

Cumbria Weather Report - The Year 2022

## The Warmest Year Recorded - most month's finished warmer than average

 Rainfall unevenly distributed throughout the year - very dry at times - but finishing average'Average' is not a term that will be used to describe 2022 - it was anything but (even though the final rainfall totals were!!)
It even began on the very first day of the year which was very mild with temperatures widely exceeding $14^{\circ} \mathrm{C}$ in Cumbria.
Some stations reached $15^{\circ} \mathrm{c}$ with the highest recorded maximum being $15.6^{\circ} \mathrm{c}$ at Prospect near Aspatria, the mildest New Year's Day on record.

Most stations saw every month through to December finish with a mean temperature above average, usually well above average.
However, at a few sites April did finish slightly cooler than average and September was a close run thing, but quite broadly it was only December that finished colder than average; also by a wide margin.
But of course the main story was the record breaking temperatures experienced in July, possibly with a degree of irony as the 'Hot Spell' was actually very brief, just intense.
In Cumbria temperatures widely reached $27^{\circ} \mathrm{C}$ on the $17^{\text {th }}$ and $18^{\text {th }}$ but on the $19^{\text {th }}$ across the whole of the UK records were broken.
In Cumbria the $19^{\text {th }}$ proved to be the hottest day ever recorded in the county with a high of $35.4^{\circ} \mathrm{C}$ recorded at Brampton.
This beat the previous record of $33.1^{\circ} \mathrm{c}$ at Penrith in 1901 by over $2^{\circ} \mathrm{c}$ !
Whilst the final rainfall totals for the year finished on or very close to average, it masks the fact that it was unevenly distributed through the year.
At times, especially through March and well into September, it became quite dry, more notably during a very dry August, after which the deficit for the year was becoming quite large.
However, at the majority of sites through the county, the last four months provided $50 \%$ or more of the year's total - as a consequence the autumn was both wet and mild and became quite 'mucky'.

Impacts - have been quite minimal this year and those that have occurred have been on a local basis. See 'named storms' below regarding some local and minor flooding in February, otherwise The main flooding event was located in Borrowdale on $30^{\text {th }}$ September when a 'heavy fall of Short duration' caused more serious flooding with the main loss being that of livestock.
Gales have generally been absent this year, the $21^{\text {st }} \mathrm{Feb}$ (see named storms) did cause a little Disruption.
Impacts from the temperature were hard to quantify during the two heat-waves, but December's cold spell again caused local issues with burst pipes and reports of some small birds perishing.

## This report should be used in conjunction with the monthly editions of the CWR.

## Temperature

2022 has been a notable year for its warmth - the two main parameters, highest daily temperature and the warmest year as a whole, having been broken.
2022 now replaces 2014 as the warmest year on record, but do not be deceived by the fact that 2014 was only marginally cooler.
As already stated, whilst there may have been a few 'average' months for temperature, (apart from December) they all showed significant, positive departures from the norm'.
All of the seasons also finished notably warmer than the average as well.
Quite widely 2022 finished $0.8^{\circ} \mathrm{C}$ warmer than average, albeit at Ambleside it was just by $0.4^{\circ} \mathrm{c}$.
As for the highest ever temperature, already mentioned, which brought two very subdued days with most
 people heeding the advice to stay indoors with the curtains shut.

However, the heat-wave during August was probably more intense - instead of just the three consecutive days attaining $25^{\circ} \mathrm{c}$ (the threshold to be classed as a heatwave) like that of July, now it wasn't just the fact that five consecutive days attained $25^{\circ} \mathrm{c}$, but that it included three consecutive days topping $29^{\circ} \mathrm{C}$ at a good number of sites.
A few sites had one of those days top $30^{\circ} \mathrm{C}$ - which saw $30^{\circ} \mathrm{C}$ attained on two separate occasions during the year.
On Great Dunn Fell the mean temperature for August finished a somewhat amazing $4.25^{\circ} \mathrm{c}$ above average.
This was the largest departure from the norm' for the whole year.

The cold spell of December was more a case of notable rather than exceptional, but it still provided some sites with their lowest temperature for 12 years.
Of the other months, February and November finished with the largest positive departures, broadly by $2^{\circ} \mathrm{C}$.

At Shap the number of air frosts (63) for the year was 8 below average, but here and elsewhere, the number of ground frosts was virtually 'on average'.

A selection of temperatures from various locations is given further below.

