

RAINFALL AT

Berkside, Helvellyn
Wm Walker

60

Rain { By

Gauge { Diameter.....in.

Height above Ground, ft. in.

Above Mean Sea Level, ft.

YEAR	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	MEANS.
January								11.25	14.50	16.25	
February								9.00	11.50	13.25	
March								6.50	15.25	2.50	
April								10.25	7.00	4.75	
May								3.75	4.25	3.75	
June								2.75	2.00	2.50	
July								8.25	1.00	5.25	
August								9.50	8.50	2.00	
September ...							9.00	7.50	5.00	19.25	
October							5.75	10.75	12.75	4.75	
November ...							12.00	2.00	7.50	9.50	
December							14.50	5.00	23.25	14.50	
TOTALS								86.50	112.50	98.25	

c c c c

RAINFALL AT *Helvellyn Birkside*

Lat.

Lon.

County of

Cumberland

Rain Gauge, by

Observer

G. J. Symonds Esq.

Diameter	8	.										
Height	1	.										
Altitude	1800	.										
YEAR	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.....	9.25	6.50	24.75		12.50	11.00	14.00	17.25	10.00			
February	13.75	13.75	14.00		9.00	3.25	15.75	8.25	7.00		14.00	
March	3.00	7.25	10.25		6.75	10.00	4.50	4.75	3.75			
April	3.00	9.00	3.00		4.50	3.25	11.00	4.50	2.75	2.50		
May	9.50	2.00	5.00		2.75	5.50	2.00	8.50	8.50	1.25		
June.....	2.50	3.75	11.25		3.25	11.75	6.75	8.00	4.75	10.00		
July.....	.75	9.25	6.75		4.50	5.50	2.50	13.50	1.25	11.50		
August.....	2.25	8.25	7.00		21.75	6.50	11.25	11.00	8.00	10.50		
September.....	5.25	5.00	14.00		16.50	11.75	8.75	7.00	9.50	10.00		
October.....	22.50	9.75	15.50		23.50	9.50	9.00	22.00	12.25	3.00		
November.....	0.50	3.25	16.50			10.00	7.50	18.00	3.00	1.50		
December.....	7.00	14.50	17.25	18.00		6.00	13.50	16.75	13.50	4.00	7.00	
TOTALS	87.25	92.25	145.25	110.00	111.00	101.50	109.75	136.25	74.75	71.25	103.25	

1871 Sept. & Oct. Gauge wilfully damaged

C. J. Symonds

1878 Gauge moved 300 yds S. in Oct.

1873 estimated from Wythburn Parsonage
d. Water dials

RAINFALL AT *Selvellyn Birkside*

70

Lat.

Lon.

County of *Cumberland*

Rain Gauge, by

Observer *J. E. Bateman Esq F.R.S.*

Diameter.									7			
Height.									1. -			
Altitude.									1900			
Year.	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.	
January.									6.80	1.50		
February.									6.00	4.10		
March.								<i># 2</i> 3.30	3.00	5.10		
April.								4.80	3.60	3.50		
May.								7.50	8.50	2.00		
June.								6.80	4.60	9.90		
July.								12.00	1.20	10.30		
August.								10.90	8.00	9.00		
September.								5.50	9.30	10.10		
October.								14.90	11.00	3.60		
November.								17.10	2.90	1.80		
December.								7.80	3.00	6.40		
TOTALS.									67.90	67.30		

