

Rainfall at Poaka Beck, NewcastleAugustus Strongtharm

Diameter of Gauge, ..... in.

Height above Ground, 3 ft. h in.Above Mean Sea Level, 500 ft.

YEAR - -	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	MEANS.
January - -						3.22			2.81	5.30	
February - -						2.13			2.66	5.73	
March - - -						1.68			5.16	1.39	
April - - -						.50			2.86	2.89	
May - - - -						4.89			2.36	3.43	
June - - - -						.38			.85	1.94	
July - - - -						2.70			.65	1.08	
August - - -						4.53			5.60	2.71	
September -					#	1.20			3.17	7.91	
October - -						6.33			5.68	3.83	
November -						4.75			3.51	5.30	
December -						2.38			10.92	4.74	
TOTALS -						34.69			45.93	46.25	

1865 G is situated near the top of the hill between the estuaries of the rivers Leven & Dudden being about  $2\frac{3}{4}$  miles W of Silverston.

# RAINFALL AT Poaka Beck Reservoir

Lat..... Lon..... County of... Lancashire  
 ..... Rain Gauge, by..... Observer... John Lewis

Av 1831-1915 52.1

Diameter.....	11										
Height.....	1.5										
Altitude.....	500										
Year.....	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	4.71	1.18	8.33	4.75	4.85	8.10	2.85	9.10	5.20	2.95	5.202
February.....	2.28	4.72	4.01	5.5	3.10	1.60	5.40	5.00	3.15	4.35	3.406
March.....	2.99	1.83	5.42	4.04	3.96	1.50	3.90	4.25	1.85	2.55	3.229
April.....	1.84	3.58	1.87	.66	1.30	1.65	3.50	3.50	2.45	2.95	2.330
May.....	2.65	1.75	1.95	2.30	1.35	2.95	.60	4.15	4.70	2.20	2.480
June.....	1.81	4.59	6.03	3.30	.75	4.75	4.65	3.50	4.10	6.20	3.968
July.....	1.91	4.66	5.94	5.80	2.50	3.45	5.00	6.50	1.60	6.85	4.421
August.....	1.94	3.02	4.78	6.30	8.65	5.65	4.90	5.95	8.20	6.25	5.574
September.....	4.41	2.81	8.41	3.94	5.30	8.10	5.75	3.25	5.60	5.50	5.307
October.....	8.13	8.04	8.52	6.07	8.30	7.90	4.15	9.50	5.50	2.95	6.906
November.....	3.23	2.67	4.86	4.38	6.20	7.05	4.75	9.10	2.90	1.45	4.659
December.....	2.89	4.36	3.89	2.45	3.25	2.95	7.65	7.60	2.75	3.15	4.094
TOTALS.....	3879	4321	6401	4494	4951	5345	5310	7140	4800	4735	51576

1879 Wall 5ft high 12ft NW.

Pennington church 1½ miles E.S.E.

