M S & L R*

Diameter .....	9											
Height .....	3 6											
Altitude .....	345											
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	3.25	7.22	4.12	3.23	4.99	4.27	2.00	5.16	5.02	1.74	3.500	
February.....	-.95	3.31	3.83	.42	1.99	.98	4.19	4.33	1.23	3.34	2.457	
March .....	2.02	1.26	3.22	2.96	4.10	.48	4.34	2.43	2.62	2.06	2.549	
April.....	1.80	4.39	2.91	.66	1.29	1.26	2.59	1.82	2.05	1.46	2.023	
May .....	1.13	2.13	2.62	2.44	1.90	1.80	1.29	3.75	3.41	1.56	2.203	
June.....	1.47	4.72	6.54	3.29	1.29	3.78	3.28	1.87	3.28	4.93	3.445	
July .....	2.00	4.32	7.27	4.91	1.69	4.42	3.08	5.44	.54	5.24	3.891	
August .....	2.24	1.71	3.21	4.88	4.39	2.87	3.60	4.73	5.78	6.94	4.035	
September.....	2.26	4.93	6.57	3.59	4.60	5.04	3.37	3.25	6.07	3.02	4.270	
October.....	11.33	4.75	4.58	6.04	4.24	4.34	2.41	4.25	3.85	3.05	4.884	
November.....	3.05	1.57	4.46	3.25	4.42	4.17	3.38	6.42	1.68	1.75	3.415	
December.....	2.14	2.60	2.16	.97	3.07	1.53	5.28	3.95	2.24	1.72	2.566	
TOTALS .....	33.64	36.91	51.49	36.64	37.97	34.94	38.81	47.40	37.77	36.81	39.238	

C C C



RAINFALL AT *Manchester Ardwick*

Lat.....

Lon.....

County of *Lancashire*

Rain Gauge, by.....

Observer

*J. Casartelli Esq.*

Diameter .....	8										
Height .....	3										
Altitude .....	154 <sup>?</sup>	149 <sup>π</sup>	154	140							
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.57	1.30	3.99	3.46	3.64	4.07	2.02	4.91	3.76	1.64	3.236
February.....	-.92	2.95	2.21	.49	1.55	.66	3.84	5.58	.88	2.84	2.192
March .....	1.98	1.58	3.83	2.57	3.53	.76	3.86	2.59	1.87	1.89	2.446
April.....	2.15	3.69	3.44	.68	1.20	.54	3.06	1.85	1.70	1.97	2.028
May .....	.99	2.32	3.36	2.59	1.73	1.94	1.22	2.99	3.43	1.73	2.230
June.....	1.87	2.96	5.54	2.42	1.20	4.17	3.51	2.57	2.71	4.66	3.161
July .....	1.40	3.78	7.15	5.53	2.36	4.72	2.89	4.97	1.28	4.01	3.809
August.....	1.71	1.75	3.59	4.54	3.50	4.33	3.98	4.57	5.64	5.62	3.923
September.....	2.89	4.54	7.13	2.38	4.04	4.33	2.97	2.79	3.48	3.13	3.768
October.....	8.48	4.69	4.76	4.32	4.30	4.74	2.66	3.77	3.93	2.67	4.432
November.....	2.35	1.58	3.72	2.53	5.00	4.09	3.00	4.14	2.04	1.27	2.972
December.....	2.23	2.50	2.51	.78	3.28	.94	4.48	4.24	2.86	1.46	2.528
TOTALS .....	30.54	33.64	57.23	32.29	35.33	35.29	37.49	44.97	33.58	32.89	36.725

1879 House 30 ft high 60 ft S.E.



# RAINFALL AT Ashton Knott Hill.

70

Lat. ....

Lon. ....

County of

Lancashire

Rain Gauge, by

Observer

J. Neal Esq.

Diameter. ....												
Height. ....												
Altitude. ....												
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January. ....	2.60	1.00	3.30	3.00	.20	3.00	1.90	5.50	3.50	1.50	2.550	
February. ....	1.00	2.40	2.40	.60	1.50	.90	4.40	4.40	1.40	2.40	2.140	
March. ....	2.00	1.00	6.40	1.90	4.60	.30	3.60	2.10	2.40	1.60	2.590	
April. ....	1.70	3.20	3.60	.10	1.10	1.00	1.80	1.70	1.20	1.10	1.650	
May. ....	1.00	2.20	2.60	1.80	1.90	1.60	.60	2.80	2.60	2.10	1.920	
June. ....	1.10	3.80	5.60	2.30	.30	2.40	1.40	2.10	3.00	4.10	2.610	
July. ....	2.00	5.00	5.80	3.90	1.20	3.60	2.50	3.80	.20	4.40	3.240	
August. ....	1.50	1.00	2.50	4.00	4.00	2.50	3.30	4.40	4.60	5.20	3.300	
September. ....	2.70	5.00	5.40	2.00	3.00	5.00	3.80	3.00	4.10	1.90	3.590	
October. ....	9.00	3.90	4.10	3.90	4.20	4.30	2.80	3.00	2.20	2.10	3.950	
November. ....	7.50	1.00	3.90	2.30	4.30	4.20	2.80	4.00	2.40	1.50	3.390	
December. ....	5.80	1.40	1.80	.40	3.40	1.10	5.60	2.60	1.70	2.30	2.610	
TOTALS. ....	37.90	30.90	47.40	26.20	29.70	29.90	34.50	39.40	29.30	30.20	33.540	



RAINFALL AT *Demton Reservoir*

Lat..... Lon..... County of *Lancashire*  
..... Rain Gauge, by..... Observer *J. J. Bateman Esq*

Diameter .....											
Height .....											
Altitude .....	<i>324</i>	.									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>2.58</i>	<i>7.01</i>	<i>3.55</i>	<i>2.73</i>	<i>3.28</i>	<i>3.58</i>	<i>1.74</i>	<i>4.97</i>	<i>3.89</i>	<i>1.34</i>	<i>2.867</i>
February.....	<i>.66</i>	<i>2.52</i>	<i>2.66</i>	<i>.39</i>	<i>1.58</i>	<i>.60</i>	<i>3.71</i>	<i>3.91</i>	<i>.95</i>	<i>2.78</i>	<i>1.976</i>
March.....	<i>2.03</i>	<i>1.64</i>	<i>2.76</i>	<i>2.27</i>	<i>3.15</i>	<i>.57</i>	<i>3.61</i>	<i>2.73</i>	<i>1.98</i>	<i>1.51</i>	<i>2.225</i>
April.....	<i>2.20</i>	<i>3.04</i>	<i>2.82</i>	<i>.35</i>	<i>.96</i>	<i>.94</i>	<i>2.73</i>	<i>1.86</i>	<i>1.67</i>	<i>1.59</i>	<i>1.816</i>
May.....	<i>.86</i>	<i>1.98</i>	<i>2.48</i>	<i>1.81</i>	<i>1.54</i>	<i>1.56</i>	<i>1.07</i>	<i>3.31</i>	<i>2.54</i>	<i>2.08</i>	<i>1.923</i>
June.....	<i>1.45</i>	<i>3.35</i>	<i>6.24</i>	<i>2.48</i>	<i>.65</i>	<i>3.14</i>	<i>3.28</i>	<i>2.75</i>	<i>2.74</i>	<i>4.95</i>	<i>3.103</i>
July.....	<i>1.13</i>	<i>3.75</i>	<i>8.54</i>	<i>4.33</i>	<i>1.16</i>	<i>4.05</i>	<i>3.08</i>	<i>5.13</i>	<i>.63</i>	<i>3.57</i>	<i>3.537</i>
August.....	<i>1.70</i>	<i>1.39</i>	<i>2.39</i>	<i>3.97</i>	<i>3.32</i>	<i>3.12</i>	<i>2.81</i>	<i>4.75</i>	<i>5.31</i>	<i>5.25</i>	<i>3.401</i>
September.....	<i>2.57</i>	<i>3.25</i>	<i>6.21</i>	<i>2.28</i>	<i>4.12</i>	<i>4.32</i>	<i>3.52</i>	<i>2.42</i>	<i>5.05</i>	<i>2.49</i>	<i>3.623</i>
October.....	<i>0.65</i>	<i>3.63</i>	<i>4.50</i>	<i>3.99</i>	<i>3.28</i>	<i>4.32</i>	<i>2.68</i>	<i>3.77</i>	<i>3.42</i>	<i>2.48</i>	<i>4.072</i>
November.....	<i>2.19</i>	<i>1.34</i>	<i>3.37</i>	<i>1.88</i>	<i>4.80</i>	<i>3.99</i>	<i>3.21</i>	<i>5.11</i>	<i>2.28</i>	<i>1.31</i>	<i>2.948</i>
December.....	<i>2.06</i>	<i>2.26</i>	<i>2.66</i>	<i>.82</i>	<i>2.63</i>	<i>1.22</i>	<i>3.88</i>	<i>2.93</i>	<i>2.18</i>	<i>2.20</i>	<i>2.284</i>
TOTALS .....	<i>28.08</i>	<i>29.16</i>	<i>48.18</i>	<i>27.30</i>	<i>30.47</i>	<i>31.41</i>	<i>35.32</i>	<i>43.64</i>	<i>32.64</i>	<i>31.55</i>	<i>33.775</i>



70

RAINFALL AT Manchester Prestwich

Lat. .... Lon. .... County of Lancashire

Rain Gauge, by .... Observer The Met. Council

Diameter . . .									8		
Height . . .									1		
Altitude . . .									295		
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .									4.17	1.81	
February . . .									1.22	3.19	
March . . . . .									1.67	1.81	
April . . . . .									1.90	2.57	
May . . . . .									3.78	1.98	
June . . . . .									3.16	4.72	
July . . . . .									.79	4.59	
August . . .									5.43	5.69	
September .									4.78	2.65	
October . . .									3.81	2.80	
November .									2.45	1.40	
December .									2.97	2.06	
TOTALS .									36.13	35.27	



RAINFALL AT *Prestwich Reservoir*

Lat..... Lon..... County of *Lancashire*  
..... Rain Gauge, by..... Observer *J. F. Bateman Esq.*

Diameter.....											
Height .....											
Altitude.....						<i>347</i>					
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				<i>4.10</i>		<i>4.62</i>	<i>2.01</i>	<i>5.76</i>	<i>3.78</i>	<i>1.36</i>	
February.....				<i>.55</i>		<i>.76</i>	<i>4.11</i>	<i>4.30</i>	<i>1.43</i>	<i>3.15</i>	
March.....				<i>2.70</i>		<i>.71</i>	<i>3.93</i>	<i>2.60</i>	<i>1.96</i>	<i>1.69</i>	
April.....				<i>.45</i>		<i>.95</i>	<i>3.06</i>	<i>1.86</i>	<i>1.89</i>	<i>2.11</i>	
May .....				<i>2.24</i>		<i>2.19</i>	<i>1.14</i>	<i>3.09</i>	<i>3.41</i>	<i>1.93</i>	
June.....				<i>2.36</i>		<i>4.40</i>	<i>3.34</i>	<i>1.98</i>	<i>3.27</i>	<i>4.63</i>	
July .....				<i>4.61</i>		<i>5.63</i>	<i>3.58</i>	<i>6.15</i>	<i>.84</i>	<i>4.58</i>	
August.....				<i>4.48</i>		<i>4.97</i>	<i>3.80</i>	<i>4.66</i>	<i>5.00</i>	<i>5.38</i>	
September.....				<i>2.53</i>		<i>5.50</i>	<i>3.36</i>	<i>2.45</i>	<i>4.96</i>	<i>2.95</i>	
October.....				<i>5.56</i>		<i>4.78</i>	<i>3.09</i>	<i>4.57</i>	<i>3.81</i>	<i>2.56</i>	
November.....				<i>2.64</i>		<i>4.43</i>	<i>3.30</i>	<i>6.58</i>	<i>2.25</i>	<i>1.30</i>	
December.....				<i>.83</i>		<i>1.16</i>	<i>5.48</i>	<i>3.39</i>	<i>2.76</i>	<i>2.68</i>	
TOTALS .....				<i>33.05</i>	<i>36.94</i>	<i>40.10</i>	<i>40.20</i>	<i>47.39</i>	<i>35.36</i>	<i>34.32</i>	

*1874 moreply*



# RAINFALL AT Shore Top Outwood

Lat.....

Lon.....

County of... Lancashire..

Rain Gauge, by.....

Observer W Horrocks Esq.

Diameter .....	/	.	.								
Height .....	/	.	.								
Altitude .....	295	.	.								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.61	7.40	4.70	4.45	3.73						
February.....	7.71	3.30	4.60	.60	1.47						
March.....	3.56	1.70	3.55	3.14	2.55						
April.....	2.42	4.60	3.35	.31	2.18						
May.....	1.50	1.85	2.42	1.90	.23						
June.....	2.50	3.65	6.48	3.44	1.38						
July.....	95	4.90	5.50	4.92	2.45						
August.....	2.45	1.50	4.01	4.15	5.90						
September.....	2.95	4.40	6.50	2.36	3.39						
October.....	9 47	5.20	4.28	5.45	4.56						
November.....	3.48	1.40	3.79	2.73	5.74						
December.....	2.40	3.00	3.48	1.10	4.02						
TOTALS .....	36.00	36.90	52.75	34.53	37.60						

1870 Feb 4 From 1871 The returns have been made by H. Bridson Esq  
 1873 G: on grass about 150 yds S of cottage



RAINFALL AT *Oldham Gas Works*

Lat.....

Lon.....

County of... *Lancashire*...

..... Rain Gauge, by.....

Observer

*J. Taylor Esq.*

Diameter.....	<i>.9</i>				<i>.5</i>					<i>5</i>	
Height.....	<i>6</i>				<i>4</i>					<i>5</i>	
Altitude.....	<i>600</i>										
YEAR.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>3.37</i>	<i>1.58</i>	<i>4.38</i>	<i>3.65</i>	<i>4.11</i>	<i>5.10</i>	<i>2.42</i>	<i>5.41</i>	<i>4.41</i>	<i>1.46</i>	
February.....	<i>7.04</i>	<i>2.75</i>	<i>4.24</i>	<i>.65</i>	<i>1.80</i>	<i>1.07</i>	<i>4.18</i>	<i>4.05</i>	<i>1.59</i>	<i>3.16</i>	
March.....	<i>1.94</i>	<i>7.28</i>	<i>3.07</i>	<i>2.21</i>	<i>3.99</i>	<i>.72</i>	<i>4.22</i>	<i>3.18</i>	<i>2.05</i>	<i>1.95</i>	
April.....	<i>2.12</i>	<i>3.89</i>	<i>3.01</i>	<i>.53</i>	<i>1.31</i>	<i>1.19</i>	<i>2.94</i>	<i>2.04</i>	<i>1.85</i>	<i>1.35</i>	
May.....	<i>1.25</i>	<i>1.85</i>	<i>2.36</i>	<i>2.24</i>	<i>1.99</i>	<i>2.31</i>	<i>1.35</i>	<i>3.35</i>	<i>3.48</i>	<i>2.29</i>	
June.....	<i>1.74</i>	<i>2.96</i>	<i>6.20</i>	<i>2.66</i>	<i>1.28</i>	<i>3.84</i>	<i>3.40</i>	<i>2.94</i>	<i>3.42</i>	<i>4.80</i>	
July.....	<i>1.72</i>	<i>3.88</i>	<i>5.53</i>	<i>4.86</i>	<i>1.97</i>	<i>4.54</i>	<i>3.70</i>	<i>5.57</i>	<i>.48</i>	<i>5.33</i>	
August.....	<i>2.67</i>	<i>1.71</i>	<i>3.76</i>	<i>4.68</i>	<i>5.21</i>	<i>3.35</i>	<i>3.79</i>	<i>4.47</i>	<i>5.41</i>	<i>6.80</i>	
September.....	<i>3.21</i>	<i>4.03</i>	<i>5.99</i>	<i>2.68</i>	<i>4.58</i>	<i>5.78</i>	<i>4.50</i>	<i>2.96</i>	<i>5.24</i>	<i>3.11</i>	
October.....	<i>8.88</i>	<i>4.50</i>	<i>4.98</i>	<i>5.83</i>	<i>4.47</i>	<i>4.27</i>	<i>2.75</i>	<i>4.46</i>	<i>3.22</i>	<i>3.02</i>	
November.....	<i>2.70</i>	<i>1.31</i>	<i>4.84</i>	<i>2.74</i>	<i>4.44</i>	<i>4.50</i>	<i>3.53</i>	<i>6.35</i>	<i>2.67</i>	<i>1.72</i>	
December.....	<i>1.85</i>	<i>2.37</i>	<i>2.21</i>	<i>.96</i>	<i>2.86</i>	<i>1.32</i>	<i>5.67</i>	<i>3.46</i>	<i>1.97</i>	<i>3.07</i>	
TOTALS.....	<i>32.49</i>	<i>32.11</i>	<i>50.57</i>	<i>33.59</i>	<i>38.01</i>	<i>37.99</i>	<i>42.45</i>	<i>48.24</i>	<i>35.79</i>	<i>38.06</i>	<i>38.930</i>

1873 A new 5 in gauge was started in October and the observations for the last three months were made by it.

1879 No return



RAINFALL AT *Oldham Royton*

Lat.....

Lon.....

County of.....

*Lancashire*

.....Rain Gauge, by.....

Observer

*W. B. Kay Bentley*

Diameter .....	5										
Height .....	1										
Altitude .....	$\pi$ 544										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	4.06	1.60	5.17	4.23	4.26	4.25					
February.....	7.35	3.57	3.46	.82	1.85	1.37					
March .....	1.97	1.94	3.38	3.07	4.13	.99#					
April.....	2.09	4.35	3.61	.54	1.36						
May .....	1.46	1.79	2.42	2.70	2.26						
June.....	1.53	3.45	6.88	2.16	1.71						
July .....	1.39	4.68	4.89	5.24	2.35						
August.....	2.99	1.94	3.13	4.82	5.64						
September.....	3.27	<sup>+</sup> 4.98	6.45	2.84	4.59						
October.....	<sup>+</sup> 10.72	4.81	4.90	6.01	4.86						
November.....	3.33	7.46	4.75	2.98	5.14						
December.....	2.34	2.68	2.60	.99	4.74						
TOTALS .....	36.50	37.25	57.64	36.40	42.89						

Gauge moved to Blackpool



# RAINFALL AT Ormskirk Aughton Springs

70

Lat. ....

Lon. ....

County of

Lancashire

Rain Gauge, by

Observer

George E.

Diameter. ....	5										
Height. ....	6										
Altitude. ....	175?										
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....	1.79	1.09	4.21	3.24	2.30	3.34	1.08	5.36	3.15	2.06	
February. ....	.52	1.91	2.95	.61	1.29	1.48	2.85	3.59	1.20	2.38	
March. ....	1.60	.66	1.99	2.85	2.72	.69	2.57	1.91	1.21	1.02	
April. ....	1.27	1.86	2.19	.59	1.33	.54	2.29	2.88	1.22	2.04	
May. ....	1.08	1.29	2.32	1.35	1.54	1.93	.57	2.50	3.49	1.92	
June. ....	1.27	1.70	5.63	1.24	.89	2.54	2.33	1.10	2.79	3.53	
July. ....	.48	3.55	5.49	3.67	1.80	4.88	2.76	5.26	.12	4.43	
August. ....	2.04	1.23	2.12	3.34	2.90	1.50	3.00	4.53	4.36	5.74	
September. ....	2.19	3.50	5.47	1.84	2.56	4.45	4.49	3.29	3.82	2.77	
October. ....	5.86	4.62	4.83	3.01	3.66	4.84	2.40	4.35	3.80	2.32	
November. ....	2.55	1.54	2.36	1.32	3.57	3.02	4.22	5.34	2.40	.50	
December. ....	1.90	1.71	2.84	.96	2.61	1.00	4.09	3.24	2.49	2.15	
TOTALS ....	22.55	24.66	42.40	24.02	27.11	30.21	32.59	43.35	30.05	30.86	30.780

Open on all sides

Gauge moved in 1873 or 74 from a position 8 or 10 yards W of the NE corner of the house on account of young plantations about 2 ft. high



RAINFALL AT *Wigan Beech Hill*

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *S. A. Oliver Esq.*

Diameter ....						.5					
Height ....						.6					
Altitude ....						200			190		
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....						4.78	1.56	5.41	3.03	1.42	
February. . .						.94	3.45	4.34	1.55	3.05	
March. ....						.67	2.68	4.13	1.42	1.26	
April .....						.76	2.33	2.08	1.47	2.27	
May .....						1.81	.61	2.85	3.48	1.71	
June .....						3.27	2.96	2.01	3.06	4.76	
July .....						5.57	2.93	6.24	1.47	4.27	
August ....						2.55	2.95	5.15	5.95	5.64	
September ..					4.03	4.47	5.27	2.81	5.38	2.79	
October ....					5.51	4.91	2.81	5.32	4.02	2.04	
November ..					4.62	4.04	4.73	6.33	1.97	1.04	
December ..					2.64	1.39	5.15	3.69	2.37	2.20	
TOTALS ..						35.16	37.43	60.36	35.17	32.45	

1879 Shrubs 9 ft high 30 ft E.N.E.

House 25 " " 78 " N.N.W.

All saints church Wigan 1½ mile S.S.E.



RAINFALL AT *Nigan Water Works*

Lat..... Lon..... County of *Lancashire*  
..... Rain Gauge, by..... Observer *J. L. Hunter Esq. C.E.*

Diameter .....	6			8							
Height .....	1	6	1.0	9	1.6						
Altitude .....	225		228	225	225						
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.17	7.28	5.09	4.24	4.23	4.05	1.58	5.77	3.30	1.54	3.425
February.....	1.23	3.00	3.92	.75	1.66	.84	3.81	4.28	1.67	3.36	2.452
March .....	2.56	1.29	4.03	3.88	3.30	.78	2.87	3.89	1.68	1.39	2.567
April.....	1.61	2.95	2.92	.90	1.68	.89	2.66	2.39	1.64	2.18	1.982
May .....	1.57	2.11	3.30	1.87	1.36	2.20	.86	3.17	4.44	1.79	2.267
June.....	1.89	3.26	5.92	2.05	1.13	3.58	3.24	1.91	3.46	5.32	3.176
July .....	.84	5.10	5.83	3.16	3.17	5.86	3.47	6.61	1.79	4.37	4.020
August.....	2.07	1.68	4.16	4.65	4.91	2.50	3.65	5.46	6.28	6.64	4.200
September.....	2.84	3.93	6.69	2.60	4.33	5.01	5.75	2.81	5.09	3.02	4.207
October.....	<sup>+</sup> 9.95	<sup>+</sup> 7.35	5.01	5.93	6.60	6.22	2.69	4.97	4.49	2.46	5.567
November.....	3.55	1.62	3.77	2.91	5.67	4.21	4.23	6.00	2.50	.94	3.540
December.....	3.07	2.76	4.20	1.34	3.22	1.56	5.56	3.90	2.32	2.35	3.028
TOTALS .....	34.35	36.33	54.84	34.28	41.26	37.70	40.37	51.16	38.66	35.36	40.431

1871 *by quite exposed*



RAINFALL AT *Bolton le Moors The Folds*

Lat..... Lon..... County of *Lancashire*  
 Rain Gauge, by..... Observer *Henry Hugh Watson*

Diameter .....	.10	.										
Height .....	3.6	.										
Altitude .....	283.	.					286		.	.		
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	3.95	1.70	5.35	5.07	4.86	5.60	2.57	6.89	5.33	1.91	4.323	
February.....	1.41	4.59	4.60	1.29	1.88	1.08	4.62	6.19	2.04	3.88	3.158	
March.....	3.31	2.09	4.15	3.92	4.66	.87	4.32	3.58	2.48	2.05	3.143	
April.....	2.46	3.78	3.08	.95	1.46	1.11	2.80	2.24	2.38	1.66	2.192	
May .....	1.91	1.86	3.03	2.29	1.96	2.39	.71	4.07	5.18	2.15	2.555	
June.....	4.01	3.57	6.56	2.47	1.63	5.01	3.08	2.22	3.48	6.71	3.874	
July .....	7.13	4.82	4.34	7.03	3.46	5.67	3.95	7.17	2.04	5.71	4.532	
August.....	2.51	1.71	3.79	5.21	6.77	3.00	4.55	5.91	5.70	7.42	4.657	
September.....	3.78	5.30	8.42	3.18	4.20	5.92	4.99	3.32	6.30	3.31	4.872	
October.....	<sup>+</sup> 11.54	<sup>+</sup> 6.11	5.32	6.43	5.97	6.13	3.24	5.75	4.48	3.36	5.833	
November.....	3.89	1.76	4.80	3.47	7.38	5.57	4.49	7.89	3.29	1.45	4.399	
December.....	3.57	3.64	4.15	1.38	4.44	1.59	6.78	5.10	3.09	3.21	3.695	
TOTALS .....	43.47	40.93	57.59	42.69	48.67	43.94	46.10	60.33	45.79	42.82	47.233	

1871 Was 6.2 inches below the average of the previous  
 40 years



RAINFALL AT *Botton to Moors Chorley Street*

70

Lat..... Lon..... County of *Lancashire*  
..... Rain Gauge, by..... Observer *J. Pigby Esq*

Diameter.....				□ 6							
Height .....				6. 9							
Altitude.....				331							
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				4.91	4.58						
February.....				1.31	2.11						
March.....				3.59	5.04						
April.....				1.39	1.42						
May .....				2.46	2.27						
June.....				2.89	1.94						
July .....				6.69	3.72						
August .....				5.22	7.27						
September.....				2.84	4.60						
October.....				5.71	6.52						
November.....				2.94	8.60						
December.....				1.68	4.69						
TOTALS .....				41.63	52.76						



RAINFALL AT *Bolton Vale Bank*

Lat.....

Lon.....

County of...

*Lancashire*

Rain Gauge, by.....

Observer

*J. Watkins Esq.*

Diameter .....	<i>5</i>										
Height .....	<i>3</i>										
Altitude .....	<i>300</i>										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>3.86</i>	<i>1.72</i>									
February.....	<i>1.24</i>	<i>4.01</i>									
March.....	<i>3.13</i>	<i>3.34</i>									
April.....	<i>2.46</i>	<i>3.92</i>									
May .....	<i>1.69</i>										
June.....	<i>4.11</i>										
July .....	<i>-.97</i>										
August.....	<i>2.42</i>										
September.....	<i>3.60</i>										
October.....	<i>11.16</i>										
November.....	<i>3.83</i>										
December.....	<i>3.04</i>										
TOTALS .....	<i>41.51</i>										

*C C**1871 April 30 g. removed to Hurst Bank*



RAINFALL AT *Bolton Churchwright Street The Freehold*

Lat..... Lon..... County of..... *Lancashire*.....

..... Rain Gauge, by..... Observer *Wm. Musgrave Esq*.....

Diameter .....	8	.										
Height .....	6	6	.									
Altitude .....	352	$\frac{\pi}{\pi}$	.									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	4.23	1.86	5.40	5.18	3.97	5.40	2.89	7.17	4.69	2.11	4.290	
February.....	1.42	4.49	4.53	1.24	1.83	1.14	4.79	6.06	2.05	3.72	3.127	
March .....	3.86	2.41	4.25	4.32	4.77	.93	4.30	3.56	2.45	1.86	3.271	
April.....	2.80	4.05	2.91	1.02	1.34	1.17	2.95	2.24	2.46	2.52	2.346	
May .....	1.92	2.64	2.80	2.45	1.92	2.59	.98	3.93	5.20	2.18	2.661	
June.....	4.26	3.53	6.52	2.57	1.72	4.80	3.40	2.31	5.25	7.64	4.200	
July .....	7.14	5.36	4.53	6.97	3.40	5.90	4.03	7.72	2.04	5.51	4.660	
August.....	2.64	7.75	3.44	5.50	6.86	3.12	4.95	5.78	6.23	7.16	4.743	
September.....	3.86	5.59	8.77	3.05	4.22	6.14	5.42	3.45	5.69	3.95	5.014	
October.....	7.23	6.49	5.26	6.25	5.92	7.07	3.36	5.48	5.44	3.49	6.109	
November.....	3.72	1.90	4.49	3.48	7.35	6.07	4.38	7.87	2.89	1.41	4.356	
December.....	3.51	3.33	4.27	1.46	3.82	1.75	6.72	4.80	3.25	3.11	3.622	
TOTALS .....	45.69	43.40	57.17	43.49	47.12	46.08	48.17	60.37	47.64	44.66	48.379	

c c c







# RAINFALL AT *Bolton Heaton*

Lat.....

Lon.....

County of *Lancashire*

Rain Gauge, by.....

