

LANCASHIRE: A CHRONOLOGY OF FLASH FLOODING

Introduction

The past focus on the history of flooding has been mainly with respect to flooding from the overflow of rivers and with respect to the peak level that these floods have achieved. The Chronology of British Hydrological Events provides a reasonably comprehensive record of such events throughout Great Britain. Over the last 60 years the river gauging network provides a detailed record of the occurrence of river flows and peak levels and flows are summarised in HiflowsUK. However there has been recent recognition that much flooding of property occurs from surface water flooding, often far from rivers. Locally intense rainfall causes severe flooding of property and land as water concentrates and finds pathways along roads and depressions in the landscape. In addition, intense rainfall can also cause rapid rise in level and discharge in rivers causing a danger to the public even though the associated peak level is not critical. In extreme cases rapid rise in river level may be manifested as a 'wall of water' with near instantaneous rise in level of a metre or more. Such events are usually convective and may be accompanied by destructive hail or cause severe erosion of hillsides and agricultural land.

There have been no previous compilations of historical records of such 'flash floods' or even of more recent occurrences. It is therefore difficult to judge whether a recent event is unusual or even unique in terms of the level reached at a particular location or more broadly of regional severity. This chronology of flash floods is provided in order to enable comparisons to be made between recent and historical floods, to judge rarity and from a practical point of view to assess the adequacy of urban drainage networks.

In the following chronology for South Yorkshire events are listed by date and by the source of the information. Where meteorological information is available especially rainfall depths over daily or shorter durations, this is listed in the second column. The description of the event then indicates the location and extent of the flooding, including levels or depths on roads and buildings which may still be identifiable. The occurrence of associated hail and especially of large hail has been included where available. Information of human interest but lacks indication of the magnitude of the flood has generally been omitted. The earliest record for South Yorkshire is from 1594 and information is intermittent or description is sparse until 1800 after which the listing of occurrences is considered comprehensive and by 1850 multiple sources provide detailed accounts.

This chronology is part of a set of regional compilations of flash floods for Northern England and for Southwest England and includes the following separate chronologies.

Yorkshire Rye and North York Moors

Yorkshire Swale

Northeast England

River Eden

Derwent and Cumbrian Coast

South Yorkshire Kent and Leven etc

Lancashire Including neighbouring counties draining to the Mersey estuary

Southwest England – Cornwall and Devon

In addition, a more selective compilation of extreme events has been created for the remainder of the British Isles. This is not intended to be comprehensive but picks out events which have been noted by the compiler.

Meteorological information

As a first step in identifying potential dates of flash flooding the publication *British Rainfall 1863 – 1968* (Symons *British Rainfall from 1863 to 1900*) was inspected to ascertain the meteorological conditions associated with flooding – thaw, thaw with rain, frontal rainfall, convectional storms etc. Of particular interest were the records provided of rainfall amounts of specified short duration. Early records of short period intensity were usually derived by observation of the amount and start and end time of intense rainfall. Later records were extracted from recording rainfall gauges, either Dines Siphon or Tilting Bucket records. Very high daily totals were also noted. Those relevant to south Yorkshire were extracted.

The Climatological Observers Link (COL) from 1970 to the present has been used to fill out the later period for intense rainfall although the number of stations is small especially in the early years during the 1970s but is supplemented by observer's descriptions of events.

Philip Eden's *Great British Weather Disasters* provides a chronology of severe events from 1901 to 2008, including storm winds, snow and thaw, and intense or prolonged rainfall.

Sources of flood Information

Descriptive information is contained in newspaper reports, diaries and further back in time, from Quarter Sessions bridge accounts and ecclesiastical records. The main source for this study has been from newspaper accounts.

Early Newspaper Source

The Lexis British Newspaper Archive has digitised large continuous runs of newspapers which have been accessed on the web. A search facility identifies all occurrences of given words or combinations of words, by newspaper, by county, by region and by date. The phrase 'flash flood' is a 20th century description, so alternative words were required to ensure that all potential flash flood events were identified, without producing an excessive number of irrelevant events. The words 'flood' and 'thunder' were adopted. The search facility includes within these words variants such as 'flooding' and 'thundering'. Up to 50% of the occurrences identified were of descriptions of 'floods of tears' or 'thundering speeches by politicians' but is likely to have produced a comprehensive set of flash flood events. All relevant information was extracted from the identified descriptions, such as location, associated meteorological conditions, the occurrence of hail, magnitude and extent of flooding, depth in buildings, fatalities from drowning or lightning, animal losses, bridges and buildings damaged by flood or lightning, severe channel erosion and descriptions of rapid rate of rise in level. Except where events were of very unusual magnitude, winter floods produced by long duration rainfall or snowmelt events were excluded. Only information which could be used to define the magnitude or severity of a historical flood in relation to a recent gauged flood has been included.

The following is a list of the newspapers that have been accessed on the British Newspaper Archive, with the dates currently available. It is noted that although some papers continue publication to the present, for copyright reasons the current archive extends only to 1900 or to 1950. Hence records are most comprehensive for the period from 1850 to 1900, but sufficient newspapers are archived up to 1950 to provide comprehensive data up to that date except for the years of World War II when press restrictions were placed on natural incidents such as thunderstorms and floods.

The earliest concurrent newspaper record is for 1753 from the Manchester Mercury. However occasional reports and descriptions of earlier historic floods are sometimes made, for example in the Burnley Express in August 1905 referring to floods in 1580 and 1666. A few early records have also been extracted from The Gentleman's Magazine (Hardcopy in the British Library)

Newspaper	Place of Publication	Available dates
Manchester Courier	Manchester	1825-1916
Liverpool Mercury	Liverpool	1812-1899
Lancaster Gazette	Lancaster	1801-1893
Lancashire Evening Post	Preston	1886-1947
Manchester times	Manchester	1829-1900
Ashton Weekly Reporter	Ashton under Lyne	1855-1871
Blackburn Standard	Blackburn	1836-1900
Bolton Chronicle	Bolton	1835-1871
Burnley Advertiser	Burnley	1855-1877
Burnley Express	Burnley	1878-1953
Burnley Gazette	Burnley	1863-1914
Burnley News	Burnley	1913-1932
Bury times	Bury	1855-1869
Leigh Chronicle	Leigh	1856-1870
Liverpool Daily Post	Liverpool	1855-1871
Liverpool Mail	Liverpool	1836-1873
Manchester Evening News	Manchester	1870-71 1914-17
Manchester Mercury	Manchester	1753-1830
Preston Chronicle	Preston	1831-1893
Rochdale Observer	Rochdale	1856-1870
Cheshire Observer	Chester	1854-1916
Chester Chronicle	Chester	1775-1870 1914-17

Newspapers after 1950

Apart from the British Newspaper Archive, individual national newspapers have online digital archives. The following have been inspected for occurrence of 'flood' and 'thunder' from 1950 onward – The Times, Daily Mail and the Guardian (originally the Manchester Guardian but becoming a national newspaper in 1959). These sources could be expected to report events of national interest but could well have missed local events even if severe. The Manchester Library provided access to the online source of *NewsBank Newspapers UK and the World*. For Northwest England this provided access to 34 local and regional newspapers. The earliest of these commences in 1995 but most of the newspapers have much shorter records. Only 4

records start before 2000 and a further 3 before 2004; the remainder mainly commence in 2007 and most continue to the present. Coverage is such that in the period with multiple sources, similar material is provided by each. It is likely that information on flooding from intense rainfall is comprehensive from 1995. There remained a period from 1950 to 1995 during which local sources were not available online and it was therefore considered necessary to access local newspapers in libraries or record offices. The principal source here was the Lancashire Evening Post inspected on hard copy and microfilm at the British Library at St Pancras (so far 1950, 1953 to 68 and 86 to 91 – to be completed).

Flood Chronology

Date and sources	Rainfall	Description
Aug 1580 Burnley Gazette 15 Aug 1905	Thunderstorm	<p>Pendle Hill has burst its bonds and spread dismay and destruction far and wide. The great rents known as Sabden and Ogden Cloughs were by tradition created in such cataclysms. Those of Burst Clough and Braggarts Hole were with certainty to have been thus caused. Of these eruptions the most furious occurred in August 1580. Previous weather had been hot and sultry. The rain was such as had never been before experienced. In several places on the summit of the hill there were spouting vast columns of water earth sand and stones with a loud hissing noise. Everywhere bridges, houses trees were swept along in the current with the inhabitants flying for their lives in every direction. Within an hour this storm had spent its fury but the water continued to run from fissures during some weeks. A considerable number of people perished and all stock were drowned or smothered in stones and mud. Scores of dwellings were entirely destroyed.</p>
18 Aug 1666 Burnley Gazette 15 Aug 1905 (form Manchester Evening chronicle) 28 Jun 1687 Webb and Elsom 2016 10 May 1697 Webb et al 2001 Royal Soc Phil Trans. 1697, Webb and Elsom 2016 30 Apr 1742 Gentleman's Mag. 23 Jul 1748 The Times Aug 25 2009 Weather Eye Paul Simons Gentlemens	Thunderstorm	<p>The storm was similar but much less severe than the flood of 1580 but more widespread.</p> <p>Pendle: Water burst out from the NW of the hill to a height of at least 6 feet, scooping out the soil to a great depth and fell with great force on the villages of Worston and Downham, two and four miles respectively from the source. Worston was practically demolished and Downham a number of houses were injured and some destroyed.</p> <p>Great Whernside and Hard Flask: A couple of days later great fissures opened on the side of both hills. The whole valley quickly became a roaring torrent and both villages, Kettlewell and Starbottom, were abandoned in haste. It was more than a generation before its effects were obliterated.</p> <p><Alvanley> (Cheshire): The village was hit by hailstones 230mm in circumference (70 mm diameter) which broke all windows facing southwest and associated winds overturned a windmill. Slate and thatched roofs were overturned and uncovered and bark was ripped off trees. There was no mention of flooding.</p> <p>Northwest England: A hailstorm caused damage from northeast Wales to Northwest England. Tiled and thatched roofs were damaged, west facing glass destroyed and several people suffered serious injuries. The storm moved from St Asaph in northeast Wales bypassing Liverpool to Fleetwood and Blackburn. The hailstones averaged 5 oz (140 g) and were up to 230 mm in circumference (described as goose egg size). The largest were reported to be 8-12 oz (225 to 334 g)</p> <p>Pilling Moss, 11 miles from Preston spewed up its contents and covered 60 acres of land several feet deep and forced its current into Garstang River.</p> <p>Quoting from the Diary of John Wesley he described a flash flood that occurred at Hayfield in the Peak District in Derbyshire. 'Several water mills were clean swept away without leaving any remains. The trees were torn up by the roots and whirled away like stubble.' He noted: 'Two women of a loose character were swept away from their own door and drowned'.</p> <p>The greatest flood ever known occurred on the edge of Cheshire and Derbyshire. The River Goit overflowed and carried all the bridges, mills and several houses away, washing out 14 bodies from graves at Hayfield churchyard and were found</p>

magazine		hanging from trees some miles from the church. Millstones were carried away for a distance of ¼ mile. The Goit covered the highest battlements of Marple Bridge, upwards of 22 feet from the surface of the water at its common height. Two girls were drowned. Large hailstones occurred at Mellor in Derbyshire
10 Oct 1765 Gentleman's Mag.		Heavy rains at Rochdale (also Ripponden West Yorks), swelled rivulets, bearing down bridges, and carrying stones of incredible magnitude. Rivers changed course.
8 Jun 1768 Stamford mercury	Thunderstorm with hail	Warrington: Some of the hailstones measured 2 inches round . [There were also reports of severe thunderstorms in West Lothian – and also in Hereford and Surrey with both severe hailstone damage and fires set by lightning]
23 Jun 23 Jul 1768 Manchester Mercury 2 Aug Oxford Jour 6 Aug	Rain was mixed with hail of very large size	At Moulden Water a village near Blackburn, the River Radiefworth (?) (Roddlesworth a tributary of the Darwen?) rose in about an hour one yard higher than had ever been known before (though that last flood had been two feet higher than the oldest inhabitant could remember). It carried away both the old and the new bridge, the latter only build in the last year and four dwelling houses from one of which 3 people were washed away and drowned. On the same day at Chowbent (Athertons south of Bolton – the Carr Brook?) a thunderstorm caused the water level to rise suddenly five feet perpendicular came into several houses and broke down three stone bridges. Coal pits are full of water and no coal can be got out for several months. Preston: A thunderstorm from 1 pm to 9 pm brought rain and very large hail caused the Mounding Brook on the road to Blackburn to rise so high as to wash down a new stone bridge and the old bridge which had stood for many centuries. It seems that floods in the Lake District in 1771 preceded the disastrous floods in northeast England which occurred on 17 November. At Beetham on the River Beela, a tributary of the lower Kent, the Rev William Hutton recorded the flood as the “greatest within the memory of man” and observed that “it was not passable at either end of Beetham Bridge for man or horse several hours (Tufnell, 1983). It run over the Meadow Wall on the east end of the bridge and bro’ it down, it run with great rapidity thro’ the style of the said Meadow”
13 Oct 1771		
Tufnell (1983)		
Curwen (1900)		
Westmoreland Gazette 1861		At Caton near Lancaster there was the greatest inundation in the memory of man with several lives lost. The bridge at Wennington was beaten down; three people were drowned in attempting to cross. A mill was damaged by the River Lune. The Attlebeck (where?) was so rapid and furious that it destroyed bridges and weirs.
Gentleman's Magazine		
7-15 July 1783 Cumberland Pacquet 15 Jul	Unusual thunder and lightning during the past week – nearest reports of loss were two men killed by lightning in Lancaster	No reports of flooding found in Cumbria
14 Sep 1786		Hutton again reported at Beetham that there was “a flood equal to that of 1771 with the same Circumstances - till when We have had rain every day since Aug 11th. Gentleman's Magazine also refers to letters from the coastal and northern parts of Cumbria which were “full of the ruinous effects of the floods, occasioned by the excessive rains that fell on 13th and 14th of September 1786”
22 Jun 1789		Liverpool: Reference back from a flood in 1831 to 1789 when ‘the wards of the Infirmary were fitted up for the reception

Saunders's
Newsletter 30
Jun
Liverpool
Mercury 19 Aug
1831

13 April 1792
Manchester
mercury 24 Apr
9 Jul 1792 Diary
of DC of
Greenbank in
Wyersdale, in
Preston
Chronicle 1 Apr
1865
17 Jul 1792
Manchester
Mercury 24 Jul

26 Aug 1792
Cumberland
Pacquet
4 Sept
30 Jul 1797
Ipswich Jour
5 Aug

Thunderstorm

17 Aug 1799
JBA Report
Chester
Chronicle 30
Aug
The Observer 25
Aug

Persistent rainfall for two days and
nights

of the poor who were driven in despair from their wretched habitations'.

Liverpool: Rain fell over the four last days but yesterday came down so heavy that the cellars of Whitechapel were filled as were many of the houses that lay low. The streets were flooded nearly two feet deep. Lightning set fire to a barn at Formby. A horse was struck dead.

In a thunderstorm at Bacup two girls were killed within a house. An old woman was killed nearby. [Severe storms also occurred at York, Bromsgrove, see general file]

Wyre: The River at Dolphinholme Factory came down in a breast 4 feet deep like as if a dam had been let off and nearly caught some women and children who were on the Warth; they were knee deep before they got out. It brought down with it tubs, barrels stools etc. It was said to have been caused by a cloud bursting in three places, one on the Hynde Hill, another beside the slate quarry above the Townbrook and the third someplace on the high fells. At Marshaw it came into the public houses and at the yate (?) into Marshaw Green the water was as high as the topmost bar of the top but one of the yate. At Dolphinholme in the street it was at a similar depth as at the factory and faster than a person could walk (but not run). At Cleavely Mill it came slower.

Manchester: severe thunderstorm

Liverpool: severe thunderstorm with remarkably large and pointed hailstones which did great damage to windows and gardens.

Chorley: Thunderstorm with rain and hail. Three horses were struck dead.

An 8 year old boy drowned in the river Lune being carried away by the rapidity of the stream raised by heavy rains [See also Eden and Carlisle]

Liverpool: The storm had hail associated with heavy rain for two hours. Hothouses had many hundreds of panes of glass broken and birds were killed. The hailstones measured 2 inches in circumference and appeared a solid mass of ice. The roof of a thatched barn was beaten off.

Chester: The thunderstorm continued for 2 hours with little intermission. Several houses and shops in various parts have upwards of two feet of water in them. Damage was done by lightning and the next day there was a short hailstorm with hailstones 2 inches in circumference.

Severe storm of wind and rain at Blackburn (and perhaps elsewhere) - "higher than remembered by the oldest person". Bridges swept away on the Darwen. Stone bridge at Wooley (sic) Banks damaged. Bridge at Brockholes (Preston) on the Ribble, the water was more than 1 foot deep over the bridge and 1/3 of the structure gave way. (Flooding also on Mersey, Tame, Medlock Irk].

Manchester: One of the highest floods ever remembered occurred. There is scarcely a bridge remaining on the Mersey to its junction with the Tame. Many mills with their machinery have been swept away and others so damaged they must be taken down. On the Medlock Irk and Tame many bridges have been washed down. Dyehouses on the Irwell have also

received much damage.