RAINFALL AT *Helwell, Birks* 80

Lat. _____

Lon. _____

County of *Cumberland*

Rain Gauge, by _____

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

Dewent - 2

Diameter	7										
Height	1. 0										
Altitude	1900 T										
Year	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	MEANS.
January	3.10	1.00	7.30	13.80	14.10	5.20	3.80	6.80	4.00	5.00	6.410
February	10.40	5.80	9.80	10.10	8.00	14.30	2.60	3.50	1.20	2.20	6.790
March	3.10	7.20	6.40	4.00	6.30	5.20	5.70	1.30	3.90	4.10	4.720
April	5.70	1.80	6.90	4.20	3.00	6.50	3.50	3.60	4.70	4.00	4.390
May	3.20	7.40	6.40	4.90	5.60	4.70	6.00	2.00	4.60	4.90	4.970
June	5.40	9.20	8.70	6.10	1.40	2.70	2.70	.70	2.80	.70	4.040
July	8.20	7.40	14.30	6.10	8.90	5.10	7.70	7.70	11.90	5.40	8.270
August	2.90	9.10	7.30	7.80	2.10	5.50	14.10	4.20	7.40	8.90	5.930
September....	8.50	4.30	5.80	9.80	8.90	11.70	13.20	9.20	2.20	3.80	7.740
October	2.30	4.10	6.80	10.20	4.70	8.20	9.90	5.20	11.70	12.30	7.540
November....	10.90	15.60	11.90	12.90	4.60	5.20	9.60	5.30	12.80	4.80	9.360
December	5.60	8.30	6.20	6.40	8.30	2.70	14.40	6.30	12.50	8.00	6.870
TOTALS	69.30	81.20	97.80	96.30	75.90	77.00	73.20	55.80	79.70	64.10	77.030

N.W. of Dollywaggon Pike.

Revised from Survey, 1880.

RAINFALL AT

Helvellyn Birkside

Lat.

Lon.

County of Cumberland

Derwent - 2.

Rain Gauge, by

Observer G. H. Hill Esq. C.E.

Monthly

Diameter	7											
Height	1 0											
Altitude	1900 T											
Year	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	MEANS.	
January	13.60	6.10	5.00	3.70	10.00	1.50	5.00	1.70	6.90	14.00	6.750	
February	1.50	.60	1.90	7.00	11.70	.50	6.10	10.50	5.00	7.10	5.190	
March	5.40	2.80	2.20	4.20	4.10	6.60	8.00	11.60	1.80	4.60	5.130	
April	2.50	4.50	1.20	1.00	6.50	5.30	3.00	7.60	7.40	7.80	4.680	
May	4.50	4.10	7.90	4.00	7.10	.60	.60	4.00	4.30	6.90	4.400	
June	7.50	3.00	4.30	5.80	4.50	1.90	5.90	5.20	6.10	2.50	4.640	
July	7.20	2.60	6.10	6.90	6.20	9.00	4.00	3.30	2.10	5.90	5.230	
August	9.00	17.80	12.10	9.90	8.30	9.90	5.00	16.10	9.00	3.50	10.060	
September	6.50	12.90	13.70	7.00	.20	3.60	12.50	9.30	5.00	8.30	7.900	
October	5.00	17.00	9.30	8.30	11.60	6.90	9.50	8.10	7.80	8.20	7.170	
November	14.30	9.90	8.20	5.20	13.00	9.50	3.50	10.30	9.30	13.50	9.680	
December80	15.40	2.70	10.10	9.50	6.20	9.20	14.70	13.00	3.80	8.510	
TOTALS . . .	77.80	96.70	74.70	73.10	92.70	61.50	72.30	102.40	77.70	86.10	81.500	

1880

Rejected from survey. 18" low.

RAINFALL AT *Hebberly Birkside*

Lat. Lon. County of *Cumberland*

Rain Gauge, by Observer *G. H. Hill Esq. C.E.*

servert - 2.

Diameter ..	7										
Height	1 3										
Altitude ..	1900T										
Year	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	MEANS.
January ..	7.00	4.40	6.00	11.50	10.40	4.00	11.00	2.30	10.80	8.40	7580
February ..	5.70	3.50	4.00	11.00	5.70	3.00	4.20	4.40	4.40	6.20	5210
March	1.20	4.10	4.90	14.50	5.00	8.20	5.80	6.30	8.20	7.30	6550
April	5.10	5.20	5.10	2.10	7.00	9.10	2.10	6.20	5.00	5.00	5190
May	6.60	3.80	4.20	6.40	5.50	3.70	13.40	9.20	7.20	4.40	6440
June	6.30	4.80	3.00	3.80	4.70	4.60	3.00	12.40	4.70	4.90	5220
July	5.30	2.20	5.60	7.00	5.10	3.30	5.70	3.80	8.70	10.80	5750
August	11.70	9.20	5.10	11.60	8.00	9.00	8.20	9.30	10.70	5.20	8800
September ..	7.20	8.50	5.00	9.20	6.00	6.40	3.80	1.30	10.70	5.10	6320
October	10.90	8.70	7.60	24.00	4.80	8.00	13.70	14.90	5.60	18.90	11710
November ..	9.50	7.00	8.20	6.20	6.00	11.30	9.50	9.10	8.10	5.00	7990
December ..	20.00	6.50	9.30	7.30	8.00	6.00	5.30	13.30	9.30	12.70	9770
TOTALS ..	9650	6790	6800	114.60	76.20	76.60	85.70	92.50	93.40	93.90	86530