Observer

*J. Wrigley*  
*H. Bayliss*  
*Swindhurst*

Diameter .....	<i>10</i>	<i>6</i>									
Height .....	<i>0 0</i>	<i>1 1</i>	<i>3</i>								
Altitude .....	<i>500</i>										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>3.60</i>	<i>1.60</i>	<i>5.40</i>	<i>5.10</i>	<i>4.40</i>	<i>4.50</i>	<i>2.50</i>	<i>5.60</i>	<i>4.00</i>	<i>1.80</i>	<i>3.850</i>
February.....	<i>7.30</i>	<i>3.30</i>	<i>3.30</i>	<i>1.50</i>	<i>1.60</i>	<i>1.00</i>	<i>4.10</i>	<i>6.50</i>	<i>1.20</i>	<i>3.80</i>	<i>2.760</i>
March.....	<i>3.20</i>	<i>1.60</i>	<i>5.40</i>	<i>3.90</i>	<i>3.90</i>	<i>1.00</i>	<i>3.40</i>	<i>3.30</i>	<i>2.00</i>	<i>1.90</i>	<i>2.960</i>
April.....	<i>2.40</i>	<i>3.80</i>	<i>2.80</i>	<i>90</i>	<i>1.30</i>	<i>90</i>	<i>2.80</i>	<i>2.20</i>	<i>2.10</i>	<i>2.20</i>	<i>2.140</i>
May.....	<i>1.60</i>	<i>2.20</i>	<i>2.80</i>	<i>2.70</i>	<i>1.60</i>	<i>2.20</i>	<i>1.00</i>	<i>3.60</i>	<i>3.80</i>	<i>1.90</i>	<i>2.340</i>
June.....	<i>3.20</i>	<i>3.40</i>	<i>6.40</i>	<i>2.60</i>	<i>90</i>	<i>4.00</i>	<i>3.60</i>	<i>2.50</i>	<i>3.10</i>	<i>5.30</i>	<i>3.500</i>
July.....	<i>7.30</i>	<i>5.60</i>	<i>5.50</i>	<i>5.70</i>	<i>4.10</i>	<i>6.00</i>	<i>2.60</i>	<i>7.60</i>	<i>1.70</i>	<i>6.20</i>	<i>4.630</i>
August.....	<i>2.50</i>	<i>1.90</i>	<i>3.80</i>	<i>6.20</i>	<i>6.40</i>	<i>2.90</i>	<i>5.10</i>	<i>5.40</i>	<i>6.10</i>	<i>7.00</i>	<i>4.730</i>
September.....	<i>3.30</i>	<i>5.30</i>	<i>8.50</i>	<i>3.10</i>	<i>4.50</i>	<i>5.30</i>	<i>4.90</i>	<i>3.10</i>	<i>5.50</i>	<i>2.80</i>	<i>4.630</i>
October.....	<i>11.10</i>	<i>6.20</i>	<i>6.50</i>	<i>5.80</i>	<i>6.20</i>	<i>6.40</i>	<i>3.40</i>	<i>5.30</i>	<i>5.10</i>	<i>3.10</i>	<i>5.910</i>
November.....	<i>4.20</i>	<i>1.90</i>	<i>4.30</i>	<i>3.70</i>	<i>6.70</i>	<i>5.40</i>	<i>4.10</i>	<i>6.30</i>	<i>2.30</i>	<i>1.20</i>	<i>4.010</i>
December.....	<i>3.40</i>	<i>3.60</i>	<i>4.80</i>	<i>1.60</i>	<i>4.00</i>	<i>1.60</i>	<i>6.60</i>	<i>5.70</i>	<i>3.20</i>	<i>2.00</i>	<i>3.650</i>
TOTALS .....	<i>41.10</i>	<i>40.40</i>	<i>59.50</i>	<i>42.80</i>	<i>45.60</i>	<i>41.20</i>	<i>44.10</i>	<i>57.10</i>	<i>40.10</i>	<i>39.20</i>	<i>45.110</i>



RAINFALL AT *Bolton Heaton*

Lat.....

Lon.....

County of... *Lancashire*.....

.....Rain Gauge, by.....

Observer

*James Holdsworth Esq*

Diameter .....	<i>.10</i>										
Height .....	<i>3.6</i>										
Altitude .....	<i>497</i>										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>3.67</i>	<i>1.53</i>	<i>5.29</i>	<i>4.74</i>	<i>3.78</i>	<i>4.60</i>	<i>2.13</i>	<i>6.65</i>	<i>4.32</i>	<i>1.74</i>	<i>3.845</i>
February.....	<i>1.23</i>	<i>3.92</i>	<i>4.09</i>	<i>1.23</i>	<i>1.79</i>	<i>1.07</i>	<i>4.39</i>	<i>5.96</i>	<i>1.84</i>	<i>3.24</i>	<i>2.876</i>
March.....	<i>3.42</i>	<i>1.99</i>	<i>4.60</i>	<i>3.82</i>	<i>4.20</i>	<i>.77</i>	<i>3.57</i>	<i>3.86</i>	<i>2.43</i>	<i>1.73</i>	<i>3.039</i>
April.....	<i>2.28</i>	<i>3.81</i>	<i>2.52</i>	<i>1.16</i>	<i>1.25</i>	<i>.98</i>	<i>2.75</i>	<i>2.36</i>	<i>2.09</i>	<i>2.52</i>	<i>2.172</i>
May .....	<i>1.66</i>	<i>2.25</i>	<i>2.55</i>	<i>2.09</i>	<i>1.83</i>	<i>2.36</i>	<i>.99</i>	<i>3.98</i>	<i>5.75</i>	<i>2.30</i>	<i>2.576</i>
June.....	<i>2.94</i>	<i>3.48</i>	<i>6.44</i>	<i>2.79</i>	<i>1.73</i>	<i>4.59</i>	<i>4.54</i>	<i>2.35</i>	<i>3.64</i>	<i>6.51</i>	<i>3.901</i>
July .....	<i>1.95</i>	<i>5.42</i>	<i>6.32</i>	<i>5.60</i>	<i>3.96</i>	<i>6.34</i>	<i>3.43</i>	<i>7.95</i>	<i>1.76</i>	<i>5.88</i>	<i>4.761</i>
August.....	<i>2.42</i>	<i>1.90</i>	<i>3.93</i>	<i>5.75</i>	<i>7.08</i>	<i>3.13</i>	<i>5.01</i>	<i>5.92</i>	<i>6.93</i>	<i>7.06</i>	<i>4.913</i>
September.....	<i>3.46</i>	<i>6.01</i>	<i>8.48</i>	<i>3.03</i>	<i>5.28</i>	<i>6.57</i>	<i>5.80</i>	<i>3.22</i>	<i>6.02</i>	<i>3.32</i>	<i>5.119</i>
October.....	<i>10.93</i>	<i>5.77</i>	<i>5.81</i>	<i>6.14</i>	<i>5.80</i>	<i>6.31</i>	<i>3.26</i>	<i>5.49</i>	<i>4.61</i>	<i>3.29</i>	<i>5.741</i>
November.....	<i>4.08</i>	<i>1.87</i>	<i>4.17</i>	<i>3.22</i>	<i>7.05</i>	<i>5.45</i>	<i>4.66</i>	<i>7.77</i>	<i>2.78</i>	<i>1.22</i>	<i>4.227</i>
December.....	<i>3.59</i>	<i>3.67</i>	<i>4.35</i>	<i>1.58</i>	<i>4.01</i>	<i>1.69</i>	<i>6.45</i>	<i>4.87</i>	<i>3.39</i>	<i>2.99</i>	<i>3.659</i>
TOTALS .....	<i>40.63</i>	<i>41.62</i>	<i>58.35</i>	<i>41.15</i>	<i>47.76</i>	<i>43.86</i>	<i>46.98</i>	<i>60.38</i>	<i>45.56</i>	<i>41.80</i>	<i>46.829</i>

C C C



# RAINFALL AT *Bolton Hurst Bank Fleton*

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer

*J. Watkins Esq.*

Diameter .....						5					
Height .....		3	3	1							
Altitude .....		440	442	$\pi$							
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....			5.00	4.43	4.15	4.38	2.17	6.14	3.67	1.74	
February .....			3.91	1.21	1.63	1.03	4.17	5.36	2.16	3.74	
March .....			4.36	3.78	3.53	.71	3.10	3.47	1.80	2.02	
April.....			2.31	1.04	1.18	.91	2.82	2.30	1.88	2.70	
May .....	#	2.13	2.35	2.17	1.80	2.19	.88	3.56	5.86	1.90	
June.....		3.36	5.95	2.73	1.72	4.40	4.35	2.46	3.62	6.54	
July .....		5.17	5.83	5.29	4.03	6.28	3.66	7.61	1.86	5.58	
August.....		1.85	4.46	4.94	6.75	2.86	4.99	5.94	7.49	6.61	
September.....		5.89	7.37	3.10	4.36	5.93	5.72	3.18	5.52	3.06	
October.....		5.79	5.66	5.84	5.67	6.34	3.22	5.14	4.85	2.99	
November.....		1.82	4.09	3.38	6.47	5.27	4.60	7.02	3.37	1.34	
December.....		3.31	4.66	1.42	3.84	1.39	7.13	4.43	3.29	2.56	
TOTALS .....			55.95	39.33	45.13	41.69	46.81	56.61	45.37	40.78	

C C



RAINFALL AT *Bolton Moss Bank*

Lat..... Lon..... County of *Lancashire*  
..... Rain Gauge, by..... Observer .....

Diameter .....	8	8									
Height .....	1.2	1.2									
Altitude .....	570	570.0		570 <sup>↑</sup>							
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	4.16	7.95	5.00	5.54	5.54	5.57	2.48	7.77	5.39	2.18	4.558
February.....	1.51	4.71	4.79	1.63	1.95	1.41	5.16	7.21	2.24	4.16	3.477
March.....	3.63	2.35	5.17	4.32	5.58	.99	4.53	4.23	2.91	2.30	3.601
April.....	2.85	4.25	2.74	1.32	1.42	1.19	2.97	2.62	2.32	2.65	2.433
May .....	1.93	2.34	3.00	2.64	2.26	2.97	1.00	4.08	5.55	2.58	2.835
June.....	4.16	4.05	7.03	2.74	2.10	4.75	3.63	2.69	3.39	7.34	4.188
July .....	1.38	6.73 <sup>+</sup>	5.27	7.26	4.01	6.64	4.37	8.72	1.18	6.62	5.218
August.....	2.90	2.06	4.09	6.40	7.91	3.29	5.08	6.29	5.85	7.83	5.170
September.....	3.92	5.85	9.89	3.22	5.28	6.46	5.66	3.41	6.98	3.83	5.450
October.....	12.74	6.58	6.19	7.11	6.63	6.65	3.19	6.10	5.60	4.08	6.487
November.....	4.42	2.02	4.77	3.93	7.97	6.00	4.98	8.75	3.27	1.37	4.748
December.....	4.15	4.26	4.74	1.83	4.87	2.12	7.05	6.21	1.16	2.41	3.880
TOTALS .....	47.75	47.15	62.68	47.94	55.52	48.04	50.10	68.08	45.84	47.35	52.045

1870 Return imperfect

St Peters Church ½ mile S.







RAINFALL AT *Bolton Halliwell New Road*

Lat.....

Lon.....

County of...

*Lancashire*

.....Rain Gauge, by.....

Observer

*Wm. Lysor Esq.*

Diameter .....	5	5									
Height .....	1	1	4								
Altitude .....	520	549	0								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....		7.90	5.84	5.23	5.49	5.58	2.39	7.88			
February.....	1.56	4.56	4.80	1.46	1.93	1.39	5.05	7.24			
March.....	3.83	2.24	4.75	4.43	5.47	1.00	4.55	4.20			
April.....		4.36	2.89	1.37	1.48	1.15	3.07	2.38			
May .....		2.29	3.09	2.36	2.19	2.70	.88	4.00			
June.....		3.82	6.36	2.64	1.99	4.67	3.25	2.37			
July .....		6.13	4.96	7.82	4.03	6.25	4.13	8.06			
August.....		1.97	3.74	5.90	8.06	3.37	4.85	6.04			
September.....		6.78	9.88	3.12	4.67	6.22	6.60	3.57			
October.....		6.56	6.00	7.01	6.45	6.42	3.37	5.95			
November.....		2.16	4.73	3.96	8.25	5.89	4.91	8.62			
December.....		4.24	5.03	1.74	4.22	1.96	6.76	5.09			
TOTALS .....		47.01	62.07	47.04	54.23	46.60	49.81	65.40			



# RAINFALL AT Bolton Sharples

70

Lat. ....

Lon. ....

County of Lancashire

Rain Gauge, by

Observer J. Wackereth

Diameter . . .									.5		
Height . . .											
Altitude . . .									481 <sup>↑</sup>		
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .											
February . .											
March . . . .											
April . . . . .											
May . . . . .											
June . . . . .											
July . . . . .											
August . . . .											
September . .											
October . . . .											
November . .									#		
December . .									3.11		
TOTALS . .											

1878 Gauge moved from Eccles in Nov<sup>r</sup>



# RAINFALL AT Bolton-le-Moors Belmont R<sup>o</sup>

Lat. ....

Lon. ....

County of

Lancaster

Rain Gauge, by

Observer

Rev<sup>d</sup> J. Mackereith

Diameter. ....										.5	
Height. ....										1.10	
Altitude. ....										481	
Year. ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....										2.34	
February. ....										4.41	
March. ....										2.69	
April. ....										2.37	
May. ....										2.63	
June. ....										8.51	
July. ....										8.45	
August. ....										10.63	
September. ....										3.95	
October. ....										4.95	
November. ....										1.60	
December. ....										4.24	
TOTALS. ....										56.77	

1879 Corner of House 24' 0" high 36" E  
 Top of Observatory dome 12' 0" " 26' S.S.E  
 Boundary wall 6' 6" " 22' N.



# RAINFALL AT *Rivington*

Lat.....

Lon.....

County of *Lancashire*

Mean of 10 Rain Gauges by..... Observer *G. F. Dacon Esq C.E.*

Diameter .....											
Height .....			1								
Altitude .....			700 <sup>ft</sup>								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....			6.53	4.67	4.88	4.76	1.97	6.00			
February .....			3.99	.72	1.91	.93	3.74	5.15			
March .....			6.49	3.70	4.58	1.03	3.34	3.88			
April.....			3.59	.62	2.43	1.02	3.04	2.61			
May .....			3.52	3.12	1.94	3.04	.83	3.52			
June.....			6.61	2.83	.95	3.93	3.57	2.86			
July .....			5.93	3.88	3.39	6.48	3.57	7.44			
August.....			5.21	6.53	6.61	3.40	5.69	6.66			
September.....			6.94	3.19	4.64	5.29	4.48	4.34			
October.....			6.07	6.63	6.56	5.69	2.84	5.43			
November.....			5.36	4.06	5.70	4.07	3.93	5.87			
December.....			4.32	2.29	2.85	1.70	5.91	5.27			
TOTALS .....			64.56	42.24	46.44	41.34	42.91	59.03			

Mean of several gauges 10 altogether



# RAINFALL AT *Rivington, Lower Knoll*

70

Lat. *53° 37' N*

Lon. *2° 32' W* County of *Lancashire*

Rain Gauge, by

Observer

*Liverpool Corporation*  
*(per J. Barry Esq.)*

Diameter. . . . .											
Height. . . . .											
Altitude. . . . .							<i>742</i>				
Year . . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. . . . .											
February. . . . .											
March. . . . .											
April. . . . .											
May. . . . .											
June. . . . .											
July. . . . .											
August. . . . .											
September. . . . .											
October. . . . .											
November. . . . .											
December. . . . .											
TOTALS. . . . .							<i>41.35</i>	<i>57.50</i>	<i>43.75</i>	<i>41.15</i>	



RAINFALL AT *Milnrow, Piethorne, Kitchcliffe*

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer.....

*J. Taylor Esq.*

Diameter .....	<input checked="" type="checkbox"/> 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	4.45	2.05	5.08	3.53	1.37	
February.....	1.58	2.80	4.34	.82	1.61	.85	3.67	2.98	1.38	3.43	
March.....	2.31	1.90	2.94	1.89	3.39	.60	3.59	2.17	1.58	2.01	
April.....	1.95	2.84	3.40	.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.....	<sup>+</sup> 0.81	<sup>+</sup> 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	37.671
										35.22	

C C C

1879 no return

1872 Gauge moved

1879. These figures are identical with those for New Year's Bridge (Yorks. W.R.). Oldham Table (VI. 22) gives 35.22 for this year.



# RAINFALL AT Rochdale

Lat. ....

Lon. ....

County of Lancashire

Rain Gauge, by

Observer J. M. Wilson M.D.

Diameter....								8			
Height ....								6			
Altitude ....								469			
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....									4.84		
February...									1.57		
March.....									2.93		
April .....									1.80		
May .....									4.65		
June .....									2.80		
July.....								# 7.77	58		
August ...								4.65	6.47		
September ..								4.95	5.26		
October ...								6.46	4.24		
November ..								7.15	3.39		
December ..								4.74	3.05		
TOTALS ..									41.58		

1879 observer left

and

e



# RAINFALL AT Rochdale Drake Street

70

Lat..... Lon..... County of Lancashire  
 ..... Rain Gauge, by..... Observer W. L. H. Hayle

Diameter.....	4								.5		
Height.....	3.7										
Altitude.....	473										
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	4.32	1.05	4.43	4.09	3.26	4.87	2.11	6.65	4.02	1.74	3.654
February.....	1.50	4.28	3.45	.86	1.52	1.32	4.90	5.60	1.81	2.90	2.814
March.....	2.57	1.66	2.44	2.99	2.91	.72	4.66	3.09	1.99	1.69	2.472
April.....	2.13	3.55	2.74	.49	1.28	1.16	2.58	2.19	1.80	1.66	1.958
May.....	1.63	.95	2.15	2.21	1.47	1.87	.96	3.54	4.40	1.76	2.094
June.....	1.32	2.57	5.73	1.89	1.23	3.94	3.52	2.30	2.56	5.68	3.074
July.....	.23	4.05	3.57	4.62	2.39	5.03	3.57	5.98	.55	5.48	3.547
August.....	2.65	1.14	3.69	4.02	5.72	3.68	4.78	4.77	5.93	5.26	4.164
September.....	2.92	3.88	6.16	2.72	3.37	5.55	3.80	3.83	4.49	2.80	3.952
October.....	9.96	4.34	4.11	4.96	5.45	4.11	3.40	7.12	3.76	2.44	4.965
November.....	3.42	1.10	4.00	2.87	4.87	5.43	3.24	8.38	3.01	1.55	3.787
December.....	2.72	2.34	2.67	.69	3.97	1.47	6.62	4.40	2.38	2.81	3.007
TOTALS.....	35.37	30.91	45.14	32.41	37.44	39.15	44.14	57.85	36.70	35.77	39.488

1876 Wall ENE-N of gauge about 60° on other sides houses at angles of from 15° to 32°. The yard in which the gauge stands is irregular in shape about 50 yds by 20 yds

St. Chads  $\frac{1}{4}$  mile N.W.



# RAINFALL AT

*Rochdale Park Observatory*

79

Lat. ....

Lon. ....

County of

*Lancashire*

Rain Gauge, by

Supplied by  
Observer

*J.R. Astworth Esq*

Diameter. ....									8		
Height. ....									6		
Altitude. ....									472		
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....									4.84	1.98	
February. ....									1.57	3.23	
March. ....									2.93	2.08	
April. ....									1.80	1.82	
May. ....									4.65	1.99	
June. ....									2.80	6.19	
July. ....									.58	6.19	
August. ....									6.47	6.05	
September. ....									5.26	3.33	
October. ....									4.24	3.07	
November. ....									3.39	1.86	
December. ....									3.05	3.74	
TOTALS ....									41.58	41.53	



# RAINFALL AT

*Rochdale Fieldhead*

70

Lat. ....

Lon. ....

County of

*Lancashire*

Rain Gauge, by

Observer

*S. S. Platt Esq. & Co.*

Diameter. ....							8				
Height. ....							6 4				
Altitude. ....							486				
Year. ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....								6.41	4.06	1.77	
February. ....								4.88	1.79	2.88	
March. ....								3.41	2.37	1.83	
April. ....							# 2.69	2.09	2.30	1.87	
May. ....							1.03	3.19	4.64	2.03	
June. ....							3.43	2.17	2.62	5.80	
July. ....							3.09	5.65	.71	5.40	
August. ....							4.23	4.46	6.10	4.57	
September. ....							3.96	4.05	4.50	2.69	
October. ....							3.01	5.76	4.22	2.92	
November. ....							3.78	6.73	3.02	2.16	
December. ....							6.22	3.66	2.48	3.18	
TOTALS. ....								52.46	38.81	37.10	



# RAINFALL AT *Bury Gin Hall*

2866  
**70**

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer .....

*J. Rigby Esq*

Diameter ....							8				
Height ....							1				
Altitude ....							475	470			
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....							1.70	5.01	3.90	.50	
February ....							4.00	4.08	1.20	1.40	
March .....							4.40	3.05	2.00	1.20	
April .....							2.90	1.07	1.60	.80	
May .....							.90	3.40	3.70	1.10	
June .....							3.20	2.23	2.40	3.30	
July .....							2.90	5.90	.50	3.60	
August ....							4.40	5.45	2.30	3.80	
September ..							4.10	3.14	3.10	1.30	
October ....							2.80	4.60	1.88	1.30	
November ..							2.80	4.90	1.50	.60	
December ..							5.16	4.90	.80	.40	
TOTALS ..							39.26	47.73	24.88	(19.30)	

*Gin Hall is between Bury & Shuttleworth & near Walmesley Church*

*1879 not printed - amount much too small*

7414

18395

10.84

7414

1825

1847



RAINFALL AT *Rufford*

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer

*John Porter Esq.**1881-1915 A 323*

Diameter .....	.5										
Height .....	.8										
Altitude .....	38.0			38.0							
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	2.45	1.32	4.57	4.31	2.80	3.79	1.38	5.56	2.99	1.34	3.051
February.....	1.02	2.82	3.41	.74	1.61	.85	3.11	3.69	1.40	2.73	2.138
March .....	2.09	1.12	3.95	3.30	2.96	.76	2.54	2.83	1.34	1.36	2.225
April.....	1.44	2.56	2.77	.72	1.15	.71	2.66	2.01	1.58	2.32	1.792
May .....	1.62	1.62	2.25	1.99	1.42	2.02	.58	2.63	4.31	2.00	2.044
June.....	1.58	2.05	6.05	1.62	1.09	3.19	3.05	1.95	3.37	3.44	2.739
July .....	.55	4.94	7.08	3.34	2.65	6.37	3.19	6.62	.41	4.35	3.950
August.....	2.12	7.09	3.12	3.48	4.12	2.62	3.46	6.00	5.58	6.97	3.856
September.....	2.72	3.62	6.60	2.76	3.27	4.59	4.99	3.91	4.24	3.44	4.014
October.....	<sup>+</sup> 8.80	<sup>+</sup> 6.90	4.77	4.59	5.19	4.82	2.49	4.69	4.36	1.93	4.854
November.....	3.14	1.40	3.81	2.04	4.53	3.55	4.21	5.42	2.57	.91	3.158
December.....	2.31	2.51	3.88	1.42	3.06	1.32	4.91	4.37	2.48	2.03	2.829
TOTALS .....	29.84	31.95	52.26	30.31	33.85	34.59	36.57	49.68	34.63	32.82	36.650

1870 Oct. 8.80 the max in any month since the gauge placed 1847

1878 Hedge 8ft 6 in high 14ft distant S.

1879 Goseberry bush 3ft high 7ft E.

Rufford church 200 yds E.



# RAINFALL AT Belmont

Lat.....

Lon.....

County of.....

Lancashire

Rain Gauge, by.....

Observer.....

S. Wright

R. H. Swindlehurst 75

Diameter .....	.10	.	.6								
Height .....	3.0	.	9								
Altitude .....	800.0	.									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	4.80	7.80	6.30	6.20	6.30	6.70	3.90	8.50	6.90	2.20	5.360
February.....	1.60	4.30	4.50	1.50	2.40	1.80	6.20	9.20	2.30	4.50	3.830
March .....	3.60	1.90	6.50	4.50	7.30	1.50	5.80	5.20	4.20	3.20	4.370
April.....	2.60	4.30	3.20	.90	2.30	1.50	3.50	3.40	3.80	2.10	2.760
May .....	2.10	2.30	3.50	3.70	2.40	3.20	1.20	4.30	6.20	3.30	3.220
June.....	4.20	<del>3.90</del> 3.50	7.40	3.00	1.30	5.30	4.30	4.00	4.00	6.50	4.350
July .....	2.10	6.90	5.20	7.50	5.50	7.10	5.00	10.40	2.20	8.10	6.000
August.....	4.80	2.10	4.50	6.80	9.40	4.40	7.10	6.80	7.30	10.00	6.320
September.....	4.10	4.80	9.70	3.20	6.00	6.90	5.70	4.30	8.70	4.70	5.810
October.....	14.20	7.50	7.40	7.50	9.00	8.00	4.30	8.10	7.40	5.80	7.920
November.....	4.60	2.00	4.90	5.40	8.60	6.70	5.60	9.20	3.50	1.80	5.230
December.....	4.10	5.00	4.40	2.40	4.70	2.80	8.80	8.30	4.10	2.80	4.740
TOTALS .....	52.80	<del>46.80</del> 46.40	67.50	52.60	63.20	55.90	61.40	81.70	60.60	55.00	59.910

1871 Correction sent by R. H. Swindlehurst  
June 28th 1880



from sunken same

70

# RAINFALL AT *Rington*

Lat. *53° 38' 29" N*

Lon. *2° 34' 22" W* County of *Lancashire*

Rain Gauge, by

Observer *Liverpool Corporation*  
*(per J. Barry C.E.)*

*Daily gauge*

Diameter. . . . .												
Height. . . . .												
Altitude. . . . .	<i>750</i>											
Year . . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January . . . . .												
February . . . . .												
March . . . . .												
April . . . . .												
May . . . . .												
June . . . . .												
July . . . . .												
August . . . . .												
September . . . . .												
October . . . . .												
November . . . . .												
December . . . . .												
TOTALS . . . . .	<i>41.03</i>	<i>42.70</i>	<i>57.30</i>	<i>38.59</i>	<i>42.29</i>							

*Lat. Hong given the same as Stonehouse but 100 ft higher in elevation*



from same source.

RAINFALL AT Rivington

Lat. 53° 40' 59" N.

Lon. 2° 32' 40" W.

County of Lancashire

Rain Gauge, by

Observer

Liverpool Corporation

(per J. Barry C.E.)

Monthly gauge

Diameter. . . . .												
Height. . . . .												
Altitude. . . . .												
Year . . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January. . . . .												
February. . . . .												
March. . . . .												
April. . . . .												
May. . . . .												
June. . . . .												
July. . . . .												
August. . . . .												
September. . . . .												
October. . . . .												
November. . . . .												
December. . . . .												
TOTALS. . . . .	48.55	45.90	61.60	45.65	50.60							

The lat. & long given the same as Gamekeepers but at 100ft  
lower elevation



# RAINFALL AT *Livingston, Brown Hill*

70

Lat. *53° 38' N*

Lon. *2° 33' W*

County of *Lancashire*

Rain Gauge, by

Observer *Liverpool Corporation*  
*(per J. Parry, Esq.)*

Diameter. . . . .												
Height. . . . .												
Altitude. . . . .						<i>843</i>						
Year . . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January. . . . .												
February. . . . .												
March. . . . .												
April. . . . .												
May. . . . .												
June. . . . .												
July. . . . .												
August. . . . .												
September. . . . .												
October. . . . .												
November. . . . .												
December. . . . .												
TOTALS. . . . .						<i>38.55</i>	<i>39.50</i>	<i>59.05</i>	<i>42.45</i>	<i>39.85</i>		



RAINFALL AT *Burton Stonehouse No 1*

Lat. *53° 38' 29" N.* Lon. *2° 34' 22" W* County of *Lancashire*

Rain Gauge, by \_\_\_\_\_ Observer *Liverpool Corporation*  
*(per J. Barry C.E.)*

Diameter. ....											
Height. ....											
Altitude. ....						<i>623</i>					
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January .....											
February .....											
March .....											
April .....											
May .....											
June .....											
July .....											
August .....											
September .....											
October .....											
November .....											
December .....											
TOTALS .....						<i>39.67</i>	<i>39.16</i>	<i>53.40</i>	<i>41.18</i>	<i>38.74</i>	



RAINFALL AT *Livingston, Stonehouse No 2*

Lat. *53° 38' N.*

Lon. *2° 34' W.*

County of *Lancashire*

Rain Gauge, by

Observer

*Liverpool Corporation*  
*(per G. Barry, C.E.)*

Diameter. . . . .												
Height. . . . .												
Altitude. . . . .						<i>623</i>						
Year . . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January. . . . .												
February. . . . .												
March. . . . .												
April. . . . .												
May. . . . .												
June. . . . .												
July. . . . .												
August. . . . .												
September. . . . .												
October. . . . .												
November. . . . .												
December. . . . .												
TOTALS. . . . .						<i>39.65</i>	<i>38.70</i>	<i>57.30</i>	<i>42.75</i>	<i>38.35</i>		



RAINFALL AT *Rivington, Hurst Hill*

Lat. *53° 39' N*

Lon. *2° 34' W*

County of *Lancashire*

Rain Gauge, by

Observer *Liverpool Corporation*  
*(Pet J. Barry, C.E.)*

Diameter. . . . .											
Height. . . . .											
Altitude. . . . .						<i>1029</i>					
Year . . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . . . .											
February . . . . .											
March . . . . .											
April . . . . .											
May . . . . .											
June . . . . .											
July . . . . .											
August . . . . .											
September . . . . .											
October . . . . .											
November . . . . .											
December . . . . .											
TOTALS . . . . .						<i>41.10</i>	<i>41.65</i>	<i>63.10</i>	<i>47.60</i>	<i>44.30</i>	



RAINFALL AT *Livingston, Coppice Hill* **70**

Lat. *53° 40' N* Lon. *2° 34' W* County of *Lancashire*

Rain Gauge, by \_\_\_\_\_ Observer *Liverpool Corporation*  
*(per J. Barry C.E.)*

Diameter. . . . .											
Height. . . . .											
Altitude. . . . .						<i>879</i>					
Year . . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. . . . .											
February. . . . .											
March. . . . .											
April. . . . .											
May. . . . .											
June. . . . .											
July. . . . .											
August. . . . .											
September. . . . .											
October. . . . .											
November. . . . .											
December. . . . .											
TOTALS. . . . .						<i>37.15</i>	<i>37.40</i>	<i>53.60</i>	<i>39.45</i>	<i>37.35</i>	



RAINFALL AT *Rivington, Gamekeepers (old)*

Lat. *53° 41' N.*

Lon. *2° 33' W.*

County of *Lancashire*

Rain Gauge, by

Observer *Liverpool Corporation*  
*(per J. Parry & Co.)*

Diameter. . . . .												
Height. . . . .												
Altitude. . . . .						<i>850</i>						
Year . . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January . . . . .												
February. . . . .												
March . . . . .												
April . . . . .												
May. . . . .												
June . . . . .												
July. . . . .												
August . . . . .												
September . . . . .												
October . . . . .												
November . . . . .												
December . . . . .												
TOTALS . . . . .						<i>41.82</i>	<i>45.84</i>	<i>64.65</i>	<i>46.47</i>	<i>44.32</i>		



# RAINFALL AT *Rivington, Game Keeper's (New)*

Lat. *53° 41' N*

Lon. *2° 33' W*

County of *Lancashire*

Rain Gauge, by

Observer *Liverpool Corporation*  
*(per G. Barry C.E.)*

Diameter. ....											
Height. ....											
Altitude. ....									<i>850</i>		
Year . . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....											
February. ....											
March. ....											
April. ....											
May. ....											
June. ....											
July. ....											
August. ....											
September. ....											
October. ....											
November. ....											
December. ....											
TOTALS . . . . .									<i>45.28</i>	<i>43.25</i>	



RAINFALL AT *Rivington, Higher Mill*

Lat. *53° 42' N*

Lon. *2° 31' W*

County of *Lancashire*

Rain Gauge, by .....