The country between Warrington and Prescot is so flooded to oblige the residents of whole villages to desert their habitations.

Northwich: We have had the heaviest flood ever experienced; 2 feet 5 inches higher. All the business there have suffered. One lost 300 tons of salt. People were got out of windows by flat boats, thus saving several lives.

[This flood was often quoted afterwards as the greatest on record compared with floods of the nineteenth century]

[Widespread flooding throughout the country from Northeast to Southwest]

The Observer notes extensive damage in Lancashire and almost all the bridges on the Mersey, Tame, Wedlock, Irk, Irwell have been destroyed along with numerous mills along the banks. The aqueducts and banks along canals have given way. Some dyehouses on the Irwell have been demolished and immense quantities of cloth carried away..

Liverpool: The storm lasted only half an hour but had damaging effect. The cellars in Whitechapel were all filled and the streets were covered to a depth that boys swam along. A wall at the poor house was thrown down.

Torrents of rain swelled the rivers to almost unparalleled magnitude. A wooden bridge at Broughton Ford was carried away. Furniture horses and sheep were seen floating down the river. Cellars and lower rooms in Salford and Strangeways were flooded. Large quantities of water flowed up the bottom of Greengate. Flooding was also reported at Warrington and Chester. The Rivers Irwell and Irk rose to an alarming height. Thunderstorms were reported in the Liverpool area.

Preston: A thunderstorm was accompanied by hail which broke innumerable windows and skylights. The hailstones were upwards of 3 ½ inches in circumference. Houses with an aspect to the Southeast had windows broken.

A fall of rain for nearly the whole day was accompanied by a gale of wind. The Lune became so rapid that it carried away the compton house at Halton forge. It carried down a large quantity of corn and some cattle. So large a flood has not been seen here for the last 30 years. The River Kent was much swollen and flooded all the low grounds. A young man of Barley Bridge, Staveley was drowned in the flood. [The Ribble was also high]

Liverpool: One of the most dreadful storms in human recollection occurred. Rain was mixed with hailstones of astonishing size and quantities. The storm lasted an hour and a half. Some houses have sustained considerable damage. Flooding occurred in Whitechapel and Paradise Street etc. have been greater than ever remembered.

The River Lune was swollen higher than known for 40 years and the holmes at Caton Cloughton and Hornby were completely covered and many sheep were drowned

Great swelling of rivers was experienced at Leeds and Manchester especially the latter place where the River Irwell attained a height unknown before exceeding by 5 inches the great flood of 1768.

Manchester: A thunderstorm with hail caused damage by fire at a mill and broken windows from hail and large pieces of ice notably at Stalybridge. Ice weighed 2 ounces and measured 3 inches in circumference.

2 Aug 1801 Thunderstorm

Hull Advertiser

15 Aug

15/16 Jan 1806

Manchester

mercury 21 Jan

11 May 1807 Thunderstorm

Oxford Uni &

City herald 16

May

6 Sep 1807 3 ½ inches of rain fell at Kendal in

Lancaster Gaz. 18 hours

12 Sep

15 Aug 1810

Manchester

mercury 28 Aug

12 Dec 1814

Lancaster Gaz

15 Apr 1865

28 Dec 1815

Garrett

Typographical

publications

19 Jun 1817

Oxford Journal

28 Jun (from

Manchester
mercury)
4 Jul 1817
Manchester
Mercury 22 July

25 Jul 1819
Lancaster Gaz
31 Jul

25 Apr 1821
Liverpool
Mercury 4 May

28 Sep 1821
Sheffield
independent 6
Oct

1 June 1823
Cumberland
Pacquet 9 Jun

No mention of thunder

10 Jun 1823
Liverpool
Mercury 13 Jun
X Aug 1825
Liverpool
Mercury 12 Aug

12 Jul 1828
Lancaster Gaz.
19 Jul
Manchester
Courier 19 Jul

The main flooding was from
persistent rainfall

Macclesfield: A storm of severe hail and rain occurred. The brook which traverses the town swelled almost instantaneously to an enormous flood carrying away much material including a large steam engine for a distance of 200 yards. The entire duration of the storm did not exceed 15 minutes.

Preston was visited by a severe storm of thunder and lightning. Many houses and cellars were flooded. A cow was killed and several people were injured by lightning.

Blackpool: A thunderstorm was accompanied by very large hailstones.

Lancaster: A thunderstorm also occurred but no reports of flooding were found.

Belmont near Bolton: A boy was struck and killed by lightning, his father injured

Blackburn: very large hailstones fell. Streets and some houses were inundated by torrential rain. The workshops of weavers principally in cellars were completely filled.

Little Harewood: gardens were inundated and much glass was broken in gardens and houses. Works at Mill Hill were damaged by flooding.

Wigan: Much glass was also broken. The River Douglas was swollen to a height not seen in the last 20 years.

Ashton in the Willows: One half of all the windows in the village were broken.

Holywell area in Cheshire was hit by a thunderstorm and flood. Torrents descended in all directions from the mountains. Several houses were nearly demolished and the cotton works sustained much damage with the water coursing through the lower storeys. Greenfield was badly affected and fled for security to the sides of the hill. The copper works was speedily filled where a furnace burst. Three people were drowned.

Rain fell in torrents and the River Lune was at its highest for several years. Several wooden bridges a horse and several sheep were seen passing down river. The River Wyre was also much flooded. It rose nearly 14 feet in two hours. It carried away a weir at Dolphinstone factory.

Blackburn: A thunderstorm with hail killed a cow and a horse. No flooding was mentioned.

Liverpool: Thunderstorm with hail.

Liverpool: Buildings were struck and animals injured. A sewer following the course of a former stream burst at Redmund Place and blocked the passage of water, flooding every house in the street.

Following four days of continuous rainfall thunderstorms were reported in some areas but floods were widespread in northern England. Fields adjoining the Lune, Kent and Ribble were overflowed to a greater or lesser degree. Persistent rain in the Manchester area from 12 to 14 July caused widespread flooding with disastrous effects for agriculture along the Mersey. A mill at Stockport was undermined and collapsed. Detailed descriptions of floods in Statham, Flixton, Stretford, Lymm, Carrington to Warrington the whole valley is under water. At Statham the peak flood level was one inch higher than the previous highest in 1799 by one inch (from a mark on a wall). At Stockport the 1799 flood was higher but this may have been due to the former constriction of the river. The peak on the Irwell was not so

high as in previous floods. Three were drowned when a boat overturned in the flood. Brief mention is made of Lune Ribble Kent, Dee and West Yorkshire.

Manchester: The effects of the flood were disastrous in Stockport and Didsbury. Park Mill several storeys high in Stockport was undermined by the flood and collapsed; another mill downstream had windows driven in by the flood. The flood had severe effects on land and crops adjoining the Mersey towards Warrington where a boat capsized and four people were drowned.

The River Dane which joins the Weaver near Northwich has had disastrous effects along its entire course.

In Cheshire the River Bollin overflowed and the river Weaver did much damage in the neighbourhood of Nantwich and Northwich. One house fell down in Witton Street and boats were launched into the streets with people rescued from their second floor by ladders.

Blackburn: Horses and cattle were killed by lightning but there was no mention of flooding.

21 Jun 1829
Manchester
mercury

Thunderstorm

30 Jun
24 Jul 1829
Westmorland

Thunderstorm

Gaz. 1 Aug
Manchester
courier 1 Aug
Chester
Chronicle 25 Jul

[WG also describes a thunderstorm in Preston (no flooding) and in Liverpool (with flooding described)].

Liverpool: thunderstorm and water spread over whole streets to a considerable depth and found its way into houses and cellars. A child was killed at the village of Alt near Litherland. Byrom Street Whitechapel was flooded; cellars were nearly filled and shops were flooded. A sewer burst in Fontenoy Street.

Manchester: People were struck and injured by lightning

The river Medlock never rose so high in living memory

Bury: A large factory was struck by lightning and demolished

Blackpool: A man was struck and killed by lightning in his house.

Chorley: great **damage was done to glass by the hail or large pieces of ice**

Thunderstorms occurred at Ashton and Blakeley with various properties struck by lightning and one man was killed.

There was no reference to flooding. Two people were drowned when a bridge gave way at Smallwood 14 miles from Knutsford when a mail coach was passing over; three others were rescued.

A man was killed by lightning at Lancaster and a child was killed at Edenfield.

A heavy thunderstorm occurred at Chadderton Hill when upwards of 200 panes of glass were broken in hothouses.

Horses and many sheep were killed by lightning.

6 Sep 1829
Manchester
Times
25 Jun 1830
Manchester
courier 10 Jul
Yorkshire Gaz
10 Jul

30 Jul 1830
Liverpool
General
Advertiser 5
Aug
8 Feb 1831

Thunderstorm

Liverpool: rain soon flooded the streets and did considerable damage. The passages were blocked up and businesses entirely suspended.

This flood was preceded by heavy snow over northern England and Scotland at the beginning of February

**Westmoreland
Gazette**

8 Jul 1831 Thunderstorm

**Manchester
Times 16 Jul
Lancaster Gaz
16 Jul**

Bolton: thunderstorm with hail or rather 'small shingles of ice and rain'. Many sewers in the street were choked up and the streets were flooded in a few minutes. People were seriously injured by lightning in their houses. At Turton the floods have done considerable damage, sweeping away several small bridges. However two miles from Bolton there was no rain.

Blackburn: At Yate and Pickup Bank the downpour caused the stream to rise to a considerable height sweeping away several large trees

10 Aug 1831 Thunderstorm

**Liverpool
Mercury 19 Aug**

Liverpool: There was a tremendous fall of rain which exceeded the memorable one of 1789. The lower part of the town was completely inundated at 6 in the morning. In many streets it was four feet deep including a liquor store in Byrom Street. Streets mentioned were Hanover Street, Scotland Road, Cable Street, Atherton Street, Burton Street with much damage to properties. Coopers Row was completely flooded and from Litherland Alley round the new Custom House to Park Lane every vault and cellar were filled. Carts were requisitioned to pull people from Church Street and Lord Street to Richmond Street etc. No lives were lost. The flood came down with such rapid impetuosity that they had scarcely time to escape and carry off their children to temporary refuge. In a cellar in Whitechapel a family of a woman and five children had a narrow escape; she carried four to safety and rushed back to the fifth and found it floating on the bed and safe. [In London the pinnacle of the west tower of Westminster Abbey was struck and sent to the ground.]

Liverpool: Whitechapel, Paradise Street and other low lying parts of the town were flooded, in several places 2 or 3 feet deep. Two people were killed by lightning while sheltering under a tree (with scythes!).

Preston: The storm was reported with damage in Liverpool Road.

Poulton le Flyde: The streets became flooded and high roads were rendered impassable.

19 Jun 1832 Thunderstorm

**Chester
chronicle 22 Jun**

Lancaster: The destruction of greenhouses and skylights was general. At the County Asylum hailstones were picked up nearly 4 inches in circumference.

Heysham: Some hailstones 5 inches round.

Caton: Many cellars of the town were completely flooded and the wind was so high as to unroof a mill.

Poulton le Flyde: Tremendous thunderstorm with hail for three hours in the early morning. Hailstones measured 4 ¼ inches round. Few windows escaped that were facing south. Similar window damage towards Blackpool.

Manchester: Oldham, Middleton, Stockport and Ashton, much damage was done to hothouses by the hail (3¾ inches in diameter) and lightning. At Litchfield hall 1000 panes were broken. At Ashton the hail lay several inches deep. At Stockport the hail was the size of pigeons eggs. No reference was found to flooding.

4 Jun 1833 The storm extended from
Preston Morecambe bay to the Mersey

chronicle 22 Jun

7 Jul 1833 Thunderstorm

**Liverpool
Mercury 12 Jul**

Liverpool: the rain rolled down from the higher to the lower parts and inundated several districts. A mill and several other buildings were struck by lightning and damaged. A boy and a horse were killed. There was partial flooding but Whitechapel and Paradise street suffered little compared with previous inundations.

Stockport: A child was killed in rushing in terror from the storm and falling over a balustrade.

**Late Dec 1833
Westmorland
Gaz. 28 Dec
1833**

For the last two weeks we have had winds rain and hail that has caused the rivers to swell. It is the most severe weather we have almost ever known. The Lune is higher than usual and has caused much loss of stock. A Cloughton farmer lost 93 sheep swept away. A factory at Halton on the Lune is much injured and will have to be rebuilt. The rain was accompanied by lightning and thunder. For the last 25 years the Lune has never risen higher than it has twice in the past week. At

11 Jul 1834
Liverpool
Mercury 1 Aug
30 Jul 1834
Manchester
Times 2 Aug
Liverpool
Mercury 1 Aug
Preston
chronicle 9 Aug
Hull advertiser 8
Aug
Westmoreland
Gaz 9 Aug

Preceding days were surly and
 oppressive. Rain was mixed with
 hailstones, an inch and a half to
 two inches in diameter.

Kirby Lonsdale it covered the island seen from the brow over the churchyard. The Mill area up to the dyehouses was also under water. At the bridge the water was fully level with the spring of the arch. The Greta with its tributary from the Ingleton fells damaged the bridge which crosses it near Tunstall. A considerable portion of the road between Greta Bridge and Black Borton was washed away.

River Douglas: The river burst its banks between Rufford and Ormskirk and flooded scores of acres. A child was killed at Bispham

Glossop: In the hills, men working observed immense quantities of peat thrown up to a height of 30 to 40 feet accompanied by large quantities of water which appeared to boil out of the earth. The water then poured down towards Glossop with tremendous force and rapidity. The Hurst Brook (headwater of R Goyt) was the principal cause of devastation. In the first factory it rushed in the windows rising to seven feet in the lower storey. Two women and child were drowned attempting to escape. Others took refuge on upper floors. Several other mills were similarly inundated. Four bridges were destroyed at Howard Town, Charleston, Primrose and Dinting and two other at Lowe mill and Dinting Mill were seriously damaged. Such was the suddenness and violence of the storm that not only sheep and lambs but also hares, rabbits and grouse were carried away and drowned and many fish were caught on the turnpike road. When the water poured into the Mersey, it was raised to an unusual size and was covered with the wreck of houses and factories. A man was drowned at Compstall Bridge attempting to retrieve floating material. Two Men were killed by lightning at Newton Heath whilst working at their looms. A woman was killed at Prestwich.

(Another version) Hurst Brook was the principal cause of the devastation. At Hurst workers at a mill observed water sweeping down towards them with great rapidity and called to other occupants 'run for your lives or you will all be drowned' the water poured in through windows and within a few minutes was 7 feet from the ground. Workers saved themselves by climbing on carding machines. Three people outside the mill were drowned. Such was the suddenness of the flood that not only sheep and lambs but also rabbits, hares, grouse and other birds were carried away in the flood. All the mills down to the River Etherow were filled with water on their lower floors except Boselys and the printing works at Dinting Lane. At Howardtown Mills 500 looms were covered with water. At Charleston the mills down to the junction with Glossop Brook were flooded. Bridges at Hurst, Cross Cliffe, Littlemoor, Shipley Mill, Wren Nest, Dinting and Charleston, Suninondly and Dinting Vale were all washed away. Moodsbottom Bridge is the only one uninjured. All the houses on the margins of the streams were filled up to a depth of 5 feet. Roads are greatly injured, some washed away and other covered with mud to a depth of half a yard. The rain fell for more than half an hour. Several hundred trees were torn up by the roots and carried away. The turf moss from the moors was brought down in great quantities, some pieces larger than two men could lift. The storm in some places was accompanied by falls of large hail or ice and several people were killed by lightning. It was the most destructive flood in Glossop Vale ever remembered including the long talked of 'Mottram Wake Flood' [no date given but 1799] Violent thunderstorms affected the area around Manchester.

Another storm passed over Saddleworth, Oldham, Middleton and Bury.

Manchester: Thunderstorm with hailstones fell weighing more than one ounce and more than an inch in diameter. At Cheetham some weighed two ounces causing loss of windows and glasshouses. A man was killed at Water Street. Two other men were killed by lightning at Newton Heath. A woman was killed at Prestwich. The hailstones were of 1 ½ to 2

inches in diameter and of irregular shape and one was measured of 4 inches diameter with much damage to growing crops of fruit and windows.

Oldham: Similar thunderstorm with hail, some three inches and more in circumference. Scarcely a window facing the storm escaped injury.

Bury: A man was killed by lightning. Rain was accompanied by large hailstones such that the drains were unable to carry the water away.

Wigan: Two lives were lost (not clear whether from drowning or lightning).

Standish: 2 men were killed by lightning.

Ormskirk: A house was struck and a horse killed by lightning.

Pendleton: many windows were broken by hail.

Littleborough: The heavy rainfall was augmented by several reservoirs that burst causing a great and sudden inundation so that the whole valley was flooded. The roads were many feet deep in water. At Stone Heys a woman and a child were struck by lightning and killed.

Leyland: A woman was killed by lightning whilst sitting at a loom. Damage was also caused near Blackburn.

Macclesfield: A hailstorm destroyed thousands of panes of glass; some were 3 to 4 inches in circumference and fell for about 10 minutes.

Horwich nr Bolton: A thunderstorm with hail caused serious damage to buildings by lightning and one man was killed.