## Rainfall

Rainfall during 2022 was unevenly distributed throughout the year, the heat and reduced rainfall were starting to tell come the end of summer, but the last four months of the year ensured that the final totals finished virtually on average.

With the final percentages finishing so close to average (it was $99.9 \%$ at St. Bees) there was no geographic pattern to the few sites that did finish with above average falls.

Aisgill Moor, which was the driest part of the county (as a percentage -78\%) this year and which was a repeat of 2021 ( $79.7 \%$ of its LTA.)

However, this was untypical of the county as a whole, with averages tending to be in the mid to high 90 's and not getting higher than 108\% (Appleby).
However, there was a geographical split as to whether 2022 finished as the driest since 2018 (Seathwaite, Ennerdale Black Sail) or the wettest since 2020 (Appleby, Shap).
Although at Carlisle it was the wettest since 2020 and nearby at Brampton it was the driest since 2018!

A slight curiosity is that even at locations that finished just drier than average, they still managed to rack up more 'Wet Days'(days with 1.0 mm or more) than average, eg: Shap having 179 (average being 173.7)

A selection of rainfall totals from various locations is given further below.


## Named Storms

Cumbria as fared quite well this year in terms of avoiding the worst of any storms.
Whilst the UK as a whole experienced four named storms, all in February, the impacts from these in Cumbria were minimal and mainly confined to trees being blown down.
There was some flooding at Low Newton during Storm Franklin - the Crown Inn public house being inundated and at Kirkby Stephen the A685 was closed on the $23^{\text {rd }}$ as the roof of the Spar/petrol station 'unravelled'.

## Station Notes

Appleby in Westmoreland - 970.6 mm is $108.3 \%$ of average for the period 1857-2020. Wettest since $2020--46^{\text {th }}$ wettest in that time

Grasmere - Total rainfall $=2557.5 \mathrm{~mm} .239$ rain days -- wettest day $30^{\text {th }}$ Sept. 68.6 mm
Carlisle - Total rainfall $=878.2 \mathrm{~mm}$ or $95.6 \%$.
Mean temperature +1.2 c above normal with $10.4^{\circ} \mathrm{c}$ the same as 2006 .

Ennerdale Black Sail - 3771.2 mm is $105.5 \%$ of its average (2000-21)
Driest since 2018 -- seven have been drier and 15 wetter

Maulds Meaburn - Mean temperature of $9.60^{\circ} \mathrm{c}$ is $0.80^{\circ} \mathrm{C}$ above the 13 yr average for this site. The warmest yet recorded Rainfall of 1193.3 mm is $95.3 \%$ of average (2009-2021) -- Wettest since 2020 $x 5$ have been drier and $x 9$ wetter. No. of rain days (211) is 4.0 below average 52 air frosts is 7.5 below average -- 118 ground frosts ( 0.8 below average) 48 days attained $20^{\circ} \mathrm{c}+\left(13.2\right.$ above average) and 9 days attain $25^{\circ} \mathrm{c}$ ( 3.9 above). Just two days of lying snow is 9.5 below average.

Seathwaite Farm - 3603.4 mm is $106.9 \%$ of average for 1845-2020
Driest since 2018 -- 121 have been drier and 56 wetter

Shap - Mean temp of $8.76^{\circ} \mathrm{c}$ is $+0.8^{\circ} \mathrm{c}$ warmer than average and makes 2022 the warmest year yet in its records
Rainfall of 1791.6 mm is $97.3 \%$ of average
In a record from 1989 it is the wettest since 2020 -- 17 have been drier and 16 wetter 63 air frosts is 8 below average.