# RAINFALL AT *Ulverston, Bowka Beck*

3019

80

Lat. \_\_\_\_\_

Lon. \_\_\_\_\_

County of \_\_\_\_\_

*Lancashire*

Rain Gauge, by \_\_\_\_\_

Observer *Mr. W. Ferguson*

*Quaddon & Co.*

Diameter ....	<i>1 1/2"</i>										
Height .....	<i>1.6</i>										
Altitude ....	<i>500 T</i>	<i>512 T</i>									
Year .....	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	MEANS.
January ....	<i>1.25</i>	<i>1.07</i>	<i>4.45</i>	<i>7.60</i>	<i>7.00</i>	<i>2.87</i>	<i>5.69</i>	<i>3.65</i>	<i>2.69</i>	<i>3.18</i>	<i>3.946</i>
February ....	<i>3.70</i>	<i>6.15</i>	<i>4.74</i>	<i>4.03</i>	<i>4.40</i>	<i>6.05</i>	<i>2.62</i>	<i>2.43</i>	<i>1.83</i>	<i>3.07</i>	<i>3.902</i>
March .....	<i>2.75</i>	<i>6.86</i>	<i>4.52</i>	<i>1.80</i>	<i>4.11</i>	<i>5.10</i>	<i>6.18</i>	<i>2.43</i>	<i>4.37</i>	<i>3.18</i>	<i>4.130</i>
April .....	<i>2.55</i>	<i>2.35</i>	<i>7.01</i>	<i>3.48</i>	<i>1.76</i>	<i>2.48</i>	<i>2.83</i>	<i>2.47</i>	<i>2.21</i>	<i>2.78</i>	<i>2.992</i>
May .....	<i>1.70</i>	<i>4.04</i>	<i>2.71</i>	<i>1.58</i>	<i>2.44</i>	<i>2.45</i>	<i>5.08</i>	<i>2.12</i>	<i>2.16</i>	<i>4.71</i>	<i>2.899</i>
June .....	<i>3.40</i>	<i>4.89</i>	<i>5.81</i>	<i>3.77</i>	<i>7.4</i>	<i>1.81</i>	<i>2.60</i>	<i>4.7</i>	<i>2.68</i>	<i>1.50</i>	<i>2.767</i>
July .....	<i>5.65</i>	<i>7.94</i>	<i>9.55</i>	<i>2.60</i>	<i>6.66</i>	<i>4.43</i>	<i>7.52</i>	<i>2.16</i>	<i>10.00</i>	<i>4.39</i>	<i>6.090</i>
August .....	<i>1.95</i>	<i>7.36</i>	<i>5.86</i>	<i>5.51</i>	<i>2.01</i>	<i>1.97</i>	<i>3.32</i>	<i>1.65</i>	<i>5.23</i>	<i>8.40</i>	<i>4.326</i>
September ....	<i>4.86</i>	<i>4.26</i>	<i>3.73</i>	<i>5.93</i>	<i>5.03</i>	<i>6.59</i>	<i>6.04</i>	<i>5.05</i>	<i>2.69</i>	<i>4.56</i>	<i>4.874</i>
October .....	<i>1.25</i>	<i>2.61</i>	<i>5.28</i>	<i>4.74</i>	<i>4.92</i>	<i>6.02</i>	<i>8.52</i>	<i>4.81</i>	<i>5.64</i>	<i>5.21</i>	<i>4.900</i>
November ....	<i>6.40</i>	<i>7.97</i>	<i>8.04</i>	<i>6.47</i>	<i>2.13</i>	<i>6.74</i>	<i>6.70</i>	<i>3.91</i>	<i>8.35</i>	<i>2.72</i>	<i>5.943</i>
December ....	<i>7.12</i>	<i>5.15</i>	<i>3.82</i>	<i>4.80</i>	<i>4.81</i>	<i>2.48</i>	<i>6.24</i>	<i>4.01</i>	<i>5.41</i>	<i>5.46</i>	<i>4.900</i>
TOTALS ....	<i>42.02</i>	<i>60.65</i>	<i>65.52</i>	<i>52.01</i>	<i>46.01</i>	<i>48.99</i>	<i>63.34</i>	<i>35.17</i>	<i>53.26</i>	<i>49.16</i>	<i>51.669</i>