A very severe thunderstorm hit the Dumfries area and was said to have had some effects over much of the country but with no detail in Lancs.

Preston: From the tremendous fall of rain two houses in Marsh Lane, a house in High Street and a large wall were levelled by the weight of waters. Houses in Walker Street were flooded. Many thousands of acres of meadow lands have been submerged. At Rufford, Sephton and Croston, Woodplumpton, Inskip and Sowerby being as bad as a great flood in June 1823. Inskip Brook Bridge was swept away. Some farmhouses had water up to the window sills. A cow was killed by lightning at Tarlton. Serious flooding occurred at the villages of Goosnargh and Salwick. The Lancaster Canal overflowed next Salwick Hall. Cottages were flooded to a great depth. At Croston the River Yarrow rolled down the street and entered houses; the Sydbrook and Lostock deluged meadows and the Douglas burst its banks. On Horscar Moss water was up to the knees in houses.

Garstang: Two men were killed by lightning.

Longton: A man was killed by lightning.

Similar land flooding and crop damage was reported at Lytham and Poulton le Flyde.

Wigan: The Douglas was higher than on any previous occasion and did great damage to cellars near Scholes Bridge. It washed away all but the central arch of Rylance bridge and overflowed the road at Smithy Brook. Much damage was done to crops at Newborough with soil and crops completely washed away. Several coal pits at Pemberton had water rising in them where colliers escaped with difficulty.

A thunderstorm with hail and large pieces of ice several inches in circumference passed over a considerable part of the

3 Aug 1834
Bucks Gazette
14 Aug
3 Jun 1835
Manchester
Courier 13 Jun
7 May 1836
Lancaster Gas
14 May
5 Jul 1836
Westmorland
Gaz. 9 Jul
18 Jun 1838
Blackburn
Standard 27 Jun

Thunderstorm from 11 am to 6 pm

3 Jul 1838

Kendal Mercury
14 Jul

Manchester
Courier 7 Jul

county, a few miles to the north of Kendal. The hail has done great damage to conservatories and skylights in gardens and factories. (The article mentions Rochdale Bolton and Bury etc. It is not clear if this article refers at all to Westmorland.

A very severe thunderstorm affected mainly south Lancashire and Yorkshire with much loss of life both from lightning and from flood. Hail, large pieces of ice followed by rain showers occurred widely lasting for several hours. Hail caused much damage with much broken glass but the greatest damage was done by flooding from the small streams which rise above Rochdale and Bolton. These have been filled with such rapidity that bridges were soon swept down and doing great damage to buildings of all kinds. The flood did great damage along the valley from Little Houghton to Silkstone (where there was a similar flood in 1807). Three men were drowned in a coal pit near Rochdale, a boy was swept from a stable at Bradley and another lost his life at Bolton. Extensive further details are provided but this must be one of the worst flooding incidents in the last 200 years for loss of life.

Manchester
Times 7 Jul

Bolton: thunderstorm with floods causing damage at Edgeworth and Egerton. Buildings were struck and a horse killed. The Royal George Factory was struck by lightning and set alight and collapsed with three men buried underneath.

Rochdale: Hailstones measuring 3 inches in circumference broke skylights and windows. The water flowed down Blackwater street like a river and many houses were flooded. A dye house at Spotland bridge was nearly washed away. Black-pits factory near Bagslate was damaged and a new stone bridge nearby was completely washed away. Three boys trapped in a mine were drowned.

Bury: With such heavy showers of rain and hail the rivers in the vicinity rose 6 to 8 feet above their usual level in 30 to 40 minutes. Great damage has been done to property in the vicinity of the Rivers Roach and Irwell and their tributaries. Mills at Dearden Clough and Ewood Bridge were greatly damaged. Two stone bridges were washed away. Damage was great in the Rawensthal area.

In late afternoon the River Irwell was observed to be rising very rapidly although very little rain had been observed. The flood came down with increasing force and in an hour and a half the river was overflowing its banks having risen 8 to 10 feet in little more than an hour. The River Irk was the greatest contributor. At Rochdale large hailstones damaged windows and skylights and 'we have not heard of any skylight not broken'. The River Roach rose immediately to an alarming height and cellars in the market place were flooded and shops to a depth of one to 3 feet. Cellars in Rope Street were from 4 to 5 feet deep. Water was 2 feet deep in the Angel Inn Blackwater street. At River Spoddin at Spotland bridge the damage is extensive; the stone bridge is washed away along with the dye house. Many cottages were flooded to the second storey and inmates were released by the aid of ladders and ropes. At Broadley Mill 3 miles from Rochdale, the gasometer, dyehouse loom shops, and stove were swept down the stream where the water was 23 feet deep, its normal level being 2 feet. A stable with a boy and three cows inside was washed away and all drowned.

At Rossendale a Cowpe Mill was cut in two by the water. A man was washed away from the Water Burn above Bacup and drowned. On Bagslate two miles from Rochdale Shepherd Mill and bridge are swept away. At Spotland a woman lost two children washed out of the house, one a baby in a cradle.

Manchester
Courier 14 Jul
Preston

Chronicle 7 Jul

Along the River Eagley, a branch of the Irwell in the neighbourhood of Little Bolton, Turton, Longworth and Sharples the river rose to a great height in 2 hours. At Egerton Mills and Eagley Mill the lower rooms were filled with water and water was 4 feet deep in the warehouse. Footbridges were swept down and coal washed away. Fortunately the heavy rains did not fall on the Mersey and it was raised very little above its ordinary level. At Blomley Colliery near Middleton although no rain was experienced, a whirlwind tore up large trees by the roots. Effects were also severe at Wigan, Chorley, Preston and Lancaster. Preston: A man was killed by lightning.

On the Cowpe Brook in the parish of Bury, a mill in the headwaters has a tunnel of considerable length the entrance of which became blocked up and the water backed up to a height of 4 storeys and 26 yards long gave way and immense volumes of water rolled over the ruins carrying away the dyehouse and cottages immediately in front of it. Various mills and bridges were flooded or destroyed downstream.

Near a place called Lower Clews a house was destroyed and three other had doors and windows broken down washing out all the furniture

Cheesden Brook which rises in Harding was much swollen. A fulling mill was flooded and a new mill was washed away at Coosden Close

Preston: The storm lasted 3 hours. The streets in many places had the appearance of brooks. A man was killed by lightning in Albert Street.

Oldham: The rivers were much swollen and many houses were flooded. The storm was accompanied by strong winds and hail and branches were torn from trees and fruit damaged. A four year old child was killed by lightning.

Aston under Lyne: a boy fell in the river and was drowned.

Macclesfield: Very heavy rain fell for half an hour. The River Bollin was swollen to a great height and houses near its banks were flooded. The spire at Astbury church was struck and partly demolished.

6 Aug 1838
Bolton chronicle
14 Aug
4 Sep 1838
Manchester
courier 8 Sep
17 Aug 1840
JBA Report
London Evg.
Standard 20 Aug
Carlisle Journal
22 Aug

Thunderstorm

Severe gale with persistent rain
and some hail

Preston and neighbourhood experienced a storm of wind and rain - "a perfect hurricane" Water rose an inch higher than in 1824 and flood at Preston was said to be the highest since 1799.

Manchester: Corn in the area is beaten down with the force of the wind. Rivers Mersey and Irwell are swelled to a height not known since 1799 (also 17 Aug).

Bury: A man woman and child were drowned.

Blackburn: Streets were flooded and houses flooded in lower areas from the overflowing of brooks. The Ribble was in very high flood with cattle washed away and Brockhole bridge (on the Blackburn and Preston turnpike road), a wooden structure was overtopped and three of the arches are carried away. Damage was done by 3 large trees blocking the opening.

Fylde: Many scores of fields are one sheet of water even covering hedges. Embankments at Inskip, Sowerby and Ashton on Ribble have given way. A considerable number of cottage houses are flooded to a depth of one foot and lanes are impassable in the neighbourhood of St Michaels.

Bolton: The damage was restricted to the breaking of a few windows.

Liverpool: St Michaels Church steeple was shattered by lightning. Low parts of the town were completely flooded. The

8 Jul 1841
Liverpool Mail
14 Jul

No reference to thunder

21 Aug 1841
Bolton chronicle

A storm of wind hail and rain with
occasional thunder

**28 Aug
14 Sep 1841
Liverpool Mail
1841**

**5 Jul 1843
Sheffield
Independent 15
Jul**

**21/22 Nov 1843
Westmorland
Gaz. 25 Nov**

**22 Jun 1844
Manchester
courier 29 Jun
6 Sep 1844
Manchester
Courier 14 Sep**

**19 Jun 1846
Manchester
Courier 24 Jun
5 Jul 1846
Manchester
courier 8 Jul
Preston
chronicle 11 Jul
29 Jul 1846
Manchester
times 8 Aug**

Thunderstorm

spire of the church of St martin also suffered some damage.

St Helens: Incessant rain and thunder continued for some hours. Water continued to pour into the lower part of the town from eight in the evening till two in the morning. At the bottom of Tontine Street (the entrance leading from Liverpool Road) the depth reached 6 feet and extended over a wide area. Seven people were drowned. The water filled Kidd's linen yarn factory and every house on the street. Fifteen people are missing in the neighbourhood of Haydock.

Melling: A boy was struck and killed by lightning.

Rochdale: The Methodist church at Castle Moor was struck and damaged and much damage was caused by flooding at Milnrow where four bridges were carried away by the overflow of water. The gable end of a house at Kiteliffe was washed away and furniture floated out of the house and found 3 miles away.

In consequence of the heavy rain on 21st and 22nd the river in the vicinity of Sedbergh [Rawthey, tributary of the Lune] was higher than has been known for a good number of years. In some parts of the vale of Dent the road was covered to a depth of 2 feet. The mail between Northallerton and Sedbergh was compelled to come by way of Catterick because of water 7 feet deep on the road at Morton on Swale. The flood entered a few houses of parties near the river.

Stockport: Thunderstorm with rain and hail. Many sewers were soon choked up and the water flowed into several poorer homes in the lower part of town. The cellars of several public houses were also filled.

Thunderstorms occurred at Warrington, Wigan, Leigh, Chowbent, Bedford and Westhoughton. At Brightmet a woman was killed by lightning and a cow killed at West Houghton.

Hazelgrove near Stockport: On the same day a storm near Hazel Grove a cotton mill at Bosden in Cheshire was flooded and men sent home; on passing a wall, behind which was a reservoir of water, the wall gave way killing 6 men and injuring several others. A bridge was destroyed.

Stockport: A thunderstorm of two hours duration caused flooding of streets. Two people were killed by lightning whilst sheltering in a barn.

Thunderstorms were reported in several other towns including Wigan and Warrington but without reference to flooding.

Oldham: A thunderstorm caused the streets to be much flooded with the sewers being surcharged. A great deal of damage has been done by water flowing into houses and cellars.

Liverpool: Houses were struck and several people injured.

Ormskirk: The lower end of Aughton Street and the houses were completely flooded.

Liverpool: Following a period of excessive heat a thunderstorm struck Liverpool (as affected much of England). Several people were struck by lightning and injured and buildings affected. No mention is made of flooding in Liverpool although there were extensive problems elsewhere including London.

Oldham: A young woman was killed by lightning in her house.

Warrington: Thunderstorm in which the sewer grids quickly became choked and the water ran down streets flooding houses and cellars and also shops. In several of the lower streets the water was 3 to 4 feet deep

Wigan: the thunderstorm extended in all directions and injury from the flow of water is very considerable. Scaffolding for the repair of a bridge over the River Douglas was carried away. In the town much damage was done by the complete glutting of sewers and overflowing into cellars. The storm was of short duration.

22 Sep 1847
Manchester
courier 29 Sep
Blackburn
Standard 29 Sep

Bacup: The rain fell in torrents for two hours. The George and Dragon public house in Market Place was flooded to a depth of several feet. St James's Street was like a river and houses and cellars flooded. A draper in Bridge Street was flooded. 'There has not been so disastrous a flood for upwards of 20 years'.

Widespread rainfall and apparently prolonged rainfall (no mention of thunder). Manchester had 3.13 inches during the week. The Rivers Irwell Medlock and Irk were in high flow and caused problems with mills due to the amount of sediment. Many establishments along the Irwell were completely flooded. We never knew the water to rise so rapidly. At Stretford the Mersey overflowed its banks to a great extent. The water overflowed the highway at Cheadle. Flooding was also reported at Stockport and Macclesfield (River Bollin)

Wigan: This is the only mention of thunder and lightning along with heavy rain for several hours. Water overflowed into old mine shafts and caused difficulties for working mines.

Garstang: The River Wyre was filled to a most extraordinary degree. An embankment failed at Stockingbridge and much land was flooded and a farmhouse was flooded to 3 feet. The water was two yards deep on the road from St Michaels to Great Ecclestone.

Oswaldthistle: A girl was drowned when falling off a plank into the flooded Lottice Brook.

Blackburn: the R Blackwater rose five feet above its normal height, higher than for 30 years. A vast number of cellars and dwellings were flooded and a great deal of property was destroyed. Water St was impassable for several hours; Penny Street and Church Street as far as Ainsworth street were covered with water. The White Bull close to Salford Bridge was flooded to several feet. At Whalley Banks cellars and lower rooms were flooded. The water rose 4 to 5 feet above the roadway in Brunswick Street and Thomas Street in the Wrangling. The lower end of Darwen Street was flooded to the first floor. In Henry St an old couple in a basement were rescued just in time. Back Livesey street was flooded to the first floor. Pearson Street, the bottom of chapel Street and Ainsworth Street were likewise inundated. King Street had the appearance of a river. At Eanam the river carried away part of an embankment and flowed through Sparrow's factory and through the first floor of a factory at Further Gate.

Wigan: had a storm of thunder lightning and rain and the rain poured for several hours. The River Douglas was swollen to a great height. Mines were flooded.

Bolton: the River Crole was higher than for 20 years. Cottages at Waterside, Coopers Row were flooded. Several mills were flooded and work stopped but damage was not serious.

Warrington: Dallam Brook overflowed and covered much meadow land. It washed over the turnpike road at Longford Bridge and over the Liverpool Road near the Wash.

Colne: A thunderstorm was reported accompanied by **hailstones the size of kidney beans**. The parsonage was struck and caused serious damage. There was no report of flooding

[On the same day serious flooding occurred in S Yorkshire and thunderstorms were reported in Cheshire and Herefordshire]

Pilkington and Whitefield: A severe thunderstorm was accompanied by hail and rain for only 20 minutes. A house was struck and damaged by lightning. Several cottage houses near Radcliffe bridge (R Irwell) were flooded.

A thunderstorm occurred at Over Darwen and a water lodge (mill dam?) burst. The embankment was reduced from 40 to 20 feet causing a breach 60 feet across. Along the stream the water rose 10 feet and carried all before it. Houses

2 Apr 1848
Manchester
Courier 8 Apr

29 Jun 1848
Manchester
Courier 1 Jul
23 Aug 1848
Manchester

**Courier 26 Aug
Preston
Chronicle 26
Aug
Blackburn
Standard 30 Aug**

**Lancs county
Publications 17
Aug 1998**

immediately below were flooded to 4 to 5 feet. Water poured down Water Street and Bury Street into Market street, the principal street of the town. It then flowed into Lum Street where it forced a door inwards. Twelve people were drowned in cellar dwellings in Bury Street where the water was 3 feet deep on the road above the cellars and in some houses it was 5 feet deep. The flood occurred at night and people were taken unawares in bed. (Blackburn Standard has an extended description of the mill dam (lodge) and the circumstances of its failure. The flash flood here was not the direct consequence of the intense rainfall but the indirect effect of the dam burst.)

Oldham: A child was killed by lightning in its house.

Preston: thunderstorms with strong cold winds over three days. The rivers are unusually full. Much land was flooded at Hutton and Penwortham, Longton and Hoole. At Croston many houses were flooded. At Brinscall all the brooks overflowed and carried everything with them and damaging walls. Roads had the appearance of being harrowed. People at Croft house had a narrow escape from the floods from the Hatch Brook, leaving furniture floating about in the house. Chorley: The river Lostock overflowed and inundated the bleachworks at Low Mill near Chorley and the cottages in the neighbourhood to a depth of 4 feet.

1998 report describes the event as follows: Bold Venture Park lake was then a vast reservoir built by Eccles Shorrock, Darwen's first industrialist. It nestled in a deep quarry high above the town centre, surrounded by hills on three sides and with an artificial embankment overlooking the narrow streets and alleys, the back-to-back slums and the cellars of the town below.

A dozen men, women and children were drowned in the dark cellars where they lived. It was just after midnight that the first spots of rain began. Then, thunder and lightning and torrential rain blasted the town for three hours without respite and water poured down the moors to swell the reservoir until, with a crack which dimmed the thunder, the embankment gave way. The water level dropped in moments by up to 40ft as tons of earth, stone and sand were swept along by the swirling torrent down the small overflow stream towards the winding network of alleyways which started close what is now the former Co-op bakery building in Borough Road. The deluge struck with devastating force, ripping apart culverts, roads and houses. There was no local newspaper to tell the story 150 years ago and it was left to Edward Gregson, the town's only printer, to publish an account of the tragedy which he headlined: "Most Alarming and Dreadful Accident in Over Darwen." He began thus: "We have to record one of the most alarming and melancholy occurrences that has ever taken place in this part of the country by the bursting of a water lodge, situated to the west part of the town, which was attended by most fearful consequences, there being no less than 12 human beings hurried into Eternity with scarcely a moment's notice, the greater part of them being drowned whilst asleep."