A selction of mean temperatures for 2022 from various official sites

| 2022 | Keswick |  | Anon | Shap |  | Anon | Gt. Dunn Fell |  | Anon | Brampton |  | Anon | Maulds Meaburn |  | Anon | Ambleside |  | Anon |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan | 2.4 | 8.8 | 90 | 0.2 | 7.3 | 73 | -1.2 | 3.1 | +1.35 | 2.7 | 7.6 | +1.10 | 0.93 | 7.69 | +111 | 1.9 | 72 | 45 |
| Feb | 3.5 | 9.4 | +2.05 | 2.0 | 7.9 | +2.20 | -2.3 | 2.5 | +1.55 | 2.7 | 8.5 | +1.35 | 2.31 | 8.35 | +1.60 | 3.6 | 9.0 | +2.55 |
| Mar | 3.0 | 12.0 | $\left.\right\|^{+1.85}$ | 1.2 | 10.4 | ${ }_{1}+1.15$ | 0.1 | 4.3 | +1.50 | 3.2 | 11.7 | +1.75 | 2.29 | 11.48 | +1.47 | 2.7 | 12.7 | +1.95 |
| Apr | 3.8 | 13.4 | +0.15 | 1.4 | 11.7 | -0.20 | 0.2 | 5.0 | -0.10 | 4.0 | 12.6 | +0.25 | 2.71 | 12.69 | -0.03 | 4.1 | 12.8 | -0.20 |
| May | 9.3 | 15.8 | $1+1.25$ | 6.8 | 14.4 | $1+1.20$ | 3.6 | 8.1 | +0.10 | 8.5 | 15.4 | +1.00 | 7.61 | 15.29 | +1.21 | 8.2 | 15.3 | +0.10 |
| June | 10.2 | 18.2 | +0.25 | 8.1 | 16.9 | $\underline{+0.25}$ | 5.6 | 10.5 | -0.20 | 10.1 | 18.0 | +0.30 | 9.14 | 17.80 | +0.10 | 9.8 | 18.5 | -0.15 |
| July | 12.5 | 20.7 | +0.90 | 11.0 | 20.0 | +1.45 | 8.2 | 13.5 | +0.85 | 12.8 | 20.3 | +1.00 | 11.74 | 20.69 | +1.11 | 12.4 | 20.8 | +0.60 |
| Aug | 11.4 | 20.9 | $1+0.85$ | 9.1 | 19.8 | +0.75 | 9.1 | 14.1 | +4.25 | 12.1 | 20.4 | +1.20 | 10.49 | 21.01 | +1.30 | 11.6 | 21.1 | +0.60 |
| Sept | 9.0 | 17.5 | $\underline{+}$ | 6.8 | 16.3 | - 0.00 | 6.0 | 10.9 | +0.60 | 9.6 | 16.9 | +0.10 | 7.94 | 17.07 | -0.01 | 8.7 | 17.6 | +0.70 |
| Oct | 9.2 | 14.9 | +1.90 | 7.4 | 13.3 | +1.80 | 4.8 | 8.5 | +1.85 | 8.9 | 14.2 | +1.60 | 7.84 | 14.13 | +1.45 | 8.2 | 14.5 | +1.30 |
| Nov | 6.5 | 11.9 | +2.10 | 4.5 | 10.2 | \% +1.90 | 2.4 | 6.1 | +2.15 | 6.3 | 10.9 | +1.95 | 5.12 | 10.72 | +1.95 | 5.8 | 10.5 | +1.80 |
| Dec | -0.1 | 6.7 | -1.55 | -1.5 | 5.0 | -1.45 | -3.0 | 1.0 | -1.00 | 0.2 | 5.1 | -1.75 | -0.54 | 5.39 | -1.57 | 0.1 | 5.2 | -2.00 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| YEAR | 6.73 | 14.18 |  | 4.75 | 12.77 |  | 2.79 | 7.30 |  | 6.76 | 13.47 |  | 5.65 | 13.56 |  | 6.43 | 13.77 |  |
| MEAN | 10.45 |  | + 0.85 | 8.76 |  | + 0.76 | 5.05 |  | +0.85 | 10.11 |  | +0.8 | 9.60 |  | + 0.80 | 10.10 |  | + 0.40 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|c\|\|} \hline \text { Mean } \\ 1991-2020 \\ \hline \end{array}$ | 9.6 |  |  | 8.0 |  |  | 4.2 |  |  | 9.3 |  |  | 8.8 |  |  | 9.7 |  |  |