Observer *Liverpool Corporation*  
*(per J Parry C.E.)*

Diameter. ....											
Height. ....											
Altitude. ....						<i>733</i>					
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....											
February. ....											
March. ....											
April. ....											
May. ....											
June. ....											
July. ....											
August. ....											
September. ....											
October. ....											
November. ....											
December. ....											
TOTALS. ....						<i>33.95</i>	<i>35.45</i>	<i>55.70</i>	<i>40.30</i>	<i>34.40</i>	



RAINFALL AT *Rockdale Nagden (Dane)*

Lat.....

Lon.....

County of.....*Lancashire*Rain Gauge, by..... Observer *L. E. Lawley Esq. M.P.*

Diameter .....	.5	'										
Height .....	1	.6	'									
Altitude .....	900.	'										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	2.39	1.50	5.95	4.77	5.04	5.36	2.45	6.54	4.23	1.14	3.937	
February.....	1.90	2.95	6.30	.66	2.18	1.00	5.21	4.42	1.91	3.16	2.969	
March.....	2.55	1.47	4.05	3.03	4.68	.87	4.43	3.03	1.65	2.03	2.679	
April.....	1.91	4.24	2.39	.28	1.84	1.25	2.73	2.61	1.90	2.20	2.135	
May .....	1.40	1.88	2.32	2.27	2.04	2.32	7.43	3.90	4.94	1.68	2.349	
June.....	2.08	2.25	7.10	2.20	1.01	5.12	3.96	1.97	3.57	7.28	3.654	
July .....	1.69	5.27	3.55	4.59	2.44	5.98	4.32	6.43	.77	5.98	4.002	
August.....	2.52	1.28	4.92	6.12	6.09	2.50	4.52	6.13	6.77	6.14	4.699	
September.....	3.35	4.68	7.10	3.42	5.43	6.29	5.17	4.14	5.07	3.25	4.790	
October.....	9.18	5.22	5.90	7.38	6.41	5.76	3.31	6.48	4.44	3.12	5.720	
November.....	4.31	1.66	5.30	3.65	1.89	5.51	3.93	7.71	3.21	1.71	3.888	
December.....	2.90	3.25	5.33	1.50	6.68	1.90	7.73	4.19	1.80	3.20	3.848	
TOTALS .....	35.18	34.65	60.21	39.87	45.73	43.86	48.50	57.55	40.26	40.89	44.670	

Too small (Oldham Water Og)



# RAINFALL AT *Southport - Meteorological Observatory*

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer .....

Diameter. ....											
Height. ....											
Altitude. ....											
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....		(1.32)	4.61	3.82	2.66	4.63	1.20	6.17	3.03	1.55	
February. ....		(2.82)	2.87	.50	1.42	.93	3.13	2.85	1.74	3.05	
March. ....		(1.12)	3.43	3.22	2.09	.85	2.04	2.40	1.30	1.59	
April. ....		(2.56)	1.88	.52	1.10	1.15	2.34	2.26	1.79	2.18	
May. ....		(1.62)	2.39	1.79	1.69	1.93	.66	2.54	3.50	2.12	
June. ....		(2.05)	4.40	1.65	1.37	2.98	2.88	1.34	5.07	3.69	
July. ....		4.34	7.25	3.47	1.87	5.23	3.21	4.36	.54	3.86	
August. ....		.99	2.82	2.71	3.99	3.78	4.78	6.09	5.47	6.44	
September. ....		2.83	6.58	2.43	2.95	6.59	3.46	4.99	3.64	3.13	
October. ....		6.25	5.24	4.46	5.61	6.96	3.13	4.57	3.86	1.65	
November. ....		1.59	3.26	1.51	4.49	5.14	4.36	5.42	2.52	.95	
December. ....		2.57	3.75	1.18	2.38	1.71	4.22	3.81	1.71	2.30	
TOTALS. ....		(30.06)	48.48	27.26	31.62	41.88	35.41	46.80	34.17	32.51	

1871-90. Daily obs. 9am - 9am Copied from MSS supplied by  
Mr. Boxendall K.U. 25



RAINFALL AT *Southport*

Lat.....

Lon..... County of *Lancashire*Rain Gauge, by..... Observer *J. Bascendell Esq.**1881-1915 As 32.0*

Diameter .....			5								
Height .....			2.8								
Altitude .....			23								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....		(1.32)	4.61	3.82	2.66	4.63	1.34	6.17	3.03	1.55	
February .....		(2.82)	2.87	.50	1.42	.93	3.08	2.85	1.74	3.05	
March .....		(1.12)	3.43	3.22	2.18	.85	2.08	2.40	1.30	1.59	
April.....		(2.56)	1.88	.52	1.10	1.15	2.34	2.26	1.79	1.96	
May .....		(1.62)	2.39	1.79	1.69	1.93	.66	2.64	3.50	2.23	
June.....		(2.05)	4.40	1.65	1.37	2.98	2.83	1.34	5.07	3.23	
July.....		4.34	7.25	3.47	1.87	5.23	2.91	4.36	.54	4.20	
August.....		.99	2.82	2.71	4.09	3.78	5.06	6.09	5.47	6.67	
September.....		2.83	6.58	2.43	2.95	6.59	3.48	4.99	3.64	3.03	
October.....		6.25	5.24	4.47	5.47	6.96	3.18	4.56	3.86	1.74	
November.....		1.57	3.26	1.51	4.49	5.13	3.83	5.42	2.52	.95	
December.....		2.57	3.75	1.18	2.38	1.71	4.57	3.81	1.71	2.13	
TOTALS .....		(30.06)	48.48	27.27	31.67	41.87	35.36	46.89	34.17	32.33	

1871 altered x1.25 from data lent by observer. Figures in brackets apparently estimated at observatory.



RAINFALL AT *Entwistle*

Lat.....

Lon.....

County of *Lancashire*

Rain Gauge, by.....

Observer *H. Baylis Esq.*

Diameter .....					6			7		6	
Height .....	0	0			1						
Altitude .....	700				700						
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	5.50	7.60	7.60	6.60	6.30	6.50	3.10	8.00	5.40	1.80	5.240
February.....	7.90	5.00	4.30	80	2.40	1.20	6.00	7.50	2.10	3.80	3.500
March.....	4.00	1.80	6.10	4.00	6.30	1.30	5.00	4.00	2.50	2.80	3.780
April.....	2.50	3.80	3.50	30	2.00	1.30	3.00	2.60	2.40	2.40	2.380
May .....	2.40	2.00	3.50	3.30	2.20	2.70	70	3.90	6.00	2.20	2.890
June.....	<del>2.10</del> <del>3.50</del>	3.30	5.70	9.20	1.00	4.90	4.70	2.80	3.60	6.70	3.800
July .....	2.00	6.70	5.70	7.50	4.60	5.80	4.30	7.20	1.70	8.80	5.430
August.....	3.50	2.20	5.20	6.50	8.50	3.30	6.90	6.10	7.40	9.90	5.950
September.....	4.30	4.70	9.80	3.50	5.70	6.40	4.80	4.50	7.30	4.60	5.560
October.....	<sup>+</sup> 17.10	<sup>+</sup> 7.00	7.10	7.60	8.30	7.10	3.90	6.90	6.20	4.60	7.580
November.....	4.70	1.80	6.10	6.00	7.30	5.70	4.30	8.60	2.90	1.50	4.890
December.....	4.00	4.10	4.50	2.20	3.70	2.50	8.50	5.60	2.80	2.50	4.040
TOTALS .....	<del>54.00</del> <del>55.40</del>	44.00	69.10	51.50	58.30	48.70	55.20	67.70	50.30	51.60	55.040

1870 Correction sent by R. H. Swindlehurst 28.6.80



# RAINFALL AT

*Windy Bank*  
*Littleborough* *Rochdale*

Lat. ....

Lon. ....

County of

*Lancashire*

Rain Gauge, by

Observer

*C. R. Dykes Esq*

*Rochdale Canal Compy.*

Diameter....	10										
Height ....	1.6										
Altitude ....	500?										
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....	4.10	2.00	5.50	4.10	4.10	4.30	2.30	5.50	4.50	1.50	3.99
February. . .	2.00	3.00	4.00	.80	1.70	1.20	4.80	5.00	2.00	3.20	2.77
March.....	3.60	1.10	4.00	2.90	3.70	.90	3.70	3.40	1.40	2.00	2.67
April .....	1.10	4.00	3.60	.30	1.70	1.40	2.30	2.10	1.80	1.70	2.00
May .....	2.30	1.90	2.40	2.40	1.70	2.30	1.30	3.10	4.30	1.70	2.34
June .....	2.10	3.80	6.40	1.70	.90	4.00	3.50	2.50	3.00	5.50	3.34
July.....	1.00	4.80	4.40	4.80	2.50	5.40	2.80	4.90	.40	5.50	3.65
August ....	2.00	1.30	3.70	4.60	5.00	3.10	4.10	3.90	5.40	4.90	3.80
September ..	3.80	5.00	6.00	2.40	3.90	5.20	3.90	4.60	4.30	3.00	4.21
October ....	10.30	5.30	5.50	5.80	5.10	4.80	3.40	5.20	4.00	2.00	5.14
November ..	4.10	1.40	5.40	3.50	3.10	5.40	3.80	5.80	3.00	1.60	3.71
December ..	2.20	2.60	3.30	1.20	3.40	1.80	7.80	5.20	2.30	2.80	3.26
TOTALS ..	38.60	36.20	54.20	34.50	36.80	39.80	43.70	51.20	36.40	35.40	40.68



# RAINFALL AT *Blackstone Edge*

70

Lat. ....

Lon. ....

County of .....

Rain Gauge, by .....

Observer .....

*C. R. Dykes Esq.*

*Rochdale Canal Compt.*

Diameter ....	10											
Height ....	2.3											
Altitude ....	1200?											
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January ....	3.20	2.00	5.00	4.00	3.60	5.20	2.20	6.10	4.20	1.00	3.65	
February. ..	1.50	3.50	3.20	1.50	1.50	1.30	5.00	6.00	1.70	3.30	2.75	
March .....	2.40	1.00	3.60	2.50	3.70	1.00	3.60	4.30	2.30	2.10	2.65	
April .....	1.10	4.00	4.10	1.30	1.60	1.10	2.40	2.60	1.80	2.10	2.11	
May .....	2.00	1.70	2.50	2.30	1.90	2.20	1.20	4.30	4.30	2.20	2.46	
June .....	1.90	4.20	7.20	1.60	1.90	3.80	3.70	2.60	2.90	6.60	3.54	
July .....	1.10	4.80	4.30	4.20	2.20	5.50	3.00	4.50	1.50	6.10	3.62	
August ....	2.40	1.10	3.70	4.10	5.40	3.40	4.10	4.40	5.80	5.00	3.94	
September ..	2.50	5.50	5.90	2.60	3.90	6.40	4.90	4.80	4.80	2.20	4.35	
October ....	10.40	4.90	5.80	4.90	5.30	5.80	3.70	6.00	4.20	2.90	5.39	
November ..	3.30	1.10	5.10	3.60	3.60	6.00	4.40	5.60	2.60	2.00	3.73	
December ..	2.30	2.60	3.10	1.00	3.00	1.90	8.30	4.30	1.80	2.20	3.05	
TOTALS ..	34.10	36.40	53.50	31.60	36.60	43.60	46.50	55.50	36.90	37.70	41.24	



# RAINFALL AT

*Summit* Blackstone edge

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by

Observer *C. R. Dykes Esq*

*Rochdale Canal Co.*

Diameter....	10										
Height ....	1.10										
Altitude ....	700										
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....	3.40	1.00	5.30	4.50	3.90	4.70	2.10	6.40	4.40	1.30	3.70
February. ..	1.30	3.30	3.60	.60	1.60	1.40	4.90	4.90	1.80	3.60	2.70
March.....	2.50	1.10	3.30	2.70	4.20	.80	4.70	3.90	2.30	2.00	2.75
April .....	1.40	3.50	4.10	.30	1.40	1.10	2.90	2.30	1.60	2.30	2.09
May .....	1.20	1.50	2.40	2.50	1.60	2.20	.80	3.40	4.80	1.70	2.21
June .....	2.00	3.70	6.20	1.60	1.20	3.70	3.20	1.90	2.70	5.70	3.19
July.....	.60	4.30	3.80	4.40	1.90	5.90	2.90	4.30	.40	5.70	3.42
August ....	1.80	1.10	3.50	4.20	5.40	3.20	4.30	4.00	5.60	4.80	3.79
September ..	2.70	4.70	6.60	2.80	3.50	5.20	4.40	4.30	4.70	2.50	4.14
October ....	9.80	4.50	5.80	5.80	4.80	5.20	3.40	6.00	3.90	2.90	5.21
November ..	3.60	1.20	5.00	3.30	3.90	5.90	4.30	6.20	2.50	1.60	3.75
December ..	2.80	2.60	3.50	1.20	3.20	1.60	7.70	4.40	1.80	2.30	3.11
TOTALS ..	33.10	32.50	53.10	33.90	36.60	40.90	45.60	52.00	36.50	36.40	40.66

On the NW face of the Range known as Blackstone edge



# RAINFALL AT

*Chelburn* Blackstone Edge

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *C. R. Dykes Esq.*

*Rochdale Canal Comp.*

Diameter ....	10										
Height ....	1.3										
Altitude ....	<del>800</del> 700?										
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....	4.60	2.20	6.00	4.80	5.00	5.60	2.60	4.00	5.00	1.50	4.430
February. ...	1.70	4.50	4.20	4.70	2.10	1.40	5.70	5.90	1.90	3.70	3.180
March .....	2.90	1.50	4.30	2.70	5.10	1.00	5.20	4.10	2.90	2.20	3.190
April .....	1.50	4.00	4.00	3.30	1.80	1.30	3.10	2.70	2.00	2.40	2.310
May .....	2.00	1.70	2.60	2.90	1.80	2.70	1.80	3.80	5.20	2.10	2.560
June .....	2.50	3.70	4.00	1.90	1.40	3.80	3.60	2.60	3.10	5.70	3.530
July .....	1.10	5.30	4.10	4.90	2.10	5.90	3.40	5.00	1.50	6.50	3.880
August ....	2.50	1.50	4.00	5.20	6.30	3.40	5.10	4.30	6.30	6.00	4.460
September ..	3.40	4.40	7.40	3.00	4.20	6.00	4.80	4.50	4.90	3.40	4.600
October ....	11.60	5.30	6.80	6.90	5.60	5.60	3.60	7.30	4.40	3.30	6.040
November ..	4.20	1.50	6.00	4.00	4.30	6.20	4.30	7.20	2.50	1.80	4.200
December ..	2.00	3.30	3.80	1.60	3.60	1.90	8.60	5.10	2.40	3.20	3.550
TOTALS ..	40.00	38.90	60.20	38.90	43.30	44.80	50.80	59.50	41.10	41.80	45.930



# RAINFALL AT

*Leuch's Blackstone Edge*

Lat. ....

Lon. ....

County of

*Lancashire*

Rain Gauge, by

Observer

*C. R. Dykes Esq.*

*Rochdale Canal Co.*

Diameter . . .	10										
Height . . .	1.9										
Altitude . . .	900?										
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .	4.20	2.00	6.50	4.40	4.80	5.70	2.60	7.20	4.90	1.20	4.38
February . . .	2.30	4.20	4.50	60	2.10	1.20	5.40	5.70	2.00	3.60	3.19
March . . . .	2.80	1.40	4.40	2.60	4.60	1.20	4.90	4.30	2.90	1.50	3.06
April . . . . .	1.10	3.90	4.40	20	2.00	1.30	2.90	2.80	1.80	1.90	2.23
May . . . . .	1.20	1.40	2.90	2.80	1.90	2.60	70	4.20	5.40	1.40	2.48
June . . . . .	2.60	4.00	4.30	2.10	1.40	3.90	3.70	2.80	2.60	4.90	3.53
July . . . . .	90	5.50	4.10	5.10	2.40	6.10	3.30	5.30	50	5.40	3.86
August . . . .	2.00	1.60	4.00	4.90	6.40	3.40	5.50	4.50	6.00	4.80	4.31
September . .	4.00	5.10	7.30	3.30	4.20	6.20	5.00	4.90	4.60	2.70	4.73
October . . . .	11.50	5.20	6.70	6.50	5.60	5.90	3.80	6.60	4.40	2.20	5.84
November . . .	4.20	1.40	6.20	3.90	4.40	6.30	4.60	6.70	2.50	1.50	4.17
December . . .	2.00	3.10	3.90	1.40	3.50	2.00	8.70	4.40	1.80	2.50	3.33
TOTALS . . . .	38.80	39.10	62.20	38.10	43.30	45.80	51.40	59.40	39.40	33.60	45.11



RAINFALL AT *Chorley Crooke Hall Whittle le Woods*

Lat..... Lon..... County of *Lancashire*  
..... Rain Gauge, by..... Observer... *J.C. Hare Esq.*

Diameter.....						5	.		.	.	
Height .....						2	6	.	.	.	
Altitude.....										265	
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				4.32	3.63	4.22	1.73	6.25	3.30	1.34	
February.....				.71	1.62	.77	3.65	4.18	1.44	2.82	
March.....				3.94	3.98	.98	3.36	3.70	1.37	1.43	
April.....				.48	2.15	1.04	2.81	2.05	1.75	1.95	
May .....				2.66	1.74	2.35	.69	3.49	4.24	2.21	
June.....				2.42	.85	3.57	3.30	2.29	3.27	4.16	
July .....				4.46	2.53	5.83	4.17	5.92	1.08	5.22	
August.....				4.65	5.25	2.19	3.73	6.81	4.34	8.18	
September.....				2.91	3.53	4.57	4.11	4.17	5.19	3.32	
October.....				6.16	6.44	4.03	2.56	4.93	5.49	2.39	
November.....				2.74	4.67	3.56	3.96	5.60	2.82	.86	
December.....				1.27	3.16	1.52	4.36	4.25	2.67	2.60	
TOTALS .....				36.72	39.55	34.63	38.43	53.64	36.96	36.48	

*1879 Wall 15ft high 51 ft S.*

*Whittle-le-woods church 1/3 mile E.*



# RAINFALL AT Chorley Withnell Hall

70

Lat. ....

Lon. ....

County of Lancashire

Rain Gauge, by

Observer J. Shackleton Esq

Diameter ....						5	.	.	.	.	
Height ....						6	.	.	.	.	
Altitude ....						545	.	.	.	.	
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....						4.95	2.08	7.01	3.67	.75	
February ....						.94	4.33	4.33	2.20	4.05	
March .....						1.05	3.68	4.17	1.59	2.32	
April .....						1.12	3.26	2.63	1.67	2.33	
May .....						2.84	.80	3.74	5.46	2.50	
June .....						3.82	2.94	2.84	3.81	4.06	
July .....						6.24	4.09	6.62	1.27	6.51	
August ....						2.57	5.55	6.67	6.66	8.42	
September ..						5.26	4.70	3.68	6.78	3.54	
October ....						4.87	2.61	3.92	5.70	3.13	
November ..						4.10	4.08	6.97	3.01	1.03	
December ..						1.93	5.19	4.65	2.51	1.47	
TOTALS ..						39.69	43.31	57.23	44.33	40.11	



RAINFALL AT Over Darwen St James Vicarage

Lat..... Lon..... County of Lancashire.....  
 ..... Rain Gauge, by..... Observer Rev. W. H. Blamire.....

Diameter.....				5							
Height .....				1							
Altitude.....				600				563			
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				7.28	5.82	6.16	2.32	8.31	4.73	1.53	
February.....				1.14	2.75	1.20	5.97	6.19	2.44	4.05	
March.....				4.99	6.51	1.57	4.83	3.92	2.35	2.61	
April.....				7.4	2.31	1.68	3.26	2.90	1.86	2.26	
May .....				3.03	1.95	2.77	85	4.46	5.29	2.46	
June.....				2.35	1.90	4.22	5.05	3.00	3.42	6.59	
July .....				5.30	3.67	5.80	4.23	6.78	1.14	6.29	
August.....				6.66	7.76	3.51	5.10	7.57	6.15	8.02	
September.....				4.31	5.09	5.52	4.39	4.77	7.20	3.62	
October.....				8.28	7.42	5.68	2.78	7.17	6.02	3.35	
November.....			5.97	4.44	6.11	4.58	4.55	7.94	3.33	1.38	
December.....				2.44	3.68	2.32	7.00	5.40	3.22	3.77	
TOTALS .....				50.96	54.97	46.01	50.33	68.41	47.15	45.93	

St James's church 150 yds E.



# RAINFALL AT *Hastingsden*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *J. Rawstron Esq*

Diameter . . .						5					
Height . . .						1 . 1					
Altitude . . .						750					
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .						2 . 00					
February . . .						1 . 60					
March . . . . .						1 . 90					
April . . . . .						2 . 20					
May . . . . .						2 . 45					
June . . . . .						3 . 60					
July . . . . .						4 . 10					
August . . . . .						5 . 20					
September . . .						4 . 25					
October . . . . .						3 . 50					
November . . .						3 . 60					
December . . .						3 . 10					
TOTALS . . .						37 . 50					

1076 N. R.



RAINFALL AT *Hastingsden Holden Wood*

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *L. Rigby Esq*

Diameter....								8			
Height ....						1	-				
Altitude ....						700	653	650			
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....						9.85	3.28	12.00	8.44	1.82	
February....						1.48	8.57	9.80	3.25	5.52	
March.....						2.09	7.25	6.06	4.73	4.03	
April .....						2.02	4.04	3.41	2.87	2.58	
May .....						4.08	9.4	5.29	7.30	3.13	
June .....						5.11	5.31	3.53	4.26	8.83	
July.....						7.46	6.00	8.05	1.94	10.43	
August ....						3.92	5.08	7.96	8.84	10.10	
September ..						7.25	6.88	6.26	10.03	5.08	
October ....						8.36	3.46	11.24	7.95	5.45	
November ..						5.97	5.84	11.30	5.15	2.29	
December ..						3.87	9.81	8.54	4.18	5.52	
TOTALS ..						61.46	66.46	93.44	68.94	64.78	

Bad-ter big. Omitted from Oldham Waters 1909.







RAINFALL AT *Blackburn Pickup Reservoir**3 1/2 miles SE of Blackburn*

Lat.....

Lon.....

County of.....

*Lancashire*

.....Rain Gauge, by.....

Observer

*J. R. Bateman Esq. J. H. S.*

Diameter .....											
Height .....									1.		
Altitude .....	<i>720</i>	.					.		.		
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>4.20</i>	<i>7.20</i>	<i>7.40</i>	<i>6.00</i>	<i>4.70</i>	<i>5.40</i>	<i>2.30</i>	<i>7.50</i>	<i>4.00</i>		
February.....	<i>1.80</i>	<i>3.70</i>	<i>3.90</i>	<i>.90</i>	<i>2.80</i>	<i>.80</i>	<i>6.20</i>	<i>6.40</i>	<i>1.80</i>		
March.....	<i>3.60</i>	<i>2.30</i>	<i>5.90</i>	<i>3.90</i>	<i>5.60</i>	<i>.80</i>	<i>4.10</i>	<i>3.90</i>	<i>2.40</i>		
April.....	<i>1.80</i>	<i>3.00</i>	<i>3.80</i>	<i>.40</i>	<i>2.40</i>	<i>1.40</i>	<i>2.80</i>	<i>3.20</i>	<i>1.90</i>		
May.....	<i>7.70</i>	<i>1.70</i>	<i>3.10</i>	<i>3.80</i>	<i>1.20</i>	<i>2.10</i>	<i>.70</i>	<i>3.60</i>	<i>5.20</i>		
June.....	<i>2.40</i>	<i>3.00</i>	<i>5.80</i>	<i>2.20</i>	<i>.90</i>	<i>4.10</i>	<i>5.10</i>	<i>3.60</i>	<i>3.40</i>		
July.....	<i>2.30</i>	<i>6.10</i>	<i>4.40</i>	<i>5.40</i>	<i>3.30</i>	<i>5.90</i>	<i>3.40</i>	<i>7.20</i>	<i>.80</i>		
August.....	<i>1.90</i>	<i>1.30</i>	<i>5.00</i>	<i>5.60</i>	<i>6.60</i>	<i>2.70</i>	<i>6.20</i>	<i>6.90</i>	<i>5.90</i>		
September.....	<i>3.80</i>	<i>3.70</i>	<i>6.10</i>	<i>2.90</i>	<i>4.80</i>	<i>4.70</i>	<i>4.60</i>	<i>5.60</i>	<i>7.70</i>		
October.....	<i>+11.40</i>	<i>+7.20</i>	<i>6.30</i>	<i>6.60</i>	<i>6.70</i>	<i>5.40</i>	<i>3.10</i>	<i>7.90</i>	<i>5.60</i>		
November.....	<i>4.10</i>	<i>2.00</i>	<i>5.50</i>	<i>3.20</i>	<i>4.40</i>	<i>3.90</i>	<i>3.50</i>	<i>8.20</i>	<i>3.30</i>		
December.....	<i>3.00</i>	<i>2.90</i>	<i>4.60</i>	<i>1.50</i>	<i>3.50</i>	<i>2.10</i>	<i>5.60</i>	<i>6.50</i>	<i>2.50</i>		
TOTALS .....	<i>42.00</i>	<i>38.10</i>	<i>61.80</i>	<i>42.40</i>	<i>46.90</i>	<i>39.30</i>	<i>47.60</i>	<i>70.50</i>	<i>44.50</i>	<i>(38.00)</i>	<i>(47.110)</i> <i>46.810</i>

*1879 Gauge leaky — estimated from Guide  
Reservoir surrounding stations.*



# RAINFALL AT *Blackburn Guide Reservoir*

Lat..... Lon..... County of *Lancashire*  
 ..... Rain Gauge, by..... Observer *J. J. Bateman Esq. R.R.S.*

Diameter .....											
Height .....									1.		
Altitude .....	<i>650.</i>										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>3.60</i>	<i>1.20</i>	<i>6.40</i>	<i>6.20</i>	<i>4.80</i>	<i>4.80</i>	<i>2.20</i>	<i>7.10</i>	<i>4.60</i>	<i>.69</i>	<i>4.139</i>
February.....	<i>7.70</i>	<i>3.60</i>	<i>3.70</i>	<i>.80</i>	<i>1.90</i>	<i>1.00</i>	<i>4.90</i>	<i>5.40</i>	<i>1.40</i>	<i>2.99</i>	<i>2.739</i>
March .....	<i>3.80</i>	<i>2.30</i>	<i>5.20</i>	<i>4.00</i>	<i>5.50</i>	<i>.70</i>	<i>4.30</i>	<i>3.60</i>	<i>2.60</i>	<i>1.83</i>	<i>3.383</i>
April.....	<i>1.80</i>	<i>2.70</i>	<i>3.90</i>	<i>.40</i>	<i>1.70</i>	<i>1.50</i>	<i>3.10</i>	<i>2.90</i>	<i>2.00</i>	<i>1.82</i>	<i>2.182</i>
May .....	<i>1.80</i>	<i>1.60</i>	<i>2.70</i>	<i>3.60</i>	<i>1.30</i>	<i>2.90</i>	<i>.50</i>	<i>3.40</i>	<i>4.90</i>	<i>2.12</i>	<i>2.482</i>
June.....	<i>2.60</i>	<i>2.70</i>	<i>5.90</i>	<i>2.10</i>	<i>.90</i>	<i>4.00</i>	<i>4.70</i>	<i>3.10</i>	<i>2.60</i>	<i>5.05</i>	<i>3.365</i>
July .....	<i>2.00</i>	<i>5.90</i>	<i>4.70</i>	<i>4.90</i>	<i>3.30</i>	<i>5.70</i>	<i>2.80</i>	<i>5.30</i>	<i>.70</i>	<i>5.22</i>	<i>4.052</i>
August.....	<i>1.90</i>	<i>1.20</i>	<i>6.30</i>	<i>5.50</i>	<i>6.60</i>	<i>3.70</i>	<i>4.60</i>	<i>6.30</i>	<i>5.20</i>	<i>6.06</i>	<i>4.636</i>
September.....	<i>3.50</i>	<i>3.70</i>	<i>6.00</i>	<i>2.80</i>	<i>4.60</i>	<i>4.90</i>	<i>4.40</i>	<i>5.00</i>	<i>7.70</i>	<i>2.78</i>	<i>4.538</i>
October.....	<i>10.70</i>	<i>6.00</i>	<i>6.80</i>	<i>7.10</i>	<i>6.70</i>	<i>4.90</i>	<i>2.60</i>	<i>5.40</i>	<i>5.80</i>	<i>2.88</i>	<i>5.888</i>
November.....	<i>3.30</i>	<i>2.00</i>	<i>5.20</i>	<i>3.80</i>	<i>4.00</i>	<i>3.80</i>	<i>3.30</i>	<i>6.50</i>	<i>2.80</i>	<i>1.13</i>	<i>3.583</i>
December.....	<i>2.00</i>	<i>2.70</i>	<i>5.40</i>	<i>2.10</i>	<i>4.00</i>	<i>1.80</i>	<i>5.10</i>	<i>5.80</i>	<i>2.10</i>	<i>3.05</i>	<i>3.485</i>
TOTALS .....	<i>39.50</i>	<i>35.60</i>	<i>61.20</i>	<i>43.30</i>	<i>45.30</i>	<i>39.70</i>	<i>42.50</i>	<i>59.80</i>	<i>42.40</i>	<i>35.62</i>	<i>44.492</i>



RAINFALL AT *Oswaldtwistle*

Lat.....