A house and shop owned by John Turner was quickly flooded to a depth of five feet. His wife ran downstairs to investigate the roar in the darkness, dropped the baby she was carrying but just managed to grab it by a leg before it was swept away. The first and second floors of the Cooper family's home collapsed on one side, but they managed to scramble to the safety of the hill behind by breaking a back window. In a narrow passage called Lumb Street the water crashed through the front doors of two houses and Ellen Townley and Mary Day held three children above their heads for an hour until they were rescued. Next door John Townley, his wife and children were hauled to safety by John and

Ralph Shorrock who had seen blood-stained hands clawing through a broken window. One little boy who had a miraculous escape was carried by the surging tide from Water Street nearly 200 yards to the Angel Inn in Market Street - the old Burton's building is on the site - before the lad was snatched to safety by shoemaker John Hindle just as he was about to be whirled into the underground culvert.

Three linked cellars under the Bury Street house of shoemaker Christopher Bibby were occupied by the Knowles and Lassey families and a young man called Haworth. The only entrance was through the front door and the water poured in. Only John Lassey, 20, survived. Although water rose to within four inches of the ceiling he managed to keep his face above it by clinging to the chimney-piece. Mary Shaw and two of her five children also died in a Bury Street cellar. In another cellar in Church Street widowed Alice Nixon managed to save only one of her two children. Next to the Black Bull in Market Street a cellar under a tailor's shop was occupied by Henry Bury, a fishmonger and fruiterer, his wife and three children. When the flood hit he and his wife managed to drag two of their children to a higher part of the cellar and hold them high until being rescued. They could do nothing for their baby. The 12th victim was Ellen Walsh, an old woman who also lived in a Market Street cellar under a butcher's.

Five trains were held up at Barnacre approaching Garstang where the line was flooded two feet deep for about a mile. The water is supposed to have come from Bleasdale Fell over which a violent thunderstorm had occurred shortly before.

Bacup: A thunderstorm followed a very calm and sultry day. The storm burst over the town at 12.10 and the town first became flooded at 12.20 and continued to rise until 1.20. The flood was said to have risen 6 inches higher than a flood 18 years ago. Some houses were flooded to a depth of 5 feet. The water threw down the parapets of several bridges and outhouses and animals were carried away. A rain gauge recorded 0.99 inch. Most of the mill owners and tradesmen have suffered severely.

Dunford Bridge: Severe storm worst for 14 or 15 years but only 4 miles away there was no rain.

Altrincham: Several buildings were struck including a church pinnacle and damaged by lightning. A cow was killed but no flooding was reported.

Macclesfield: the thunderstorm lasted more than an hour around midnight. The River Bollin which might have been stepped over the previous day was increased to such an extent as to flood houses in some cases to a depth of 5 feet. In George Street and the Water Cotes furniture was afloat and mud left in some houses to a depth of one foot. In Back Wallgate a sewer fell in and left a hole 4 yards square. Tradesmen near the Bollin have suffered losses. Two cows were killed by lightning at Alderley.

Glossop and Woodhead: Etherow was visited first by a snow storm then by thunder which continued for several hours. Manchester Waterworks in the vicinity, then under construction was damaged by floods particularly in the Heaton Brook and the River Etherow. Along the Etherow it flooded large areas of land. At the Vale House mill three miles downstream the water came like a 'wall of water' five feet high; the lower storeys of the mill were flooded in an instant and destroyed an adjacent school building. Two bridges were partly swept away and most of the houses suffered some flooding. Further down Lee's spinning mill was flooded along with neighbouring cottages to a great depth. Further down the Hollingworth Printing works, Waterside Mill were flooded, cottages flooded and a bridge carried away.

Preston: A bridge under construction for the Bamber bridge branch of the East Lancashire Railway over the river Ribble

1 Sep 1848
Manchester
Courier 6 Sep
9 Aug 1849
Manchester
Courier 11 Aug

1 Sep 1849
Morning
Chronicle 6 Sep

5 Oct 1849
Manchester
courier
12 Oct
Liverpool
Mercury 26 Oct

Snow then thunderstorm!

29 May 1850 Manchester Courier 8 Jun	Thunderstorm	was destroyed, fourteen arches being demolished by the high flood level. Blackburn: thunderstorm with rain and hail causing the streets to be deluged in an instant. The storm appears to have been very localised.
20 Jun 1850 Manchester courier 29 Jun	Thunderstorm	Stockport: In a thunderstorm many houses were flooded at Alderley near Stockport
16 Jul 1850 Manchester courier 20 Jul Liverpool Mercury 23 Jul	Thunderstorms	<p>Thunderstorm stretching from Manchester to Bury, Chorley, Liverpool and Knutsford. Two children were killed by lightning at Horwich and a man was drowned when working in a pit which filled with water.</p> <p>At Horwich the storm continued from 4.15 to 9.00 and the water descended the valley, uprooting trees, tore up roads, broke down bridges and flooded houses and several mills. On some roads it made cavities 4 to 6 feet deep. Next morning the river Irwell was much swollen. A boy was killed by lightning near Bury and a man was killed at St Helens.</p> <p>The print works at Adlington were flooded and there is great damage at Blackrod where a man was drowned by the filling of a coal pit. At Wigan the water got into some old workings from the Douglas, and fearing a repetition of the problems in 1847, men got out quickly. At Hendley a row of houses were completely filled and a child was drowned. Two people were swept off their feet at New Scholes but they were rescued. At Ormskirk several houses were flooded and the railway line was covered for some distance. At Hindley the Brosden Brook broke down two bridges and injured the county bridge and the Douglas overflowed. Many houses were flooded in Wigan and two public houses.</p> <p>Bolton: Houses and mills were struck by lightning and damaged.</p> <p>Ormskirk: Heavy rain continued for upwards of an hour. The streets were completely flooded partly owing to blockage of gutters by straw etc. The rails of the railway near Moor Street were covered. Several houses were flooded. Two men and a horse were killed at North Meols.</p> <p>Darwen: In a thunderstorm the streets had the appearance of rivers; drains were choked and several cellars flooded. A young man fell into the brook in Water Street and was carried for some distance before being rescued.</p>
1 Aug 1850 Preston chronicle 10 Aug 21 Jun 1851 Manchester Courier 28 Jun	Widespread thunderstorms from North Wales to Nottingham and West Yorkshire moving from west to east.	<p>Thunderstorm accompanied by very strong wind and large hailstones, some as big as pigeon's eggs, rugged pieces of ice and weighing nearly an ounce.</p> <p>Manchester: Rain was so heavy that gulleys were surcharged and almost every street was more or less flooded and in many poured into cellars. A heavy volume of water rushed down Great Dulcie Street, Strangewasys and Bury New Road and streams came from Cheetham Hill and Cheetwood. A wall was washed away at Strangeways Methodist chapel. Cellars in Chester Road Hulme were flooded to a considerable depth and also at the lower end of Deansgate. Stalls in Shadehill Market were thrown down by the wind. At Pendleton, factories were damaged by hailstones, 7/8 inch in diameter, and the wind. At Droylsden the Catholic Chapel had 200 panes broken and nearly every house was similarly affected.</p> <p>At Newton where Shooter's Brook and Blue Button Brook join a number of cottages and a beerhouse were flooded. At Bowdon 0.98 inches of rain fell in 30 minutes. Sandy Lane was transformed into a large river and near Peel Causeway a large hole was excavated by the water. At Bowdon Railway Station the water rushed down from Bowdon Downs, through the booking office and was knee deep on the tracks. New shops near the station were flooded.</p>

Ashton: Windows were widely broken at Little Moss. Many houses in the Boston area were flooded to a considerable depth. The sewers at Charlestown were insufficient to carry the Hurst Brook and water flowed down Boston Street in some places to 18-20 inches deep and flooded some houses.

Bolton: The storm continued for 1 ½ hours. A pub was set on fire by lightning. There was no reference to flooding.

Bury: water poured down the streets in torrents. Part of a factory at Simpson Clough was washed away and grocers at Heywood had cellars and contained goods flooded. A child was killed by lightning.

Blackburn and Haslingden: Lightning effects were noted but no reference to flooding.

Middleton: At Little Parks, Lower Tonge and at Rhodes a number of cottages were flooded and furniture severely damaged- 7 houses at Tonge Lane, 9 cottage houses at Greenshaw Lane. Damage was caused by the wind with trees blown down and houses destroyed.

Oldham: Hurricane was more destructive than the thunderstorm which had **hail and large pieces of ice**. The hurricane approached with a deafening roar carrying away roofs, whole buildings and trees.

Rochdale: The storm lasted one hour. In Yorkshire Street the gulleys were surcharged and water flowed down into Old Market Place where it filled many cellars. In College Street and Holland Street the flood left heaps of rubbish. The foundations of 6 new houses in Manchester Road were swept away and the Gas works were affected. Damage was done to a mill in Manchester street. At Amen corner water surrounded a house to 4 feet depth. At Spotland a pub at Shawforth was flooded from an adjoining brook. Three cottages were flooded near Bridge Mill. Three weirs in the vicinity were washed away.

Stockport: **Hailstones 1 ½ inch in diameter were measured and few houses have escaped injury. Large factories have had several thousand panes broken and foliage and fruit stripped** from trees.

Warrington: Streets were flooded and impassable especially in Scotland Road.

Liverpool: Minor lightning effects were noted but no reference was made to flooding.

Manchester: Cellars especially in Deansgate and Chester road are flooded

Salford: Cellars were flooded by the heavy fall of rain.

(otherwise much the same information as in Courier though this is 3 days earlier)

The village of Chipping 12 miles from Preston was visited by a fearful thunderstorm and devastating flood. **A vast tide with irresistible force swept down the valley from the Parlick Hill, sweeping away sheep, trees and thousands of tons of earth and stones, weir ,bridges, fences and hedges.** Chipping Brook otherwise and insignificant stream was swollen into a torrent. At Evans' cotton factory on the banks the water rose 18 feet and was 6 feet deep in the mill or 2 feet over the top of the machinery which was covered with mud. One mill weir was destroyed and another damaged. One stone bridge was demolished and another partially destroyed; a wooden bridge was removed and another damaged. Many houses in the village were flooded to a depth of 4 to 6 feet; one house was undermined and partially carried away. Rochdale: A thunderstorm of short duration caused lightning damage to a mill chimney. There is no reference to flooding.

Thunderstorms at Hulne which completely flooded the streets and many of the cellars. A man was killed by lightning at Droylsden. **Large hail broke skylights at Stalybridge, Hyde and Dukinfield.** A woman was killed by lightning at Rochdale.

**Manchester
Times 25 Jun**

**2 Jul 1851
Manchester
courier 5 Jul**

**28 Jul 1851
Manchester
courier 2 Aug
14 Aug 1851
Manchester**

times 16 Aug
Manchester
Courier 16 Aug
Preston
chronicle 16 Aug
21 Jun 1852
Manchester
Times 23 Jun

13 Jul 1852
Manchester
Courier 17 Jul
26 Jul 1852
Preston
Chronicle 31 Jul
17 Aug 1852
Manchester
Courier 21 Aug
Liverpool
Mercury 20 Aug

31 Aug 1852
Manchester
courier 4 sep
9 Jul 1853
Manchester
Courier 23 Jul
Bolton Chronicle
23 Jul

Noted that the year 1852 had a remarkable number of severe thunderstorms around the country

Widespread destructive thunderstorms and prolonged rainfall and floods over much of England

At Wigan the volume of water which rushed down the Scholes was very great and flooded several houses and cellars. A great body of water ran down Standishgate and flooded several houses and shops.
Darwen: several houses were flooded near the Angel Inn. In a second storm the following day houses were flooded in Lawrence St and the bottom end of Duckworth Street.

Manchester: thunderstorm with rain and hail of 'prodigious size'. The worst effects of the hail were in Eccles and Pendleton where greenhouses were riddled by large lumps of ice. Mills have been temporarily stopped because of damage to buildings. Hail was measured at 2 ½ inch in circumference; elsewhere the size was reported as 1 inch in diameter. Buildings were struck in Manchester but there were no reports of flooding in that area.

Bury: A number of houses were flooded by the rain.

Rochdale: Buildings were damaged by lightning.

Oldham: thunderstorm with rain and hail. A horse was killed by lightning and a building struck and damaged.

Middleton: Intense rainfall for 40 inutes; a house was struck and damaged. Cellars were filled by the flood.

Storms were also reported at Warrington and Todmorden but without reference to flooding or lightning damage.

Darwen: Fields lanes and houses were inundated by the flood. A culvert at Eccles' Mill was surcharged and water flowed into the factory yard. Timber fowl and pigs were seen floating down the brook.

Manchester: the storm was concentrated over Ashton and Openshaw. People were struck and injured but there were no fatalities. A horse was killed and houses were damaged by lightning. Cattle Market Hotel Cross Lane Salford was flooded when sewers in the street became surcharged (the second time in 2 years that the house has been flooded).

Liverpool: the streets were completely flooded.

Bury: The flood overflowed the tanks conks connected to the gasworks, stopping the supply of gas.

Rochdale: A man was drowned in the river Roach.

Liverpool: the streets were completely flooded. Some cellars in Lord Street and other low lying parts of the town were flooded.

Haslingden: three cows were killed by lightning.

Blackburn: A factory chimney was damaged by lightning. The lower parts of the town were again flooded especially in Darwen Street.

Preston and Lancaster: Heavy rain with some thunder and lightning lasting from Saturday morning to Sunday morning. Rivers were very high and great damage was done to farmers in Caton, Aughton, Claughton and Hornby Holmes. Cows, sheep and pigs were washed away. The Rivers Kear and Condor overflowed and caused much damage. The River Wyre forced down the baulks below Churchtown and did great damage at Fleetwood, Pilling, Nateby, Winmarlegh and Cockerham Sandside. On the River Wyre at St Michaels, Sowerby, Wooplumpton was at the greatest extent in the last 60 years. Embankments gave way causing widespread flooding of farmland at Sowerby. The brook which flows through these townships was the highest since the disastrous inundation in 1840. Two thirds of the highway between St Michaels and Great Ecclestone was covered with water to a great depth and impassable.

Garstang: A correspondent notes that this was the largest flood on the Wyre since 2 Jun 1823. The water entered all the

buildings at Kirkland mill in some places to a depth of 30 inches. Flooding was also extensive in Croston and Rufford areas.

Bolton: the storm lasted 20 minutes and streets were deluged with hail and rain. At Gilnow a cow was killed by lightning. Oldham: rainfall for a couple of hours; lightning injury and damage to a house but no reports of flooding.

Rochdale: Lightning damage to property but no reference to flooding.

Ashton: A heavy shower of rain with a little thunder for 1.5 hours causing houses in low localities to be completely flooded. The sewers were choked up and streets impassable.

Manchester: Storm with rainfall for 2 hours but there was no reference to flooding there or elsewhere.

Bolton: A boy was killed by lightning at Egerton

Rochdale: A factory chimney was partly demolished by lightning at Wardle

Ashton under Lyme: A factory was struck and seriously damaged at Cock Brook

Ingleton: Severe thunderstorm but no flooding noted.

Milnthorpe: the lower end of the town was flooded. The hailstones were very large and lay thick upon the ground. A cow was killed by lightning.

Liverpool: Storm flooded roads and streets

Birkenhead: Severe flooding occurred especially at Chester Street where the water rushed towards Woodside Ferry.

Many houses in the town suffered severely.

Manchester: the storm was brief but violent. Two houses were struck by lightning and damaged.

Heywood: many houses were flooded and a house was struck by lightning.

Mossley: Several houses in low places were flooded.

Gorton: A boy was struck and killed by lightning in his house.

Rochdale: some houses in Halland St were flooded ankle deep.

Manchester: Thunderstorm but no reports of flooding

Thunderstorms were widespread.

Runcorn: Rain fell in streams, deluging cellars and tearing up roads; a horse was killed by lightning.

Manchester: Two separate storms during the night, the first lasting one hour and the second of shorter duration. 'The streets and courts were flooded with incredible rapidity'. No specific mention of property flooded.

28 May 1854 Thunderstorm

**Manchester
times 31 May**

**31 Jul 1854
Manchester
Courier 5 Aug**

5 Jun 1855 Thunderstorm

**Manchester
Courier 9 Jun**

**8 Jun 1855
Lancaster Gaz**

16 Jun

**31 Jun 1855
Liverpool
Mercury 3 Jul**

14 Jul 1855 Thunderstorm

**Bury Times 21
Jul
Ashton weekly
Reporter 21 Jul
Lancaster Gaz
21Jul**

24 Jul 1855 Thunderstorm

**Manchester
courier 28 Jul
Liverpool daily
Post 25 Jul**

8 Aug 1855 Thunderstorm

**Carlisle Journal
10 Aug
Manchester
courier 11 aug**

24 Aug 1855 Thunderstorms

Manchester

courier 25 Aug

**4 Oct 1855
Manchester
Courier 6 Oct
8 Aug 1856
Manchester
Times 16 aug**

Thunderstorm

Thunderstorm with hail on 7th and 8th followed by persistent rain on 9th.