A selction of rainfall totals for 2022 from assorted sites

| 2022 | Maulds Meaburn + | Ambleside | Castle <br> Scar | Keswick + | Shap + | Appleby* | Carlisle + | Brampton+ | Kirkby Thore * | Aisgill <br> Moor * | Haresceugh Castle * | Brothers Water ${ }^{*}$ | Seathwaite <br> Farm * | Coniston | St. <br> Bees + | Walney + |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan | 62.2 | 128.3 | 81.7 | 66.8 | 99.4 | 44.3 | 31.6 | 33.6 | 25.8 | 105.3 | 22.57 | 128.36 | 216.4 | 154.6 | 35.0 | 40.2 |
| Feb | 165.7 | 379.0 | 243.8 | 234.8 | 347.2 | 131.8 | 114.6 | 104.4 | 112.2 | 290.5 | 106.55 | 428.12 | 658.4 | 450.1 | 123.2 | 123.6 |
| Mar | 46.0 | 73.9 | 67.4 | 65.6 | 71.2 | 34.0 | 34.2 | 45.9 | 33.2 | 37.0 | 36.58 | 96.42 | 153.0 | 89.1 | 52.8 | 36.2 |
| Apr | 43.8 | 67.8 | 54.0 | 53.6 | 62.0 | 45.3 | 34.0 | 39.9 | 46.0 | 55.3 | 42.79 | 99.05 | 149.0 | 114.1 | 42.6 | 39.8 |
| May | 69.7 | 116.3 | 81.9 | 71.4 | 95.0 | 65.0 | 65.0 | 57.7 | 46.0 | 85.0 | 52.20 | 125.12 | 185.2 | 136.2 | 59.8 | 46.6 |
| June | 86.1 | 140.5 | 117.8 | 81.0 | 121.8 | 83.2 | 73.4 | 56.5 | 75.6 | 58.9 | 74.01 | 152.25 | 183.2 | 145.4 | 72.0 | 54.6 |
| July | 70.1 | 98.0 | 76.1 | 78.8 | 71.4 | 68.8 | 58.2 | 62.5 | 49.2 | 73.6 | 70.20 | 93.97 | 166.6 | 147.9 | 59.8 | 57.6 |
| Aug | 22.7 | 99.1 | 41.1 | 86.4 | 52.4 | 15.4 | 52.6 | 37.1 | 31.8 | 104.3 | 52.30 | 113.40 | 191.6 | 125.7 | 79.4 | 55.8 |
| Sept | 103.4 | 167.4 | 112.6 | 117.2 | 112.6 | 93.3 | 75.0 | 79.0 | 90.4 | 115.6 | 131.08 | 198.90 | 301.6 | 228.9 | 141.8 | 106.4 |
| Oct | 212.6 | 349.8 | 263.4 | 249.8 | 300.0 | 158.2 | 147.6 | 163.1 | 130.4 | 196.3 | 205.05 | 382.34 | 525.4 | 348.7 | 167.2 | 134.2 |
| Nov | 176.3 | 325.4 | 220.1 | 208.0 | 252.0 | 129.4 | 94.6 | 84.5 | 101.6 | 167.8 | 114.09 | 424.70 | 493.0 | 375.8 | 161.8 | 191.4 |
| Dec | 134.7 | 319.5 | 167.8 | 179.8 | 206.6 | 101.9 | 97.4 | 102.6 | 107.8 | 191.2 | 107.18 | 372.61 | 380.0 | 349.1 | 112.8 | 112.4 |
| YEAR | 1193.3 | 2265.0 | 1527.7 | 1493.2 | 1791.6 | 970.6 | 878.2 | 866.8 | 850.0 | 1480.8 | 1014.6 | 2615.2 | 3603.4 | 2665.6 | 1108.2 | 998.8 |
| \% | 95.3 | 107.7 |  | 94.8 | 97.3 | 108.3 | 95.6 | 89.1 | 106.6 | 78.0 | 99.0 | 94.3 | 106.9 | 98.9 | 99.9 | 97.3 |
| * Environment Agency gauge $\quad+=$ Met' Office site |  |  |  |  |  |  |  |  |  | Relatively new records with not enough years data |  |  |  |  |  |  |
| Castle Scar is between Shap and Crosby Ravensworth |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Long Term <br> Averages |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 1252.7 | 2102.9 |  | 1575.2 | 1862.9 | 896.0 | 918.8 | 973.2 | 797.3 | 1899.2 | 1024.6 | 2772.0 | 3370.1 | 2695.9 | 1109.4 | 1027.0 |