*1880. Pennington*

*1 1/2 miles*

*E. S. E.*

*Wall 5ft high 12ft NW*



30/9

RAINFALL AT *Ulverston Poaka Beck*

Lat. \_\_\_\_\_

Lon. \_\_\_\_\_

County of *Lancashire*

Rain Gauge, by \_\_\_\_\_

Observer *Mr W Fergusson**Duddon 7 61*

Diameter ....	11											
Height .....	16											
Altitude ....	512 ft											
Year .....	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	MEANS.	
January ....	7.52	2.73	5.56	2.13	4.04	3.53	3.34	1.59	4.62	5.89	4.095	
February ....	1.01	.64	2.00	6.04	7.35	2.22	3.58	3.33	3.43	3.54	3.214	
March .....	4.37	1.67	1.97	2.10	2.24	5.26	6.16	5.28	1.47	3.30	3.282	
April .....	2.23	2.79	1.94	1.04	2.01	3.34	1.79	3.49	4.27	5.17	2.807	
May .....	3.64	2.02	5.35	2.57	3.66	.96	.60	2.76	4.02	3.98	2.956	
June .....	5.89	1.77	3.55	1.90	4.70	1.69	4.11	7.33	4.25	1.71	2.690	
July .....	4.44	2.85	2.59	4.59	3.91	6.04	5.60	2.17	.94	3.86	3.699	
August .....	6.03	10.46	8.94	6.25	5.31	4.69	4.31	5.80	8.90	1.58	6.227	
September ...	7.09	7.61	7.04	5.45	1.00	1.80	8.01	5.71	2.57	5.87	5.215	
October .....	3.98	5.56	5.58	7.48	6.08	6.87	5.79	3.59	5.80	3.64	5.407	
November ....	11.73	6.49	5.14	3.43	6.23	4.49	2.17	7.91	6.08	4.59	5.896	
December ....	.85	8.42	4.00	4.57	5.63	5.41	6.86	7.32	6.32	5.02	5.440	
TOTALS . . .	58.78	53.01	53.66	47.55	52.86	46.30	52.32	56.28	52.67	48.15	52.158	

1890 Pennington Church 1 1/2 miles E.S.E  
 Wall 5 ft high 12 ft NW

1890 -

# RAINFALL AT Ulverston Poaka Beck

3019

Lat. 54° 11' 35" N

Lon. 3° 9' 50" W

County of Lancashire North

Rain Gauge, by Barfield & Son

Observer W. Fergusson Esq

Duddon

Diameter ..	11										
Height ....	1 6										
Altitude ..	512 <del>K</del>										
Year ....	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	MEANS.
January ..	6.95	2.72	3.59	7.87	6.94	3.24	5.61	2.46	3.96	2.92	4.626
February ..	5.25	2.50	2.86	6.91	3.76	2.26	3.80	2.41	2.86	2.51	3.512
March ....	.80	3.05	4.08	6.06	5.03	5.08	3.58	4.88	3.92	4.90	4.138
April .....	3.37	3.25	2.37	2.77	3.91	3.95	2.33	3.03	3.36	4.37	3.271
May .....	3.08	2.33	3.41	6.26	2.67	1.46	6.74	6.06	4.49	3.32	3.982
June .....	4.88	2.89	1.79	2.15	2.02	1.79	3.26	9.01	3.09	2.51	3.239
July .....	3.25	1.53	5.40	4.64	4.85	2.22	3.66	3.25	5.68	7.96	4.244
August ....	8.22	5.72	5.26	6.63	4.37	6.45	5.04	5.61	5.03	4.75	5.708
September ..	3.45	2.41	2.64	5.74	4.25	4.01	2.40	.89	6.74	4.12	3.655
October ....	8.77	7.30	4.88	12.45	3.38	5.02	7.68	8.02	3.93	7.86	6.929
November ..	6.19	5.40	5.21	4.98	5.37	6.01	6.08	5.82	5.31	2.20	5.257
December ..	7.16	5.85	5.35	4.77	3.79	2.01	8.02	6.70	6.22	7.44	5.731
TOTALS ..	61.37	44.95	46.74	71.23	50.34	43.50	58.20	58.14	54.59	54.86	54.392

1900 Pennington Church 1 1/2 miles E.S.E.  
 Wall 5 ft high 12 ft N.W.  
 1903 Lidal Station 1 1/2 mile E.S.E.  
 55 1907

RAINFALL at Ulverston Poole DockCounty of North LancashireObserver W. Fergusson EsqRiver Basin Leven & C 27 Chadderton EsqRain Gauge, by Kennedy