**9 Aug 1856
Manchester
Times 16 Aug
Ashton Weekly
Reporter 16 Aug
Chester
chronicle 16 Aug**

Persistent rain – no mention of thunder but it was said the rain was mingled with hailstones of enormous size and at Helmshore the hail was 6 inches deep.

Stockport: Heavy rain stopped many of the channels and sewers and flooded cellars; a house was struck and seriously damaged.

Manchester: Heavy rain mixed with hail and a smart breeze from the southwest. Several streets were flooded when the gratings were unable to receive the water and cellars were flooded. Hail damaged skylights including panes in the roof of Victoria Station.

Ramsbottom: Rain Hail and pieces of ice fell in torrents causing damage to mills and houses (not clear whether from lightning, hail or flooding). A blacksmith from Ramsbottom was drowned.

Bury, Edenfield: A gardener was killed by lightning and two horses were killed at Quarlton. The high roads were completely flooded. Some of the streams were higher than had been known for 30 years.

Manchester: The rivers Irk Medlock Irwell and Tib rose to a height not known for many years. The River Medlock rose 15 feet above ordinary level and flooded a vast number of warehouses storehouses and cellars, mainly in Downing St and Buxton St off London Road. Mellor's timber yard and Hoyle's Printworks sustained much damage. Gas was put out as meters became inundated. Peak level was said to be 3 feet above that ever known, the previous great flood being in 1828. A culvert recently constructed at Hulme St was surcharged and water rose 4 feet above its crown and backed up. In the cellars of the Royal Oak Inn, London Road, the water rose to 8 feet. Businesses were flooded in Store Street and a wooden footbridge washed away. Cellars in Hanover Street and Buxton Street were flooded with loss of yarn and warps and a chemical manufacturer at Ardwick Bridge was flooded. Flooding extended from Buxton Street on the one side of Ardwick Bridge to Russell Street on the other. In the neighbourhood of Oxford Road the flood broke into properties of Irish poor and 80 houses were flooded. Two men were drowned in the River Irwell, thought to be caused by the failure of a bridge they were crossing.

Rochdale: An embankment at Marland Mill gave way flooding the River Roach but no damage was reported.

Woodhead: Owing to the overflow of the River Etherow the railway was blocked from Sheffield to Manchester. The rails were carried away.

Stockport: A cottage in the vicinity was washed down.

Ashton: The Rivers Teme and Swineshaw Brook overflowed and affected Harrison's Cotton mill.

Stalybridge and Dukinfield: Several houses and mills were flooded. Two bridges were swept away. North-end Mill was flooded and a culvert burst causing the flooding of the Swan Inn. All the houses in Canal Street were flooded when the canal bank was washed in. At least 6 mills were also mentioned and the Dog and Partridge Inn. All the houses in Caroline Street were flooded. Turner Lane Brook at Charlesworth also overflowed and flooded houses.

Mossley and Saddleworth: the River Teme and Tributaries overflowed especially at Bottoms where a substantial bridge was carried away along with 5 timber bridges; many mills near the river were flooded up to a depth of 5 feet. A great many roads are broken up and furrows more than a yard in depth and three or four yards wide are quite common. Part of the wall of Mossley churchyard was carried away and in many cottages the water accumulated to a depth of 5 ½ feet. New Hollins: A row of houses damaged by a thunderstorm 2 days previous was further damaged by the longer rain with the back walls falling in.

Saddleworth: 3 bridges were washed away including 2 stone ones and 3 weirs. The flood was said to have surpassed any flood since the great flood of 1799.

Oldham: A waterspout fell at Crompton fold and Weymoss in the neighbourhood of the corporation waterworks. The

4 Oct 1856

Presumably a thunderstorm

**Manchester
Times 11 Oct**

**14 May 1857
Blackburn**

**Standard 20
May**

**28 Jun 1857
Lancaster gaz 4
Jul**

**15 Aug 1857
Manchester
Times 22 Aug**

**Manchester
courier 22 Aug**

thunderstorm

Thunderstorm

Widespread thunderstorms over
North, East and West of England

brooks in the neighbourhood were immediately flooded and much damage done to adjoining property. A part of the waterworks embankment gave way but did not fail. Several mills were flooded and the road was ploughed up to a depth of 18 inches, the boulder stones with which it was paved being washed away.
Liverpool: some of the public thoroughfares were flooded.

Craven: the storm flooded low grounds and many cellars. Preston was also affected by the thunderstorm but no flooding was reported.

[Storms were also reported at Chester and Crewe with floodin at the former].

Manchester: the Irwell was higher than for many years. The low ground behind Broughton Mews was flooded to a depth of several feet. Only the white parapets of wooden bridges were visible. Mills were flooded to the level of boiler fires and hence stopped. At Victoria Bridge the Irwell augmented by the Irk rose 4 inches higher than in Sept 1855 (no ref above); a man was drowned attempting to catch floating timber. Along the Medlock the water rose 3 to 5 feet higher than last August; many properties were flooded this time which escaped in the 1856 flood, including Chorlton Mills. An engineer's premises at Great Marlborough St were flooded to 8 feet. All the cottages in Little Ireland were flooded some to the bedroom floor and some broke through their roofs to escape.

Mills at Prichard St of Charles St suffered severely along with Mynahull Mill, with boilers carried away and water reaching 5 feet in an upper yard and New Mill (6 ½ feet deep, three feet higher than the flood last year). Edmonson's Calico printers on the other side of the street had water 7 feet deep. Mills in Zara Street and Temple Street on the other side of the Medlock were also flooded; chemical works in Jackson St were flooded as was the Hanover Mill in Buxton Street. The Royal Oak pub was flooded. Premises in Mount Street, Ardwick Island. Holt Town in Beswick. Several lives were said to have been lost by the bursting of a reservoir at Blue Pits.

Ashton: Severe damage in Ashton, Stalybridge, Mossley and Duckinfield including Mayalls Mills. A number of mills are mentioned including Chadwick's and Mellors mills in the Tame valley. At Bardsley between Ashton and Oldham a large gasometer was carried away; a man was washed away and drowned.

Saddleworth: At Hey Heads some buildings were washed away.

Bury: A reservoir failed at Morris Mills Pilsworth and the flood downstream carried away a bridge and a weir at Hollins vale Bleachworks.

Oldham: Another reservoir failed and the downstream flood was 40 yards wide and flowed down Manchester Road and Drury Lane, doing great injury to cottages where inmates escaped from windows.

Middleton: Many houses were flooded notably in Tong Street. Mills and dyehouses were flooded. A man was drowned in the River Irk below St Michael's church Tonge.

Rochdale: Several mills were flooded. Unequalled flood caused flooding of meadows sometimes to a depth of 2 to 3 yards. In the valley from Todmorden to Wakefield crops are seriously damaged. One man was drowned at Butterworth and a woman was killed by being struck by bricks falling from a chimney hit by lightning. Mills and shops and the Tim Bobbin inn were flooded.

Bolton: Some inconvenience was caused by the flooding of cellars and low buildings. The water was from 2 or 3 inches to

as many feet in several parts of the town but the severity here was nothing like in other parts of Lancashire. Littleborough: along the road to Todmorden houses and mills were flooded in great numbers. Two canal bridges were swept away. Water flowed like a river through the railway Summit Tunnel causing great damage to mills in the neighbourhood of Walsden Station. The mill at Walmsley at the bottoms was flooded. The River Dar broke down its embankment on the Burnley Road opposite the police office and flooded 50 to 60 the neighbouring houses and the National School to a depth of one to two yards.

Stockport: The thunderstorm lasted 2 hours. The town was completely flooded and the river rose higher than for many years. Great damage has been done to factories which have stopped working. Some damage has been done elsewhere by the bursting of sewers.

Near one hundred houses in Cobden and Salford were flooded.

The Manchester Courier gives further details of mills flooded and notes that they may well be out of action for some time causing loss of livelihood for workers. The River Medlock rose several feet higher than in 1851 when the Holmfirth reservoir burst.

Whitchurch Salop: Rainfall in 3 hours was 3.18 inches. The Chester and Ellesmere canal overflowed and water flowed down the High Street like a stream flooding many of the houses in the centre of town including the Post Office and the Fox and Goose Inn.

Darwen: There was flooding of a few cellar dwellings

Oldham: A thunderstorm with hail caused flooding of houses when the drains could not take the water off.

Glossop vale: Rain was accompanied by hail and large pieces of ice. At Hayfield the river rose one yard within an hour sapping the foundations of many cottages.

Hayfield: The mountain torrent devastated trees fences and crops. In the town a weir was upturned and the huge stones hurled down the chasm. A printworks and neet Mill suffered severely. Five houses three stories high were washed down and the whole of the back walls fell. The inmates escaped.

Thunderstorms in the Peak District of Derbyshire caused flooding which destroyed bridges, flooded mills and washed houses away with the greatest damage done in the village of <Hayfield> through which the River <<Kinder>><<Etherow>> runs; the foundations of five houses were washed away and serious damage to Ned's mill where the weir was washed away. A similar flood occurred in <Hayfield> in 1809 [Ed. wrong date?] when bodies were washed from graves.

Saddleworth: a man was killed by lightning.

Southport: the streets were completely flooded in some places to 6 inches deep and residents had to be taken to their homes in carts.

Manchester: Rain flooded the streets. Several houses in Broughton and the lower parts of Manchester were flooded. [Storms were also reported in London and the Potteries with deaths by lightning]

14 May 1858
Bolton chronicle

Sequence of thunderstorms

22 May
3 Jun 1858
Manchester
Courier 5 Jun

Thunderstorm

15 Jun 1858
Bolton chronicle
19 Jun
Lancaster Gaz

Widespread thunderstorms but little rain usually but much damage from lightning – but locally heavy rain.

26 Jun
Manchester
courier 26 Jun

7 Jun 1859
Preston
Chronicle 11 Jun
26 Jun 1859
Manchester

Thunderstorm

Times 2 Jul
18 Jul 1858
Bury times 24
Jul
16 Jul 1859
Manchester
courier 23 Jul
Manchester
Times 23 Jul

Thunderstorm

Radcliffe: Hail and rain completely flooded the streets. A horse was killed by lightning

Thunderstorm

Manchester: Rain was accompanied by hail and pieces of ice and a strong wind. The storm lasted only half an hour. Roads were flooded in Cheetham Hill and Higher Broughton.
Swinton and Worsley: Hailstones the size of large marbles and in some places the hailstones lay more than 2 feet deep. Every pane that was not of plate glass was broken; a pig was killed and crops destroyed.
Ashton: some windows in the Catholic chapel were broken.
Haslingden: A woman was killed by lightning.
Middleton: The main road through the town was like a river with planks and children's carriages being carried along. A mill was flooded.
Oldham: Hail and ice were accompanied by a strong wind caused the breakage of many windows including the Town Hall, the Baptist and Unitarian Chapels and other public buildings. A mill at Lower Moor was flooded.
Warrington: Large hailstones with a strong wind caused much damage to windows both in houses and factories, including St James Church Letchford and Trinity church Sankey Street.
Bury and Rossendale: Houses were damaged by lightning – no mention of hail or flooding.
St Helens: Hail and pieces of ice weighing ½ to 1 ounce and more than an inch in diameter followed a day when temperature reached 85 F. Windows in houses conservatories and hot houses were destroyed.
Liverpool: A woman was killed by lightning at Ince.
Tranmere: A man was killed by lightning.
Neston: Showers of bolts of ice destroyed thousands of window panes.
Warrington: In less than three quarters of an hour over 50000 panes of glass were broken by hail, some of which were 4 inches in circumference. In St James church 700 panes were broken. The streets were flooded in many places.
Oldham: Another storm of rain and hail occurred and cellars were flooded, Mellodew's Mill behind Church Street was so badly flooded that a hole was made in the wall to let the water escape.

22 Jul 1859
Manchester
Times 23 Jul
16 Jun 1860
Manchester
Courier 23 Jun
21 Jun 1861
Manchester
Courier 22/29
Jun
Manchester
Times 29 Jun

Thunderstorm

Altrincham: Two horses were killed by lightning.
Stockport: Rain and hail lasted for one hour. Fields in the lower part of the region were flooded.

Thunderstorm – rain continued for upwards of an hour

Disastrous flood in Saddleworth. Following heavy rain on the moors water came rapidly down the Chew valley and Upperwood Nook and filled the stream of the Broadwater. The meadows were strewn with large boulders some several tons in weight. A road surveyor said the water flowed down in breast waves a yard in height and a few minutes between each one. It had been very dark especially over the Ashway Moss towards the source of the River Chew. The soil on some parts of the moor was completely washed away. Bottomley's mill at Greenfield was flooded. Three bridges one stone and two wooden were destroyed and many houses were flooded at Nally cottages. At one of them an old woman and two grandchildren were drowned at Clubhouse Cottages. One child was carried out the window and carried over a mile to the Royal George Mill. Others escaped through roofs. Trees were uprooted and farming implements carried away. The

flood came down the hills like an avalanche, washing down the bridges and stripping trees of their bark and strewing the meadows with large stones, some several tones in weight.

A surveyor said the water came down in breast waves about a yard in height and a few minutes between each. An observer said that in the hills he found a place where the soil was completely washed away and lower down stones several tons in weight were piled up like marbles.

The river at Greenfield rose 2 yards above its normal level and it was said to be higher than in the great flood of 1799.

Nearby including Ashton no rain fell.

Stalybridge: The River Tame rose to a considerable height and many places were flooded in Stalybridge and Dukinfield. People were injured by lightning and houses were damaged.

Stalybridge: A severe thunderstorm caused the River Tame which runs through Stalybridge to rise to a considerable height. Many places were flooded in Stalybridge and Duckinfield. One girl was killed and several people were severely injured by lightning.

A man was killed by lightning in Staffordshire.

Bolton: A horse was killed by lightning and a man injured.

Crawshawbooth: Heavy rain caused a considerable flood.

Rawenstall: Rain and hail caused a number of houses to be flooded.

Whitworth: The storm mainly over Whitworth Rake rushed across the road at the Dog and Partridge Inn and flooded Capstick's beerhouse. The free church schoolroom was flooded with water and covered with debris. A mill was set alight by lightning.

Blackburn: A thunderstorm occurred over Darwen causing flooding of streets

Manchester: The storm came from the southwest and the rain was accompanied by a high wind. Drains soon became flooded. The River Irwell and other streams rose several feet. The Mersey overflowed its banks and flooded meadows.

Burnley: The rivers Calder and Brun were both much swollen especially the latter which overflowed its banks and flooded streets and houses. In Water Street the flood left so much debris that 15 tons was carried away by scavengers.

Stalybridge: The river rose to as great a height as in the disaster at Greenfield in 1861; a few cellars in Caroline Street were again flooded. The rain descended with great violence along the valley of the Tame and on the high lands in the parish of Saddleworth. The water overflowed the banks and created extensive lakes. The weir at Wright Mill was carried away and several other mills along the Tame were affected. An extensive mill at Bottoms was flooded. Several houses near the canal bridge were also flooded. Although the level was the same as in June 1861 the damage was not so great as there was much less debris – trees bridges etc.

Darwen: Many persons were flooded in their dwellings. A cow was killed by lightning.

Bacup: Another flood! Yorkshire Street, Bridge Street and St James's Street were all flooded 'as might be expected'.