Lon.....

County of..

*Lancashire*

Rain Gauge, by.....

Observer

*W. Gourlay Esq*

Diameter .....			6							10	
Height .....	6		9		6		1	6			
Altitude .....			635	635 <sup>π</sup>			640		635		
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	5.32	1.83	7.81	7.16	6.35	6.91	2.75	9.18	4.89	1.95	5.415
February .....	3.02	5.35	4.25	9.2	3.31	1.26	6.26	7.31	1.75	4.63	3.806
March .....	3.69	2.88	6.55	4.67	6.59	1.50	5.16	5.70	3.14	2.59	4.247
April.....	2.33	3.62	3.80	4.3	3.44	1.79	2.57	2.80	2.20	2.02	3.500
May .....	2.58	2.25	3.11	3.44	1.70	3.78	6.9	4.18	5.48	1.90	2.911
June.....	3.31	3.64	6.49	2.83	8.9	5.27	5.12	3.67	3.93	5.87	4.102
July.....	3.18	6.65	4.28	5.61	3.30	6.13	3.45	7.10	9.0	6.85	4.745
August.....	2.99	2.12	5.57	5.72	6.72	3.03	6.82	7.20	6.20	8.31	5.468
September.....	3.70	4.34	7.04	3.24	4.97	5.97	5.29	5.24	7.93	3.56	5.128
October.....	15.45	6.32	7.04	7.56	8.07	5.81	3.50	7.77	6.90	3.60	7.202
November.....	5.08	1.62	6.76	4.79	5.85	4.53	4.21	8.02	3.55	1.44	4.585
December.....	4.08	3.97	5.35	1.80	4.25	2.74	7.74	6.34	4.18	3.29	4.374
TOTALS .....	54.73	44.59	68.05	48.17	55.44	48.72	53.56	74.51	51.05	46.01	54.483

1876

R. R.

1879 Fence 5 ft high 90 ft E

Immanuel church  $\frac{3}{4}$  mile W.



# RAINFALL AT *Lytham Whalley House*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer .....

Diameter ....									.8		
Height ....							2.1				
Altitude ....											
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....							1.35	5.69	3.19	1.63	
February ...							3.76	3.87	1.64	2.91	
March .....							2.65	2.91	1.39	2.01	
April .....							2.41	2.81	1.51	2.72	
May .....							.51	2.94	4.04	2.28	
June .....							2.86	1.68	3.56	3.45	
July .....							2.84	6.33	.51	4.89	
August ....							3.13	5.16	4.80	6.12	
September ..							4.27	4.66	4.10	3.48	
October ....							2.96	5.05	3.33	1.83	
November ..							3.93	5.52	3.03	.98	
December ..							4.70	6.01	2.26	2.02	
TOTALS ..							35.37	52.63	33.36	34.32	

1878 Garden wall 7 ft high 12 ft distant



RAINFALL AT *Lytham*

Lat.....

Lon.....

County of *Lancashire*

.....Rain Gauge, by.....

Observer *L. Fisher Esq. M.D.*

Diameter .....			.10								
Height .....			.6								
Altitude .....			34 $\pi$								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....			4.90	4.49							
February.....			2.73	.80							
March.....			4.49	3.64							
April.....			1.65	.80							
May .....			2.09	2.52							
June.....			4.06	2.55							
July .....			5.94	2.90							
August.....			3.16	2.88							
September.....			5.57	2.54							
October.....			5.92	4.62							
November.....			3.88	2.03							
December.....			3.70	1.44 $\frac{1}{2}$							
TOTALS .....			48.09	31.21							

1874 no Slip







# RAINFALL AT *Blackburn Milton*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *W. B. Bryan*

Diameter...								8	.		
Height ...								2. 6	.	2.	
Altitude ...								315	.	.	
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ...								# 6.68	3.87	1.36	
February. .								4.89	1.74	2.55	
March .....								4.34	1.81	1.72	
April .....								2.45	1.46	1.59	
May .....								3.75	5.27	2.24	
June .....								2.37	2.77	4.60	
July .....								5.68	1.11	5.19	
August ...								7.34	6.72	6.26	
September .								4.88	5.40	2.91	
October ...								5.78	4.74	3.20	
November .								5.81	3.60	1.15	
December .								5.26	2.56	2.59	
TOTALS ..								59.23	41.05	35.36	



RAINFALL AT *Blackburn Water Works Office*

Lat..... Lon..... County of *Lancashire*  
Rain Gauge, by..... Observer *J. J. Balemen Esq. J.R.S.*  
*J. S. Whithead P. Gaudin*

Diameter .....									.6		
Height .....								30			
Altitude .....	<i>400</i>						<i>400</i>				
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>4.17</i>	<i>1.45</i>	<i>5.47</i>	<i>6.09</i>	<i>4.45</i>	<i>3.10</i>	<i>2.17</i>	<i>8.01</i>	<i>3.65</i>	<i>1.24</i>	<i>3.980</i>
February.....	<i>2.06</i>	<i>3.85</i>	<i>3.13</i>	<i>1.03</i>	<i>1.85</i>	<i>.80</i>	<i>5.40</i>	<i>5.54</i>	<i>1.21</i>	<i>2.34</i>	<i>2.721</i>
March .....	<i>3.31</i>	<i>2.66</i>	<i>4.72</i>	<i>3.83</i>	<i>5.50</i>	<i>.72</i>	<i>3.77</i>	<i>4.31</i>	<i>2.30</i>	<i>1.57</i>	<i>3.269</i>
April.....	<i>7.71</i>	<i>3.07</i>	<i>4.02</i>	<i>.37</i>	<i>2.26</i>	<i>.80</i>	<i>3.06</i>	<i>2.22</i>	<i>1.46</i>	<i>1.52</i>	<i>2.049</i>
May .....	<i>1.97</i>	<i>1.62</i>	<i>3.62</i>	<i>3.23</i>	<i>1.96</i>	<i>1.92</i>	<i>.57</i>	<i>3.09</i>	<i>4.44</i>	<i>2.04</i>	<i>2.446</i>
June.....	<i>2.70</i>	<i>3.51</i>	<i>5.88</i>	<i>2.09</i>	<i>.58</i>	<i>2.27</i>	<i>4.76</i>	<i>2.64</i>	<i>2.35</i>	<i>4.25</i>	<i>3.103</i>
July .....	<i>2.23</i>	<i>5.08</i>	<i>5.14</i>	<i>4.80</i>	<i>3.53</i>	<i>4.43</i>	<i>3.32</i>	<i>5.40</i>	<i>1.01</i>	<i>5.10</i>	<i>4.004</i>
August.....	<i>2.25</i>	<i>7.35</i>	<i>6.09</i>	<i>5.67</i>	<i>6.24</i>	<i>2.11</i>	<i>5.98</i>	<i>6.59</i>	<i>5.70</i>	<i>5.88</i>	<i>4.786</i>
September.....	<i>3.25</i>	<i>3.90</i>	<i>7.19</i>	<i>2.66</i>	<i>3.80</i>	<i>3.36</i>	<i>4.99</i>	<i>5.09</i>	<i>4.78</i>	<i>2.54</i>	<i>4.156</i>
October.....	<i>9.72</i>	<i>6.57</i>	<i>6.59</i>	<i>6.87</i>	<i>4.51</i>	<i>3.03</i>	<i>3.20</i>	<i>5.48</i>	<i>4.83</i>	<i>2.73</i>	<i>5.353</i>
November.....	<i>3.90</i>	<i>1.73</i>	<i>5.90</i>	<i>3.88</i>	<i>3.77</i>	<i>2.62</i>	<i>3.47</i>	<i>5.10</i>	<i>2.26</i>	<i>1.02</i>	<i>3.365</i>
December.....	<i>3.41</i>	<i>3.11</i>	<i>5.21</i>	<i>1.70</i>	<i>2.34</i>	<i>1.08</i>	<i>4.78</i>	<i>4.75</i>	<i>2.32</i>	<i>2.43</i>	<i>3.113</i>
TOTALS .....	<i>40.68</i>	<i>37.90</i>	<i>62.96</i>	<i>42.22</i>	<i>40.79</i>	<i>26.24</i>	<i>45.47</i>	<i>58.22</i>	<i>36.31</i>	<i>32.66</i>	<i>42.345</i>



# 70 RAINFALL AT *Blackburn Preston New Road*

Lat. ....

Lon. ....

 County of *Lancashire*

Rain Gauge, by ....

 Observer *H. B. Bryan Esq. C.E.*

Diameter ....									8		
Height ....									5		
Altitude ....									515		
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....									4.24	1.30	
February ....									1.81	2.88	
March .....									2.38	2.03	
April .....									1.64	1.76	
May .....									5.51	2.45	
June .....									2.89	4.97	
July .....									1.30	5.95	
August ....									7.55	7.15	
September ..									6.51	3.18	
October ....									5.16	3.88	
November ..									4.17	1.25	
December ..									2.72	3.00	
TOTALS ..									45.88	39.80	



# RAINFALL AT Blackburn

70

Lat. .... Lon. .... County of Lancaster  
 Rain Gauge, by .... Observer .....

Diameter....							5				
Height ....							1				
Altitude ....							360				
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....							1.95				
February....							4.34				
March .....							3.86				
April .....							3.12				
May .....							5.4				
June .....							3.85				
July .....							2.89				
August ....							4.62				
September ..							4.35				
October ....							2.39				
November ..							3.23				
December ..							5.15				
TOTALS ..							40.29				

*gauge stolen*



# RAINFALL AT Blackburn Audley Place

Lat.....

Lon.....

County of.....

Lancashire

Rain Gauge, by.....

Observer

J. Shackleton Esq.

Diameter .....	.5	.	.	.	.	.	.	.	.	.	.
Height .....	.6	.	.	.	.	.	.	.	.	.	.
Altitude .....	450.	.	.	.	.	.	.	.	.	.	.
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	4.00	1.73	6.03	6.12							
February.....	2.30	4.71	3.17	1.43							
March.....	3.47	2.71	6.12	3.22							
April.....	2.49	2.91	3.49	.57							
May.....	2.11	2.02	3.94	3.42							
June.....	3.03	3.31	5.68	2.28							
July.....	2.40	6.50	4.50	4.68							
August.....	2.93	1.58	5.96	6.23							
September.....	3.90	3.64	7.08	3.02							
October.....	7.50	7.00	6.31	7.18							
November.....	4.51	1.89	5.72	4.14							
December.....	4.00	3.73	5.02	1.81							
TOTALS .....	49.80	41.73	63.02	44.10							

C C C



# RAINFALL AT *Blackburn WW. Samsbury, Lower Nabs Head Farm*

Lat. .... Lon. .... County of *Lancashire*.  
 Rain Gauge, by ..... Observer .....

Diameter. ....											
Height. ....											
Altitude. ....										240	
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January .....											
February. ....											
March .....											
April .....											
May .....											
June .....											
July .....											
August .....											
September. ....											
October .....											
November .....											
December .....											
TOTALS .....										3566	

1879-1892 Entered from P. Y. (G. H. Hill) 29. XI. 1913.



## 70

Lancashire

Observer

[illegible]



# RAINFALL AT Accrington Warmden Reservoir

70

Lat. ....

Lon. ....

County of Lancashire

Rain Gauge, by

Observer R. Crossley

Diameter....									8		
Height ....									1.9		
Altitude ....									650		
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....	3.98	1.43	5.95	4.89	4.87	4.96	1.61	7.03	3.74	1.38	3.984
February....	2.41	4.03	5.05	1.45	2.30	78	4.90	4.33	1.59	3.68	3.052
March.....	2.69	1.82	3.99	3.38	4.89	92	4.04	3.52	2.32	1.91	2.948
April .....	1.20	3.25	3.41	71	1.92	1.45	2.75	2.18	2.23	1.47	2.057
May .....	2.08	1.97	2.84	2.58	1.56	2.66	53	3.18	4.33	2.00	2.373
June .....	2.53	4.33	6.14	2.13	1.24	4.36	4.39	2.09	2.77	5.67	3.565
July.....	1.74	5.88	3.83	5.01	3.01	5.66	3.52	5.04	78	6.15	4.062
August ....	2.02	1.70	4.52	5.02	6.14	2.52	4.12	6.52	6.67	6.64	4.587
September ..	3.17	4.72	6.84	3.10	4.57	4.70	3.83	4.55	5.38	2.80	4.366
October ....	11.74	5.43	5.57	7.40	5.89	4.51	2.23	5.93	5.58	2.91	5.719
November ..	3.59	1.47	4.93	3.97	4.32	3.92	3.42	6.89	3.11	1.31	3.693
December ..	3.22	3.07	3.38	1.89	3.74	2.03	5.19	4.86	2.99	3.05	3.342
TOTALS ..	40.37	39.10	56.45	41.53	44.45	38.47	40.53	56.12	41.49	38.97	43.748

Circular wall 4ft high 15ft distant with high land rising to N.E.  
St James church 1 mile N.W.



# RAINFALL AT

Bacup Holmes

70

Lat.

Lon.

County of

Lancashire

Rain Gauge, by

Observer

T. Aitken Esq.

Diameter...									5		
Height ...									3		
Altitude ...									870	880	
Year ...	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ...									6.44	1.91	
February. .									2.78	4.05	
March .....									2.86	2.89	
April .....									2.13	2.63	
May .....									5.15	2.11	
June .....									4.77	8.04	
July .....									1.25	8.13	
August ...									7.10	7.92	
September .									6.58	4.02	
October ...									5.37	3.53	
November .									4.27	1.39	
December .									3.44	4.02	
TOTALS ..									52.14	50.64	



# RAINFALL AT *Preston*

70

Lat. ....

Lon. ....

County of *Lancaster*

Rain Gauge, by .....

Observer *R. N. Hunter*

Diameter ....							8	8			
Height ....							1.6	16.	16.		
Altitude ....							100	133	120		
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS
January ....							1.84	6.13	3.09	1.15	
February ....							4.21	3.72	1.19	2.79	
March .....							2.80	3.22	1.28	1.55	
April .....							2.80	2.04	1.56	1.72	
May .....							68	2.62	4.59	2.53	
June .....							3.48	2.19	2.90	4.17	
July .....							3.76	5.03	1.12	4.98	
August ....							3.88	6.80	4.94	5.52	
September ..							3.68	4.38	4.96	3.07	
October ....							2.85	5.85	4.06	2.39	
November ..							3.47	5.62	3.90	.82	
December ..							3.70	4.80	2.12	2.02	
TOTALS ..							37.15	52.40	35.71	32.71	



RAINFALL AT *Rawtenstall Clough Bridge Reservoir or Clough Bridge Reservoir*

Lat..... Lon..... County of *Lancashire*  
Rain Gauge, by..... Observer *Edward Barber Esq.*

Diameter .....	8										
Height .....	1										
Altitude .....	900.										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	4.11	7.81	7.03	6.97	5.54	6.54	1.96	8.59	4.91	4.49	4.895
February.....	2.61	5.59	5.63	.94	2.53	1.00	5.68	4.35	2.12	3.04	3.349
March.....	3.22	2.08	4.43	3.76	5.46	1.10	4.62	4.24	3.01	2.62	3.454
April.....	2.64	3.84	3.45	.57	2.24	1.71	3.16	3.35	2.08	2.24	2.528
May.....	2.76	1.99	2.82	2.50	2.32	3.06	.70	4.26	5.08	2.54	2.803
June.....	4.17	4.48	7.10	3.61	1.52	4.23	4.85	3.05	3.29	7.71	4.401
July.....	2.58	6.80	6.68	5.58	2.69	6.04	4.93	5.37	1.03	6.62	4.832
August.....	2.55	2.31	5.09	6.15	8.01	3.11	4.96	6.94	6.75	6.29	5.216
September.....	4.35	4.64	8.03	3.58	4.92	5.55	5.31	4.50	6.01	4.16	5.105
October.....	14.41	5.75	6.73	8.52	7.14	6.20	3.08	7.23	5.91	3.92	6.889
November.....	4.48	2.02	6.77	4.43	6.15	5.51	4.16	8.67	3.11	1.52	4.682
December.....	4.70	3.63	4.92	2.19	3.78	2.44	7.03	6.18	2.46	3.63	4.096
TOTALS .....	52.58	44.94	68.68	48.80	52.30	46.49	50.44	66.73	45.76	45.78	52.250

C C C







# RAINFALL AT *Huncocks Burnley Road Reservoir*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *T. Duckworth Esq*

Diameter....											
Height ....											
Altitude ....											
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....						4.34	1.50	6.65	3.94	.77	
February....						1.41	4.83	5.00	1.71	2.84	
March.....						.93	4.15	3.49	2.27	1.80	
April .....						1.49	2.59	2.83	2.16	1.75	
May .....						2.97	.66	3.43	4.72	2.01	
June .....						4.31	4.85	2.91	3.37	5.15	
July.....						5.71	3.36	5.60	1.01	6.36	
August ....						2.89	3.74	6.70	6.59	6.93	
September ..						5.11	5.42	4.58	4.86	2.63	
October ....						4.37	2.25	5.74	5.48	2.82	
November ..						4.33	3.11	6.35	2.80	1.20	
December ..						2.02	5.01	4.91	2.23	2.65	
TOTALS ..						39.88	41.47	58.19	41.14	36.91	

*St John's church  $\frac{3}{4}$  mile W.*



# RAINFALL AT *Great Harwood Dean Clough*

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer .....

Diameter...							8				
Height ...						3-	3.6				
Altitude ...						600	592				
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....						3.67	2.05				
February....						.62	3.79				
March .....						.72	2.36				
April .....						.99	2.27				
May .....						1.99	.36				
June .....						3.31	3.08				
July .....						5.76	3.51				
August ...						2.60	2.85		.67		
September ..						4.00	4.26				
October ....						3.44	4.90		7.65		
November ..						3.32	2.29				
December ..						1.72	4.27		3.05		
TOTALS ..						32.14	35.99				

*1878 Observations not regularly taken*



# RAINFALL AT *Burnley Rosegrove Cemetery*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *N. B. Bryan Esq. C.E.*

Diameter ....							.8				
Height ....							1				
Altitude ....							493				
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....						5.00	1.68	8.08	3.83	1.17	
February ....						1.07	5.11	4.17	1.61	3.41	
March .....						.97	4.09	3.85	2.10	2.07	
April .....						1.72	2.56	2.71	1.75	1.81	
May .....						2.70	.54	3.38	4.78	1.86	
June .....						3.86	4.25	2.40	3.11	6.37	
July .....						5.73	3.77	4.59	1.27	5.74	
August ....						2.37	4.40	6.94	5.84	5.86	
September ..						5.18	3.98	4.33	4.81	2.92	
October ....						4.49	2.47	5.57	5.22	2.57	
November ..						4.50	3.35	6.38	3.45	1.23	
December ..						1.96	5.80	5.08	2.64	3.28	
TOTALS ..						39.55	42.00	57.48	40.41	38.29	



# RAINFALL AT Burnley Water Works Office

Lat. ....

Lon. ....

County of Lancashire

Rain Gauge, by .....

Observer J. Emmett Esq

Diameter . . .											
Height . . .							20				
Altitude . . .							420				
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .							1.44	7.80	4.80	.63	
February . . .							4.91	4.59	1.63	2.73	
March . . . . .							4.50	4.23	2.59	2.18	
April . . . . .							2.40	2.55	1.85	1.49	
May . . . . .							4.8	3.27	3.22	1.71	
June . . . . .							3.73	2.33	2.02	4.10	
July . . . . .							4.10	4.70	.82	5.44	
August . . . . .							4.40	6.95	2.54	4.81	
September . . .							4.50	4.71	5.44	2.36	
October . . . . .							2.64	5.11	4.77	2.89	
November . . .							3.67	5.78	3.63	1.22	
December . . .							6.22	4.51	1.27	3.28	
TOTALS . . .							42.99	56.53	34.58	32.84	



# RAINFALL AT *Burnley Corporation Offices*

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer...

*W. B. Bryan*

70

Diameter.....					8						
Height.....					29.9						
Altitude.....					410						
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....					5.04	4.95	1.44				
February.....					2.04	.97	4.98				
March.....					4.66	.94	4.81				
April.....					2.20	1.52	2.00				
May.....					2.12	2.93	.29				
June.....					.77	3.67	3.54				
July.....					2.74	5.04	3.71				
August.....					6.31	2.06	4.09				
September.....					4.74	4.94	3.83				
October.....					6.30	4.48	2.57				
November.....					4.15	4.52	3.04				
December.....					3.86	1.71	5.30				
TOTALS.....					44.93	37.73	39.60	N.O.			

1874 150 yds from gauge at gasworks



RAINFALL AT Burnley, Gas Works

70

Lat..... Lon..... County of... Lancashire

Rain Gauge, by..... Observer... W. B. Bryan

m S P Leather

Diameter.....					8						
Height .....					21						
Altitude.....					388						
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....					5.15	5.04					
February.....					2.06	.85					
March.....					3.94	.95					
April.....					2.41	1.56					
May .....					2.14	2.86					
June.....					.75	3.36					
July .....					2.80	4.71					
August.....					6.43	1.78					
September.....					4.66	4.63					
October.....					6.34	4.46					
November.....					4.06	4.44					
December.....					3.95	1.79					
TOTALS.....					44.69	36.43					

1876. N.O.



# RAINFALL AT *Burnley Palace House*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *W. B. Bryan Esq*

Diameter....							8				
Height ....							1	1	5		
Altitude ....							450				
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....							1.43	5.67	4.12	1.83	
February. . .							4.51	3.56	1.23	2.36	
March .....							4.21	3.61	1.92	1.91	
April .....							2.42	1.99	1.76	1.47	
May .....							52	2.72	4.04	1.68	
June .....							3.80	2.12	2.73	5.79	
July .....							4.29	4.22	1.01	5.35	
August ....							3.92	6.95	5.62	5.26	
September . .							3.94	4.29	4.59	2.36	
October ....							2.52	4.76	4.50	2.66	
November . .							2.77	5.29	3.18	1.15	
December . .							4.53	4.14	2.16	2.59	
TOTALS . .							38.86	49.32	36.86	33.41	



RAINFALL AT *Burnley Green Hill*

70

Lat. .... Lon. .... County of *Lancashire*

Rain Gauge, by .... Observer *N. B. Bryan Esq. C.E.*

Diameter ....						8					
Height ....						4 0					
Altitude ....						583					
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....						4.92	1.21				
February ....						.90	4.72				
March .....						.89	3.73				
April .....						1.54	2.35				
May .....						2.79	.55				
June .....						3.49	3.90				
July .....						5.19	3.42				
August ....						2.22	3.93				
September ..						4.69	3.83				
October ....						4.29	2.57				
November ..						4.36	2.93				
December ..						1.74	5.09				
TOTALS ..						37.02	38.23				



# RAINFALL AT *Burnley Brierfield*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *W. B. Bryan Esq. C.E.*

Diameter . . . .								8			
Height . . . .								1			
Altitude . . . .								402			
Year . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . . .						4.95	2.25	7.64	6.22	1.24	
February . . . .						1.18	4.28	4.71	1.70	2.56	
March . . . . .						.88	4.38	4.61	3.03	2.31	
April . . . . .						1.23	2.13	2.37	1.78	1.55	
May . . . . .						2.95	.58	3.02	4.09	1.69	
June . . . . .						3.36	4.00	2.18	1.60	5.06	
July . . . . .						5.51	3.30	4.68	.56	5.90	
August . . . .						3.40	3.65	6.77	4.30	5.75	
September . .						5.20	3.90	3.90	5.39	2.82	
October . . . .						3.67	2.70	5.57	5.22	3.57	
November . .						4.80	3.30	5.65	3.51	1.41	
December . .						1.59	4.48	4.68	2.70	3.51	
TOTALS . .						38.72	38.95	55.78	40.10	37.37	



# RAINFALL AT *Burnley Simonstone*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *W. B. Bryan Esq. C.E.*

Diameter . . .									.5		
Height . . .									1		
Altitude . . .									365		
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .									# 4.60	1.20	
February . . .									1.41	2.47	
March . . . . .									2.51	2.01	
April . . . . .									1.89	1.56	
May . . . . .									4.27	1.84	
June . . . . .									2.68	5.37	
July . . . . .									.97	5.56	
August . . . .									5.77	5.82	
September . .									4.12	2.56	
October . . . .									5.03	2.61	
November . .									3.41	1.23	
December . .									2.10	2.55	
TOTALS . .									38.76	34.78	

*1878 Gauge moved from Padiham about 1 mile distant*



RAINFALL AT *Burnley N. W. Swindon*

Lat.....

Lon.....

County of.....

*Lancashire*

.....Rain Gauge, by.....