The following is a breakdown of the weather in 2022 at ... Shap

| Shap 2022 | Min | Max | High | Date | Low | Date | AF's | Rain | Wet Days | Wet Day | Date | Notes | Average |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  | Temperature | Rain |
| Jan | 0.2 | 7.3 | 12.0 | 29th | -5.7 | 6th | 12 | 99.4 | 10 | 23.2 | 2nd |  | +0.73 | 42.6\% |
| Feb | 2.0 | 7.9 | 11.4 | 16th | -5.0 | 19th | 4 | 347.2 | 23 | 51.0 | 19th |  | $+2.20$ | 209.8\% |
| Mar | 1.2 | 10.4 | 17.3 | 25th | -5.5 | 7th | 12 | 71.2 | 13 | 17.8 | 11th |  | +1.15 | 50.4\% |
| Apr | 1.4 | 11.7 | 17.1 | 17th | -5.1 | 27th | 12 | 62.0 | 9 | 19.0 | 6th |  | - 0.20 | 66.4\% |
| May | 6.8 | 14.4 | 18.2 | 15th | 1.1 | 28th | 0 | 95.0 | 17 | 17.0 | 9th |  | +1.20 | 96.3\% |
| June | 8.1 | 16.9 | 23.7 | 23rd | 0.3 | 20th | 0 | 121.8 | 12 | 26.2 | 26th |  | + 0.25 | 121.4\% |
| July | 11.0 | 20.0 | 32.8 | 19th | 4.4 | 27th | 0 | 71.4 | 11 | 17.0 | 1st | 1 | +1.45 | 66.9\% |
| Aug | 9.1 | 19.8 | 27.6 | 14th | 2.6 | 31st | 0 | 52.4 | 9 | 21.4 | 1st |  | + +0.75 | 39.3\% |
| Sept | 6.8 | 16.3 | 21.5 | 5th | -1.7 | 17th | 1 | 112.6 | 12 | 41.8 | 30th |  | 0.00 | 85.9\% |
| Oct | 7.4 | 13.3 | 15.4 | 4th | -0.6 | 13th | 1 | 300.0 | 24 | 47.0 | 4th |  | + +1.80 | 162.2\% |
| Nov | 4.5 | 10.2 | 17.0 | 13th | -2.3 | 4+29th | 4 | 252.0 | 24 | 30.0 | 2nd |  | +1.90 | 122.9\% |
| Dec | -1.5 | 5.0 | 12.1 | 19th | -11.4 | 15th | 17 | 206.6 | 15 | 24.6 | 24th |  | - -1.45 | 84.3\% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Year | 4.75 | 12.77 | 32.8 |  | -11.4 |  | 63 | 1791.6 | 179 | 51.0 | 19.2.22. |  | +0.77 | 97.3\% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | Notes:- | 1 | Highest te | rature | ew record |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | +0.61 | +0.93 |  |  |  |  |  |  |  |  |  |  |  |  |

## REGISTER OF RAINFALL IN 2022

## At Seathwaite Farm, Cumberland

Time of Observation, 0900 GMT

Easting ..... 323579
Northing .. 512167

Height of Receiver\} above ground....... 1 ft
of rain gauge \} above sea level 423 ft