Rochdale: Water flowed down the streets and in Drake Street a wheelbarrow was carried away! No damage was done in

23 Jun 1861
Manchester
Times 29 Jun
7/8 Jul 1861
Manchester
Courier 13 Jul
Rochdale
Observer 13 Jul

Thunderstorm

Widespread thunderstorms in England

21 Jul 1861
Manchester
Courier 27 Jul
7 May 1862
Manchester
Courier 10 May
Burnley
Advertiser 10
May
Ashton Weekly
rep 10 May

Thunderstorm

Thunderstorm after a period of oppressive heat

15 Aug 1862
Preston
chronicle 20 Aug
2 Sep 1862
Rochdale
Observer 6 Sep
7 Jul 1863

Thunderstorm

thunderstorm

Thunderstorm

Rochdale Observer 11 Jul 25 Aug 1863	Thunderstorm	Rochdale but much damage was done in adjoining towns.
Manchester Courier 29 Aug 15 May 1864	Thunderstorm	Manchester: Heavy rain was occurred but with no flooding reported. [Severe thunderstorms occurred in the southeast of England]
Preston chronicle 21 May 20 May 1864	Thunderstorm	Lancaster: The storm lasted a considerable time and completely flooded the streets. Buildings were damaged by lightning but there was no reference to flooding of property.
Leigh Chronicle 28 May 21 May 1865	Thunderstorm	Liverpool: A woman was struck and killed by lightning on the Cheshire side of the Mersey and various damages were caused to buildings but there was no reference to flooding.
Manchester courier 23 May		Preston: Streets were flooded and flood overran grates so that cellars were half flooded and goods spoiled especially on principal streets where water was up to 2 yards deep (in cellars). Fishergate railway station was flooded and water rose to the fireboxes of engines. After the rain came hail the size of marbles. Much glass was broken both in the town and the surrounding areas by hail. In some places the hail was fully an inch in diameter. Some were more like icicles than ordinary hailstones.
Manchester Times 27 May		There was considerable damage to goods in Friargate and in Water Street furniture was floating about. Many shopkeepers in Church Street had goods damaged or destroyed. Liverpool Mercury lists seven mills that were damaged either by egress through the roof or from below. A boy was killed by lightning at Longton and houses were seriously flooded in the same village. There were many reports of lightning killing animals and striking houses. The rain flooded Avenham Park including some schools
Liverpool Mercury 25 May		Liverpool: Severe lightning effects on buildings but no flooding reported.
8 Jul 1865	Thunderstorm	Blackburn: A barn was burnt down after being struck with lightning.
Ashton Reporter		Ashton: The storm and heavy rain lasted one hour; much debris of earth and stones was washed from Hough Hill and houses shops and cellars were filled with mud. The greatest damage was done on the Castle Hill. On Hough Hill the water made chasms 5 feet deep. A councillor's house at Spring bank was flooded. The water flowed down Walmsley, Kay, Kenworthy and Vandrey Streets filling houses and cellars and also in Grosvenor street and Square where virtually every cellar was flooded. At Castle Hill the water flooded houses in High Street with water rushing in the front and out the back.
17 Aug 1865	Waterspout! – but unaccompanied by thunder	Blackpool: an immense fall of rain caused great damage to property. Cellars were suddenly filled including those of hotels and several shops were flooded in Bank Hey Street
Lancaster Gaz 19 Aug 5 Jun 1866	thunderstorm	Heavy rain was generally welcomed due to previous dry weather. There is no reference to flooding.
Bury times 9 Jun 5 Sep 1866	Thunderstorm	Manchester: Rain with hail quickly flooded the streets as well as the entrance to shops. The hailstones were of unusual size.
Manchester Courier 6 Sep 15-17 Nov 1866	No reference to thunder or rate of rise	[Severe flooding occurred in the London area] Very high rainfall but principally in S Yorks and Lancs

British Rainfall

JBA Ribble Report

Manchester courier 19 Nov Warrington Advertiser

Major flood on the Ribble and all its tributaries and also on all the adjoining catchments on both sides of the Pennines including the Lune, Aire, Calder (Yorks), Mersey.

The flood of 1866 caused the most serious and widespread flooding throughout the Ribble catchment over the last 200 years, affecting both upland tributaries and the main river as far as Preston, where there were serious consequences even within the tidal reach. This was in spite of the fact that the tide was one of the lowest of the month. Local newspapers provided a detailed description of the effects of the flood including major flooded property and the depth or extent at certain locations. Exceptional flooding also occurred on the Lune and on the Aire and Calder in Yorkshire.

It has not been possible in this review to assess the discharge associated with this flood, but it is possible that information on flooded locations or depths may be able to be used for this purpose. Although many buildings and even streets have been demolished since 1866, it is likely that discharge can be assessed from the peak water level at some existing sites which have remained unchanged.

Of particular interest is the boat house at Samlesbury where flood stones from earlier eighteenth century floods (1771 and 1775) were recorded and compared with the flood of 1866. This is in the reach where detailed hydraulic modelling will be carried out. If the mill still exists and the levels determined, then discharge may be readily assessed (assuming that no significant changes in the control have occurred during the period)

Descriptions are provided below by tributary and by reach or town. It is recognised that details may be fuller at some locations than at others depending on the source of the information. A comprehensive search was not possible in this review.

1866 - Weather

Information on rainfall causing the flood is imprecise both in amount and duration. There is reference at Burnley to the 'downpouring of Thursday (15th) night continuing on Friday morning'. Selected annual maximum daily rainfall totals in British Rainfall are divided between 15th and 16th. At this early stage of rainfall recording it is possible that some stations recorded on the day of measurement and some to the previous day. Several Lancashire stations recorded 1.5 to 2.0 inches on 15th, but none on the Ribble catchment. On 16th Blackburn recorded 2.10 and Stonyhurst (Preston WW) (Location ?) recorded 3.87. Halifax had 3.25 over the two days. It was reported that rain stopped Clitheroe at 15.00 and at Preston at 14.00

There is no evidence of any snowmelt contribution. Temperature at Warrington from a.m. on 15th did not fall below 44oF. After the rain stopped, the temperature dropped rapidly to 24oC on 17th

The rain was accompanied by a SW wind from Wed 14 to Friday 16. The wind turned NE and rain ceased at 15.00 (at

Clitheroe). The rain was accompanied by rapidly falling pressure until 09.00 on 16th (988.6 Mb), rising sharply to 1021.5 Mb at 09.00 on 17th.

On the Darwen at Blackburn the flood was reported to be at its highest at 18.30. At Preston the Ribble began to rise rapidly at 17.00, overflowed its banks at 19.00 and reached a peak at 22.30. Given cessation of rainfall at 14.00, the centre of area of rainfall was rather earlier. This suggests a lag time as great if not greater than in the recent recorded floods of smaller magnitude.

1866 - Calder - Burnley

Both the Brun and Calder were in flood though the effects from the Brun were said to be more serious. Overflow from the Leeds and Liverpool Canal also had an effect and this was said to be the source of water which rushed down Ship Alley, flooding the street that leads to the Gasworks. On Fletcher Street, cellars on the left were flooded. Water was within a foot of the top of the doors. On Heap Alley cellars and some houses were flooded. Water poured down Manchester Road like a torrent and Pickup Delph was flooded several yards deep.

The River Brun flooded many properties in the vicinity of Bridge Street. The bridge arch was unable to convey the flow and water flowed over the top. The afflux at the bridge exacerbated flooding in Water Street and Cannon Court. Cannon Street was flooded on both sides. "The Brun rose up Water Street, to the right along Cannon Street and poured into Bridge Street and down to the bridge, the safety of which was doubted". To the left of the bridge the water rushed against a wall on the left of Fleet Street. A footbridge from the Old Brewery to the Market Place was washed away.

The Calder covered the road on both sides of the bridge at Burnley Wood and flooded the low-lying parts of Townley Park. Many houses in Newtown were flooded at Bridge End and cellars in Cheapside, rushing through the Cross Keys Inn. At Curzon Street bridge, water entered houses on the Park side, forcing occupants to their upper stories.

Mills adjacent to the river were flooded. At Parsonage Mills shed, water covered the looms. Rushworth's mill on the right of the Brun was undermined. Damage was done to Mr Barnes' caul (?) below Cannon Street bridge. Mill weirs at Pleasant Ford were taken down and a stone bridge at Netherwood Farm was washed away.

1866 - Calder - Padiham

The flood water washed away an embankment known as the Nook of the Hown "which had been put up many years before to prevent the lower portion of the town from being flooded which was sometimes the case previously". However the damage was far greater after the failure of the embankment and damage greater than known by the oldest inhabitants. A great many mills and sheds were flooded. The following were listed:

Wm Ingham and Sons - the highest and least affected

Lilley Weaving shed
Alma Shed
Shed of Whittakers
Sherburn and Watson's Mill
Britannia Mill
Spa Mill

In the shed of Mr Gregson's (?), water was within a few inches of the height of the looms; in others about 2 feet deep. The timber yard was flooded. All the houses and shops in Burnley Road from Padiham Bridge to Gas Street were flooded with a depth from 1 to 3 feet. All the houses in Waddington Street, Tattersall Street, Sager Street, Myersclough Street and Gas Street were also flooded. The Gasworks was flooded and no gas could be made.

Another report noted that the Coal Tramway bridge was washed away, partly blocking Padiham Bridge and raising the upstream water level. Scores of houses shops and cellars were flooded from the bridge to the mill of J. Hindle and Co. In Thompson's mill the water was 3 feet 4 inches deep.

1866 - Calder - Whalley

The town was flooded to a greater extent than known by the oldest inhabitant; several dwellings were a few inches deep in water which had never been known to flood before. One house was flooded to the mantelpiece.

1866 - Upper Ribble - Clitheroe

Flooding occurred both from the Ribble and from the Wilkin Brook. The accounts did not usually distinguish whether the flooding resulted from one or the other. The Ribble flooded Garnett and Horsfall's new weaving shed at Low Moor. At Waddington Lane railway bridge the water rose 9 feet, stopping all traffic.

The Wilkin Brook flooded houses at Waterloo to a depth of 18 inches. Bracewells Mill was flooded; the water got into flues and put out the fires. Water was into houses at Taylor Fields to a depth of 4 feet. Robinsons Mill and Dewhurst's Albion Mill were flooded. Water was held back at Wilkin Bridge; 30 yards of wall was washed down and many houses flooded to a depth of 2 to 3 feet. Victoria Mill and Salford Bridge Mill were flooded. In Salford water was in many houses to a depth of 3 feet. Houses in Water Street were flooded. Hodgson's Mill was flooded.

1866 - Hyndburn

A dam at Church was overtopped and failed and two houses washed away. Fortunately the occupants had been warned in advance and escaped. There was resulting damage at Dunkenhaigh and Oakenshaw. Bridges to Rippon and Barton's Printworks were carried away and water entered the printworks. Wilkinson's Print Works is further from the river and

only the adjoining joiner's shop was affected. Water covered the retorts at the gas works and fires were put out. Hyndburn Bridge was demolished and several houses near it flooded. Five houses at Tanpits were flooded.

At Great Harwood, several streets were flooded, a few wooden bridges washed away. Cottages, a few mills and workshops were flooded; Mr Noble's mill was the greatest loser.

1866 - Darwen - Darwen

Damage was done at Hollins' Paper Mill and at the Logwood Mill machinery was inundated.

1866 - Darwen - Blackburn

Damage was done along the whole route of the Blakewater from the cemetery, near which many cottages and a weaving shed were flooded. "4000 operatives at mills were forced into idleness on Friday as a result of damage done to weft and yarn". The river overflowed its banks at Brookhouse and flooded the mills of Hornby and Co and Mr Ward. Follywell Street, Merchant Street and mill were flooded as were Mr Eastwood's machine works. Houses in Water Street were flooded to 12 to 18 inches. Jubilee Mill was flooded and the water was into the timber yard at Darwen Street.

The lower part of the borough was flooded to 4 feet including the Wrangling district, embracing Harrison, Brunswick and Pearson Streets and the lower portion of King Street and streets adjoining Mr Livesey's Mill and part of Whalley Banks. It was noted that some houses in the Wrangling are flooded to some extent twice a year, but this was far beyond previous experience.

The footbridge at the foot of Anvil Street was carried away. The timber yard in Harrison Street was severely affected.

Six or seven cotton mills were stopped - Jackson's Phoenix mill was flooded to 2 feet; also Slater's, Livesey's, Sellars' Fielding's Higton and Sharples' Hopwood and Co. Hornby and Co Banktop mill was also closed.

Low lying land in the vicinity of St Peter's Church was flooded including the foundry of Stafford and McCallan and into cottages in adjoining streets. There was general flooding of the Wrangling district. Several mills were stopped. Pleasington valley was a considerable lake; Hogton Bottoms was a complete sea of water, flooding several cottages and workshops.

1866 - Hodder

No information was given but this may be more the result of the absence of reports rather than the absence of flooding.

1866 - Lower Ribble above Preston

At Ribchester some people had to be removed to safety from their cottages.

At Samlesbury the flood washed away the surface earth of fields. "On the boat house at Samlesbury, the height of the last two great floods, one in 1771 and the other in 1775 are marked on a stone. The flood in the latter was about 4 or 5 inches higher than in the former and about 7 inches higher than the one which occurred last Friday. But there was not the same 'flowing space' for the water nor the same outlet for it as now." It was thought that 1866 was the greater flood.

1866 - Ribble - Preston/Walton/Penwortham

All the land from the base of Fishergate Bottoms to the bottom of the embankment near Walton was a sheet of water. "The Ribble and the Darwen are one". Several farm houses were flooded including Mr Strickland's farmhouse and barn.

From Walton Bridge, the river stretches right across the meadows above and below Frenchwood to Walton Mill. The old portion of Avenham Park was filled up and rose much above the level of the lake in the park. Miller Park was similarly flooded and the fountain was out of sight.

Below the North Union Railway bridge, there was a sea of water with houses jutting out of it. Occupants bundled furniture upstairs and sailed off to Fishergate Hill. People in the centre of South Meadow Lane were hemmed in on all sides to a depth of 3 to 4 feet and were eventually removed in boats. The cricket ground adjoining South Meadow was flooded to 4 to 5 feet. Some houses were also flooded at the bottom of Grafton, Landerdale and Beech Streets. It overflowed the end of Ribble Place and ran in at the end of Taylor Street and flowed up towards Regatta Inn where at the peak of the flood it was running at a dept of 4 feet past his door.

Workmen had to abandon Strand Road and move to Fishergate Hill. The river flowed along Ribble Place, then entered Taylor Street, then branched off by a passage into Lime Street, took a straight move across the bottom of Fishergate Hill and along Strand Road. At its peak (at 10.30 pm)the water was running through Elm Street (above Lime Street).All the back premises of the Taylor Street houses were flooded to a depth of several feet. Some houses were flooded at Beech Street. At Fishergate Hill, water had risen as high as the base of Stanley Terrace. It covered the Ribble Branch Railway. Humber's Mill at the bottom of Marsh Lane was flooded to several feet and the waggon works were also inundated.

The water was right up to Penwortham and from the Preston side it seemed to be swamped from beside the new church past the foot of the Oaks (Mr Cooper's) and right on the brow leading up to the old church. Penwortham Holme was one sheet of water and the water covered the field behind right up to the wood. Gillibrand's farmstead just below the Holmes was soon surrounded by water (as it had been on many previous occasions) and was tremendously inundated. Two small cottages opposite Swallow House were completely washed down.

After the flood it was reported that Strand Road had been washed quite bare and looked more like the bed of a river.

Sleepers on the Ribble branch railway were washed away. An embankment between Ribble Place and Penwortham bridge had been washed down. The foundations of the Pleasure Boat Inn were exposed to the 'very bottom' and it was feared the house and buildings would be washed away.

At Walton a wall of Calvert Bros. factory was swept down and water covered the factory floor. Damage at the mill was estimated at £4000 and in the village as a whole at £20000. The Regatta Inn was surrounded

SUMMARY AND CONCLUSIONS

1. A record of the major floods that have occurred on the catchment since the latter part of the eighteenth century has been provided with summary descriptions of flood extent where available. A more complete description of the flood of 1866 is given.
2. Given the extent of damage and disruption in this flood it is highly probable that the associated discharge is much greater than the 100 year return period flood estimated from the data. The possibility of two further floods of similar magnitude (in 1771 and 1775) in a 250 year period gives support to the possibility that such an event occurs with an average recurrence interval of the order of 100 years, suggesting a steepening of the flood frequency distribution at higher return periods.
3. The two flood stones at the Boat house in Samlesbury, if still in existence, or if there is photographic evidence of their level, might be used to assess the discharge for these three largest floods. If this is done, a parallel study of the downstream reach of channel should be carried out to assess changes in control.
4. There may be sufficient information at several other sites, where the flood level has been described (in public houses, mills etc.) to assess flood discharge in individual events.
5. The flood levels described for the flood of 1866 may be compared with the flood levels assessed from flood frequency and hydraulic analysis.

Manchester: At Manchester such floods have rarely been seen here; the Irwell was 25 feet above its ordinary level and has not been so high since the Holmfirth catastrophe Feb 5 1852. Three men were drowned in the Manchester area. Along the course of the River Medlock the following places were flooded; a coachbuilder near Ardwick bridge, houses in Tipping St, Tennant's Chemical Works, a spinning mill at Jackson Street and an iron works, a dyeing company at Brook Street and scores of other places along the river. Inhabitants left their houses in Broughton and Strangeways where buildings had become unstable.

Ashton: Printworks in the Tame Valley were flooded as were several other mills

Stalybridge: A number of houses were flooded in Bridge Street.

Hyde: The whole stretch from above Brook Stair Bridge to Glasshouse Fold bridge was a sheet of water. AT Broom Stair

the water rose 14 feet above its ordinary level and was within a few feet of the arch of the bridge. The water rose to within 4 feet of the Great flood of August 1799 at Gibraltar Mills.

Marple and Compstall: Marple Bridge forge weir was reduced to a wreck. Norfolk Arms and other houses were flooded. An iron bridge was carried away. One man was drowned at Duckinfield.

Stockport: Many mills were flooded, some to a depth of 7 feet. At Wellington Bridge the water was about 14 feet above its usual level.

Wigan: Large numbers of houses were flooded.

Rufford (Lancashire) reported a 'greater flood than for 30 years'.

Warrington: Water rose to a height not known for 30 to 40 years and was within a yard of the apex of Warrington bridge.

Many houses were flooded some to 3 feet deep. Haystacks, horses, sheep and pigs were seen washed past Bank Quay.

All the mills and warehouses have been flooded. At Warrington the record of the height of two previous floods is preserved on the house of Mr J Lea No 8 of the riverside row of houses in Latchford. Two brass plates are fastened; the highest shows the flood mark of a flood on St Swithin's Day 1828 and the lower one reads St Thomas' Day 1837 and is 3 inches lower. The 1866 flood is 6 inches below the St Thomas Day marker. A brass plate will be placed there.