Observer

*J. Emmett Esq.*

Diameter .....			1.6								
Height .....	18.0		18.								
Altitude .....	750.0			750 <sup>π</sup>							
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.19	1.17	4.77	6.30	5.60	6.00	1.57	7.00	6.85	.65	4.330
February.....	.78	2.26	3.16	1.06	2.22	1.17	4.84	4.60	1.75	2.81	2.465
March.....	1.70	-.99	3.92	3.38	5.95	1.12	4.15	3.73	2.90	2.21	3.005
April.....	1.33	2.25	4.29	.77	2.25	1.85	2.83	2.80	1.90	1.79	2.206
May .....	1.54	1.30	2.95	2.25	2.73	3.35	.59	3.67	4.28	2.28	2.494
June.....	3.62	2.38	6.60	1.17	1.13	4.10	4.28	2.80	2.85	4.10	3.303
July .....	1.31	2.83	3.40	5.85	3.30	6.10	4.73	5.63	1.78	5.46	4.039
August.....	-.58	1.35	4.05	5.44	6.65	2.58	4.38	6.00	5.30	5.10	4.143
September.....	.96	1.50	6.75	2.75	4.75	5.00	4.50	4.78	5.75	2.38	3.912
October.....	<sup>+</sup> 7.08	<sup>+</sup> 3.06	5.88	8.11	6.10	4.55	2.91	5.55	5.10	1.37	4.971
November.....	2.64	2.10	6.58	4.97	4.23	4.95	3.25	6.73	3.27	.88	3.960
December.....	1.31	1.85	3.61	2.85	3.32	2.45	6.45	4.76	1.27	2.08	2.995
TOTALS .....	26.04	23.04	55.96	45.10	48.23	43.22	44.48	58.05	43.00	31.11	41.823

C C C



RAINFALL AT *Burnley Gawthorpe Hall*

Lat. .... Lon. .... County of *Lancashire*  
Rain Gauge, by ..... Observer *Sir U. K. Shuttleworth*

Diameter. ....											8	
Height. ....											1	
Altitude. ....											316	
Year. ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January. ....										1.12		
February. ....										2.62		
March. ....										1.89		
April. ....										1.59		
May. ....										1.68		
June. ....										6.14		
July. ....										5.56		
August. ....										6.34		
September. ....										2.80		
October. ....										2.34		
November. ....										1.26		
December. ....										2.78		
TOTALS. ....										36.12		

*1879 Trees 6ft high 8ft S.W.*

*All: Saint church Haberham 1/2 mile S.*



# RAINFALL AT *Burnley Radham*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *N. B. Bryan Esq. C.E.*

Diameter ....						5					
Height ....						8	1				
Altitude ....						352					
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....						4.67	1.79	6.10			
February ....						1.05	4.52	4.56			
March .....						.95	4.13	3.92			
April .....						1.21	2.41	2.28			
May .....						2.45	.64	2.67			
June .....						3.21	4.22	2.09			
July .....						5.78	3.47	4.61			
August ....						3.00	3.67	8.07			
September ..						4.00	3.94	4.59			
October ....						3.64	2.56	4.68			
November ..						4.12	2.82	5.45			
December ..						1.98	4.08	4.90			
TOTALS ..						36.06	38.25	53.92			

1878 Gauge moved to Simonstone about 1 mile distant



# RAINFALL AT

*Padiham*

*Huntroyde Gardens*

17 OCT 1912

Lat. *53° 48' 45"*

Lon. *2° 10' 20"* County of *Lancaster*

*Dial* Rain Gauge, by

Observer *Head Gardener*

*R. G. Howson Esq*

Diameter. ....	<i>10" square</i>										
Height. ....	<i>4 ft.</i>										
Altitude. ....	<i>423 ft.</i>										
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....	3.87	.96	5.41	4.47	4.69	5.16	2.27	6.89	5.37	.79	
February. ....	1.86	3.90	3.88	.97	2.18	1.62	4.71	4.13	1.60	2.88	
March. ....	3.59	1.65	3.55	1.99	5.11	.85	4.41	3.80	2.24	2.20	
April. ....	2.02	3.18	3.42	.73	1.42	1.36	1.82	2.01	1.43	1.62	
May. ....	1.84	2.13	2.48	2.53	2.48	2.94	.81	3.20	3.70	1.63	
June. ....	2.85	3.42	5.91	2.38	1.11	4.11	4.52	.99	.95	5.27	
July. ....	2.10	6.38	3.80	6.19	3.08	5.70	3.07	7.11	1.02	6.20	
August. ....	1.73	1.46	5.75	4.80	5.77	3.24	3.16	9.07	3.46	5.78	
September. ....	2.87	4.17	7.55	2.40	5.36	5.53	5.24	4.58	<i>No Record</i>	2.70	
October. ....	11.20	5.43	4.93	5.75	7.23	3.39	2.93	3.64	4.25	2.92	
November. ....	3.41	1.44	4.49	3.53	4.60	4.25	2.47	6.06	4.20	1.47	
December. ....	3.71	3.02	3.65	1.78	3.55	1.90	5.80	4.39	2.06	2.83	
TOTALS. ....	41.05	37.14	54.82	37.52	46.58	40.35	41.21	55.87	30.28	36.29	

*Recd. 17.x.12 Entd. 27.xi.12*

*mf*



RAINFALL AT *Burnley Briercliffe*

70

Lat. \_\_\_\_\_ Lon. \_\_\_\_\_ County of *Lancashire*  
Rain Gauge, by \_\_\_\_\_ Observer *Rev. R. D. H. Gray*

Diameter. ....										5	
Height. ....										1. -	
Altitude. ....										680	
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January .....											
February. ....											
March .....										# 2.13	
April .....										1.56	
May. ....										2.07	
June .....										5.10	
July. ....										5.92	
August .....										5.25	
September....										2.63	
October .....										3.25	
November....										1.65	
December ....										3.20	
TOTALS ....											

*A long two miles N.E. of Burnley*







RAINFALL AT *Preston Fishwick House*

Lat..... Lon..... County of *Lancashire*  
 ..... Rain Gauge, by..... Observer *Thos Oddie Esq.*

Diameter .....	7' 0										
Height .....	22										
Altitude .....	134.0										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	2.48										
February.....	2.48										
March.....	2.10										
April.....	3.03										
May .....	1.14										
June.....	1.10										
July .....	1.20										
August.....	.95										
September.....	2.87										
October.....	8.90										
November.....	2.60										
December.....	2.32										
TOTALS .....	29.17										

*C*  
 My address in future will be the Oaklands  
 Poulton le Fyldes  
 I shall continue the Rain Gauge



from Preston Gaardian  
RAINFALL AT Preston Local Board

700

Lat. \_\_\_\_\_ Lon. \_\_\_\_\_ County of Lancashire  
Rain Gauge, by \_\_\_\_\_ Observer \_\_\_\_\_

Diameter . . .											
Height . . .											
Altitude . . .											
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .						4.38					
February . . .						97					
March . . . . .						83					
April . . . . .						87					
May . . . . .						2.16					
June . . . . .						4.00					
July . . . . .						5.53					
August . . . .						1.44					
September . .						4.74					
October . . . .						3.59					
November . .						3.91					
December . .						1.70					
TOTALS . .						34.12					

34.05



RAINFALL AT *Preston Atherton Terrace*

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer

*Jas. Armytage Esq. C.E.*

Diameter .....	<i>.8</i>	<i>'</i>									
Height .....	<i>1.2</i>	<i>"</i>									
Altitude .....	<i>143</i>	<i>"</i>									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>3.21</i>	<i>1.71</i>	<i>4.76</i>								
February.....	<i>3.26</i>	<i>2.98</i>	<i>4.74</i>								
March.....	<i>2.70</i>	<i>7.66</i>	<i>3.94</i>								
April.....	<i>1.67</i>	<i>2.67</i>	<i>2.84</i>								
May .....	<i>1.75</i>	<i>1.81</i>	<i>2.09</i>								
June.....	<i>1.46</i>	<i>2.58</i>	<i>5.43</i>								
July .....	<i>7.45</i>	<i>6.02</i>	<i>5.97</i>								
August.....	<i>3.81</i>	<i>1.96</i>	<i>4.36</i>								
September.....	<i>3.36</i>	<i>3.71</i>	<i>6.32</i>								
October.....	<i>11.52</i>	<i>3.69</i>	<i>5.36</i>								
November.....	<i>3.21</i>	<i>1.86</i>	<i>3.87</i>								
December.....	<i>3.00</i>	<i>3.46</i>	<i>3.42</i>								
TOTALS .....	<i>40.40</i>	<i>34.11</i>	<i>53.10</i>								

C C C







# RAINFALL AT *Preston N. W. Alston*

Lat..... Lon..... County of *Lancashire*

Rain Gauge, by..... Observer *J. S. Armytage Esq. L. E.*

Diameter .....	.8	.										
Height .....	1	.2	.									
Altitude .....	320.	.										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	3.22	1.63	5.17	5.03	4.80	5.23	2.75	7.15	4.20	1.22	4.040	
February.....	7.20	3.19	4.18	1.35	1.55	1.15	5.03	4.45	2.50	2.67	2.677	
March.....	2.65	1.78	4.24	3.55	4.96	1.17	3.01	3.98	1.66	2.00	2.900	
April.....	1.99	3.17	2.78	.90	1.53	1.15	2.86	2.78	1.40	1.54	2.010	
May .....	1.85	1.95	2.10	2.34	1.88	2.26	.55	2.50	5.03	2.50	2.296	
June.....	2.22	2.66	5.57	3.27	1.61	3.55	4.00	1.76	3.00	4.40	3.198	
July .....	3.00	6.50	5.91	4.38	2.50	5.30	4.36	4.92	1.09	5.18	4.314	
August.....	4.83	1.80	4.97	5.10	7.33	3.04	4.46	5.68	5.55	7.50	5.026	
September.....	3.70	3.47	6.10	3.05	4.54	4.26	5.45	6.36	5.28	3.46	4.567	
October.....	9.95	3.76	5.78	5.74	6.05	3.86	2.73	5.93	4.98	3.36	5.214	
November.....	3.27	2.00	4.00	2.17	5.30	4.70	3.10	5.45	3.24	.95	3.418	
December.....	3.28	3.65	3.40	1.72	3.60	2.42	4.62	5.60	2.00	3.28	3.357	
TOTALS .....	41.16	35.56	54.14	38.60	45.65	38.09	42.92	56.56	39.43	38.06	43.017	

C C C

*1874 on 21st June as read from the rain gauge  
 5.00 in. for a quantity of rain  
 the rest of the year*



RAINFALL AT *Blackpool Southshore*

Lat.....

Lon.....

County of *Lancashire*Rain Gauge, by..... Observer *J. Sharples Esq.*

Diameter .....	10	.	.	.	.	.	.	.	.	.	.	.
Height .....	1	0	.	.	.	.	.	.	.	.	.	.
Altitude .....	29	.	.	.	.	.	.	.	.	.	.	.
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	3.30	1.20	5.45	3.70	2.88	3.65	1.40	6.40	2.70	1.45	3.203	
February.....	1.72	2.88	2.60	.65	1.90	1.00	2.60	3.55	1.70	2.95	2.155	
March.....	2.40	1.45	3.20	3.49	1.45	.58	1.85	2.40	1.40	1.50	1.972	
April.....	1.10	2.20	1.65	.48	1.08	.65	2.12	2.90	1.35	2.20	1.573	
May.....	1.45	1.45	1.40	1.75	1.20	1.40	.25	2.60	3.60	1.90	1.700	
June.....	1.15	1.75	5.05	1.93	.25	3.85	2.50	1.40	2.75	3.80	2.443	
July.....	1.10	4.43	6.55	2.70	1.72	6.30	1.90	4.10	.65	4.30	3.375	
August.....	1.23	1.38	1.95	2.20	4.00	2.20	3.05	5.70	5.90	5.40	3.301	
September.....	3.00	2.90	7.20	2.20	3.25	4.65	4.35	4.40	3.90	3.50	3.935	
October.....	9.60	6.15	5.40	4.32	5.40	4.55	3.35	5.45	3.30	1.85	4.937	
November.....	2.70	1.50	3.18	1.65	4.25	3.80	3.70	5.15	2.80	1.25	2.998	
December.....	2.66	2.65	3.72	1.20	2.35	1.40	5.70	5.32	1.87	1.50	2.837	
TOTALS .....	31.41	29.94	47.35	26.27	29.73	33.93	32.77	49.37	31.92	31.60	34.429	

1870 Average (15 y<sup>r</sup>) for Oct. is 4.10

1874 Oct<sup>r</sup> 23 Gauge moved from North side of  
Dean street to an equally good position on  
the South side



RAINFALL AT *Blackpool Arnold House*

Lat..... Lon..... County of *Lancashire*  
..... Rain Gauge, by..... Observer *J. Ward Esq*

Diameter .....			<i>.8</i>								
Height .....			<i>.9</i>								
Altitude .....			<i>30</i>								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....			<i>4.12</i>	<i>4.11</i>							
February.....			<i>2.68</i>	<i>.92</i>							
March.....			<i>3.59</i>	<i>3.45</i>							
April.....			<i>1.24</i>	<i>.56</i>							
May .....			<i>1.77</i>	<i>2.03</i>							
June.....			<i>3.80</i>	<i>2.06</i>							
July .....			<i>6.99</i>	<i>2.83</i>							
August.....			<i>2.56</i>	<i>2.71</i>							
September.....			<i>7.15</i>	<i>2.51</i>							
October.....			<i>5.42</i>	<i>3.84</i>							
November.....			<i>3.04</i>	<i>1.62</i>							
December.....			<i>4.08</i>	<i>1.35</i>	<i>H</i>						
TOTALS .....			<i>46.44</i>	<i>27.99</i>							

*1874 Moslip*



# RAINFALL AT *Blackpool Arnold House*

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *T. Ward Esq*

Diameter ...									.5		
Height ...									1		
Altitude ...									30		
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....									2.66	1.45	
February ....									1.60	3.04	
March .....									1.58	1.68	
April .....									1.10	2.28	
May .....									3.48	2.37	
June .....									3.07	3.88	
July .....									.63	4.85	
August ....									5.99	5.32	
September ..									3.83	3.46	
October ....									3.61	1.76	
November ..									2.70	1.21	
December ..									2.07	2.25	
TOTALS ..									32.32	33.55	

1878 On the S of gauge is a wall 3ft 6 in high & 16 ft distant & on N. a wall 6 ft high & 21 ft distant

Holy Trinity church South Shore 1 mile N.N.W.



RAINFALL AT *Wirkham Nelson Reservoir Bank.*

Lat..... Lon..... County of *Lancashire*  
 Rain Gauge, by..... Observer *J. Bradley*

Diameter .....		10										
Height .....		1' 0										
Altitude .....			150									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	2.60	.82	(3.88)	3.05	2.17	(3.05)	1.13	4.28	1.65	1.10		
February.....	1.35	2.95	2.40	.56	1.16	.62	2.70	2.28	1.05	2.20	#	
March.....	1.70	1.12	2.84	2.52	1.02	.45	1.15	1.90	.45	(1.60)		
April.....	.75	2.20	1.78	.26	.70	.48	1.92	2.45	1.20	(2.20)		
May .....	1.20	1.20	1.35	1.60	1.05	1.32	.26	2.17	3.30	(2.55)		
June.....	1.10	1.20	3.30	1.73	.48	3.18	1.43	1.12	2.98	(3.87)		
July .....	.47	4.07	4.08	2.62	1.13	4.70	1.52	4.40	.45	(5.30)		
August.....	2.27	1.18	3.20	2.70	4.10	2.12	3.05	5.02	4.10	(5.90)		
September.....	1.53	2.77	5.27	2.05	2.42	4.20	3.25	4.25	2.17	(3.57)		
October.....	2.45	4.90	4.10	3.05	3.82	4.06	2.50	3.62	2.20	(2.00)		
November.....	1.78	.98	2.38	.98	3.31	4.16	2.95	3.55	1.88	(.90)		
December.....	1.96	2.18	2.75	.77	(2.33)	.96	4.03	3.05	1.09	(2.10)		
TOTALS .....	25.16	25.57	37.33	21.89	(23.89)	(29.30)	25.89	38.09	22.52	(33.20)	(28.293)	

1872 Jan 1<sup>st</sup> to 13<sup>th</sup> G out of order.

1874 The Gauge was out of order during the last week or 9 days in Dec?

1875 Gauge replaced Jan 12<sup>th</sup> after undergoing repair  
 The gauge is on the most elevated ground for several miles round  
 and there is nothing near the gauge to intercept the rain

1879 new gauge started in another position - The  
 registration of the old gauge was continued for  
 some time but it did not register as much  
 as the new one

1879 new gauge used



# RAINFALL AT *Kirkham Weeton Reservoir*

Lat. .... Lon. .... County of *Lancaster*  
 Rain Gauge, by ..... Observer .....

Diameter. ....										<i>.10</i>	
Height. ....										<i>1.</i>	
Altitude. ....										<i>100</i>	
Year .....	<i>1870</i>	<i>1871</i>	<i>1872</i>	<i>1873</i>	<i>1874</i>	<i>1875</i>	<i>1876</i>	<i>1877</i>	<i>1878</i>	<i>1879</i>	MEANS.
January. ....											
February. ....											
March. ....										<i># 1.60</i>	
April. ....										<i>2.20</i>	
May. ....										<i>2.55</i>	
June. ....										<i>3.87</i>	
July. ....										<i>5.30</i>	
August. ....										<i>5.90</i>	
September. ....										<i>3.57</i>	
October. ....										<i>2.00</i>	
November. ....										<i>.90</i>	
December. ....										<i>2.10</i>	
TOTALS ....										<i>—</i>	

*1879 New gauge started on 1<sup>st</sup> March about  
 1/4 of a mile from the Reservoir on lower  
 ground*



RAINFALL AT *Blackpool*

700

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *B. H. Bentley*

Diameter . . .						5					
Height . . .						7					
Altitude . . .						70					
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .											
February . . .											
March . . . . .											
April . . . . .											
May . . . . .						47.56					
June . . . . .						3.29					
July . . . . .						6.47					
August . . . .						2.18					
September . .						4.34					
October . . . .						4.37					
November . . .						3.15					
December . . .						1.30					
TOTALS . . .											

*Moved from Oldham Royton*

ce  
not  
5 in  
ence



## RAINFALL AT Eccleston Elswick Lodge

Lat..... Lon..... County of Lancashire

Rain Gauge, by..... Observer S. King Esq.

In 1881-1915 35.0

Diameter .....			.10								
Height .....			1.8	1.4							
Altitude .....			50	55	50		55				
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....			5.99	4.83	3.51	4.75	1.58	5.95	2.69	1.53	
February.....			3.57	.89	1.49	.86	4.09	3.86	1.93	2.92	
March.....			4.39	3.43	1.95	.71	2.16	2.86	1.23	1.36	
April.....			2.42	.52	1.13	.69	2.64	2.71	1.57	1.49	
May.....			1.45	2.06	1.05	2.05	.32	2.77	4.42	2.19	
June.....			4.94	2.37	.76	4.43	3.47	2.21	4.37	3.61	
July.....			4.88	4.26	2.30	5.49	2.92	6.05	.74	4.80	
August.....			3.85	3.81	5.68	2.95	3.59	6.38	5.04	6.28	
September.....			6.99	2.17	4.02	4.97	4.32	4.56	4.23	3.49	
October.....			5.93	5.44	6.29	4.40	2.63	5.74	4.19	1.99	
November.....			4.09	1.86	4.44	4.75	3.34	5.84	3.04	.81	
December.....			3.42	1.31	3.35	1.73	4.79	5.24	2.14	1.74	
TOTALS .....	(35.00)	(36.00)	57.89	32.95	35.97	37.78	33.85	54.17	35.59	32.21	(38.74)

1878 House & trees 20 to 30 ft high about the same distance from the gauge 3.1.1880 My rain gauge is in a rather confined situation but I do not like to move it, as it would not then compare with former years. I have for a short time had a 5 in gauge in a more open situation but find very little difference between the two.

1879 Trees 45 ft high 40 ft E.S. & W.  
House 35 ft 30 ft N.

1870 & 1871 estimated from Kirkham, Weeton,  
& Gaistang, Vale House



# RAINFALL AT

*Stonyhurst College*

70

Lat. ....

Lon. ....

County of

*Lancashire*

Rain Gauge, by

Observer

*Rev. S. J. Perry*

Diameter. ....											
Height. ....											
Altitude. ....											
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January .....	4.13	1.74	5.59	6.21	5.29	5.17	3.11	6.13	5.12	1.53	
February .....	1.62	4.57	4.61	.83	1.79	1.41	6.03	5.40	2.12	2.70	
March .....	2.94	1.98	4.78	3.42	6.50	1.25	4.64	4.40	2.70	2.51	
April .....	2.65	3.62	3.70	.83	1.82	1.60	2.70	2.77	1.58	1.56	
May .....	1.97	1.81	3.22	2.87	1.85	2.94	.64	2.79	4.66	2.38	
June .....	2.24	3.38	5.07	4.03	2.06	4.50	4.63	2.89	3.38	4.79	
July .....	2.28	8.13	4.52	4.84	3.06	5.72	5.36	4.99	1.20	6.79	
August .....	2.89	2.09	5.60	6.41	7.26	3.78	4.34	6.70	7.05	7.71	
September .....	4.02	4.23	8.91	2.84	5.59	5.91	5.41	4.51	6.33	3.40	
October .....	13.44	6.62	6.04	8.73	6.94	3.81	3.05	6.55	5.45	4.14	
November .....	3.54	2.09	4.72	3.89	5.38	5.84	2.19	6.49	3.80	1.32	
December .....	4.12	3.92	4.11	2.41	3.97	2.60	5.42	6.68	2.04	3.56	
TOTALS .....	45.84	44.18	60.87	47.31	51.51	44.53	47.52	60.30	45.43	42.39	

From the corrected table printed in the "Results" for 1878

1878 and 1879 copied 9/12/42 from M.S. summary from Stonyhurst.  
 Supplied by R. Met. Soc. It may be that the values added above for 1878-9 are  
 only an incorrect version of the values given here sheets previously, but the  
 values 1870-7 on this sheet agreed precisely with the R. Met. Soc. version.



## RAINFALL AT Whalley Stoneyhurst College

Lat.....

Lon.....

County of.....

Lancashire

Rain Gauge, by.....

Observer

Rev. S. J. Perry

Daily

46.7

Diameter .....	11	.					11½		.	.		
Height .....	8	.	1.3	1.		1.3	1.		.	.		
Altitude .....	376.0	.					381	376	.	.		
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	4.11	7.73	5.56	6.17	5.26	5.13	3.09	6.10	5.13	1.53	4.381	20.98
February.....	7.61	4.55	4.58	.82	1.78	1.40	6.00	5.36	2.12	2.70	3.092	17.58
March .....	2.92	1.97	4.75	3.40	6.45	1.25	4.61	4.37	2.69	2.51	3.492	15.43
April.....	2.64	3.60	3.68	.82	1.81	1.59	2.68	2.76	1.58	1.56	2.272	10.17
May .....	1.95	1.80	3.20	2.85	1.84	2.92	.64	2.77	4.66	2.38	2.501	13.37
June.....	2.23	3.36	6.04	4.01	2.05	4.47	4.60	2.88	3.37	4.79	3.680	20.11
July .....	2.27	8.08	4.49	4.81	3.04	5.69	5.32	4.96	1.14	6.79	4.660	23.91
August.....	2.87	2.07	5.57	6.38	7.21	3.76	4.31	6.66	7.05	7.71	6.359	29.49
September.....	3.99	4.20	8.85	2.82	5.56	5.88	5.38	4.48	6.33	3.40	5.089	25.41
October.....	13.36	6.58	6.00	8.68	6.90	3.78	3.04	6.51	5.45	4.15	6.445	22.93
November.....	3.52	2.08	4.70	3.87	5.35	5.81	2.18	6.45	3.80	1.32	3.908	19.56
December.....	4.09	3.89	4.09	2.40	3.95	2.58	5.39	6.64	2.04	3.56	3.863	20.21
TOTALS .....	45.56	43.91	60.51	47.03	51.20	44.26	47.25	59.94	45.36	42.40	48.742	



## RAINFALL AT Whalley Stoneyhurst College

Lat.....

Lon.....

County of Lancashire

Monthly

Rain Gauge, by.....

Observer

Rev. S. J. Perry

Monthly Av. 46.1

Diameter .....	.11	.	.	.	.	.	.	.	.	.	.	.
Height .....	.8	.	1.3	.	.	.	.	1.	.	.	.	.
Altitude .....	376	.	.	.	.	.	.	.	.	.	.	.
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	4.10	1.68	5.53	6.07	5.02	5.07		6.21	4.75	1.67		
February.....	1.56	4.50	4.20	.78	1.40	1.40		5.38	2.15	2.72		
March.....	2.80	1.94	4.26	3.29	6.19	1.10		4.42	2.63	2.44		
April.....	2.47	3.59	3.60	.72	1.58	1.20		2.74	1.49	1.54		
May.....	1.93	1.79	3.08	2.58	1.81	2.76		2.85	4.50	2.33		
June.....	2.13	3.31	4.86	3.88	1.86	4.00		2.98	3.43	4.90		
July.....	2.22	8.01	4.30	4.48	2.74	5.25		4.93	1.40	6.76		
August.....	2.80	2.04	5.19	6.00	6.99	3.40		6.65	6.82	7.83		
September.....	3.69	3.64	8.29	2.61	5.50	5.10		4.49	6.28	3.49		
October.....	<sup>+</sup> 3.30	<sup>+</sup> 6.50	5.71	8.36	6.66	3.06		6.55	5.44	4.19		
November.....	3.46	2.03	4.38	3.60	5.13	5.45		6.52	3.82	1.31		
December.....	3.90	3.81	3.90	2.09	3.81	1.98		6.42	2.14	3.87		
TOTALS .....	44.36	42.84	57.30	44.46	48.69	39.77		60.14	44.85	43.15		

1875 The monthly gauge has a considerable hole in the side which interfered with the accuracy of the results.

76 no slip



# RAINFALL AT *Stonyhurst College*

700

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *Rev<sup>d</sup> S. J. Perry*

## *Self recording Gauge*

Diameter ....										11	
Height ....										2	
Altitude ....										377	
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....						5.01				1.38	
February ....						1.38				2.60	
March .....						1.18				2.47	
April .....						1.63				1.58	
May .....						2.77				2.34	
June .....						4.22				4.76	
July .....						5.78				6.70	
August ....						3.15				7.63	
September ..						5.27				3.38	
October ....						3.74				4.05	
November ..						5.69				1.30	
December ..						2.24				3.46	
TOTALS ..						42.06				41.65	

76. no slip



RAINFALL AT *Preston N.W. Knowl Green*

70

Lat..... Lon..... County of *Lancashire*

Rain Gauge, by..... Observer *J. Armytage Esq. C.E.*

Diameter .....	.8	.							.	.	
Height .....	1.2	.					.		.	.	
Altitude .....	400.	.					.		.	.	
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.10	1.58	4.31	4.60	4.70	4.93	2.80	7.00	4.12	1.00	3.814
February.....	1.16	3.19	4.12	.76	1.50	1.33	5.28	3.90	1.95	2.60	2.579
March.....	2.37	1.66	3.63	2.85	4.62	1.22	3.27	4.00	1.61	2.17	2.740
April.....	2.14	2.78	2.70	.85	1.34	1.48	2.50	2.26	1.33	1.21	1.859
May.....	1.69	7.46	2.15	2.49	1.90	2.59	.56	2.10	5.33	2.42	2.269
June.....	1.44	2.70	4.93	3.46	1.29	3.95	3.61	1.85	3.00	4.45	3.068
July.....	2.20	6.05	5.30	4.00	2.00	4.40	4.88	4.56	1.05	6.78	4.122
August.....	3.29	1.73	4.87	4.80	5.66	3.80	4.05	5.50	5.20	7.20	4.610
September.....	2.63	3.55	7.12	2.83	4.68	4.45	5.20	7.00	5.10	3.30	4.586
October.....	10.00	5.25	5.20	6.46	5.03	4.33	3.14	6.00	4.96	3.56	5.453
November.....	3.15	1.57	3.37	3.36	4.87	4.46	3.60	5.80	3.18	1.18	3.454
December.....	3.10	3.40	2.94	1.97	3.12	2.15	4.20	5.82	2.01	2.60	3.131
TOTALS .....	36.27	35.52	50.64	38.43	40.71	39.09	43.09	55.79	38.84	38.47	41.685

C C C



RAINFALL AT *Preston W. W. Loud Scales*

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer

*J. Armytage Esq. C.E.*

Diameter .....	.8										
Height .....	1.2										
Altitude .....	400										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.65	1.60	4.27	4.08	4.85	5.50	2.76	7.12	4.35	1.22	3.940
February.....	7.18	2.69	3.80	2.10	1.64	1.02	5.53	3.95	2.00	2.45	2.636
March.....	2.48	7.23	4.13	4.04	4.95	1.10	3.00	4.28	1.86	2.50	2.957
April.....	1.65	2.99	2.92	.92	1.18	1.14	2.60	2.83	1.49	1.30	1.902
May .....	1.88	1.30	2.19	2.58	1.62	2.69	.50	2.51	5.30	2.34	2.291
June.....	1.84	2.61	5.10	3.14	1.00	3.63	4.50	1.65	3.04	4.45	3.096
July .....	2.61	6.80	5.40	4.40	2.16	5.02	4.20	4.21	1.01	5.30	4.111
August.....	3.00	1.86	4.50	5.30	6.92	3.00	4.48	5.68	5.00	7.40	4.714
September.....	3.05	2.98	6.85	3.00	4.50	4.16	5.43	6.37	5.70	3.04	4.508
October.....	10.45	4.92	5.80	6.62	5.38	3.36	2.70	5.90	5.64	3.66	5.443
November.....	3.20	1.67	3.90	2.90	5.20	4.70	3.85	5.55	3.11	.83	3.491
December.....	3.26	3.80	3.37	1.70	3.08	2.70	5.10	5.60	2.06	2.63	3.330
TOTALS .....	38.25	34.45	52.23	40.78	42.48	38.02	44.65	55.65	40.56	37.12	42.419

C C C



RAINFALL AT *Preston N. W. Spade Mill*

Lat.....

Lon.....

County of.....

*Lancashire*

.....Rain Gauge, by.....

Observer.....

*J. Armytage Esq. C.E.*

Diameter.....	.8	.	.	.	.	.	.	.	.	.	.
Height.....	1	.2	.	.	.	.	.	.	.	.	.
Altitude.....	400.	.	.	.	.	.	.	.	.	.	.
YEAR.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.60	1.44	4.80	4.91	4.00	4.96	2.54	7.02	4.30	1.05	3.862
February.....	7.19	3.47	3.90	7.0	1.51	1.30	5.00	3.60	1.97	2.30	2.494
March.....	2.49	7.16	3.76	3.22	4.62	1.20	3.40	3.95	1.61	2.00	2.741
April.....	1.80	2.83	2.76	.94	1.26	1.13	2.48	2.70	1.30	1.14	1.834
May.....	1.74	1.74	2.10	2.34	1.70	2.23	.60	2.40	5.00	2.48	2.233
June.....	2.30	2.60	5.36	3.24	1.34	4.12	4.15	1.68	3.02	4.40	3.221
July.....	2.28	6.00	5.44	3.70	2.32	4.10	4.30	4.61	1.05	5.31	3.911
August.....	3.50	1.92	4.97	4.56	5.75	2.96	4.06	5.57	5.10	7.32	4.571
September.....	3.81	3.83	6.70	2.50	4.28	4.20	5.10	6.34	6.09	3.30	4.615
October.....	11.00	3.76	5.43	6.97	5.48	4.38	3.10	5.95	5.00	3.50	5.457
November.....	3.07	1.65	3.44	2.34	5.00	5.02	3.05	5.30	3.18	.95	3.300
December.....	3.06	3.33	3.04	1.55	3.30	2.40	4.15	5.70	1.96	2.83	3.132
TOTALS.....	39.84	33.73	51.70	36.97	40.56	38.00	41.93	54.82	39.58	36.58	41.371



## RAINFALL AT Preston W. W. Jeffery Hill

Lat.....