Diameter ...	11												
Height .....	1.6												
Altitude ...	512 ft												
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.		
January ...	4.74	1.63	4.90	5.36	4.02	4.69	4.44	2.71	5.19	7.81			2015
February ...	5.21	4.91	2.92	2.15	4.38	5.94	4.34	2.12	5.16	2.06			308
March .....	1.99	1.60	6.68	4.42	4.72	2.48	1.75	3.27	2.48	5.69			319
April .....	3.00	3.45	1.39	4.98	1.03	2.88	3.53	1.99	1.66	3.02			1020
May .....	2.52	2.38	2.07	3.45	2.66	1.53	4.96	4.16	3.05	2.20			1437
June .....	3.08	3.31	6.41	3.05	1.42	1.29	4.09	2.84	3.12	2.09			1214
July .....	4.38	1.00	4.75	1.59	6.69	5.89	3.93	2.05	5.10	1.08			1216
August .....	6.77	4.19	6.70	1.85	4.14	4.36	2.71	9.31	5.30	4.67			3199
September ..	1.25	5.05	3.06	2.59	3.93	1.25	4.59	5.01	11.87	4.79			3126
October ...	2.36	4.80	6.29	4.06	2.33	2.61	9.26	9.65	6.07	2.90			2758
November ...	6.27	5.26	5.07	5.08	5.37	2.61	5.87	7.66	3.56	3.65			3074
December ...	5.44	8.59	5.37	3.48	6.23	10.17	3.93	3.33	9.88	7.46			2460
TOTALS ...	47.01	46.42	55.61	42.06	46.92	45.69	53.40	54.10	62.44	47.42	50.107		21736
	7	2	2	2	2	2	2	2	2	2			966

1913 Call 5 ft high 12 ft NW

B 49

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.
	54.11.35	3.9.50 W	Lindal	2 1/2 m	SE	Pennington	1 1/2 m	ESE



RAINFALL at Ulverston Poole BeckCounty of N LancashireObserver F. Chadderton Esq.River Basin Leven + C 2 1C. Diamond  
Emp. Manager Barrow Gas Works(1921) Howard Rain Gauge, by Kennedy's 1921.Av 1831-1915 52.1

Diameter ...	11											
Height .....	1.6											
Altitude ...	512											
Year .....	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	<del>1930</del> 1930	Totals.
January ...	6.30	8.37	5.01	5.45	5.92	4.03	5.80	5.97	12.68	2.90	7.86	70.29
February ...	3.66	5.2	5.56	6.49	1.44	5.94	8.22	4.67	5.46	1.29	.45	43.70
March .....	6.97	4.43	2.61	1.85	2.54	1.90	2.20	4.42	5.10	.82	2.49	35.33
April .....	6.93	1.70	2.03	4.18	3.22	3.60	2.34	2.94	2.77	2.16	2.94	35.11
May .....	5.51	3.27	3.76	2.85	5.68	8.01	2.60	2.49	1.15	3.09	1.90	40.31
June .....	3.31	.44	3.59	1.46	3.62	1.10	3.12	4.92	5.31	3.11	1.92	31.93
July .....	7.30	2.31	5.94	4.88	5.93	2.87	4.91	4.91	5.35	5.28	5.29	21.97
August .....	2.99	7.70	5.20	8.28	5.39	5.01	4.39	6.94	6.29	7.76	9.22	68.17
September...	4.81	2.23	4.46	7.27	6.19	5.12	6.63	11.64	3.80	2.63	3.38	58.16
October .....	2.43	3.03	1.92	9.13	5.60	7.07	4.11	5.59	7.60	7.52	10.16	64.16
November...	3.70	3.07	3.19	6.21	3.88	3.44	8.65	6.16	9.25	11.98	6.42	65.95
December...	4.67	6.22	6.10	7.30	8.03	4.71	2.57	1.59	4.71	8.72	6.36	60.78
TOTALS...	58.58	43.29	49.37	65.35	57.44	52.80	55.54	62.24	69.47	57.59	58.39	630.06

1920 Mail 5 ft high 12 ft NW

1925 House 20' high 20' W.

Position of Station on reduced Ordnance Survey } No. of Map

Reference No.