| Date | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1.0 | 18.6 | - | - | 0.4 | 0.8 | 29.4 | 89.6 | - | 6.8 | 36.0 | - |
| 2 | 4.4 | 12.8 | 13.8 | - | 2.0 | 18.0 | 2.0 | 11.2 | - | - | 33.0 | - |
| 3 | 13.4 | 24.0 | 6.2 | 10.2 | 5.2 | 3.0 | 12.8 | 5.8 | 8.8 | 13.2 | 0.2 | - |
| 4 | - | 11.0 | 1.0 | 21.6 | 3.2 | - | 1.0 | 7.0 | 10.8 | 82.2 | 6.6 | 0.8 |
| 5 | - | 72.4 | 0.2 | 42.0 | - | 1.0 | 3.2 | 3.0 | 4.4 | 21.6 | 22.8 | 0.2 |
| 6 | 30.8 | 4.2 | - | $\underline{29.8}$ | 10.4 | - | 2.6 | - | 12.2 | 46.8 | 43.6 | - |
| 7 | 43.0 | 20.2 | - | 5.0 | - | 21.0 | - | - | 2.0 | 11.8 | 46.4 | - |
| 8 | 9.2 | 16.4 | 1.2 | - | - | 10.4 | 1.2 | - | 5.6 | 0.8 | 44.4 | - |
| 9 | 6.4 | 1.8 | 4.4 | - | 42.0 | 2.4 | - | - | 3.4 | $\underline{44.0}$ | 15.6 | 0.2 |
| 10 | 15.6 | 2.2 | 2.0 | - | 11.8 | 1.0 | - | - | - | 0.4 | 9.8 | - |
| 11 | - | 44.2 | 49.6 | 0.4 | 2.4 | 6.0 | - | - | 41.4 | 20.4 | 19.4 | - |
| 12 | - | 41.6 | 24.4 | 10.8 | 10.0 | 7.2 | - | - | 0.8 | 16.8 | - | - |
| 13 | - | 67.6 | 2.8 | - | - | - | 2.8 | - | - | 4.8 | - | - |
| 14 | - | 24.8 | 17.2 | - | - | - | 5.2 | 2.8 | - | 23.6 | 15.8 | - |
| 15 | 0.2 | $\underline{26.8}$ | - | - | 0.8 | - | 3.0 | 1.0 | - | 19.2 | 21.0 | - |
| 16 | - | 19.8 | 7.6 | - | 8.0 | - | 1.0 | 0.6 | - | 9.0 | 2.4 | 5.4 |
| 17 | - | 7.6 | 7.4 | 15.6 | 6.6 | 4.0 | - | 1.8 | 1.0 | - | 13.2 | 4.4 |
| 18 | 10.6 | 9.8 | - | - | 4.2 | 0.2 | - | 20.4 | 6.2 | - | 5.0 | 42.8 |
| 19 | - | 90.2 | - | 1.0 | - | - | - | 4.2 | - | 4.2 | $\underline{25.4}$ | 40.6 |
| 20 | - | 57.4 | - | - | 6.8 | - | - | 21.0 | - | 11.2 | 9.0 | 9.2 |
| 21 | - | 22.6 | - | - | 1.4 | - | 4.0 | 1.8 | 44.0 | 38.8 | 16.8 | 3.4 |
| 22 | 0.2 | 3.6 | - | - | 11.6 | - | 2.8 | 3.8 | 35.4 | 5.0 | 20.0 | 0.2 |
| 23 | - | 8.4 | - | - | 0.6 | 2.6 | 41.6 | 16.2 | 0.6 | 14.4 | 19.0 | 21.4 |
| 24 | - | 13.2 | - | - | $\underline{25.6}$ | 12.2 | 14.8 | 0.2 | 0.0 | 5.2 | $\underline{28.6}$ | 30.8 |
| 25 | - | - | - | - | 12.2 | 11.8 | 5.8 | - | 16.4 | $\underline{27.2}$ | 6.0 | $\underline{29.0}$ |
| 26 | 25.2 | - | - | - | 8.2 | 51.2 | - | - | - | 4.8 | 24.2 | 3.8 |
| 27 | 0.2 | 16.6 | - | - | - | 0.6 | 1.2 | - | 0.6 | $\underline{29.2}$ | 8.8 | 36.4 |
| 28 | 12.4 | 20.6 | 6.6 | - | - | 19.0 | 5.0 | 1.2 | 6.4 | 2.0 | - | 49.4 |
| 29 | 1.0 |  | 8.4 | - | 1.2 | 7.2 | 12.8 | - | 1.2 | 14.2 | - | 32.2 |
| 30 | 33.0 |  | - | 12.6 | 1.0 | 3.6 | 14.4 | - | $\underline{100.4}$ | 29.6 | - | 23.4 |
| 31 | 9.8 |  | 0.2 |  | 9.6 |  | - | - |  | 18.2 |  | 46.4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Totals | 216.4 | 658.4 | 153.0 | 149.0 | 185.2 | 183.2 | 166.6 | 191.6 | 301.6 | 525.4 | 493.0 | 380.0 |
| $\begin{gathered} \text { From } \\ \text { 1st Jan } \end{gathered}$ | 216.4 | 874.8 | 1027.8 | 1176.8 | 1362.0 | 1545.2 | 1711.8 | 1903.4 | 2205.0 | 2730.4 | 3223.4 | 3603.4 |


| Rain <br> Days | 17 | 26 | 16 | 10 | 23 | 20 | 20 | 17 | 19 | 28 | 25 | 19 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wet <br> Days | 14 | 26 | 14 | 9 | 20 | 17 | 20 | 15 | 16 | 26 | 24 | 15 |

## Data specific to Maulds Meaburn

- A Mean Minimum of $5.65^{\circ} \mathrm{c}-$ Mean Maximum of $13.56^{\circ} \mathrm{c}$
- During 2022 snow lay on the ground* on 2 days ( 9.5 below average) and was seen to fall on 18 (inc' sleet)( 7.8 below average) with hail falling on 8 days.
- Fog* was recorded on 3 days with thunder heard on 6 days ( 1.8 above average).
- Mean cloud* cover was $79.1 \%$ with 121 days having a $100 \%$ cover* and 9 days being totally clear.
- Mean air pressure* was 1014.8 Mb

Lowest pressure was $970.8 \mathrm{Mb}\left(6^{\text {th }}\right.$ April) and the highest was 1044.4 Mb (18-19 ${ }^{\text {th }}$ March').