Lon.....

County of..... Lancashire.....

.....Rain Gauge, by.....

Observer

J. Armytage Esq. C.E.

Diameter .....	.8	.	.	.	.	.	.	.	.	.	.	.
Height .....	1	.2	.	.	.	.	.	.	.	.	.	.
Altitude .....	900.	.	.	.	.	.	.	.	.	.	.	.
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	3.10	2.20	5.10	5.03	5.85	6.41	3.54	7.16	4.50	1.22	4.411	
February.....	7.50	4.35	4.91	.68	1.95	1.59	6.15	4.31	2.05	1.74	2.923	
March.....	3.32	1.08	4.85	2.96	4.43	1.46	3.58	5.02	2.03	2.63	3.136	
April.....	1.91	2.20	2.72	.83	1.53	1.68	3.01	2.94	1.53	1.65	2.000	
May.....	2.14	1.96	2.98	2.78	1.92	2.95	.77	3.30	5.53	2.66	2.699	
June.....	2.69	3.23	5.12	4.63	1.70	4.35	4.90	2.65	3.08	4.50	3.685	
July.....	2.30	8.43	5.35	4.50	2.91	5.70	5.30	5.36	1.25	6.80	4.790	
August.....	3.78	2.22	4.50	5.96	7.92	3.65	4.81	6.50	5.75	7.65	5.274	
September.....	4.39	4.35	7.11	3.03	5.80	5.68	5.82	7.07	6.78	3.70	5.373	
October.....	<sup>+</sup> 11.50	5.08	5.25	7.89	7.16	3.42	3.60	6.50	5.24	3.70	5.934	
November.....	3.38	2.01	3.35	4.07	5.57	5.78	3.90	5.40	3.07	1.25	3.778	
December.....	3.20	4.25	3.63	3.00	3.63	2.70	5.12	6.00	2.14	3.30	3.697	
TOTALS .....	43.21	41.36	54.87	45.36	50.37	45.37	50.50	62.21	42.95	40.80	47.700	



# RAINFALL AT Lancaster Wray Vicarage

700

Lat. ....

Lon. ....

County of Lancashire

Rain Gauge, by

Observer Rev C. L. Reynolds

Diameter . . .								5			
Height . . .								1.1			
Altitude . . .								165			
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .									3.99	1.30	
February . . .									1.98	3.24	
March . . . . .									2.28	3.03	
April . . . . .									1.67	1.20	
May . . . . .									4.36	2.35	
June . . . . .									3.58	4.66	
July . . . . .									94	5.38	
August . . . .								# 6.63	5.87	6.31	
September . .								4.18	5.84	3.65	
October . . . .								6.70	5.12	3.25	
November . .								8.88	3.47	1.32	
December . .								4.97	2.72	2.88	
TOTALS . .								(3900)(4350)(6200)	41.82	38.57	

Extd for purpose of average VII. 1911.



RAINFALL AT *Fleet Bank*

Lat.....

Lon.....

County of *Lancashire*

Rain Gauge, by.....

Observer

*Thos. Mansome Esq.*

Diameter .....	1	0										
Height .....	2	2										
Altitude .....	58											
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	3.00	1.44	6.58	5.48	4.02	4.34	1.82			1.30		
February.....	2.02	3.55	3.60	.63	1.80	.83	3.85			2.76		
March .....	1.48	1.72	3.98	2.50		.77				1.64		
April.....	1.10	2.22	1.84	.67		1.10				1.25		
May .....	2.10	1.50	1.22	1.77	1.00	2.05				2.08		
June.....	1.76	7.68	5.50	1.82	.40	4.25				4.91		
July .....	2.11		5.25	4.12	2.24	3.65				5.35		
August.....	2.56	3.07	11.40	4.63	5.72	3.00				4.72		
September.....	2.22	3.71		1.70	5.60	4.50				3.51		
October.....	9.08	5.72	5.40	5.40	5.72	2.90				1.85		
November.....	2.88	1.51	4.03	1.68	3.32	5.00				1.10		
December.....	2.23	4.05	4.88	1.57	3.05	2.32				2.16		
TOTALS .....	33.34	36.17	53.68	31.97	<del>32.87</del>	34.71				32.63		

1870 The fall in Oct. is the largest in any one month since  
Oct. 1852 when 9.14 fell.

76 N.B.



# RAINFALL AT Lancaster Halton Park

Lat. ....

Lon. ....

County of Lancaster

Rain Gauge, by .....

Observer A. Grey Esq

Diameter . . . .										.8	
Height . . . .										1.6	
Altitude . . . .										240	
Year . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . . .									3.40	1.50	
February . . . .									1.70	2.90	
March . . . . .									1.70	1.80	
April . . . . .									1.50	1.00	
May . . . . .									3.30	2.05	
June . . . . .									3.50	3.80	
July . . . . .									.45	5.30	
August . . . .									5.40	5.10	
September . .									5.50	3.40	
October . . . .									4.40	2.50	
November . .									3.00	1.10	
December . .									1.20	2.10	
TOTALS . .									35.05	32.55	

Trees 50ft high 60yd N.E.

Caton church 1 1/4 mile S.E.



RAINFALL AT Lancaster Caton

Lat..... Lon..... County of... Lancashire  
..... Rain Gauge, by..... Observer Rev. A. Christopher

Diameter .....	.5										
Height .....	1.6			1.4	1.6	1.0					
Altitude .....	120.0		118	118 <sup>↑</sup>	117 <sup>↑</sup>						
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.96	1.95	7.09	6.19	4.72	5.20	1.91				
February.....	2.64	4.45	4.71	.77	1.77	.93	5.08				
March .....	2.56	1.89	4.98	3.12	3.77	1.03					
April.....	1.76	2.97	2.27	.59	1.59	1.29					
May .....	2.51	1.78	2.47	1.62	1.49	2.57					
June.....	2.12	2.44	5.45	2.36	1.12	4.24					
July .....	2.02	5.97	7.48	4.41	2.42	4.03					
August.....	2.27	1.95	5.52	5.26	6.70	3.83					
September.....	3.39	3.96	7.96	2.54	4.75	4.19					
October.....	9.86 <sup>+</sup>	6.14 <sup>+</sup>	6.47	6.32	6.38	3.24					
November.....	3.02	1.81	5.05	2.05	5.26	5.12					
December.....	3.56	4.28	5.24	1.90	4.08	2.73 <sup>#</sup>					
TOTALS .....	39.67	39.59	64.69	37.13	44.05	38.40					

C C C



# RAINFALL AT Lancaster Escowbeck

Lat. ....

Lon. ....

County of Lancashire

Rain Gauge, by

Observer

J. Grey

Av 1887-1915 40.7

Diameter ....	12										
Height ....	2 1/2										
Altitude ....	150										
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....	4.00	1.75	7.25	6.25	4.63	4.75	2.00	7.13	3.50	1.38	4.264
February ....	2.12	4.13	4.38	.75	1.62	1.00	4.75	4.50	2.00	2.75	2.800
March .....	2.38	1.87	4.87	3.13	3.75	.88	3.00	4.00	1.63	2.00	2.757
April .....	1.62	3.00	2.13	.50	1.50	1.12	2.63	2.00	1.62	1.25	1.737
May .....	2.38	2.00	2.00	1.62	1.50	2.50	.50	2.50	3.38	2.37	2.075
June .....	2.00	2.13	5.50	2.38	1.00	4.00	4.25	2.50	4.00	5.13	3.289
July .....	2.00	6.25	6.50	4.12	2.13	3.75	3.87	4.12	.50	5.50	3.874
August ....	2.12	1.87	5.37	5.63	6.62	3.50	3.75	6.38	5.50	5.25	4.599
September ..	3.50	3.88	8.38	2.25	4.88	4.38	3.88	4.75	5.62	3.50	4.502
October ....	10.00	5.87	6.62	6.50	6.50	2.87	2.62	6.50	4.50	2.62	5.460
November ..	2.88	1.75	5.00	1.87	4.62	4.88	3.25	8.25	3.13	1.13	3.676
December ..	3.00	4.63	4.75	2.00	3.75	2.62	5.25	5.12	2.50	2.25	3.587
TOTALS ..	38.00	39.13	62.75	37.00	42.50	36.25	39.75	57.75	37.88	35.13	42.614

The gauge is situated  $\frac{3}{4}$  of a mile from Caton Parsonage S.W. 4 miles E. of Lancaster 4 1/2 miles from the nearest sea shore in the valley of the Lune.

Gauge in a kitchen garden on the top of a hill no fruit trees above 5ft & none near hot house 20ft distant 4ft 6in high



RAINFALL AT *Lancaster South Road*

Lat.....

Lon.....

County of.....

*Lancashire*

.....Rain Gauge, by.....

Observer .....

*Wm. Raper Esq.*

Diameter .....	1.0											
Height .....	3.6											
Altitude .....	114.0		114 <sup>W</sup>									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	3.62	7.56	6.39	5.67	3.93	4.91	2.26	6.94	3.17	1.16	3.961	
February.....	2.13	3.55	4.01	7.2	1.58	.88	4.29	3.56	1.68	2.55	2.495	
March .....	1.80	2.02	4.27	2.37	3.44	.75	2.69	3.37	1.42	1.72	2.385	
April.....	7.35	2.07	2.18	5.3	1.35	1.26	2.75	1.92	2.18	1.08	1.667	
May .....	2.05	1.01	1.60	1.75	1.88	2.39	.51	2.34	3.36	2.24	1.993	
June.....	1.91	2.20	5.86	2.69	.89	5.56	4.44	3.14	4.15	4.79	3.563	
July .....	2.19 <sup>+</sup>	6.66	5.40	3.93	2.42	3.92	3.29	5.18	.56	4.82	3.837	
August.....	2.49	2.02	4.57	4.73	4.70	2.36	3.81	6.62	5.10	6.19	4.259	
September.....	3.05	3.98	8.58	2.00	4.28	4.75	3.42	4.32	5.01	3.57	4.296	
October.....	8.31 <sup>+</sup>	6.24	5.63	6.61	6.63	2.70	2.79	5.87	4.37	2.40	5.155	
November.....	3.04	1.73	4.65	1.88	3.66	5.23	3.34	7.77	2.70	1.24	3.524	
December.....	2.73	4.62	4.86	1.69	3.41	1.85	5.28	4.97	2.56	1.13	3.310	
TOTALS .....	34.67	38.46	58.00	34.57	38.17	36.56	38.87	56.00	36.26	32.89	40.445	



RAINFALL AT *Garstang The Parsonage*

Lat.....

Lon.....

County of.....

*Lancashire*

.....Rain Gauge, by.....

Observer

*Rev. J. B. Armitstead*

Diameter .....			5								
Height .....			1								
Altitude .....			71								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....			5.63	5.46	3.90	5.04	2.09	6.22	3.46		
February.....			2.66	.98	1.51	1.02	4.47	4.14	1.86		
March .....			5.49	3.20	3.18	.90	2.89	3.05	1.29		
April.....			2.34	.73	1.41	1.02	3.21	2.58	1.98		
May .....			1.61	1.82	1.22	2.14	.34	2.94	3.96		
June.....			6.30	2.81	.94	5.37	4.38	2.44	3.81		
July .....			5.30	3.37	1.56	4.21	2.86	4.64	.93		
August.....			3.70	4.60	5.57	2.91	3.95	7.45	4.83		
September.....			7.55	2.54	4.63	4.47	4.31	4.18	4.64		
October.....			5.96	6.54	6.52	3.83	2.63	5.80	3.02		
November.....			4.46	1.96	4.52	5.09	3.44	6.23	2.51		
December.....			4.33	1.60	3.33	2.26	5.10	5.33	2.80		
TOTALS .....			55.33	35.61	38.29	38.26	39.67	65.00	35.09		

1878 Small bushes about 3ft high 5 or 6 feet distant

1879 Observer moved



# RAINFALL AT Garstang Calder Mount

Lat.....

Lon.....

County of Lancashire

Rain Gauge, by.....

Observer C. Wilson Esq

W 1881-1915

38.7

Diameter .....								.5				
Height .....			10.									
Altitude .....			100?									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....			5.53	6.27	4.88	5.34	1.93	7.13	2.98	1.37		
February.....			2.66	.73	1.68	1.08	4.38	4.88	1.45	3.63		
March .....			4.53	3.88	4.20	.95	3.30	3.53	1.57	1.57		
April.....			3.87	.57	1.60	1.20	2.77	2.56	1.43	1.26		
May .....			1.74	2.23	1.53	2.54	.39	2.60	3.78	2.81		
June.....			6.41	3.23	1.07	5.60	5.18	2.38	3.76	3.75		
July .....			7.64	4.06	1.62	5.07	3.22	4.97	.98	6.65		
August.....			4.10	4.80	7.53	3.28	4.39	8.63	5.57	7.99		
September.....			8.26	2.42	4.84	4.98	4.07	5.62	4.90	3.44		
October.....			7.48	7.55	6.07	4.02	2.92	5.69	4.18	2.89		
November.....			4.82	3.00	5.41	6.06	3.09	6.62	2.19	1.35		
December.....			4.21	1.72	3.82	2.42	4.95	4.66	2.40	2.85		
TOTALS .....			61.25	40.41	44.25	42.54	40.59	59.27	35.19	39.56		

C



RAINFALL AT *Clitheroe (Downham Hall No. 1)*

Lat. ....

Lon. ....

County of .....

*Lancashire*

Rain Gauge, by..... Observer .....

Diameter .....	<i>10<sup>1</sup> x 9<sup>1</sup></i>	<i>10<sup>1</sup> x 9<sup>1</sup></i>										
Height .....	<i>1</i>	<i>1</i>										
Altitude .....	<i>473</i>											
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	<i>3.93</i>	<i>1.34</i>	<i>5.56</i>	<i>5.54</i>	<i>4.95</i>	<i>4.15</i>	<i>2.60</i>	<i>6.30</i>	<i>5.08</i>	<i>2.42</i>	<i>4.187</i>	
February .....	<i>1.34</i>	<i>4.35</i>	<i>4.72</i>	<i>1.20</i>	<i>1.62</i>	<i>.98</i>	<i>6.68</i>	<i>4.36</i>	<i>1.47</i>	<i>2.20</i>	<i>2.892</i>	
March .....	<i>2.26</i>	<i>1.72</i>	<i>4.46</i>	<i>3.46</i>	<i>5.72</i>	<i>1.16</i>	<i>5.13</i>	<i>3.65</i>	<i>2.67</i>	<i>2.77</i>	<i>3.300</i>	
April.....	<i>1.94</i>	<i>2.93</i>	<i>3.43</i>	<i>.42</i>	<i>1.75</i>	<i>1.50</i>	<i>2.57</i>	<i>3.17</i>	<i>1.52</i>	<i>1.67</i>	<i>2.090</i>	
May .....	<i>1.80</i>	<i>1.66</i>	<i>3.02</i>	<i>2.52</i>	<i>2.17</i>	<i>2.63</i>	<i>.53</i>	<i>2.45</i>	<i>3.64</i>	<i>1.95</i>	<i>2.237</i>	
June.....	<i>3.05</i>	<i>3.14</i>	<i>4.24</i>	<i>1.66</i>	<i>1.39</i>	<i>2.81</i>	<i>4.08</i>	<i>2.13</i>	<i>2.45</i>	<i>4.57</i>	<i>2.952</i>	
July .....	<i>1.05</i>	<i>7.27</i>	<i>3.32</i>	<i>4.36</i>	<i>3.92</i>	<i>5.45</i>	<i>3.35</i>	<i>5.02</i>	<i>1.30</i>	<i>6.60</i>	<i>4.164</i>	
August.....	<i>2.00</i>	<i>2.14</i>	<i>4.58</i>	<i>4.77</i>	<i>6.58</i>	<i>5.07</i>	<i>4.26</i>	<i>6.86</i>	<i>6.17</i>	<i>6.75</i>	<i>4.918</i>	
September.....	<i>2.94</i>	<i>3.69</i>	<i>7.71</i>	<i>2.50</i>	<i>5.05</i>	<i>4.51</i>	<i>4.80</i>	<i>4.35</i>	<i>4.47</i>	<i>3.15</i>	<i>4.317</i>	
October.....	<i>9.40</i>	<i>5.74</i>	<i>5.48</i>	<i>7.37</i>	<i>4.93</i>	<i>4.02</i>	<i>2.84</i>	<i>5.60</i>	<i>3.94</i>	<i>2.48</i>	<i>5.180</i>	
November.....	<i>5.24</i>	<i>1.39</i>	<i>4.54</i>	<i>3.40</i>	<i>3.61</i>	<i>5.24</i>	<i>3.43</i>	<i>6.20</i>	<i>3.47</i>	<i>1.00</i>	<i>3.752</i>	
December.....	<i>2.97</i>	<i>2.68</i>	<i>3.75</i>	<i>1.84</i>	<i>4.73</i>	<i>2.13</i>	<i>5.53</i>	<i>4.57</i>	<i>2.04</i>	<i>3.14</i>	<i>3.338</i>	
TOTALS .....	<i>37.92</i>	<i>38.05</i>	<i>54.81</i>	<i>39.04</i>	<i>46.42</i>	<i>39.65</i>	<i>45.80</i>	<i>54.66</i>	<i>38.22</i>	<i>38.70</i>	<i>43.327</i>	

The difference in amount between this G and No 3 is entirely owing to the position as the two Gs have been changed and the difference remains the same. The readings are now taken by plunging a thin rod into the retaining chambers of the G. and seeing how far it is wetted.

1876 trees near the gauge

1879 not printed



RAINFALL AT *Clitheroe Downham Hall**No 2*

Lat.....

Lon.....

County of... *Lancashire*...

Rain Gauge, by.....

Observer *Ralph Ashton Esq. M.P.*

Diameter .....	$\square$ .10										
Height .....	1.6										
Altitude .....	$\overline{464}$										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	4.00	1.34	5.23	5.67	4.87	4.15	2.65	5.90	5.32	2.25	4.138
February.....	7.25	4.35	4.73	9.5	1.27	1.06	6.02	4.65	1.75	2.19	2.822
March.....	2.13	1.77	4.50	3.22	5.82	1.08	4.97	3.65	2.85	2.60	3.259
April.....	1.97	2.95	3.52	4.7	1.67	1.56	2.67	3.10	1.55	1.50	2.096
May.....	1.88	1.69	3.16	2.47	2.25	2.82	.72	2.45	3.65	1.95	2.304
June.....	2.95	3.09	4.19	2.15	1.40	2.72	4.20	1.90	2.40	4.60	2.960
July.....	1.02 <sup>+</sup>	7.24	3.47	4.30	3.77	5.40	4.05	5.02	1.32	6.67	4.226
August.....	1.95	2.22	4.83	4.97	6.47	5.14	3.52	6.65	6.35	6.91	4.901
September.....	3.08	3.76	7.22	2.55	5.05	4.75	4.70	4.27	4.70	3.25	4.333
October.....	9.60 <sup>+</sup>	5.77	5.69	7.57	4.95	4.07	2.88	6.00	4.25	2.26	5.304
November.....	5.30	1.34	4.73	3.35	3.50	5.38	3.17	6.60	3.32	1.02	3.771
December.....	2.92	2.73	3.37	1.82	4.45	2.24	5.40	4.77	1.87	3.25	3.282
TOTALS .....	38.05	38.25	54.64	39.49	45.47	40.37	44.95	54.96	39.33	38.45	43.396

1871 This is the wettest July I have registered in 17 years  
 & with the exception of 1855 (1.11) the driest Oct.

1878 Some trees 20 ft high 60 yds N.N.E.

1879 Downham church 400 yds E.



RAINFALL AT *Clietheroe (Downham Hall No. 3)*

Lat..... Lon..... County of *Lancashire*

..... Rain Gauge, by..... Observer .....

Diameter .....	<i>10 + 9</i>	<i>9 + 10</i>									
Height .....	<i>1.3</i>										
Altitude .....	<i>447</i>										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>4.72</i>	<i>1.88</i>	<i>5.95</i>	<i>6.63</i>	<i>5.85</i>	<i>4.67</i>	<i>2.94</i>	<i>7.07</i>	<i>5.70</i>	<i>2.72</i>	<i>4.813</i>
February .....	<i>1.62</i>	<i>5.11</i>	<i>5.61</i>	<i>1.27</i>	<i>1.81</i>	<i>1.35</i>	<i>6.84</i>	<i>5.16</i>	<i>1.53</i>	<i>2.47</i>	<i>3.277</i>
March .....	<i>2.46</i>	<i>2.27</i>	<i>4.96</i>	<i>3.71</i>	<i>6.44</i>	<i>1.37</i>	<i>5.60</i>	<i>4.04</i>	<i>3.02</i>	<i>3.04</i>	<i>3.691</i>
April.....	<i>2.12</i>	<i>3.17</i>	<i>2.83</i>	<i>.46</i>	<i>2.05</i>	<i>1.77</i>	<i>2.82</i>	<i>3.35</i>	<i>1.52</i>	<i>1.70</i>	<i>2.179</i>
May .....	<i>2.09</i>	<i>1.72</i>	<i>3.05</i>	<i>2.70</i>	<i>2.28</i>	<i>2.90</i>	<i>.68</i>	<i>2.75</i>	<i>3.91</i>	<i>2.12</i>	<i>2.420</i>
June.....	<i>3.10</i>	<i>3.17</i>	<i>4.55</i>	<i>2.25</i>	<i>1.47</i>	<i>3.05</i>	<i>4.27</i>	<i>2.38</i>	<i>2.50</i>	<i>4.87</i>	<i>3.161</i>
July .....	<i>1.06</i>	<i>7.57</i>	<i>3.30</i>	<i>4.53</i>	<i>4.10</i>	<i>6.03</i>	<i>3.51</i>	<i>5.45</i>	<i>1.30</i>	<i>6.90</i>	<i>4.375</i>
August.....	<i>2.02</i>	<i>2.29</i>	<i>4.89</i>	<i>5.20</i>	<i>7.01</i>	<i>5.29</i>	<i>4.46</i>	<i>7.22</i>	<i>6.32</i>	<i>7.23</i>	<i>5.193</i>
September.....	<i>3.19</i>	<i>3.77</i>	<i>8.42</i>	<i>2.67</i>	<i>5.57</i>	<i>5.55</i>	<i>4.94</i>	<i>4.66</i>	<i>4.72</i>	<i>3.16</i>	<i>4.667</i>
October.....	<i>4.79</i>	<i>5.97</i>	<i>6.08</i>	<i>7.91</i>	<i>5.37</i>	<i>4.33</i>	<i>2.99</i>	<i>6.54</i>	<i>4.51</i>	<i>3.20</i>	<i>5.669</i>
November.....	<i>6.10</i>	<i>1.47</i>	<i>5.37</i>	<i>3.72</i>	<i>4.26</i>	<i>5.72</i>	<i>3.69</i>	<i>7.42</i>	<i>3.75</i>	<i>1.13</i>	<i>4.263</i>
December.....	<i>3.35</i>	<i>3.03</i>	<i>4.35</i>	<i>2.09</i>	<i>5.50</i>	<i>2.54</i>	<i>6.12</i>	<i>5.53</i>	<i>2.49</i>	<i>3.70</i>	<i>3.870</i>
TOTALS .....	<i>41.62</i>	<i>41.44</i>	<i>59.36</i>	<i>43.14</i>	<i>51.71</i>	<i>44.57</i>	<i>48.86</i>	<i>61.57</i>	<i>41.27</i>	<i>42.24</i>	<i>47.578</i>

*C C C*



RAINFALL AT *Garstang Vale House*

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer .....

*J. Jackson Junr Esq.*

Diameter .....	6											
Height .....	4	3										
Altitude .....	455	0										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	4.18	1.53	6.33	5.44	4.26	5.27	2.54	7.25	4.27	1.42	4.249	
February.....	7.48	3.87	4.15	1.11	1.65	1.16	5.13	4.21	2.21	3.27	2.824	
March.....	2.82	2.09	5.08	4.30	4.14	1.07	2.78	4.18	1.87	1.85	3.018	
April.....	1.80	3.19	2.86	.91	1.43	1.11	3.25	2.79	1.93	1.42	2.069	
May.....	2.36	1.60	2.00	2.38	1.57	2.39	.53	3.58	4.91	2.82	2.414	
June.....	2.07	3.67	5.68	3.40	1.28	5.75	4.78	2.36	3.68	4.55	3.722	
July.....	2.33	7.15	7.24	4.31	2.00	4.61	3.80	5.78	1.04	6.09	4.435	
August.....	3.53	3.44	5.08	5.46	6.87	3.52	4.72	8.00	5.74	7.01	5.337	
September.....	3.29	3.45	8.89	2.85	4.59	5.19	4.61	4.92	5.92	3.64	4.735	
October.....	10.33	7.15	6.28	7.51	6.11	4.37	3.14	5.88	4.26	3.28	5.831	
November.....	2.80	1.87	4.58	2.29	5.64	6.01	3.86	6.85	2.97	.99	3.786	
December.....	3.62	3.92	4.04	1.86	4.37	2.50	5.57	5.70	2.35	2.12	3.605	
TOTALS .....	40.61	42.93	62.21	41.82	43.91	42.95	44.71	61.50	41.15	38.46	46.025	

1879 Shrub 10ft high 18ft W.

Garstang church 5 miles W.



# RAINFALL AT *Garstang Winmarleigh Vic.*

Lat. *53° 55' 35" N.* Lon. *2° 48' W.* County of *Lancashire*

Rain Gauge, by

Observer

*Rev J. B. Armistead*

Diameter. ....										<i>.5</i>	
Height. ....										<i>1.</i>	
Altitude. ....										<i>53</i>	
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....										<i>1.56</i>	
February. ....										<i>2.60</i>	
March. ....										<i>1.33</i>	
April. ....										<i>1.13</i>	
May. ....										<i>2.19</i>	
June. ....										<i>3.30</i>	
July. ....										<i>5.16</i>	
August. ....										<i>6.16</i>	
September. ....										<i>3.80</i>	
October. ....										<i>1.68</i>	
November. ....										<i>.77</i>	
December. ....										<i>1.87</i>	
TOTALS ....										<i>31.55</i>	

*1879 House 30ft high 17 yds N.E.*

*Winmarleigh church 350 yds W.N.W.*



# 70 RAINFALL AT *Garstang* *Barnacre* Res:

Lat. \_\_\_\_\_ Lon. \_\_\_\_\_ County of *Lancashire*  
 Rain Gauge, by \_\_\_\_\_ Observer *J. Bradley*

Diameter.....											
Height.....											
Altitude.....											
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....											
February.....											
March.....											
April .....										# 1.50	
May.....										2.98	
June .....										5.10	
July.....										6.13	
August .....										8.00	
September....										4.55	
October.....										3.15	
November....										1.08	
December ....										2.05	
TOTALS ....										4	

1879 The figures printed by the "Preston Guardian"  
 are the mean of the gauges at Barnacre  
 and Grizedale



RAINFALL AT *Garstang Grizedale Reservoir*

Lat.....

Lon.....

County of.....

*Lancashire*

.....Rain Gauge, by.....

Observer.....