1905 Jan + Feb short diff. Marshall says leaking

Rejected from survey 18" low.

RAINFALL at Helvellyn, BirksideCounty of Cumberland Observer G. H. Hill Esq. C.E.River Basin Derwent 2

Rain Gauge, by _____

Diameter ...	7										
Height	1.3										
Altitude ...	1900T										
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.
January ...	9.00	4.60	8.10	11.70	9.30	9.10	10.80	2.10	10.70	10.70	
February ...	16.00	9.20	6.50	6.30	12.70	14.70	7.50	1.70	8.10	1.80	
March	5.50	3.20	11.10	9.20	8.30	4.10	4.50	3.50	3.70	4.60	
April	7.70	7.40	1.90	10.50	3.30	4.10	5.30	7.60	1.50	3.30	
May	4.10	4.60	4.70	4.80	4.60	2.50	7.40	4.90	2.70	3.10	
June	3.10	7.80	11.70	6.90	4.10	1.10	4.90	3.50	2.30	3.10	
July	10.10	2.50	10.50	1.40	7.00	9.10	5.90	2.10	7.20	2.20	
August	16.10	6.60	12.20	6.30	6.90	5.20	4.50	15.30	6.60	7.20	
September ..	1.50	8.00	5.30	4.90	4.70	2.00	5.00	4.00	13.70	8.00	
October ...	5.20	10.70	13.50	9.70	2.60	3.20	15.40	10.40	9.00	3.60	
November ...	6.60	16.80	7.00	8.70	12.30	3.40	13.30	5.10	6.50	4.60	
December ...	14.90	24.30	21.10	8.30	15.80	16.10	6.60	3.20	10.00	13.20	
TOTALS ...	99.80	105.70	113.60	88.70	91.60	74.60	91.10	63.40	82.00	65.40	

Rejected 18' low from Survey.

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

RAINFALL at HELVELLYN BIRKSIDE New Gauge

County of Cumberland Observer L. HOLME LEWIS CE.River Basin Derwent 2 60 ft.
Manchester, Wb.

Rain Gauge, by _____

Diameter ...						5					
Height						1.0					
Altitude ...						1900					
Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930. MEANS.
January ...						6.50	11.30	7.10	13.00	6.70	12.50
February ...						6.80	9.60	5.90	5.00	2.50	3.00
March						2.00	2.40	8.30	9.90	1.40	4.50
April						8.70	4.70	3.50	4.70	3.50	5.20
May						9.40	5.00	4.40	2.60	5.40	3.70
June						20	6.90	6.00	11.80	4.10	3.20
July						2.60	7.70	9.40	5.10	9.90	7.40
August						8.80	8.20	11.50	15.00	11.80	13.50
September...						7.50	7.30	10.20	5.20	3.30	7.60
October						14.00	7.40	9.10	18.10	11.50	15.70
November...						2.30	12.80	9.30	16.20	12.70	10.00
December...						6.20	1.80	3.30	6.00	19.90	9.10
TOTALS...						75.00	85.10	88.20	112.80	98.70	95.40

*Rejected from survey. 23" low.*Position of Station on reduced Ordnance Survey
Map, 2 miles to 1 inch Series

No. of Map _____

Reference No. _____

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

RAINFALL at Helvellyn BirksideCounty of CumberlandObserver Messrs G. H. Hill & Sons G.E.