- Mean wind speed* was $6.54 \mathrm{Mph}-$ the highest gust $=62 \mathrm{Mph}\left(21^{\text {st }}\right.$ Feb') the windiest day with a mean speed of 23.4 Mph was the $10^{\text {th }}$ November.
- Gales (a 10 min mean wind speed of 39 Mph ) were recorded on one day.
- We had 52 air frosts ( 7.5 below average) - 118 ground frosts ( 0.8 below average)

48 days attained $20^{\circ} \mathrm{c}+\left(13.2\right.$ above average) of which 9 went on to attain $25^{\circ} \mathrm{c}$ ( 3.9 above average).

- There were three 'Ice days' (all in December) when the temperature remained below freezing all day.
- The 30 cm soil temperature had a mean of $10.8^{\circ} \mathrm{C}$
with a low of $2.0^{\circ} \mathrm{c}\left(19^{\text {th }}\right.$ Dec') and a high of $19.0^{\circ} \mathrm{C}\left(20^{\text {th }}\right.$ July $)$.
- The 100 cm soil temperature had a mean of $10.6^{\circ} \mathrm{C}$
with a low of $6.1^{\circ} \mathrm{c}\left(21^{\text {st }} \mathrm{Dec}\right)$ and a high of $15.7^{\circ} \mathrm{c}\left(18-19^{\text {th }}\right.$ Aug' $)$.
- THANKS:- There are several people whom I would like to thank for their help, support and assistance over the past year:

For the supplying of data: to Susan Sandelands of the hydrometry and Telemetry team at the Environment Agency (superbly efficient).

And then to my deputy observers who stand in for me when required, Margaret, Alison \& Paul, and especially Sarah.

* Refers to 0900 GMT - the hour of observations.
++ = a new record for this site.

Records for this site during 2022 are:

- The highest temperature $-34.2^{\circ} \mathrm{c}$ on $19^{\text {th }} \mathrm{July}$
- The earliest date in autumn to record an air frost -- $17^{\text {th }}$ September with $-0.5^{\circ} \mathrm{c}$

Below is the rainfall card for 2022

## REGISTER OF RAINFALL IN 2022

## At Maulds Meaburn, Westmorland

Time of Observation, 0900 GMT
Height of Receiver\} above ground....... 1ft
of rain gauge \} above sea level 600 ft