Date.	Lat. N.	Long. W.	Railway Station.	Distance from gauge	Direction	Parish Church.	Distance from gauge	Direction
	54° 11' 35"	3° 9' 55"	Lindal	2 1/2 mi	SE	Pennington	1 1/2 mi	ESE

RAINFALL at Ulverston (Poaka Beck)County North LancashireObserver Claude Diamond, Esq.River Basin Puddon & C. - 1Type of Gauge Howard (Standard 1935)Annual Average 52.1 in. based on 35 years obs. un-weighted. Period of average 1881 - 1915 Ref. B. & N.

Diameter	11.				5"							
Height	1.6.				1.0							
Altitude	572				512							
Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	Means	
January	6.00	6.24	3.52	6.31	3.31	5.82	4.11	5.19	5.12	3.72		Totals. 4734
February	4.75	.00	4.86	.41	5.51	2.59	6.79	1.71	3.96	1.79		32.37
March	.61	4.09	4.30	3.30	1.53	3.14	2.53	2.62	3.04	5.12		29.68
April	2.70	4.82	3.16	3.71	3.93	.77	3.43	.52	2.26	3.29		28.59
May	3.55	6.30	4.19	4.26	1.00	1.21	2.04	4.35	.68	1.77		27.35
June	9.35	1.38	2.48	3.01	5.09	4.37	3.04	5.45	3.18	.62		37.97
July	7.08	6.19	4.27	1.73	1.72	4.40	3.32	7.04	8.26	4.40		48.41
August	4.59	1.36	4.76	7.07	4.64	4.52	2.52	3.05	2.89	2.42		37.82
September	2.73	4.94	.95	6.40	9.40	5.72	4.25	3.40	3.15	4.53		45.47
October	4.69	7.65	4.57	6.82	7.88	3.86	2.91	10.81	2.03	5.67		56.89
November	10.85	2.98	3.52	2.42	6.04	5.95	2.34	7.55	5.81	5.74		53.20
December	5.51	4.58	1.80	8.25	4.44	6.24	4.05	5.82	2.68	6.08		49.45
TOTALS	62.41	50.53	42.38	53.69	54.49	48.59	41.33	56.91	43.06	45.15		498.54
	D.	D.	D.	D.	D.	D.	D.	D.	D.	D.		498.54

1932. House 30' high 20' W. Inspected 1934:- Exposure satisfactory. New gauge should be set up 4ft from present gauge and comparative readings should be taken from both gauges for one year.  
 IV/1935 Standard g. set up & brought into use; old g. discontinued from 31/III; footnote in S.R.  
 1935 - New gauge March 1935.

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

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge	Direction from gauge
1932.			Lindal	2 1/2 m.	S. E.	Pennington	1 1/2 m.	E. S. E.



Station No. T.F. 3019RAINFALL at Ulverston (Parks Beck)

41

County of North LancashireObserver Blonde Diamond Eq.River Basin Dundon & C-1Engineer Barnard

Type of Gauge

WATER FILLING GAUGEAnnual Average 52.1 in. based on 35 years obs. un-weighted. Period of average 1881-1915 Ref. B. of NFile No. 11556/31