*J. Bradley Esq.*

Diameter .....	<i>.10</i>	.										
Height .....	<i>1.0</i>	.										
Altitude .....	<i>519</i>	.										
	<i>484</i>	.										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	<i>4.10</i>	<i>1.52</i>	<i>8.02</i>	<i>5.65</i>	<i>4.40</i>	<i>5.18</i>	<i>2.50</i>	<i>7.00</i>	<i>3.70</i>	<i>1.50</i>	<i>4.257</i>	
February.....	<i>7.05</i>	<i>4.82</i>	<i>5.83</i>	<i>7.5</i>	<i>1.85</i>	<i>1.20</i>	<i>5.30</i>	<i>4.70</i>	<i>1.85</i>	<i>3.45</i>	<i>3.080</i>	
March .....	<i>2.52</i>	<i>1.80</i>	<i>5.34</i>	<i>4.40</i>	<i>3.85</i>	<i>1.05</i>	<i>2.15</i>	<i>3.80</i>	<i>1.45</i>	<i>1.75</i>	<i>2.811</i>	
April.....	<i>1.60</i>	<i>3.24</i>	<i>2.10</i>	<i>.60</i>	<i>1.45</i>	<i>1.25</i>	<i>3.00</i>	<i>3.00</i>	<i>1.65</i>	<i>1.59</i>	<i>1.948</i>	
May .....	<i>2.42</i>	<i>1.03</i>	<i>2.30</i>	<i>2.45</i>	<i>1.25</i>	<i>2.40</i>	<i>.62</i>	<i>3.05</i>	<i>4.43</i>	<i>2.68</i>	<i>2.263</i>	
June.....	<i>2.03</i>	<i>3.45</i>	<i>6.10</i>	<i>3.00</i>	<i>1.20</i>	<i>4.45</i>	<i>4.75</i>	<i>2.90</i>	<i>4.15</i>	<i>4.65</i>	<i>3.668</i>	
July .....	<i>2.40</i>	<i>6.64</i>	<i>5.85</i>	<i>4.20</i>	<i>2.00</i>	<i>5.10</i>	<i>3.20</i>	<i>5.30</i>	<i>.80</i>	<i>5.75</i>	<i>4.124</i>	
August.....	<i>2.30</i>	<i>3.00</i>	<i>4.40</i>	<i>5.80</i>	<i>6.90</i>	<i>3.45</i>	<i>4.35</i>	<i>7.00</i>	<i>5.55</i>	<i>7.35</i>	<i>5.010</i>	
September.....	<i>1.30</i>	<i>3.43</i>	<i>7.40</i>	<i>2.65</i>	<i>4.90</i>	<i>4.70</i>	<i>4.90</i>	<i>4.85</i>	<i>5.40</i>	<i>4.40</i>	<i>4.393</i>	
October.....	<i>11.52</i>	<i>8.83</i>	<i>6.60</i>	<i>7.51</i>	<i>6.03</i>	<i>4.75</i>	<i>3.40</i>	<i>5.90</i>	<i>3.93</i>	<i>2.92</i>	<i>6.139</i>	
November.....	<i>5.32</i>	<i>3.82</i>	<i>4.90</i>	<i>2.28</i>	<i>6.10</i>	<i>7.00</i>	<i>3.75</i>	<i>6.65</i>	<i>2.65</i>	<i>1.03</i>	<i>4.356</i>	
December.....	<i>4.50</i>	<i>5.53</i>	<i>4.40</i>	<i>1.86</i>	<i>3.50</i>	<i>2.65</i>	<i>6.75</i>	<i>5.25</i>	<i>2.20</i>	<i>2.25</i>	<i>3.879</i>	
TOTALS .....	<i>41.06</i>	<i>46.11</i>	<i>63.24</i>	<i>41.15</i>	<i>43.48</i>	<i>43.08</i>	<i>44.67</i>	<i>59.40</i>	<i>37.76</i>	<i>39.32</i>	<i>45.922</i>	



RAINFALL AT *Halgate*

70

Lat. \_\_\_\_\_ Lon. \_\_\_\_\_ County of *Lancashire*

Rain Gauge, by \_\_\_\_\_ Observer *S. Marshall Satterthwaite Esq.*

Diameter. ....	<i>5</i>										
Height. ....	<i>4.6</i>										
Altitude. ....	<i>120</i>										
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....									<i>3.44</i>	<i>1.44</i>	
February. ....									<i>1.16</i>	<i>2.59</i>	
March. ....									<i>1.82</i>	<i>1.69</i>	
April. ....									<i>2.46</i>	<i>1.37</i>	
May. ....									<i>3.88</i>	<i>2.03</i>	
June. ....									<i>4.33</i>	<i>4.98</i>	
July. ....									<i>.71</i>	<i>5.60</i>	
August. ....									<i>4.79</i>	<i>5.59</i>	
September. ....									<i>5.38</i>	<i>3.52</i>	
October. ....									<i>4.57</i>	<i>2.40</i>	
November. ....									<i>2.56</i>	<i>.87</i>	
December. ....									<i>1.90</i>	<i>1.33</i>	
TOTALS. ....									<i>37.00</i>	<i>33.41</i>	



# RAINFALL AT *Lee Fell*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer.....

Diameter . . . .							8				
Height . . . .							1'				
Altitude . . . .							1080				
Year . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . . .							3.40	7.40			
February. . .							7.40	7.00			
March . . . . .							4.00	6.40			
April . . . . .							2.50	4.50			
May . . . . .							.80	1.60			
June . . . . .							4.00	4.30			
July . . . . .							4.00	7.20			
August . . . .						# 3.50	5.00	(8.52)			
September . .						5.40	5.00	4.00			
October . . . .						4.80	2.70	7.20			
November . .						4.70	5.40	7.00			
December . .						3.20	7.00	7.00	#		
TOTALS . .							51.20	(72.12)			



RAINFALL AT *Tarnbrook Fell* 70

Lat. .... Lon. .... County of *Lancashire*

Rain Gauge, by ..... Observer.....

Diameter....							8				
Height ....							1				
Altitude ....							1500				
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....							3.40	7.30			
February. . .							8.20	7.00			
March .....							4.20	6.40			
April .....							2.50	4.30			
May .....							.90	1.60			
June .....							3.80	4.30			
July.....							4.00	7.20			
August ....						# 3.30	5.00	(8.52)			
September ..						4.90	4.10	4.00			
October ....						5.10	2.80	7.20			
November ..						5.30	5.30	7.00			
December ..						3.20	7.20	7.00	#		
TOTALS ..							51.40	(71.82)			



# RAINFALL AT *St Michaels on Wyre*

70

Lat. .... Lon. .... County of *Lancashire*  
 Rain Gauge, by ..... Observer *P. J. Hornby*

Diameter...							5	.	.		
Height ...								10	.	.	
Altitude ...							26	.	.		
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ...							<sup>#</sup> 1.66	6.54	3.11	1.53	
February...							4.07	3.66	1.92	2.85	
March.....							2.47	2.92	1.45	1.53	
April .....							2.88	2.78	1.90	1.38	
May .....							.35	2.77	3.89	2.09	
June .....							3.94	2.23	3.89	3.61	
July.....							2.12	4.64	.79	5.61	
August ...							4.58	6.54	4.43	6.34	
September ..							3.87	4.41	4.42	3.62	
October ....							2.68	5.80	4.71	2.20	
November ...							2.89	6.03	3.13	.99	
December ..							5.97	5.68	2.29	1.94	
TOTALS ..							37.48	54.00	35.93	33.69	

1876 Gauge moved some distance in the course of the year. Last three days of July included in Aug.

1879 Rose Trees 3ft 11in & 5ft 10in S.  
 " " 3ft 8in 7" 4" N.

*St Michaels on Wyre*  $\frac{1}{4}$  mile W.



RAINFALL AT *Millington Hornby Castle*

Lat.....

Lon.....

County of, *Lancashire*

Rain Gauge, by.....

Observer *Mr. Reid*

*W 1831-1915*

*43.8*

Diameter .....	<i>1.0</i>							<i>8</i>			
Height .....	<i>3.2</i>							<i>2</i>		<i>2.3</i>	
Altitude .....	<i>103.0</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>			<i>100</i>			
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>4.14</i>	<i>1.03</i>	<i>6.90</i>	<i>6.35</i>	<i>6.70</i>	<i>5.28</i>	<i>2.21</i>	<i>#</i>	<i>4.20</i>	<i>1.18</i>	
February.....	<i>2.43</i>	<i>4.29</i>	<i>4.73</i>	<i>.50</i>	<i>1.91</i>	<i>1.26</i>	<i>5.41</i>	<i>#</i>	<i>1.97</i>	<i>2.81</i>	
March.....	<i>1.97</i>	<i>2.32</i>	<i>4.45</i>	<i>2.38</i>	<i>4.34</i>	<i>.82</i>		<i>#</i>	<i>3.69</i>	<i>2.86</i>	<i>2.24</i>
April.....	<i>1.03</i>	<i>3.17</i>	<i>2.39</i>	<i>.39</i>	<i>2.54</i>	<i>1.20</i>		<i>2.28</i>	<i>1.77</i>	<i>1.03</i>	
May.....	<i>3.24</i>	<i>1.09</i>	<i>2.18</i>	<i>1.32</i>	<i>1.58</i>	<i>3.10</i>		<i>2.08</i>	<i>4.32</i>	<i>2.43</i>	
June.....	<i>7.65</i>	<i>2.01</i>	<i>4.57</i>	<i>2.67</i>	<i>1.34</i>	<i>3.96</i>		<i>3.07</i>	<i>3.10</i>	<i>4.51</i>	
July.....	<i>2.66</i>	<i>7.77</i>	<i>4.95</i>	<i>4.66</i>	<i>3.43</i>	<i>3.60</i>		<i>4.68</i>	<i>.86</i>	<i>5.34</i>	
August.....	<i>2.90</i>	<i>2.31</i>	<i>4.64</i>	<i>6.10</i>	<i>7.46</i>	<i>4.59</i>		<i>5.78</i>	<i>6.44</i>	<i>5.67</i>	
September.....	<i>3.46</i>	<i>3.16</i>	<i>8.10</i>	<i>3.11</i>	<i>5.73</i>	<i>4.52</i>		<i>3.89</i>	<i>5.57</i>	<i>3.30</i>	
October.....	<i>10.56</i>	<i>4.26</i>	<i>6.73</i>	<i>6.89</i>	<i>7.50</i>	<i>3.13</i>		<i>6.45</i>	<i>4.71</i>	<i>3.10</i>	
November.....	<i>2.52</i>	<i>1.57</i>	<i>5.04</i>	<i>1.90</i>	<i>5.24</i>	<i>5.34</i>		<i>8.86</i>	<i>3.17</i>	<i>1.25</i>	
December.....	<i>4.85</i>	<i>(4.33)</i>	<i>4.82</i>	<i>2.54</i>	<i>3.87</i>	<i>3.04</i>	<i>#</i>	<i>4.92</i>	<i>2.43</i>	<i>2.75</i>	
TOTALS .....	<i>42.21</i>	<i>(38.91)</i>	<i>59.50</i>	<i>38.81</i>	<i>51.64</i>	<i>39.84</i>	<i>(41.40)</i>	<i>(57.54)</i>	<i>41.40</i>	<i>35.61</i>	<i>(44.686)</i>

*1871 - Rain gauge out of order in December, and sent away for repair*  
*1878 Trees about 40 yds distant.*

*Hornby church 400 yds S.W.*

*1876 & Jan & Feb 1877 = Arkholme, Storms Hall*



RAINFALL AT *Barrow-in-Furness* **70**

Lat. .... Lon. .... County of *Lancashire*  
Rain Gauge, by ..... Observer *W. Fergusson Esq*

Diameter. ....										11	
Height. ....										1.6	
Altitude. ....										30	
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January. ....										1.90	
February. ....										2.85	
March. ....										1.60	
April. ....										2.85	
May. ....										1.45	
June. ....										4.15	
July. ....										5.15	
August. ....										5.00	
September. ....										4.50	
October. ....										1.30	
November. ....										1.30	
December. ....										2.40	
TOTALS ....						(37.10)	(37.80)	(56.50)	(38.20)	33.75	

*roughly comp'd from Cavendish Park VII. 13*

*1879 Wall 7 ft high 18 ft N.W.*

*S<sup>t</sup> Georges church Barrow ½ mile E.S.E*



# RAINFALL AT Barrow

Cavendish P. 70

Lat.....

Lon.....

County of...

Lancashire

Rain Gauge, by.....

Observer...

F. Wade Esq.

Diameter.....				7	8						
Height.....				2							
Altitude.....				60	60 <sup>+</sup>						
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				4.57	3.59	4.96	1.73	6.64	3.74	1.88	
February.....				1.03	2.09	1.20	3.29	3.34	2.59	2.81	
March.....				3.66	2.16	.97	2.39	3.22	1.27	1.68	
April.....				4.7	1.17	1.03	2.41	2.50	1.78	2.15	
May.....				1.29	1.03	1.92	.16	3.27	2.69	1.67	
June.....				2.24	.67	2.76	3.74	2.08	3.27	3.94	
July.....				2.88	1.93	2.21	2.96	4.17	.46	5.07	
August.....				3.55	7.50	3.15	3.22	5.30	6.69	5.16	
September.....				1.86	4.82	5.77	3.64	2.59	4.33	4.51	
October.....				4.52	6.20	5.07	3.11	7.74	4.34	1.61	
November.....				2.37	5.02	4.80	3.05	7.35	2.87	1.22	
December.....				1.70	3.26	1.75	6.59	6.00	2.70	2.08	
TOTALS.....				30.14	39.44	35.59	36.29	54.20	36.73	33.78	



# RAINFALL AT *Artikholme Storr's Hall*

Lat..... Lon..... County of *Lancashire*  
 ..... Rain Gauge, by..... Observer *J. J. Pearson Esq.*

Diameter .....	-5	.										
Height .....	1	.0	.									
Altitude .....	220.0	.										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	4.07	1.83	5.97	7.15	4.96	5.72	2.28	7.01	2.92	1.26	4.320	
February.....	2.44	3.91	4.26	1.50	1.87	1.00	5.62	4.83	2.09	2.68	3.020	
March.....	2.79	1.33	4.20	2.40	4.87	1.09	4.23	3.74	2.07	2.81	2.953	
April.....	2.43	3.51	2.42	.69	2.16	.90	2.80	2.23	2.60	1.20	2.094	
May.....	2.54	1.33	2.40	2.19	1.50	3.16	.89	2.47	4.31	2.48	2.327	
June.....	1.88	7.20	5.65	2.68	1.04	4.81	2.70	3.27	3.04	4.79	3.106	
July.....	2.35	<sup>+</sup> 6.53	5.18	4.30	3.30	3.04	4.64	4.88	.79	6.02	4.103	
August.....	2.13	2.65	5.81	4.77	6.20	4.80	3.68	6.51	6.72	6.03	4.930	
September.....	3.51	3.47	8.87	2.75	5.66	4.40	3.75	3.80	5.87	3.91	4.599	
October.....	<sup>+</sup> 8.21	5.46	6.35	5.65	7.27	2.77	2.79	6.55	4.22	3.24	5.251	
November.....	2.75	1.85	5.07	2.34	4.65	5.18	3.13	6.61	2.64	1.29	3.551	
December.....	2.80	4.30	4.22	1.92	3.10	3.32	4.89	3.86	2.40	2.76	3.357	
TOTALS .....	37.90	37.37	60.40	38.37	46.58	40.19	41.40	55.76	39.67	38.47	43.611	

1870 Our Summers are cool & Winters wet & mild. Position 7 miles from Morecomb Bay in a valley with hills 5 or 600 feet high between and the Sea. The Valley is very thickly wooded & surrounded by hills



RAINFALL AT *Yealand Conyers [Burton]*

Lat..... Lon..... County of..... *Lancashire*  
..... Rain Gauge, by..... Observer *Rev J. B. Birkett*

Diameter .....	<i>.5</i>										
Height .....	<i>3 . 1</i>										
Altitude .....	<i>225 . 0</i>										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>3 . 79</i>										
February.....	<i>1 . 76</i>										
March .....	<i>1 . 95</i>										
April.....	<i>1 . 55</i>										
May .....	<i>2 . 22</i>										
June.....	<i>1 . 77</i>										
July .....	<i>2 . 13</i>										
August.....	<i>1 . 96</i>										
September.....	<i>2 . 83</i>										
October.....	<i>+ 8 . 31</i>										
November.....	<i>2 . 44</i>										
December.....	<i>2 . 31</i>										
TOTALS .....	<i>33 . 12</i>										

*The Rev J Birkett has removed to 10 South Place Clifton but J Bony Esq: who succeeds him as tenant of the Bower has kindly promised to continue the Register*



# RAINFALL AT *Silverdale Milnthorpe*

Lat..... Lon..... County of *Lancashire*  
 ..... Rain Gauge, by..... Observer *Rev. C. C. W. Shipton*

Diameter .....	5										
Height .....	1	0									
Altitude .....	56	0	65								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.94	1.90	7.55	6.27							
February.....	1.79	3.72	3.80	.68							
March .....	2.03	1.86	3.89	2.97							
April.....	7.34	2.73	2.10	.72							
May .....	2.24	1.90	2.12	2.54							
June.....	1.67	2.05	4.69	2.47							
July .....	2.34	5.26	4.89	5.45							
August.....	2.14	2.09	5.36	4.86							
September.....	2.73	3.64	8.09								
October.....	9.36	5.06	5.83								
November.....	2.51	1.92	5.20								
December.....	2.26	4.61	5.29								
TOTALS .....	34.35	36.74	58.81								

1873 Gauge moved to Carnforth Silverdale Cove House



70

RAINFALL AT Carnforth Silverdale (Cove House)

Lat..... Lon..... County of Lancashire

Rain Gauge, by..... Observer... D. Pickard

Diameter.....					5						
Height .....				1 -							
Altitude.....				56.							
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....					4.42	5.30					
February.....					1.92	1.03					
March.....					3.49	.79					
April.....					1.40	1.23					
May .....					.97	2.68					
June.....					1.32	4.25					
July .....					2.75	2.55					
August.....					6.71	2.91					
September.....				2.59	5.62	6.40					
October.....				# 5.86	8.46	3.57					
November.....				2.27	3.97	5.64					
December.....				1.91	3.16	2.59	#				
TOTALS .....					44.19	38.94					

J: moved from Cove Lea Silverdale. in Sept



RAINFALL AT *Carlton Flookburgh*

Lat..... Lon..... County of... *Lancashire*  
Rain Gauge, by..... Observer *J R Broadale*

*Av 1881-1915 41.2*

Diameter .....		5										
Height .....	3	2.4										
Altitude .....	70	70.0										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....		7.75	8.29	5.96	4.51	6.32	3.03	7.05	4.36	2.08		
February .....		4.36	3.84	1.04	2.24	.86	4.90	4.67	1.95	3.48		
March .....		2.20	4.16	2.68	2.25	1.26	3.17	3.60	2.22	2.12		
April.....	1.31	2.96	1.83	.37	.99	1.31	2.64	2.43	2.30	1.51		
May .....	2.32	1.80	1.73	2.26	1.45	2.27	.24	2.77	4.35	1.92		
June.....	1.86	2.05	4.40	2.14	1.01	3.93	4.27	2.04	2.61	3.76		
July .....	1.64	5.01	5.51	4.18	2.29	2.69	2.55	4.46	.55	6.90		
August.....	2.05	2.89	5.04	5.34	6.64	3.22	4.64	5.06	6.40	4.52		
September.....	2.65	3.26	7.15	2.69	4.63	5.91	3.53	3.14	4.12	4.36		
October.....	10.23	6.87	6.97	6.10	8.40	5.22	3.70	7.54	4.15	2.44		
November.....	3.73	2.43	4.89	3.15	4.26	5.72	2.63	7.79	1.35	1.03		
December.....	2.69	4.82	4.58	2.15	2.91	2.15	7.01	6.24	1.37	2.20		
TOTALS .....		39.40	58.39	37.46	41.58	40.86	42.31	56.79	35.73	36.32		

*1879 Tree 12ft high 30ft E.*

*Flookburgh church 1/4 mile E.*

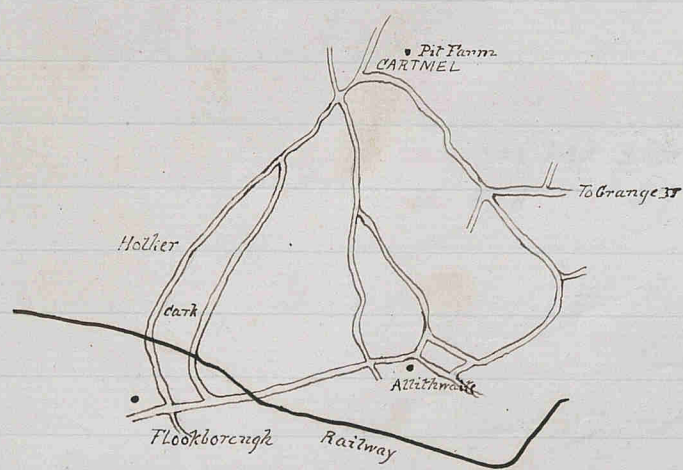


# RAINFALL AT *Cartmel Allithwaite*

Lat..... Lon..... County of... *Lancashire*.....  
 .....Rain Gauge, by..... Observer *Wm. R. Math*.....

Diameter .....	.5										
Height .....	1.0							1.			
Altitude .....	88.0			90							
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	3.32	1.69	6.47	4.79	4.48	6.70	2.60	7.02	3.83		
February.....	1.41	3.68	3.88	.84	2.13	1.34	4.41	3.71	1.94		
March .....	1.86	7.48	3.79	3.25	2.67	.94	3.59	3.52	1.59		
April.....	1.38	3.12	1.97	.57	1.22	1.20	2.73	2.36	2.07		
May .....	2.41	1.75	1.90	2.30	1.16	2.41	.30	2.44	4.52		
June.....	2.13	2.28	4.43	1.67	1.17	4.06	3.84	2.50		#	
July .....	1.78	4.88	5.55	5.08	1.97	2.92	3.16	4.27			
August.....	2.02	2.60	4.27	5.39	6.11	3.43	3.81	5.78			
September.....	3.21	3.32	7.57	2.14	5.11	5.74	4.23	3.19			
October.....	9.51	6.20	6.01	6.06	8.62	4.67	4.25	6.62			
November.....	2.98	1.87	4.52	2.73	3.67	5.85	2.35	7.38			
December.....	2.32	3.99	3.76	1.55	2.77	2.14	5.81	5.27			
TOTALS .....	34.33	36.86	54.12	36.57	41.08	41.40	41.08	54.06			

1878 Gauge moved to Cartmel Pit Farm in 11<sup>th</sup> May





586618

# RAINFALL AT *Hall* Cartmel Flooker Gardens

Lat.....

Lon.....

County of.....

Lancashire

Rain Gauge, by.....

Observer

W. Wilson

Gardener to Duke of Devonshire

Diameter .....	8	.					.		.	.	
Height .....	4	8	.				.		.	.	
Altitude .....	$\pi$ 155	0	.				150	155	.	.	
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	4.34	2.13	8.19	5.71	4.61	6.67	2.63	7.87	4.18	2.21	4.854
February.....	2.16	4.37	4.68	1.06	2.34	1.37	4.52	3.59	2.59	3.45	3.013
March.....	2.28	2.23	4.21	3.83	3.08	1.08	3.42	3.56	1.94	2.08	2.771
April.....	1.60	3.79	1.83	.62	.98	1.35	2.85	2.63	2.25	1.90	1.980
May .....	2.79	1.81	1.68	2.47	1.23	2.50	.33	3.14	3.87	1.50	2.132
June.....	1.88	2.25	4.95	2.45	1.62	3.98	4.35	2.28	3.67	5.02	3.245
July .....	1.56	4.93	5.95	4.46	2.15	2.52	3.75	4.50	.48	6.40	3.670
August.....	1.97	3.19	4.86	5.81	7.16	3.54	3.57	5.66	6.28	4.16	4.620
September.....	3.65	3.78	9.16	2.81	5.01	6.06	4.49	3.43	4.62	4.42	4.743
October.....	<sup>+</sup> 11.30	<sup>+</sup> 6.36	6.53	6.52	8.59	5.29	3.76	7.95	4.23	2.60	6.313
November.....	3.07	2.36	5.04	2.98	4.61	6.35	3.18	7.57	2.78	1.20	3.914
December.....	2.64	5.21	4.79	1.94	3.71	2.46	6.99	6.05	2.42	2.49	3.870
TOTALS .....	39.24	42.41	61.87	40.66	45.09	43.17	43.84	58.23	39.31	37.43	45.125

1878 Bushes 2ft high 12ft distant

Cartmel church 1½ mile E.

MET.O.S. RAINFALL  
RETROSPECTIVE SITE REVIEW

586618

MGR: SD(34) 359778

155 0 = 47 metres. Date of review 12-1-1979



# RAINFALL AT *Grange Kents Bank*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *J. H. Matthews Esq.*

Diameter . . .								5			
Height . . .								1	-		
Altitude . . .								37			
Year . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . .								7.28	4.09		
February . . .								3.54	2.24		
March . . . . .								3.33	1.77		
April . . . . .								2.31	2.20		
May . . . . .								2.67	4.02		
June . . . . .								2.23	4.38		
July . . . . .								3.95	3.6		
August . . . . .								5.67	6.43		
September . . .								3.32	4.81		
October . . . . .								6.74	3.74		
November . . .								7.40	2.65		
December . . .								5.34	2.45		
TOTALS . . .								53.78	39.14		

1879 Observer dead

28



RAINFALL AT *Grange Bay Villa*

Lat.....

Lon.....

County of.....

*Lancashire*

Rain Gauge, by.....

Observer.....

*Amos Beardsley Esq*

Diameter .....		8									
Height .....	3.0	3.2									
Altitude .....	25 <sup>π</sup>	25.0 <sup>π</sup>									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....		1.95	8.98	6.47	5.62	6.44	3.34	7.65			
February.....		4.69	3.74	.52	2.28	1.31	4.68	4.39			
March.....	2.53	2.38	4.99	3.58	3.56	1.20	4.24	3.77			
April.....	1.44	3.71	2.25	.57	1.18	1.70	2.80	2.26			
May.....	3.76	1.93	2.16	3.49	.84	4.36	.39	2.65			
June.....	2.11	2.16	5.04	2.60	.12	4.70	3.78	2.86			
July.....	1.98	6.01	5.45	5.73	1.41	3.29	3.81	4.64			
August.....	2.11	2.42	5.41	6.60	6.92	3.64	3.99	5.28			
September.....	5.10	3.46	8.16	2.64	5.65	5.43	4.59	2.67			
October.....	10.92	6.29	7.42	7.10	10.80	4.55	4.04	7.67			
November.....	3.35	2.22	5.33	2.97	4.38	6.22	2.53	7.21			
December.....	2.33	4.30	4.70	3.25	3.36	2.29	6.50	6.12			
TOTALS .....		41.52	63.63	45.52	46.12	45.13	44.69	57.17	—		

1870 - Jan 7 was sent as .33, and Feb as having no rain, these being evidently incorrect. I have left the year imperfect off.

1878 No obs



# RAINFALL AT *Grange Nutwood*

70

Lat.....

Lon.....

County of.....

*Lancashire*

.....Rain Gauge, by.....

Observer.....

*Rev. E. Massie*

Diameter.....						5					
Height.....				2.10	3		2.6		1.6	2.6	
Altitude.....					100						
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....					4.79	6.65	2.38	7.30	4.49	1.88	
February.....					2.18	1.27	4.80	3.71	2.52	2.87	
March.....					3.63	1.04	3.63	3.50	2.25	2.30	
April.....					.96	1.52	2.74	2.20	2.67	1.33	
May.....					.97	2.41	.37	2.75	3.88	1.78	
June.....					1.10	4.84	3.74	2.36	4.77	4.90	
July.....					2.36	2.26	3.59	4.34	.68	6.50	
August.....					7.02	3.56	2.10	5.71	5.86	3.13	
September.....					5.77	5.34	4.57	3.36	4.79	4.31	
October.....					9.32	4.32	3.56	6.63	4.58	2.78	
November.....				#	2.63	4.28	6.13	2.97	7.53	2.44	1.43
December.....					1.99	3.40	2.48	6.07	5.35	2.37	2.46
TOTALS.....					45.78	41.82	40.52	54.74	41.30	35.67	



# RAINFALL AT Cartmel Vicarage

Lat.....

Lon.....

County of... Lancashire.....

Rain Gauge, Inj.....

Observer Rev.<sup>d</sup> Canon Hubbersty

Diameter .....			5								
Height .....			1.7								
Altitude .....			100. <sup>↑</sup>								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....			# 9.31	6.66							
February.....			5.00	.95							
March .....			4.52	4.09							
April .....			1.06	.68							
May .....			2.79	2.93							
June.....			5.43								
July .....			7.70								
August .....			7.48	6.44							
September.....			9.08								
October.....			7.13								
November.....			5.75	3.05							
December.....			5.38	2.44							
TOTALS .....			70.63	43.10							

1874 from Jan 1<sup>st</sup> to Oct<sup>r</sup> 12



RAINFALL AT *Ulverston*

Lat.....

Lon.....

County of *Lancashire*

Rain Gauge, by.....

Observer

*J. N. Matthews Esq.*

Diameter .....	.5	'									
Height .....	5	.6	'								
Altitude .....	$\pi$ 162.0	'	131					98	'		
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	4.94	2.63	9.52	5.68	5.39	7.91	2.76	9.85	5.53		
February.....	2.30	5.17	5.41	1.24	3.30	1.50	5.19	5.01	3.32		
March.....	2.65	2.29	5.22	4.84	3.77	1.31	4.30	4.96	2.34		
April.....	2.20	4.32	1.73	.52	1.31	1.52	3.30	3.10	2.51		
May.....	3.07	1.60	1.99	2.53	1.83	2.50	.33	4.00	3.87		
June.....	1.90	3.83	5.88	3.18	1.08	4.77	4.30	2.53	3.77		
July.....	7.61	5.08	5.26	4.99	2.86	3.03	4.01	5.81	1.01		
August.....	2.19	3.16	4.46	6.35	9.32	4.32	4.07	5.73	8.30		
September.....	3.69	3.45	8.84	2.91	5.75	7.52	5.27	3.24	5.27		
October.....	<sup>+</sup> 11.79	<sup>+</sup> 6.97	7.06	7.54	8.99	6.73	3.90	9.95	5.90		
November.....	3.84	3.27	4.84	3.91	6.67	7.59	3.65	11.04	3.34		
December.....	3.50	5.96	4.92	2.44	4.18	3.08	8.05	7.61	3.06		
TOTALS .....	43.60	47.73	65.13	46.13	54.45	51.78	49.13	72.83	48.22		

C C C

1879 Observer dead



RAINFALL AT *Poaka Beck Reservoir*

Lat.....

Lon.....

County of.....

*Lancashire*

.....Rain Gauge, by.....

Observer.....