Looking

River Basin Derwent 2L. Holmes Lewis (1921)

Rain Gauge, by 6.95 [†] means: stick pushed in inches

Diameter ...	7	to									
Height	1	3									
Altitude ...	1900										
Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	MEANS.
January ...	6.10	9.20	6.00	4.00	4.70	4.00					
February ...	5.20	6.00	5.90	8.20	1.20	4.90					
March	8.10	7.50	3.20	3.50	1.50	1.80					
April	7.20	1.20	4.10	4.10	2.80	5.40					
May	5.80	4.20	3.00	4.70	5.10	5.50					
June	3.70	4.40	3.30	2.00	2.90	3.00					
July	8.90	3.60	7.90	3.70	7.00	1.80					
August	4.60	8.60	5.50	10.70	4.90	5.90					
September...	4.00	2.20	4.50	6.80	7.60	4.60					
October	3.00	3.30	2.60	12.80	5.60	8.50					
November...	6.00	3.60	3.70	5.20	3.90	2.20					
December...	6.20	6.50	8.80	6.70	8.00	6.90					
TOTALS...	68.80	50.90	58.50	72.40	55.20	51.80	see next sheet				

1924. N.P. low. On hillside & rule of rate

† Inspected R. Barker X.X.S. G. on slope of Helvellyn - 1 in 9 down to West.
 suggested erecting 18 inch tank soft distant as probably overexposed.

1925 Not printed low

Repealed from survey 18" low.Position of Station on reduced Ordnance Survey
Map, 2 miles to 1 inch Series

No. of Map

Reference No.

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

RAINFALL at Helvellyn (Birkside)*County of Cumberland.Observer Manchester Corp. W.W.River Basin Derwent-2.

Type of Gauge.....

Annual Average 98.45 in. based on 25 years obs. un-weighted. Period of average 1916-1950 Ref.....

660604/26.

Diameter	5.											
Height	1.0.											
Altitude	1900.											
Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	Means	
January	7.6	20.30	10.85	15.94	4.69	14.29	14.84	12.08	14.26	1.66	116.51	10891
February	7.2	4.44	8.50	8.6	14.72	5.15	10.30	4.75	13.34	3.45	68.71	6151
March	2.0	6.64	6.96	6.79	2.60	6.90	8.30	5.50	7.57	10.29	63.55	
April	5.6	9.21	3.59	7.82	6.84	2.93	6.01	7.9	3.90	5.04	51.73	
May	6.8	6.38	4.83	6.89	1.13	1.95	3.82	2.31	2.25	2.95	45.31	
June	10.8	5.75	3.52	3.62	9.54	8.62	5.28	12.40	7.69	1.26	68.48	5168
July	9.2	10.72	8.60	3.20	4.55	10.67	6.55	13.27	14.73	10.22	91.71	825
August	7.9	2.91	6.79	10.51	5.09	5.76	4.98	5.44	4.50	3.92	57.80	4990
September	5.1	10.09	2.65	13.52	16.37	12.02	8.35	6.53	2.96	6.51	84.10	
October	5.7	14.28	9.00	15.11	16.37	8.10	6.64	14.59	6.23	11.00	112.02	
November	17.2	6.61	4.73	4.41	9.78	11.24	2.49	17.17	15.29	11.40	100.32	
December	6.1	16.98	1.65	19.53	7.69	15.82	6.97	8.59	5.44	10.68	99.15	9305
TOTALS	91.2	110.31	71.67	108.20	99.37	103.45	84.53	114.42	97.86	78.38	959.39	1115

* Gauge over exposed on Moor. (B.R.) to 1931.

1931 Gauge removed to site selected by inspector & surrounded by turf wall.

Printed in B.R. with foot note "Turf wall round gauge".

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

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction	Parish Church.	Distance from gauge	Direction
1931.								

RAINFALL at S Helvellyn (Birchside)

41

County of CumberlandObserver Manchester Corp. W.H.River Basin Derwent - 2

Type of Gauge.....