Diameter	5"			588	702							
Height	1'0"				1							
Altitude	512				41							
Year	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Means	
January	2.01	5.27	7.87	4.86	4.32	6.82	4.35	9.62	3.72	2.94		Totals 51.78
February	4.30	2.61	2.68	2.31	4.76	3.94	1.06	3.15	2.42	4.94		32.17
March	3.74	3.80	1.61	.67	3.32	1.88	7.36	2.35	3.38	3.85		31.96
April	1.80	2.34	3.29	3.70	2.43	2.07	4.58	2.43	3.45	3.17		29.26
May	4.50	3.90	4.39	3.05	3.54	1.47	5.27	2.15	4.12	1.81		34.20
June	.98	1.13	3.66	3.42	4.10	3.92	3.55	7.58	.91	3.00		32.11
July	1.84	4.58	4.20	3.40	3.88	5.22	4.21	2.24	4.36	4.60		38.53
August	5.05	5.54	9.05	5.04	1.10	5.86	.22	5.08	3.91	6.79		47.64
September	2.34	4.02	6.72	6.93	4.60	8.60	4.21	6.60	1.95	10.85		56.78
October	6.98	6.26	5.95	5.98	6.20	.75	1.02	5.20	7.36	4.44		50.11
November	3.14	1.43	4.63	8.33	.45	8.83	5.82	4.99	6.25	5.01		48.91
December	2.81	6.16	2.45	5.01	3.46	6.81	2.85	4.29	8.07	3.83		45.74
TOTALS	39.32 D	47.10 D	56.50 D	52.76 D	42.16 D	56.17 D	44.50 D	55.68 D	49.80 D	55.20 D		494.19 466

443.99  
5392Position of Station on reduced Ordnance Survey Map,  
1 mile to 1 inch Series

No. of Map.....

Reference No.....

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

BRITISH RAINFALL ORGANIZATION

Station No. 3019 7.37RAINFALL at Wharston (Peaka Beck)

51

County of N. Lancashire Observer Water Engineer, Barrow.River Basin Duddon + C-1

Type of Gauge

Annual Average 52.1 in. based on 35 years obs. un-weighted. Period of average 1881-1915 Ref. B & N52.72 " " " " " 1916-1950File No. 111236/31

Diameter ...	5"			588	702							
Height ...	11 0"				1							
Altitude ...	512.				51							
Year ...	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Means	Totals
January ...	6.47	4.47	3.15	4.29	2.82	5.16	5.19	5.33	3.12	7.59	47.59	
February ...	4.63	1.55	2.29	5.00	2.68	.77	3.97	8.03	1.37	5.36	35.65	
March ...	5.46	3.97	.52	3.60	2.32	1.47	4.12	1.91	2.96	1.63	27.96	
April ...	1.29	3.34	3.24	1.03	3.33	1.22	1.38	2.04	3.63	3.51	24.01	
May ...	1.89	2.98	3.43	3.67	3.41	2.89	3.86	4.95	1.04	3.72	31.84	
June ...	.90	3.75	2.12	4.54	3.96	3.25	2.74	5.24	4.07	1.82	32.39	
July ...	3.36	2.15	6.16	6.08	2.91	6.85	4.67	3.16	3.36	7.52	46.22	
August ...	5.61	6.93	6.48	7.22	3.33	10.60	4.75	6.02	.64	5.43	57.01	
September ...	5.55	4.66	6.08	7.93	3.81	4.32	10.43	7.83	1.57	5.19	57.37	
October ...	.88	4.40	3.89	10.35	3.75	5.07	7.43	5.59	5.46	4.82	52.14	
November ...	9.02	2.43	8.00	11.17	2.71	1.94	2.32	3.17	5.90	9.09	55.75	
December ...	8.73	5.85	3.80	6.17	6.25	5.37	5.91	4.90	8.87	6.02	61.87	
TOTALS ...	53.79	46.48	49.16	71.05	41.28	48.91	56.77	58.17	42.49	61.70	529.80	
	D	D	D	D	D	D	D	D	D	D		

1951 annual total appears rather low but accepted

Position of Station on Ordnance One-Inch map : No. of Map ..... National Grid Reference SD(34)240 782

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

Summary of Earlier Records from 10-year Sheets :

1916-1950, P-accepted

Record D, or d	1910-19	1920-30	1931-40	1941-50	1951-60
	✓ Short - 19	✓ ✓	✓ ✓	✓ ✓	✓ ✓