| Aug | Sept | Oct | Nov | Dec |
| :--- | :--- | :--- | :--- | :--- |


| Date | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 8.1 | 0.2 | tr | 0.1* | 0.1 | 0.2 | 7.2 | 5.7 | - | 4.8 | 10.5 | 0.2 |
| 2 | 11.4 | tr | 1.3 | 0.1* | 2.1 | $\underline{23.9}$ | 0.3 | 1.0 | 0.3 | - | $\underline{25.5}$ | 0.3 |
| 3 | 11.9 | 1.9 | 13.6 | 5.8 | 2.9 | 0.1 | 2.0 | 1.0 | 4.3 | 1.2 | 0.9 | 0.4 |
| 4 | - | 3.0 | 0.6 | 0.2 | 0.1 | - | tr | - | 5.1 | 33.8 | 1.9 | 1.0 |
| 5 | - | 12.7 | - | 4.8 | tr | 5.2 | 0.5 | 1.0 | 1.6 | 4.0 | 4.4 | 0.1 |
| 6 | 7.5 | 7.0 | - | 8.3 | 1.6 | - | tr | - | 13.6 | 22.8 | 11.8 | - |
| 7 | 7.7 | 0.1 | - | 1.6 | - | 16.7 | - | - | 2.8 | 0.8 | 7.0 | - |
| 8 | 4.3 | 3.1 | - | 0.6* | - | 0.4 | - | - | 6.4 | - | 10.8 | tr |
| 9 | 1.3 | 0.8 | 3.9 | tr | 7.5 | 0.3 | - | - | 2.1 | 8.3 | 4.0 | 0.2* |
| 10 | 0.9 | $0.1^{\wedge}$ | 0.3 | - | 5.3 | 0.2 | - | - | - | - | 5.8 | - |
| 11 | tr ${ }^{\wedge}$ | 10.4 | 11.6 | 1.1 | 1.6 | 1.6 | - | - | 3.2 | 0.1 | 4.7 | - |
| 12 | - | 18.5 | 1.2 | 7.9 | 1.3 | 1.0 | - | - | 0.5 | 0.9 | 0.1! | $0.1^{\wedge}$ |
| 13 | - | 16.0 | 0.9 | 0.1 | 0.1 | tr | 0.1 | - | - | 2.4 | - | tr |
| 14 | - | 10.4 | 0.7 | - | 0.1 | tr | tr | 0.7 | - | 7.8 | 4.1 | - |
| 15 | tr | 4.0 | 0.1 | - | 5.9 | - | 0.2 | 0.1 | - | 24.8 | 11.9 | $0.1^{\wedge}$ |
| 16 | tr ${ }^{\wedge}$ | 9.1 | 3.3 | - | 9.3 | - | 1.5 | - | - | 11.1 | 4.8 | 6.1* |
| 17 | - | 8.1 | 1.0 | 2.7 | 4.2 | - | tr! | - | - | 0.8 | 16.3 | 0.8* |
| 18 | 2.7 | 4.8 | - | - | 7.0 | - | tr! | 1.8 | 0.4 | - | 0.2 | 13.7 |
| 19 | $0.1^{\wedge}$ | 15.5 | - | tr | - | - | 0.1 | 2.1 | tr | 0.7 | 4.1 | 5.5 |
| 20 | $\operatorname{tr}^{\wedge}$ | 16.2 | - | - | 1.3 | - | tr | 2.5 | tr | 29.3 | 3.3 | 5.5 |
| 21 | - | 4.5 | - | - | 3.2 | - | 3.1 | 0.1 | 0.2 | 3.9 | 0.4 | 1.8 |
| 22 | - | 1.0 | - | - | 3.9 | - | 4.4 | 1.0 | 8.2 | 0.2 | 5.8 | 0.7 |
| 23 | - | 6.6 | - | - | 0.2 | 8.6 | 8.7 | 5.1 | - | 8.3 | 11.5 | 10.1 |
| 24 | - | 4.7 | tr | - | 0.4 | 0.4 | 6.2 | 0.1 | - | 2.0 | 13.7 | 12.4 |
| 25 | - | - | - | - | 0.5 | 3.4 | 4.5 | - | 1.9 | 11.8 | 1.1 | 19.2 |
| 26 | 0.9 | - | - | - | 1.1 | 12.3 | - | - | 0.9 | 3.0 | 9.2 | 1.3 |
| 27 | - | 1.5 | tr | - | - | 0.1 | 8.4 | - | - | 9.1 | 2.1 | 10.5 |
| 28 | tr | 5.5 | 3.6 | - | 0.1 | 6.7 | 4.5 | 0.5 | 15.7 | 1.3 | $0.1^{\wedge}$ | 15.4 |
| 29 | tr |  | 2.6 | - | - | 4.5 | 2.5 | - | 0.2 | 5.9 | $0.1^{\wedge}$ | 7.3 |
| 30 | 5.3 |  | 1.2+ | 10.5 | 6.3 | 0.5 | 15.9 | - | 36.0 | 3.4 | 0.2 | 9.5 |
| 31 | 0.1 |  | 0.1+ |  | 3.6 |  | - | - |  | 10.1 |  | 12.5 |
| Totals | 62.2 | 165.7 | 46.0 | 43.8 | 69.7 | 86.1 | 70.1 | 22.7 | 103.4 | 212.6 | 176.3 | 134.7 |
| $\begin{aligned} & \text { From } \\ & \text { 1st Jan } \end{aligned}$ | 62.2 | 227.9 | 273.9 | 317.7 | 387.4 | 473.5 | 543.6 | 566.3 | 669.7 | 882.3 | 1058.6 | 1193.3 |


| Rain <br> Days | 11 | 23 | 14 | 10 | 20 | 16 | 15 | 11 | 18 | 26 | 26 | 21 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wet <br> Days | 9 | 21 | 10 | 8 | 17 | 10 | 12 | 9 | 12 | 21 | 22 | 15 |