Annual Average 98.43 in. based on 25 years obs. un-weighted. Period of average 1916-1950. Ref. 96738/32File No. 660604/26

Diameter	5				592	775					
Height	10					1					
Altitude	1900					41					
Year	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Means
January	3.77	8.01	16.71	(16.15)	7.54	11.51	11.86	15.83	8.32	6.48	
February	9.35	3.13	7.04	(5.04)	(13.00)	6.32	(2.50)	10.09	4.78	12.51	
March	6.20	7.77	3.35	1.15	6.01	5.82	(9.50)	4.31	3.09	6.55	
April	4.96	6.26	4.85	(6.13)	4.34	2.84	11.92	4.23	9.77	6.27	
May	6.78	8.64	8.54	4.32	6.78	2.13	5.77	4.26	4.51	3.83	
June	6.65	2.09	6.25	(7.53)	7.40	9.27	6.57	13.34	2.39	4.78	
July	2.74	6.54	6.10	(4.50)	7.05	7.67	6.16	6.93	3.29	7.68	
August	12.08	11.52	14.03	6.15	2.82	12.32	16	18.09	6.28	15.61	
September	2.81	11.70	11.59	9.62	10.02	18.42	8.89	11.59	3.45	20.18	
October	9.22	12.23	13.25	10.20	11.75	1.46	3.46	8.81	13.37	7.94	
November	10.46	2.94	5.89	16.44	9.5	19.15	15.89	8.65	16.37	9.08	
December	6.07	17.82	4.67	11.13	8.25	13.49	5.04	12.02	13.14	3.28	
TOTALS	75.09	98.65	102.27	98.36 n.p.	85.91 n.p.	110.40 n.p.	87.72 n.p.	118.14 n.p.	91.76 n.p.	104.29 M	10

1943. Feb. April, Aug., Oct. - Dec. appear low.

1944 n.p. too much estimation from Feb. May. Jan. 23.5

1945 n.p. low. Feb. part est'd.

1947. Feb. March est. n.p. but.

1946 n.p. low

65404 20004

30004

S Turf wall round gauge.

Position 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. 3631 T.F.39RAINFALL at 3 Helsellyn (Birkside)

51

County of CumberlandObserver Manchester Express M.W.River Basin Deverant - 2

Type of Gauge

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

" " 48-43 " 25 " 1782-57

File No.

1916-30

E20134/56

1967-82

Diameter ...	5"				592	775					
Height ...	1' 0"					1					
Altitude ...	1900'					51					
Year ...	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Means
January ...	9.29	8.22	5.81	8.18	8.23	(6.08)	14.63	10.09	6.94	13.87	
February ...	10.20	2.98	4.58	7.28	(3.45)	1.97	9.80	9.86	3.13	12.37	
March ...	8.10	6.97	1.28	7.54	(3.35)	(4.03)	8.23	2.19	7.58	3.34	
April ...	6.80	5.62	5.48	2.43	4.32	2.18	2.37	3.12	8.48	7.26	
May ...	4.11	5.00	5.67	7.40	8.29	4.83	5.02	9.70	2.16	4.11	
June ...	1.76	4.63	5.39	9.15	7.12	5.52	2.98	7.43	6.92	7.30	
July ...	6.09	6.00	14.66	7.72	4.28	8.96	7.58	7.12	9.45	9.95	
August ...	10.75	12.61	10.25	10.04	4.46	16.19	11.54	7.83	2.13	5.96	
September ...	12.78	9.42	16.00	18.20	7.21	7.43	11.08	10.17	1.54	5.65	
October ...	1.28	11.62	5.34	20.63	7.86	7.25	12.55	10.23	12.21	8.15	
November ...	22.25	6.09	17.66	19.87	4.77	3.99	14.41	2.49	15.61	20.39	
December ...	15.40	7.89	6.87	12.67	12.93	13.36	11.12	8.84	19.13	9.84	
TOTALS ...	108.81	87.05	98.99	131.11	75.87	81.79	101.31	89.07	95.28	108.19	
	7	11	17	11	NP	NP	7	17	17	17	

1955 Feb. Mar. app. M. o. 3b.

1956 Jan. March est. 1103. NP low.

1957 np

1958 np

4000 4

Insp. July 1956 Decks. of SW. old turf wall.

Turf wall.

Position of Station on Ordnance One-Inch map :

No. of Map

National Grid Reference NV 338122

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

Summary of Earlier Records from 10-year Sheets :

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