In the lowest room of Howley Quay warehouse there is the following record chalked on a beam. 'A flood 14 inches in this warehouse floor on Jul 15th 1828'. On Nov 17 1866 it rose to a height of 19 inches, 5" higher than in 1828 and this 1828 flood is the highest remembered by Mr Bercow the engineer employed by the Bridgewater Trust who has been there 40 years. Outside the room on the west corner of the warehouse is a stone marked HW 1828 which is 2' 4 ½" from the ground. In this flood the level was a ½ inches lower than this mark. Elsewhere it is stated that floods in Warrington were equalled only by those of Jul 15 1828, and Dec 21 1837.

<Manchester>: The storm tore up roads on the hill side.

Mossley: Rain fell in torrents for 2 hours; one house at Brookbottom was flooded to several inches. Some damage was caused to highways.

Oldham: A thunderstorm occurred in Saddleworth and extended over the eastern portion of Oldham. A girl was killed by lightning. Several animals were killed and buildings were struck. The main damage was caused by flooding and many cellars were flooded including those at Bottom o' th' Moor. The main sewer was unable to carry off the water. At Royton 2 ½ inches fell in an hour and a half but at the western end of the town scarcely any rain fell. At the western end of the town scarcely any rain fell.

Manchester: the River Medlock had risen 7 or 8 feet overnight and rose with unexampled suddenness. The body of a woman was found in the river next morning. Phillips Park cemetery was flooded to 4 or 5 feet and coffins were floating about. The inquest concluded she had been washed out of a grave.

Accrington (11th) Thunderstorm with hail and a man was struck and seriously injured.

Great Harwood: Houses in low lying places were flooded. A cow and a horse were killed by lightning. The storm was very localised.

Bolton: The storm lasted about 1 ½ hours and in a very short time the River Croal roase several feet and many cellars and other low lying places were flooded in some cases to several feet. A hayrick was ignited by lightning. At Farnworth the railway was flooded with the rails several inches under water.

10 May 1867 BR

Manchester (Friesland) 1.60" in 30 m

**28 May 1867
Ashton weekly
reporter 1 Jun**

Thunderstorm

**10 Jul 1867
Manchester
Courier 12 Jul
Preston
chronicle 13 Jul
Blackburn
Standard 17 Jul**

Thunderstorm and early part of the day was extremely hot. At Royton 2 ½ inches rain fell in an hour and a half.

**13 Jul 1867
Manchester
Times 20 Jul**

thunderstorm

19 Aug 1867 BR		A great thunderstorm at night; River Hipper flooded higher than for 20 years; trees swept away and people removed from upper stories in boats in Shipley Street; Claycross tunnel flooded trains delayed 5 hours. On 20th at Duffield near Derby 2 hour thunderstorm with 2.34"
3 Sep 1867 Ashton Reporter 7 Sep		Ashton: Severe thunderstorm but only damage to crops reported. Stalybridge: Grates were choked by earth washed down from the higher portions of the town and several cellars were flooded. Houses were struck and damaged at Duckinfield and Hyde Oldham: A man was killed by lightning.
19 May 1868 Liverpool Daily Post 20 May 27 Jun 1869 Bolton Evg News 29 Jun	Thunderstorm with hail Storm lasted about 1 ½ hours but with limited thunder and confined to an area 4 miles in circumference.	Liverpool: Dale Street near the top of North John street was flooded as were Whitechapel and many other streets in the lower part of the town. In the cellars in Compton House in Church Street the water rose to a height of 5 feet from backed up sewers. Chorley: In a very few minutes the streets and roads were under water and several cellar dwellings were completely swamped – and this in the higher portion of the town. The cellars of the Leigh Arms and the Queens Hotel were flooded. In the lower part of the town houses were flooded to such a depth that it was feared it might reach the bedrooms. Ballast on the railway was washed away for about a mile Liverpool Cellars in all parts of the city were flooded. Bootle: A large sewer burst and flooded the neighbourhood.
1 Oct 1869 Manchester Courier 2 Oct 3 Oct 1869 Bolton Evg news 4 Oct	Thunderstorm Thunderstorm	Chorley: In a very short time the Market Street was rendered almost impassable and the water found its way into tradesmen's cellars
17 Jun 1870 BR Yorkshire Post 18 Jun	Storm followed a drought and high temperatures 80F	Bolton: The thunderstorm lasted nearly 2 hours. The main sewer near the river in Bridge Street burst washing a great quantity of earth and bricks into the river. The River Croal rose 3 feet and a number of low lying houses in the area known as Twenty Steps were flooded to a depth of 4 to 5 feet. A slaughter house in the vicinity was flooded. The cellars of several shops in Blackburn Road were also flooded to a depth of nearly 5 feet. The cellars of the Waggon Inn were also flooded.
9 Jul 1870 BR JBA Ribble Report Manchester Times 16 Jul Archer and Fowler (2015)	Severe thunderstorm	BR notes Remarkable floods described at Todmorden and Bacup (Upper Calder) and also at Dent. BR gives 6 ½ pages of description contained in BR Todmorden flood file. (Note also a report in Met Mag 5 p 105 by Sedgewick). Note the very circumscribed area of the storm with perfectly fine weather prevailing all around the storm area. The rain at Todmorden and Bacup occurred between 14.00 and 15.00. there was a sudden rise in water level at Todmorden soon after which in a few minutes overflowed its banks and left the lower part of the town completely under water with one house destroyed and a woman swept away and water swept through many mills destroying looms etc. The Calder through Burnley rose 4 feet above its ordinary level in an incredibly short time Reference was made to a similar flood in Bacup on 9 August 1849. A serious thunderstorm, accompanied with an extraordinary fall of rain occurred in the neighbourhood of Lancaster and Morecambe. But the most serious visitation was in the eastern section of the county, between Haslingden and Burnley. Between Townley and Portsmouth the adjoining fields were about two yards deep with water, and nearly every house in the immediate district was flooded. The valley from Portsmouth to Todmorden was inundated, and it is feared that a

bridge belonging to the line below the latter station will fall. The line was blocked in several places, and the traffic was suspended for several hours. Many of the small villages in East Lancashire were flooded, and it is feared that much damage has been done in some of them.

Heavy rainfall occurred on Flower Scar, a moor which separates Bacup from Todmorden.

Burnley: A storm passed over with unremitting force, for upwards of two hours. The river Calder, which passes through Burnley, was very much swollen, and rose in an incredibly short time, something like four feet above its ordinary level. The streets in several parts of the town presented the appearance of an unbroken stream. Men, women, and children could be seen wading through the water knee deep, whilst here and there were to be seen floating on the water stray pieces of furniture. In Fletcher-street, and near the cattle market, were to be seen many cart loads of furniture, which had been hastily recovered from the houses, indiscriminately heaped up, whilst in Cannon-street, and in Wapping, almost every cellar was flooded, and in many instances the houses also. Large quantities of newly-mown hay were either washed away or completely spoiled by the wind and rain. In Manchester Road many tons of the macadam were washed towards the lower parts of the town, and a number of carts were engaged for a good many hours in clearing the streets. The Cross Keys public house, in Newtown, the landlord of which has just recovered from the Burnley Corporation a sum of money for damage sustained in a recent storm, was very considerably damaged, whilst the streets thereabouts were many inches deep in water.

Portsmouth: About three miles from Burnley, the line was blocked up for a considerable time by sediment washed from the hills, the water on some parts of the line covering the steps of the carriages.

Accrington: Considering the violent nature of the storm, the damage done is inconsiderable, chiefly arising from the flooding of some of the cellars in the lower parts of the town.

Bacup: Several persons concur in saying that waterspouts, similar to what are sometimes seen in tropical latitudes, were at one time distinctly visible. The storm raged for about an hour and a half, and, with but few exceptions, flooded all the streets of the town. Most of the mills are built along the banks of the river Irwell, in some instances over the river, and all of them have sustained more or less damage. At Vale Mill, the flood swept down one of the walls of the weaving shed, burst the arch for a distance of several yards, and, in a few minutes, and for several hours afterwards, a perfect torrent of water was dashing through the middle of the building. Several of the looms also fell into the river. At Nut Mill the damage is of a similar character, but on a more extended scale. At this place a large wall in the middle of the weaving shed has been washed down, and the roof has also partially fallen in. Here the water entered the weaving shed and destroyed a large quantity of weft and cloth. At Albion Mill the flood entered the weaving shed, and soon all the looms were completely covered. Aitkin's mill premises in Burnley Road, has been completely destroyed, a large portion of the roof being carried down the river for a distance of several hundred yards. The flood also entered the weaving room of Shepherd's mill, in the same street, and completely covered the looms. Irwell Mill, belonging to the Rossendale Industrial Company, Limited, is a total wreck. The flood entered the weaving sheds at both Spring Holme and Throstle Mill, belonging to Messrs. John Mander and Son, Newchurch-road, and also at the India and New Hey Mills, belonging to Mr. Edward Hoyle. The damage done to house and other property is on a scale of the most frightful magnitude. At one time, in St. James' Street, the water was rushing along at a fearful pace to the depth of 5 feet 9 inches, bearing along on its bosom every conceivable kind of merchandise and of household goods. As an instance of the force of the flood, we may mention that a railway lorry, heavily laden with cloth, and without horses, was carried a distance of 100 yards as though

it had been a boat. So suddenly did the flood come that the occupants of the different shops and houses had scarcely time to close their doors, much less to attempt to save any of their property, but were glad to escape to the upper rooms of their premises. Many tradesmen had everything, even until it came to their weights and scales, swept out of their shops, and some, it is feared, will be completely ruined. The Bacup Co-operative Store have lost the whole of their stock in the gutta-percha department. In numerous instances houses have been stripped of the whole of their furniture. Notwithstanding the heavy loss of property that the flood has caused, it is satisfactory to learn that not a single life has been sacrificed, but we have heard of several narrow escapes. Had the flood occurred in the night time, the loss of life would have been something terrible to contemplate. An almost similarly destructive flood visited Bacup on the 9th of August, 1849.

Clitheroe: the storm lasted for 2 ½ hours. A barn was set alight by lightning. There was no reference to flooding.

Thunderstorms affected upper Calder and Darwen in the vicinity of Accrington, Burnley; also Todmorden and Bacup. At Burnley, the River Calder rose 2 to 3 yards in height following scarcely an hour's rainfall and overflowed its embankment. Water did most damage in that part of St James Street known as Cheapside. Water ran 4 feet deep through Cross Keys public house and shops and houses adjacent and across the road were flooded in some cases to a yard and a half deep. Low Lane was flooded and houses stood 2 feet deep in water. Manchester Road (unmacadamised) ploughed up. In Fletcher Street furniture was recovered from flooded houses. In Cannon Street and Wapping almost every cellar was flooded and in many instances the houses also.

Stalybridge: Rain quickly flooded the lower portion of the town finding its way into cellars. The Eagle Inn near Stamford street county bridge was flooded to a depth of more than a foot. Several houses in Vaudrey Street were flooded to a depth of 1 foot 3 inches. Some grocer's cellars were also flooded.

Tintwistle: Two horses were killed by lightning. Many houses in the village were flooded

Manchester: a thunderstorm was reported but no reference was made to flooding.

Preston: The lower parts of the town were flooded.

Ashton: The sewers were inadequate in Turner Lane and flooding occurred. Water came down in torrents from Hurst. Furniture was floating in rooms and residents retreated upstairs. In Winton and ? almost every house was flooded to several inches and a warehouse was also flooded. The footway under the railway was some feet deep in water. The Ashton Mechanics Institute was set alight by lightning.

Wigan: A woman was killed by lightning and three cows were killed. The ground was covered with hailstones to a depth of 1 inch and growing crops were damaged.

Atherton and Tyldsley: The storm lasted 3 hours with rain mixed with hail and the water rushed down the streets as though a reservoir had burst. Scores of houses were inundated. Bridgefoot Cotton Mill was set alight. Mills were flooded and serious damage done. Low lying houses especially in the Bag Lane area were flooded up to their window sills. Water rushed in the windows of Hindsford Foundry. Scores of houses were flooded in Chowbent. A mill in Bedford Leigh was also damaged although there was little rain there.

Ashton: Anglers were struck by lightning and lost their rods.

Clitheroe : A cow was killed and a house damaged by lightning.

26 Jul 1870
Ashton Reporter
30 Jul

Thunderstorm following
oppressive heat.
Hail and rain for upwards of 1
hour.

25 March 1871
Manchester Evg
news 27 Mar
19 Jun 1871
Ashton Reporter
24 Jun
Manchester
Times 24 Jun

Thunderstorm for an hour and a
half

9 Jul 1871
Manchester

Thunderstorm

**Times 15 Jul
18 Aug 1871
BR
Westmorland
Gaz 26 Aug
18 Jun 1872
Westmoreland
Gazette 22 Jun
Manchester
times 22 Jun
BR**

Kendal 3.05" in 3 hrs
Burton 1.45" in 45 mins 2.30 to
3.15

Newton Nurseries (17th) 0.95 in 35
m
Macclesfield Thunderstorm
lasting nearly 12 hours; rain for 10
hours, in which the (here)
unprecedented fall of 4.27 was
registered; serious damage by
floods in the town and district.

Casterton, Kirkby Lonsdale. Hot,
dark morning, at 9 a.m., temp.
75°, with a gentle S.S.W. wind,
which gradually veered to W.; by
11.15 a.m. the clouds in the west
portended a storm, which came
on at 11.37; it followed the course
of the Fells, which have a
northerly direction, and so great
was the downpour of hail and rain
that in 18 min. there fell 1.34 in.
being at the rate of 1 yard deep in
8 hours, or 4 ½ in. in an hour;
temp, fell from 79° to 65°, and the
hailstones were more than half-
an-inch in diameter.

**24 Jun 1872
York Herald 29
Jun
6 Jul 1872
Manchester
times 13 Jul
10 Jul 1872
BR
13 Jul 1872
Manchester**

Thunderstorm

Thunderstorm

Newton Nurseries 1.20 in 1 h 30 m

Rain almost incessant during the
past week but for two days a
continuous downpour.

Blackburn: Streets were flooded and Blakewater was enormously swollen.

[Thunderstorms were widespread in northern England in most cases with serious fatalities and damage from lightning but little rain or flooding]

Nothing in Manchester papers

[Widespread thunderstorms with deaths from lightning and flooding occurred in England, notably at Manchester, Oldham, Birmingham and Yorkshire. More thunderstorms occurred on 24th especially Staffordshire.

Manchester: Thunderstorm lasting from 6 pm to midnight. Lightning damage to a mill at Gaythorn was reported. A child was killed by lightning at Weaste.

Goyt valley: On 19th the Goyt was 12 to 14 feet above its normal level. At Whaley Bridge houses near the river were completely flooded and people were taken into the chapel and inns. At New Mills where the Goyt is joined by the Kinder, two blocks of a paper works were washed away. Two stone weirs were washed away and two bridges. At Waterside Disley a cotton mill was badly damaged. At Strines a stone bridge was partly washed away. A gasometer was lifted from its basin and tossed on the river bank. At Marple several houses were flooded. The Pineapple Inn was damaged by lightning. At Romiley a stone bridge was washed away. A bridge near Taxal church was destroyed. At Chapel en le Frith a severe landslide occurred onto the Midland Railway and a train was wrecked when it hit the debris.

Burnley: Low lying districts were flooded but there is no reference to houses.

Bury: Rain was accompanied by large hailstones, several streets were flooded and the Barn Brook overflowed. The Star Inn Freetown was struck and seriously damaged. Other houses and mills were also struck.

Oldham and Rochdale: Damage was done by lightning but no flooding was reported.

A child was drowned in mid Cheshire when a house in Winsford was deeply flooded.

Northwich: A large part of the town was under water; the River Weaver overflowed its banks. The High Street was flooded to a depth of 3 to 4 feet with some occupants rescued by boat. The Rivers Dane and Weaver overflowed. The court room was flooded within 30 minutes of first observation and trials continued for a time with participants standing on forms and chairs before it was adjourned; the water was 3 to 4 feet deep. The saltworks of Anderton and Winsford were flooded and the fires put out at the latter place. A child was washed out of a house at midnight and drowned. A great many houses were flooded.

Macclesfield: a woman and child were drowned when the river Bollin overflowed. Two reservoirs burst in the vicinity

Ormskirk: The railway was completely inundated and paved footpaths around the town were washed up. Several buildings were struck by lightning.

Macclesfield: the thunderstorm was of short duration but intense. In the Bollin the water was said to have risen 5 feet in 3 minutes. Many sewers in the street burst and many houses were flooded. Mills were flooded and a house was struck by lightning and left in ruins.

Manchester: the River Medlock overflowed its banks to an extent which eclipsed all former floods including the one in 1866. The districts bordering the Medlock, which flows through Manchester from Phillips Park to Knott Mill, has been

**Times 20 Jul
BR**

Only in Bury and Bacup was a thunderstorm mentioned but this was the day before the continuous rain which caused damage elsewhere.
Caton (12th) 0.84 in 30 m

quite laid under water and affected some of the most populous parts of the city. The districts affected include Bradford, Beswick, Ancoats, Fairfield Street, London road, Brook Street, Charles Street, Oxford Road and on through Gaythorn. The Medlock at its peak was 21 feet above its normal level. Many streets were impassable for six hours including the London road which is the main artery with depths from 2 to 5 feet. Hundreds of houses were flooded with water rising in some to the bedrooms. At 12.00 the Medlock was only 3 or 4 feet above its normal level but by 3.30 it was 20 feet above its ordinary level at London Road bridge. The cemetery at Phillips park was flooded and bodies washed out of graves.