*John Lewis**Av 1881-1915 52.1*

Diameter.....	<i>11</i>											
Height.....	<i>1.5</i>											
Altitude.....	<i>500</i>											
Year.....	<i>1870</i>	<i>1871</i>	<i>1872</i>	<i>1873</i>	<i>1874</i>	<i>1875</i>	<i>1876</i>	<i>1877</i>	<i>1878</i>	<i>1879</i>	MEANS.	
January.....	<i>4.71</i>	<i>1.18</i>	<i>8.33</i>	<i>4.75</i>	<i>4.85</i>	<i>8.10</i>	<i>2.85</i>	<i>9.10</i>	<i>5.20</i>	<i>2.95</i>	<i>5.202</i>	
February.....	<i>2.28</i>	<i>4.72</i>	<i>4.01</i>	<i>.55</i>	<i>3.10</i>	<i>1.50</i>	<i>5.40</i>	<i>5.00</i>	<i>3.15</i>	<i>4.35</i>	<i>3.406</i>	
March.....	<i>2.99</i>	<i>1.83</i>	<i>5.42</i>	<i>4.04</i>	<i>3.96</i>	<i>1.50</i>	<i>3.90</i>	<i>4.25</i>	<i>1.85</i>	<i>2.55</i>	<i>3.229</i>	
April.....	<i>1.84</i>	<i>3.58</i>	<i>1.87</i>	<i>.66</i>	<i>1.30</i>	<i>1.65</i>	<i>3.50</i>	<i>3.50</i>	<i>2.45</i>	<i>2.95</i>	<i>2.330</i>	
May.....	<i>2.65</i>	<i>1.75</i>	<i>1.95</i>	<i>2.50</i>	<i>1.35</i>	<i>2.95</i>	<i>.60</i>	<i>4.15</i>	<i>4.70</i>	<i>2.20</i>	<i>2.480</i>	
June.....	<i>1.81</i>	<i>4.59</i>	<i>6.03</i>	<i>3.30</i>	<i>.75</i>	<i>4.75</i>	<i>4.65</i>	<i>3.50</i>	<i>4.10</i>	<i>6.20</i>	<i>3.968</i>	
July.....	<i>1.91</i>	<i>4.66</i>	<i>5.94</i>	<i>5.80</i>	<i>2.50</i>	<i>3.45</i>	<i>5.00</i>	<i>6.50</i>	<i>1.60</i>	<i>6.85</i>	<i>4.421</i>	
August.....	<i>1.94</i>	<i>3.02</i>	<i>4.78</i>	<i>6.50</i>	<i>8.65</i>	<i>5.55</i>	<i>4.90</i>	<i>5.95</i>	<i>8.20</i>	<i>6.25</i>	<i>5.574</i>	
September.....	<i>4.41</i>	<i>2.81</i>	<i>8.41</i>	<i>3.94</i>	<i>5.30</i>	<i>8.10</i>	<i>5.75</i>	<i>3.25</i>	<i>5.60</i>	<i>5.50</i>	<i>5.307</i>	
October.....	<i>8.13</i>	<i>8.04</i>	<i>8.52</i>	<i>6.07</i>	<i>8.30</i>	<i>7.90</i>	<i>4.15</i>	<i>9.50</i>	<i>5.50</i>	<i>2.95</i>	<i>6.906</i>	
November.....	<i>3.23</i>	<i>2.67</i>	<i>4.86</i>	<i>4.38</i>	<i>6.20</i>	<i>7.05</i>	<i>4.75</i>	<i>9.10</i>	<i>2.90</i>	<i>1.45</i>	<i>4.659</i>	
December.....	<i>2.89</i>	<i>4.36</i>	<i>3.89</i>	<i>2.45</i>	<i>3.25</i>	<i>2.95</i>	<i>7.65</i>	<i>7.60</i>	<i>2.75</i>	<i>3.15</i>	<i>4.094</i>	
TOTALS.....	<i>38.79</i>	<i>43.21</i>	<i>64.01</i>	<i>44.94</i>	<i>49.51</i>	<i>53.45</i>	<i>53.10</i>	<i>71.40</i>	<i>48.00</i>	<i>47.35</i>	<i>51.576</i>	

*1879 Wall 5ft high 12ft N.W.**Pennington church 1½ miles E.S.E.*



# RAINFALL AT *Cartmel Pit Farm*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *W. R. Nash*

Diameter....											
Height ....											
Altitude ....											
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....										2.27	
February. ...										3.23	
March.....										2.46	
April .....										1.69	
May .....										1.83	
June .....									# 5.11	4.78	
July.....									.63	7.35	
August ....									6.36	4.53	
September ..									5.15	4.50	
October ....									4.95	2.77	
November ..									2.26	1.37	
December ..									2.64	2.70	
TOTALS ..										39.48	

1878 Gauge moved from Allithwaite on May 11<sup>th</sup>

1879 House 25ft high 45ft N.

Hedge 6 " " 90 "

Bushes 5 " " 30 "

Trees 25 " " 75 "

Cartmel church  $\frac{1}{3}$  mile W.



RAINFALL AT *Carlmet Broughton Hall*

Lat..... Lon..... County of..... *Lancashire*  
..... Rain Gauge, by..... Observer *Capt. Mansworth*

Diameter .....	.5	.							.	.	.	
Height .....	2	.8	.						.	.	.	
Altitude .....	230	.0	.						.	.	.	
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January .....	5.00	2.64	9.97	6.88	5.71	7.43	3.39	8.35	5.30	2.48	5.715	
February .....	2.94	5.18	5.97	1.05	2.88	1.40	5.77	4.10	3.07	3.61	3.597	
March .....	2.43	2.62	5.30	3.95	3.79	1.25	4.03	4.05	2.20	2.58	3.220	
April .....	1.99	3.98	2.16	.86	1.29	1.68	3.23	2.68	2.73	1.6	2.224	
May .....	3.59	1.70	1.79	3.31	1.23	2.48	.46	3.31	4.61	2.02	2.459	
June .....	2.01	2.06	5.86	2.49	2.13	5.53	4.86	2.65	4.87	6.01	3.847	
July .....	1.91	5.43	5.95	5.31	2.26	3.24	4.10	5.62	.82	6.36	4.100	
August .....	2.05	3.61	5.68	7.31	7.95	3.92	3.68	6.44	6.27	4.56	5.147	
September .....	3.59	5.05	10.35	3.56	5.81	7.20	5.25	4.41	5.62	5.14	5.598	
October .....	<sup>+</sup> 11.57	<sup>+</sup> 7.26	7.64	8.05	10.92	5.48	3.96	8.91	5.47	2.77	7.203	
November .....	3.58	-1.22	5.81	2.95	5.03	7.06	3.44	8.74	2.60	1.06	4.149	
December .....	2.61	5.99	4.58	2.49	3.53	2.88	7.06	6.11	2.61	3.15	4.101	
TOTALS .....	43.27	46.74	71.06	48.21	52.53	49.55	49.23	65.37	46.17	41.38	51.351	

*Carlmet church 1 1/4 mile S.*



RAINFALL AT Newby Bridge Backbarrow

Lat..... Lon..... County of... Lancashire  
..... Rain Gauge, by..... Observer ... Capt. Dunsforth

Diameter .....	1.0										
Height .....	3.2										
Altitude .....	70.0		90.								
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	5.44	1.99	8.87	5.88							
February.....	2.61	5.84	4.39	1.26							
March .....	2.38	2.48	3.72	3.96							
April.....	1.49	3.08	1.30	.50							
May .....	3.85	.96	1.60	2.67							
June.....	2.15	2.25	4.69	1.68							
July .....	.79	3.14	4.60	4.05							
August.....	1.64	2.94	3.48	4.57							
September.....	2.45	3.30	7.30	2.59							
October.....	<sup>+</sup> 10.35	5.21	6.47	7.91							
November.....	2.93	2.40	5.32								
December.....	2.18	<sup>+</sup> 5.51	3.87								
TOTALS .....	38.26	39.10	55.61								

C C C  
1 mile from Newby Bridge S extremity of Lake Windermere



# RAINFALL AT *Uwerston Colton*

700

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by .....

Observer *Rev A. Christopherson*

Diameter ....					5	.	.	.			
Height ....					1	-	.	.	.		
Altitude ....					216	ft	.		226	.	
Year ....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January ....					6.64	9.96	3.24	10.97	6.20	3.15	
February. ..					3.97	1.89	5.31	5.18	4.12	5.18	
March .....					3.88	1.53	4.93	4.12	2.76	3.44	
April .....					1.54	1.75	3.56	2.72	2.92	2.12	
May .....					.97	2.66	.47	4.42	4.14	1.70	
June .....					.25	4.27	5.44	3.03	4.18	6.73	
July .....					1.35	3.82	3.84	5.68	.89	7.90	
August ....					8.57	3.88	3.95	6.10	7.72	5.41	
September ..					6.40	7.73	5.53	4.33	5.90	6.86	
October ....					12.24	8.87	3.93	11.97	6.47	2.73	
November ..					6.81	7.57	4.03	10.76	2.61	1.46	
December ..					5.19	3.64	8.30	8.45	2.77	3.69	
TOTALS ..					57.81	57.57	52.53	77.73	50.68	50.37	

*Trinity church Colton 200 yds E.*



RAINFALL AT *Broughton in Furness*

Lat.....

Lon..... County of *Lancashire*.....

..... Rain Gauge, by..... Observer *Rev. A. Malletson*.....

*No 1881-1915 565*

Diameter.....			5								
Height .....			1.3					1.3			
Altitude.....			40								
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....			<i>(20.00)</i> 6.61	5.95	7.95	3.87	11.40	5.74	2.50		
February.....			1.43	4.34	2.03	6.18	5.04	4.00	4.27		
March.....			<i>7.82</i> 5.12	3.98	1.67	3.94	4.81	2.75	3.15		
April.....			2.10	.85	1.44	1.81	3.94	2.37	2.58	2.08	
May .....			3.57	2.51	.86	3.25	.51	3.97	4.15	2.42	
June.....			6.79	3.62	.92	4.83	4.76	3.73	3.65	3.58	
July .....			4.98	6.41	2.85	3.71	2.96	5.55	.73	8.76	
August.....			7.28	5.86	9.05	4.49	4.61	7.97	7.07	7.29	
September.....			10.30	3.50	5.78	7.78	5.67	3.07	5.95	5.77	
October.....			10.05	9.04	8.14	7.61	4.26	12.39	6.29	3.95	
November.....			5.38	3.98	9.24	7.41	3.67	10.93	2.78	1.36	
December.....			7.64	3.23	5.47	4.00	14.12	7.15	2.58	3.78	
TOTALS.....			65.85	52.16	58.02	56.54	58.49	78.38	48.27	48.91	

C

*1878 A low tree 20ft distant*

*Jan Feb 1872 very roughly estimated*



RAINFALL AT Broughton in Furness Woodland Parsonage

Lat..... Lon..... County of Lancashire  
..... Rain Gauge, by..... Observer Rev E. C. Shawfield

Diameter.....				5							
Height .....				3	9						
Altitude.....				100	100 <sup>ft</sup>						
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				5.61	6.61	8.30	4.12	12.36	7.14	3.82	
February.....				1.56	3.78	1.80	6.51	4.96	3.20	6.78	
March.....				4.26	4.27	1.55	4.41	4.69	3.11	4.34	
April.....				1.00	1.16	1.88	3.74	3.11	2.68	2.51	
May .....				2.81	1.71	2.98	.54	4.05	4.32	2.60	
June.....				2.82	.68	4.74	4.15	3.86	3.97	5.71	
July .....				6.25	2.63	3.25	3.10	4.75	.99	11.85	
August .....				5.08	9.27	4.35	4.63	7.90	6.18	8.98	
September.....				3.28	5.29	8.28	5.77	3.22	5.79	6.14	
October.....				8.75	7.60	6.84	3.81	10.44	6.46	3.27	
November.....				4.26	7.52	8.17	3.65	10.38	2.87	1.35	
December.....				2.69	5.59	3.05	11.32	8.93	3.50	5.36	
TOTALS .....				48.37	56.11	55.19	55.73	78.65	50.21	62.71	

1878 A few low shrubs 12ft off<sup>E</sup> + oak trees 20 yards distant 20ft high N.

S: John's church, Woodland 3 1/4 furlongs S.



# RAINFALL AT *Coniston Tower Rectory*

70

Lat. ....

Lon. ....

County of *Lancashire*

Rain Gauge, by

Observer: *Rev. J. Ellwood*

Diameter . . .											
Height . . . .							1.0		.6		
Altitude . . . .							400				
Year . . . .	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January . . . .						18.87	5.10	17.58	8.00	3.47	
February . . . .						2.63	8.88	5.85	4.60	6.02	
March . . . . .						.99	5.19	4.15	4.10	5.53	
April . . . . .						1.95	3.49	4.35	4.90	2.06	
May . . . . .						3.33	.61	2.10	5.31	3.00	
June . . . . .						5.02	5.50	3.26	3.80	6.32	
July . . . . .						3.64	2.78	10.32	1.25	10.49	
August . . . .						4.77	7.45	6.37	6.30	8.17	
September . .						10.77	8.25	7.80	8.10	8.56	
October . . . .						6.56	6.94	13.29	4.00	5.60	
November . .						7.62	4.28	11.42	7.30	2.54	
December . .						5.22	12.27	10.28	1.00	7.18	
TOTALS . .						71.37	70.74	96.77	58.66	68.94	

*Tower church 1/4 mile W.*



RAINFALL AT *Coniston Lamehead*

Lat..... Lon..... County of *Lancashire*  
..... Rain Gauge, by..... Observer *R. J. Bywater Esq.*

Diameter .....	<i>.5</i>										
Height .....	<i>1 0</i>										
Altitude .....	<i>287.0</i>										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	<i>8.42</i>	<i>5.72</i>	<i>13.86</i>	<i>11.21</i>	<i>10.89</i>	<i>13.41</i>	<i>4.39</i>				
February.....	<i>5.85</i>	<i>9.63</i>	<i>9.46</i>	<i>2.11</i>	<i>5.33</i>	<i>3.63</i>	<i>9.85</i>				
March.....	<i>4.66</i>	<i>4.45</i>	<i>8.73</i>	<i>5.15</i>	<i>5.75</i>	<i>2.66</i>	<i>4.76</i>				
April.....	<i>2.92</i>	<i>5.62</i>	<i>2.58</i>	<i>1.30</i>	<i>2.67</i>	<i>2.78</i>	<i>4.15</i>				
May.....	<i>6.53</i>	<i>2.40</i>	<i>3.97</i>	<i>3.64</i>	<i>1.32</i>	<i>3.77</i>	<i>.74</i>				
June.....	<i>2.60</i>	<i>2.99</i>	<i>8.63</i>	<i>4.71</i>	<i>1.34</i>	<i>5.35</i>	<i>5.22</i>				
July.....	<i>7.55</i>	<i>6.53</i>	<i>6.04</i>	<i>10.31</i>	<i>4.41</i>	<i>3.18</i>	<i>3.93</i>				
August.....	<i>2.24</i>	<i>3.35</i>	<i>7.61</i>	<i>8.98</i>	<i>12.07</i>	<i>4.73</i>	<i>6.60</i>				
September.....	<i>4.41</i>	<i>4.59</i>	<i>11.43</i>	<i>5.81</i>	<i>7.64</i>	<i>9.38</i>	<i>5.44</i>				
October.....	<i>15.19</i>	<i>9.98</i>	<i>12.22</i>	<i>12.50</i>	<i>13.99</i>	<i>7.72</i>	<i>5.80</i>				
November.....	<i>5.82</i>	<i>3.48</i>	<i>9.94</i>	<i>5.02</i>	<i>8.70</i>	<i>9.06</i>	<i>5.88</i>				
December.....	<i>4.47</i>	<i>10.81</i>	<i>9.47</i>	<i>5.22</i>	<i>5.03</i>	<i>5.77</i>	<i>15.81</i>	<i>#</i>			
TOTALS .....	<i>64.66</i>	<i>69.55</i>	<i>103.94</i>	<i>75.96</i>	<i>79.14</i>	<i>71.44</i>	<i>72.57</i>				

*C C C*



# RAINFALL AT Monk Coniston Park

70

Lat.....

Lon.....

County of.....

Lancashire

Rain Gauge, by.....

Observer

J. J. Marshall Esq.

Diameter .....	7.0	.									
Height .....	4	11	.								
Altitude .....	150.0	.									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	7.40	6.40	15.20	9.70	9.70	13.70	6.00	14.80	8.40	2.80	9.410
February.....	7.00	10.40	8.40	1.70	5.00	2.00	9.70	7.60	4.20	6.50	6.250
March.....	4.60	4.80	7.40	4.30	4.60	2.30	8.20	4.20	4.60	6.30	5.130
April.....	3.30	4.60	2.10	.90	2.10	2.20	3.70	3.60	4.40	2.00	2.890
May.....	6.40	1.90	3.90	3.50	.90	3.60	.50	5.40	5.10	2.20	3.340
June.....	2.00	2.70	8.00	4.20	1.00	5.00	4.90	4.30	3.30	4.60	4.000
July.....	.80	6.30	5.40	9.90	3.70	3.10	2.80	6.80	.30	10.00	4.910
August.....	2.20	4.80	6.80	8.40	12.60	4.60	6.70	9.30	6.20	7.80	6.940
September.....	5.20	3.90	12.40	4.60	7.50	9.40	6.40	5.20	7.60	8.20	7.040
October.....	15.00	9.40	10.70	12.00	16.50	7.60	4.80	15.80	7.80	4.70	10.430
November.....	5.30	3.50	9.80	4.80	8.50	9.30	4.70	16.70	3.00	2.30	6.790
December.....	5.20	11.10	9.90	5.00	6.00	5.70	14.40	10.60	2.90	6.50	7.730
TOTALS .....	64.40	69.80	100.00	69.00	78.10	68.50	72.80	104.30	57.80	63.90	74.860

Gauge in the Park

Rise 60 ft high 150 yds E & W.

Coniston Church 1 mile S.W.

Hya Sta. No. 38-587958

Ngr. SD (34) 315980

Alt 150 ft 46m

Adopted for Rainmaster

October 1975.



# 70

## RAINFALL AT *Monk Coniston, Gardens*

Lat.....

Lon.....

County of... *Lancashire*...

.....Rain Gauge, by..... Observer... *T. Everett*...

Diameter.....						5					
Height.....					1	—					
Altitude.....					305						
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....					11.50	15.60	6.95	16.00	11.05	3.75	
February.....					5.89	2.57	10.34	8.65	6.20	6.93	
March.....					7.50	2.93	8.64	5.82	5.69	6.80	
April.....				# 1.16	2.72	2.79	4.47	4.38	5.02	2.64	
May.....				4.81	1.44	4.45	.85	6.49	6.34	2.87	
June.....				5.21	1.58	6.08	5.84	5.96	4.32	6.80	
July.....				11.13	4.79	4.26	4.12	8.59	1.32	11.73	
August.....				9.61	14.29	5.54	7.70	10.76	7.97	9.11	
September.....				5.32	8.99	10.76	7.45	5.78	9.21	10.08	
October.....				13.75	18.32	8.10	5.97	16.55	9.61	5.73	
November.....				5.54	9.03	10.72	6.16	17.70	4.19	2.77	
December.....				6.16	6.18	6.93	15.12	12.30	4.25	7.69	
TOTALS.....					92.23	80.73	83.61	118.98	75.17	76.90	

*Gauge in kitchen garden*

Hyd Sta. 16. 38-587962 } Adopted for Rainmaster  
 NGR SD (34) 319983 } October 1975.  
 Alt <sup>305</sup> ~~ft~~ ~~ft~~ 93m }



# RAINFALL AT Coniston The Parsonage

70

Lat.....

Lon.....

County of Lancashire

.....Rain Gauge, by.....

Observer Rev C Chapman

Diameter.....				5							
Height.....				1							
Altitude.....				205	205 <sup>W</sup>						
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				13.25	12.48	17.49					
February.....				1.81	5.90	2.87					
March.....				5.47	8.66	2.93					
April.....				1.33	2.97	2.91					
May.....				4.09	1.52	5.22					
June.....				5.27	1.48	6.36					
July.....				10.31	5.36	3.65					
August.....				13.12	10.09	6.13					
September.....				5.55	9.30	11.63					
October.....				13.77	19.48	8.88					
November.....				6.47	11.64	8.24					
December.....				6.89	7.37	7.69 <sup>#</sup>					
TOTALS.....				87.33	96.25	84.00					

Hyg Sta. No. 38-588007 } Adopted for Rainmaster  
 NGR SD (34) 302<sup>S</sup> 978<sup>S</sup> } October 1975.  
 Alt 205ft 62m



# RAINFALL AT Hawkshead Belmont

Lat..... Lon..... County of Lancashire  
 ..... Rain Gauge, by..... Observer C. J. Woodsworth Esq.

Diameter .....	5										
Height .....	1.1										
Altitude .....	316.0										
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	7.39										
February.....	5.81										
March .....	4.33										
April.....	3.20										
May .....	4.06										
June.....	2.28										
July .....	1.01										
August.....	9.8										
September.....	6.14										
October.....	13.78										
November.....	6.07										
December.....	3.82										
TOTALS .....	58.87										



# RAINFALL AT Hawkshead Highfield

70

Lat.....

Lon.....

County of...

Lancashire

Rain Gauge, by.....

Observer...

W. H. Jones Aclis

Diameter.....				5							
Height .....				1							
Altitude.....				460	460						
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....					11.13						
February.....					6.44						
March.....					6.55						
April.....					2.41						
May .....				# 368	1.24						
June.....				4.59	1.74						
July .....				10.85	3.71						
August .....				8.41	12.69						
September.....				5.34	7.99						
October.....				12.40	15.97						
November.....				4.80	7.65						
December.....				4.64	5.29						
TOTALS .....					82.81						

873 The f. is placed on the top of a small hillock on the Eastern side of the high ground between Conistown & Hawkshead. It is freely exposed on every side.



RAINFALL AT *Hawkshead*

Lat..... Lon..... County of... *Lancashire*  
..... Rain Gauge, by..... Observer... *W. Lane Esq.*

Diameter.....				5							
Height .....				1.2	1 -		1.2				
Altitude.....					270		280				
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				11.82	10.46	14.04	6.29	13.59	8.35	2.69	
February.....				1.45	6.47	2.63	7.71	7.17	4.91	4.42	
March.....				4.26	5.28	2.52	7.36	3.37	4.22	5.47	
April.....				.85	2.69	2.59	3.90	3.65	3.46	2.63	
May .....				3.55	1.17	3.72	.82	5.57	5.70	2.26	
June.....				3.89	1.39	6.31	5.31	4.68	4.70	6.90	
July .....				9.94	2.55	3.15	3.62	6.96	.93	8.47	
August.....				8.28	13.33	4.98	5.32	8.68	7.54	7.94	
September.....				4.98	7.27	9.44	5.86	4.86	7.34	8.14	
October.....				11.42	15.56	6.76	4.44	14.46	8.03	4.13	
November.....				4.61	7.55	8.73	5.51	15.06	3.16	2.11	
December.....				5.98	5.20	5.69	11.81	8.51	3.03	6.89	
TOTALS .....				71.03	78.92	70.56	67.95	96.56	61.37	62.05	



RAINFALL AT *Wray*

Lat..... Lon..... County of *Lancashire*  
..... Rain Gauge, by..... Observer *Rev. W. R. Morris*.....

Diameter.....						5					
Height.....						1	-				
Altitude.....						220					
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				17.04	10.13	12.32	4.85	13.10			
February.....				1.27	5.11	2.54	6.96	5.48			
March.....				4.14	6.58	2.44	5.93	3.49			
April.....				59	2.48	2.36	3.42	3.26			
May.....				3.16	1.07	3.48	.80	5.52			
June.....				4.30	1.65	5.85	4.57	4.48			
July.....				8.32	3.25	3.14	3.22	7.41			
August.....				7.87	10.86	4.61	5.52	8.62			
September.....				4.86	6.20	8.21	6.15	3.96			
October.....				9.98	12.87	5.95	5.09	12.64			
November.....				2.92	5.24	7.60	5.22	14.29			
December.....				4.04	5.54	5.77	12.47	9.07	#		
TOTALS.....				68.49	70.98	64.27	64.20	91.32			



# RAINFALL AT *Mary Cottage*

Lat..... Lon..... County of *Lancashire*  
 ..... Rain Gauge, by..... Observer *Elizabeth P. Buckle*

Diameter .....				8							
Height .....				4							
Altitude .....				180	500 <sup>2</sup>						
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....											
February .....	5.74										
March .....											
April.....											
May .....					1.16						
June.....					1.57						
July .....				8.56	3.21						
August.....				7.63	10.90						
September.....				4.93	7.13						
October.....				10.13	14.07						
November.....				4.57	6.34						
December.....				4.10	5.14						
TOTALS .....											

C



RAINFALL AT *Little Langdale Bridge* <sup>Lancashire</sup>

Lat.....

Lon.....

County of *Westmoreland*

Rain Gauge, by.....

Observer *E. B. W. Balme Esq.*

Diameter .....											.8	
Height .....			.9									
Altitude .....			385									
YEAR .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....			<i>#22.79</i>	<i>22.88</i>	<i>13.76</i>	<i>17.26</i>	<i>5.94</i>	<i>19.24</i>	<i>11.72</i>	<i>3.79</i>		
February.....			<i>12.66</i>	<i>1.72</i>	<i>6.84</i>	<i>2.50</i>	<i>9.71</i>	<i>12.04</i>	<i>7.99</i>	<i>7.40</i>		
March.....			<i>9.27</i>	<i>5.80</i>	<i>6.96</i>	<i>3.17</i>	<i>9.16</i>	<i>7.14</i>	<i>8.20</i>	<i>11.46</i>		
April.....			<i>3.83</i>	<i>.97</i>	<i>3.21</i>	<i>2.51</i>	<i>5.68</i>	<i>4.58</i>	<i>4.85</i>	<i>4.01</i>		
May.....			<i>5.63</i>	<i>3.22</i>	<i>1.22</i>	<i>5.76</i>	<i>1.03</i>	<i>8.14</i>	<i>7.16</i>	<i>3.72</i>		
June.....			<i>9.92</i>	<i>5.10</i>	<i>1.72</i>	<i>6.80</i>	<i>7.74</i>	<i>9.52</i>	<i>4.30</i>	<i>10.99</i>		
July.....			<i>6.04</i>	<i>11.72</i>	<i>5.64</i>	<i>3.52</i>	<i>4.93</i>	<i>13.99</i>	<i>1.32</i>	<i>10.87</i>		
August.....			<i>8.25</i>	<i>14.10</i>	<i>17.21</i>	<i>5.67</i>	<i>8.62</i>	<i>10.29</i>	<i>7.67</i>	<i>11.68</i>		
September.....			<i>14.57</i>	<i>7.89</i>	<i>12.09</i>	<i>11.62</i>	<i>7.90</i>	<i>6.17</i>	<i>13.07</i>	<i>11.88</i>		
October.....			<i>14.42</i>	<i>11.98</i>	<i>24.19</i>	<i>6.67</i>	<i>6.03</i>	<i>20.51</i>	<i>12.69</i>	<i>7.46</i>		
November.....			<i>12.44</i>	<i>6.99</i>	<i>8.96</i>	<i>12.78</i>	<i>7.82</i>	<i>23.97</i>	<i>5.91</i>	<i>3.29</i>		
December.....			<i>13.54</i>	<i>7.83</i>	<i>5.73</i>	<i>11.06</i>	<i>14.00</i>	<i>15.68</i>	<i>4.51</i>	<i>10.07</i>		
TOTALS .....			<i>133.36</i>	<i>100.20</i>	<i>107.53</i>	<i>89.32</i>	<i>88.56</i>	<i>151.27</i>	<i>88.89</i>	<i>96.62</i>		



# RAINFALL AT *Brathay Hall*

70

Lat..... Lon..... County of *Lancashire*  
 ..... Rain Gauge, by..... Observer... *G. Redmayne Esq*

Diameter.....				.6					.6	.5	
Height .....				1.5					1.6		
Altitude.....				135			140 <sup>2</sup>		1.20	150	
Year .....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....				<del>#</del> 6.57 <sup>14</sup>	9.59	13.82	5.45	14.04	9.76	2.87	
February.....				1.52	3.42	2.59	8.90	7.10	5.39	4.36	
March.....				4.02	6.83	1.84	7.70	3.69	4.66	6.20	
April.....				.44	2.65	2.38	3.66	3.40	3.32	2.75	
May .....				3.08	2.03	3.94	.65	5.30	5.72	2.09	
June.....				4.32	2.17	5.93	4.10	4.85	4.35	6.64	
July .....				11.63	3.63	3.39	3.39	7.10	1.15	9.30	
August.....				9.11	11.98	5.10	5.89	8.15	6.72	7.96	
September.....				6.02	7.94	8.65	6.51	5.10	8.60	8.63	
October.....				10.92	18.81	7.41	5.61	11.32	5.66	3.94	
November.....				4.65	7.95	8.67	7.39	16.94	3.51	1.62	
December.....				5.34	5.10	7.20	12.47	9.57	4.00	<sup>*</sup> 7.67	
TOTALS .....				<del>#</del> 67.62	82.10	70.92	71.72	96.56	62.84	(64.03)	

*W.H.*

\*1873 Observations commenced Jan<sup>y</sup> 14<sup>th</sup>

1879 Gauge quite full & possibly overflowed on Dec<sup>r</sup> 27<sup>th</sup>

1879 Greenhouse 19ft high 36ft N.

Brathay church  $\frac{1}{4}$  mile W.