[Manchester Times has several columns of detailed description of the flood]

Fallowfield and Withington: A reservoir burst at Gorton and flooded houses in Fallowfield to a depth of 3 to 4 feet. A 17-year old boy was drowned attempting to retrieve a table from the flood.

Stretford and Sale: The countryside between these locations was under water with great damage to crops and hay. At Throstle Nest Weir the Irwell was within 15 inches of the flood of 1866; the Manchester Raceground was flooded.

Salford: The Irwell was 13 feet above its ordinary level and 6 feet three inches below the level of the 1866 flood. Cellars and works around Broughton were flooded but the effects were not as severe here as elsewhere.

Eccles and Patricroft: Large portions of Liverpool were laid under water. Gildabrook burst its culvert and adjacent houses were flooded. At Bencliffe Mill the river was 14 feet above its normal level.

Blackley and Crumpsall: A dam burst, a stone bridge and a weir were washed away. Many mills were flooded and nearby a young man was drowned attempting to retrieve timber from the river.

Middleton: Ten cotton mills were flooded and extensive dyeworks in Tonge and Rhodes were closed due to flooding and 2000 employees laid off. An iron bridge over the Irk was carried away as well as four wooden bridges. 150 cottages were flooded at Little Park.

Stalybridge: The river rose rapidly to nearly fill the arch of the stone bridge at Stamford Street. A wooden bridge gave way when a man and horse were crossing. The man was rescued some distance downstream but the horse was drowned.

Ashton under Lyme: Water rose to 4 feet depth in three major mills and a brewery was also flooded. A bridge under construction was carried away. Factories and a brewery were flooded at Bardsley. A man was drowned when the bank on which he was standing gave way.

Stockport: the Mersey rose to within 6 inches of the mark from the flood of 16 Nov 1866. The volume of the Tame was not so great as in 1866 but the Goyt was as high as in 1866. The lower storeys of the mills on the Mersey below the Goyt and Tame confluence were flooded. Twelve works are named in MT.

Bolton: A reservoir burst and damaged the downstream mill. Mills at Charnley were flooded. Many cottages were flooded.

Bury: Flooding was caused by a thunderstorm. A dam at Tottington burst and the water flowed down Tottington Brook, a tributary of the Irwell. Four mills were seriously damaged and in one the weavers had to climb on top of their looms to safety. Four or five wooden bridges were washed away. A mill chimney was damaged by lightning and nearly a score of houses was struck.

Oldham: Werneth Railway station was flooded and the water rushed out of the station towards Middleton Junction carrying away part of the embankment. Lees Hall Mill was badly flooded to a depth of 13 feet. Mills and houses were flooded at Cow Hill Chadderton. A bleaching works was carried away and in one mill employees escaped through

24/25 Jul 1872
Manchester
Times
BR 1919

Thunderstorms – 2 in Manchester
travelling north to south

skylights. All the cellars of dwellings and workshops in Mumps were flooded to 5 to 6 feet. Part of the wall of St Mary's Churchyard was washed away and some human bones were carried off.

Bacup: The town and the whole of the forest of Rossendale experienced a thunderstorm with hailstones. The Burnley Road was like a river for about two hours. Several mills were flooded. In Greavesfold and Tong nearly all the houses were flooded and debris to a depth of one yard had accumulated. The streets with the most damage were St James Street, Bridge St, Weir Terrace, South St, Irwell St and Burnley road. Several cattle were killed by lightning.

Saddleworth: the River Tame washed away Pingle Mill bridge above Delph and many houses were flooded in Delph and an iron bridge washed away. Several mill dams burst causing much damage to mills. At Upper Mill the water overflowed the main road bridge and the water passed down the main road and flooded all the houses to a depth of several feet. At Halls below Upper Mills a bridge was washed away and a drunk man was drowned there attempting to cross

Mossley: the river was said to be at its highest ever known. Two bridges near Greenfield were swept away and the stone bridge near Roaches was damaged. The Winterworth Bridge, two bridges at Scout and the Black Rock bridge were all swept away. From Greenfield to Scout the river and the canal were joined and the canal bank destroyed at Scout making a chasm 20 yards wide and 8 yards deep. Many mills were deeply flooded.

Leigh: Vast tracts of land were covered but in Leigh itself effects were limited but in neighbouring villages serious flooding occurred. At Low Side Lowton a number of cottages were flooded. The village of Bury Lane was almost completely submerged

Wigan: the river Douglas which flows through the town overflowed its banks, many houses were flooded and bridges impassable. Works along the river were flooded. A child was drowned at Adlington. Pigs and pigstys were washed away.

Manchester: no damage reported

Liverpool: Heavy rain so that drains were inadequate to carry the flow and streets converted to rivers. Steep streets such as Parliament Street, Hardman Street and the streets running from Everton Hill were covered from side to side, furrowing the macadam. Flow accumulated in the lower levels of the town where sewers were broken and tenements flooded. Along the line of the Old Pool from the Custom House to Paradise Street and northwards to Byrom Street scarcely a house escaped. Shops in Basnett Street and Hanover Street were flooded. Cellars of various newspaper offices were flooded. The spire of St Barnabas church in Parliament Street was struck and part fell through the roof into the church. The Police Station at Brunswick Dock was flooded through water coming up from the sewer (although it stands 3 feet above street level). Sand and gravel covered the dock railway. Quays to each side of Queen's and Coburg Docks were flooded to a depth of 2 feet with great loss to stored goods. Various public house cellars were flooded. Along Waterloo road New Quay and adjoining thoroughfares the water was 2 feet deep.

Birkenhead: Low lying streets were flooded. The streets in Tranmere Park and those on the western side of Happy Valley poured torrents into Happy Valley Road which was flooded in several places with damage to parapets etc. A house was struck and seriously damaged by lightning. At Woodside Ferry the water running down the inclines of Hamilton Street, Chester Street and Church Street converged towards the ferry station and flooded offices. A large wall in Argyll street between Theatre Royal and Stewart's barbers was washed away and the water poured through the gap. Much damage was done to hay and other crops in the Wirral.

Ormskirk: The storm lasted for 5 hours with hailstones as large as marbles during part of the storm. Property was flooded at Lathom and a number of houses were flooded at Bursclough with furniture washed about. Flooding occurred from the

overflow of the River Tawd and the River Alt. In Skelmersdale some roads were flooded to a depth of several feet.

Burnley: A mill was struck by lightning and several houses in the lower part of the town were flooded.

Preston: The town experience a severe thunderstorm for about four hours. The main effects were from lightning with several animals killed and several houses struck.

Blackpool: Two men were killed by lightning.

Blackburn: Many low-lying streets had the appearance of rivers. Duke Street Mill and a weaving shed at Little Peel were flooded and work had to stop. Walkden's paper mill, Brookhouse was flooded to a depth of 6 inches, as was Livesey's mill in King Street as were all the houses in the neighbourhood. The cellars of the Duke of York Inn were full of water. Similar conditions were experienced at Sharples, at Nova Scotia and in Addison Street and Penny Street. Also affected were Ribchester, Whalley, Rishton, Balderstone and Withnell with the storm lasting about an hour and a half.

BR 1872 notes a waterspout burst upon the mountains above Garstang

BR in 1919 notes: Mr. W. Shaw, of Caton, to whom we are indebted for some particulars, adds an interesting note relative to a remarkable storm on 26th July, 1872, which has hitherto apparently escaped notice in British Rainfall. On that occasion the reputed rainfall measured in Escowbeck Gardens, Caton, is given as 2 ¼ in. in little more than half an hour. The rain gauge in use was unfortunately of the now obsolete pattern of float gauge fitted with a fixed measuring rod projecting from the funnel. The exposed portion of the rod undoubtedly acts as a collecting surface, and the precision of the reading was thus vitiated, so that we cannot accept the record as authentic, but even allowing for the error introduced by this means, the phenomenon is of sufficient importance to be put on record. On the occasion in question all the bridges over the Artle Beck and Bull Beck were washed away, and a child carried from the road into the torrent was drowned.

[Storms were also reported at London, Derby, Leicester, Hampshire, Kidderminster, Crewe, Dudley (a man killed by lightning), Wolverhampton and Leamington]

Accrington: A few dwellings were flooded and the rain ploughed furrows in roadways. A barn struck by lightning was destroyed.

Elsewhere in Lancashire the effects were mainly from lightning.

Werneth: A cloudburst filled the valleys on each side of The Lows, a range of hills running to Mottram. In Lyham Lane the houses on each side were filled. Large stones were carried about in all directions and much damage was done in Werneth and Gee Cross towards Hyde Lane, Hyde. **Hail covered the top of the Lows to a depth of 6 inches.** Houses were flooded at Compstall; the market place was flooded and the schoolroom underneath the Athanaeum was filled with water to a yard deep.

Manchester and Salford: The cellars of many warehouses and dwellings were flooded including warehouses in Market Street. The lower storey of Salford Town Hall was flooded. A house was struck and damaged by lightning.

Bury: The lightning was exceptional for just over one hour but no flooding was reported.

Bolton: the thunderstorm lasted two hours. A man was killed by lightning. Several houses in different parts of Bolton were flooded mainly due to defective drainage.

Bury: Two separate thunderstorms passed over the town. Houses and a mill were struck by lightning and damaged. A few streets were flooded and in two houses it burst open the doors and entered to a depth of 2 feet. A man was drowned trying to reach home through flooded water.

6-8 Aug 1872
Manchester
times 10 Aug
BR

Thunderstorms reported in
 Manchester, Burnley, Accrington,
 Bolton, Werneth
 Broughton in furness 0.51 in 20 m

4 Sep 1872
Manchester
times 7 Sep

Thunderstorms

28 Sep 1872 Yorkshire Post	Widespread heavy rain (not a thunderstorm)	Northwest Lancashire: All the low lands have been flooded and great damage done to crops. The Ribble overflowed its banks. The Miller park at Preston was flooded and adjacent houses were affected. The Lostock overflowed its banks at Croston and land was inundated at Rufford and Penwortham. Damage was also done by the wind.
30 Sep		
2 Oct 1872 Westmorland Gazette	Not a thunderstorm	Various rivers in the North including the north Riding and The River Kent when it was said that residents couldn't remember when the river had been so swollen. However, no property or roads were reported flooded.
5 Oct		
3 Jun 1873 Westmoreland Gazette		[reference to storm in Manchester where streets were flooded to several feet]
7 Jun		
30 Jun 1873 Burnley Advertiser		Bacup: The River Irwell rose to a considerable height in a short time indicating heavier rainfall at Dirplay than at Bacup. At Dirplay and Weir the rainfall was equal to that in 9 July 1870. At Weir Terrace several houses were flooded and the water made holes half a yard deep in the turnpike road
5 Jul		Whalley: there was a severe flood from a mountain called Whalley Nabs which brought down large quantities of earth and stones. A very large ash tree next to Whalley Abbey was struck and destroyed.
17 Jul 1873 Burnley Advertiser		
19 Jul		
22 Jul 1873 Westmorland Gazette	Thunderstorm raged for several hours.	A dozen people were reported at various places to have died of sunstroke.
26 Jul & 9 Aug Lancaster Gazette	Excessive heat with 89F in the shade reported.	Blackburn: A man severely injured by lightning
26 Jul Burnley Advertiser		Liverpool: Cellars and streets were flooded in the lower parts of the town. Several buildings were damaged by lightning.
26 Jul BR		Chorley: Streets were flooded. Several houses were struck by lightning. A cow was killed.
		Preston: the storm came from the northwest and was accompanied by a violent wind
		Bolton: Two boys were killed by lightning whilst kite flying – before the rain had commenced. Rain was accompanied by hailstones of enormous size. The streets in the lowlying part of the town were flooded and the River Croal rose 3 feet in half an hour.
		Thunderstorms were reported in various other towns around Lancashire but little if any flooding.
		BR notes: Slight thunderstorm in central England; but in the north and west, especially between Preston and Lancaster, a series of the most terrific storms experienced for many years.
26 Aug 1873 Westmorland Gazette	Thunderstorm	Preston: Rain fell heavily for two hours accompanied by very large hailstones. Various houses and mill chimneys were struck by lightning and damaged. There was no reference to flooding.
30 Aug Preston Chronicle		Lancaster: Several houses in Stonewell were flooded to a considerable extent following half an hour of heavy rain. Buildings were struck by lightning.
30 Aug		Bury: Some of the lower parts of the town were flooded
24 Jul 1874 Manchester Times	Thunderstorm	Manchester: A storm was also reported but without serious effects.
25 Jul		Blackburn: Great damage was done to property on the east side of the town and also in lower places where many of the houses were flooded.
2 Sep 1874 Manchester courier	Thunderstorm	Heavy rainfall was reported in Manchester, Bolton and Rochdale. A house was struck by lightning in Bolton. In Rochdale several streets were like shallow rivers but no flooding of property was reported there or elsewhere.
3 sep		

6 Oct 1874

British Rainfall

**Met.I Magazine,
vol. ix., p. 162**

6 Oct1874	In- ches		In- ches
Dartmoor	3.00	Highgate	3.38
Highfield, Hawksh ead	3.05	Underfell	3.52
Cartmel	3.05	Hawes mead	3.51
Coniston Parsonage	3.85	Stavely Hall.	3.80
Low Wray	3.17	Matson .s Ground s	3.24
Seathwaite	5.14	Winder mere, The Wood	3.52
Barrow House	3.30	Brathay Vicarage	3.82
Deer Close, Keswick	3.03	Little Langdale	4.34
Brow Top	3.10	Eltenwater	4.70
Shule crow	3.28	Lesketh Howe	3.75
Watere nd	3.05	High Close	3.30
Kendal, Kent Terrace	3.22		

Widespread heavy rainfall on west of England and Wales with totals generally > 3" in the Lake District.



Broughton in Furness 0.80 in 20 m

1 Jul 1875

BR

20 Jul 1875

Preston

Chronicle 24 Jul

Preston: The main description was of flooded fields and damage to crops. The Ribble was very high but no houses were reported flooded.

Settle: The Ribble rose to an unusual height and overflowed its banks for 30 miles covering growing grain and mowing grass. The Hodder and Calder were also high causing great devastation.

Blackburn: The River Blakewater was higher than for many years and in low-lying parts houses were much flooded.

Accrington: The River Hyndburn overflowed and flooded mills in Accrington and Church. Several houses in church were flooded with furniture floating.

Manchester and Salford: Cellars in the vicinity of the River Irwell were flooded to an average of 18 inches.

Manchester: Severe thunderstorm for half an hour. A house was struck and set alight. The Irwell rose rapidly but not sufficient to cause damage.

St Helens: Many cellars were completely deluged. Two houses were struck by lightning but no one injured.

Manchester: A house was set on fire by lightning but there was no reference to flooding.

Blackburn: In the low lying parts the mills and houses were flooded. The Hodder, Calder and Ribble overflowed.

Manchester: the storm lasted 2 hours. The Medlock and Irwell were considerably swollen. Damage was done to houses by the lightning and limited flood damage was reported.

Middleton: cellar dwelling in the lower parts of Middleton and Tonge were flooded several feet deep. The River Irk was swollen that fears were entertained for the safety of the bridges.

Heywood: Low lying parts of the town were flooded. Damage was done by lightning to a school.

Rochdale: Sewers were unable to carry off the water and houses were flooded to a considerable depth in the lower parts of the town notably in Drake Street where a sewer was under construction. A man was killed by lightning in Thornham.

Very general high rainfall on the east of Pennines from S Wales to Argyll.

2 Sep 1875

7-9 Aug 1875

Manchester

Times 14 Aug

Lancaster Gaz

14 Aug

12 Aug 1875

Manchester

Times 14 Aug

Thunderstorms

Thunderstorm

Rochdale 2.25 in 3 h

2 Sep 1875

Westmorland

Gazette 4 Sep

No reference to thunderstorms

19 Sep 1875

Manchester

Times 25 Sep

Blackburn

Thunderstorm

Broughton in Furness 0.75 in 10 m

Frodsham 2.00 in 2 h 30 m

Liverpool: The church in Heswell was struck and the organist and page turner were killed (whilst he was playing the Magnificat). A farm was struck and set alight and two cows were killed.

Blackpool: Lightning during the storm caused damage to buildings and killed a cow.

Manchester: A storm was reported but without damage or flooding.

Standard 25 Sep

21 Jun 1876

Liverpool

Mercury 22 Jun

23 Sep 1876

Manchester

courier 25 Sep

14/15 Jul 1877

JBA Ribble

report

Manchester

courier 17 Jul

Thunderstorm
Preceding temperature 85F in the shade
Macclesfield 1.10 in 55 m
Thunderstorm

The violent storms of the last few days culminated in a drenching downpour on 15th. More than 4 inches in 48 hours.
Salford rainfall 14th 1.88"
15th 2.30"
No reference to thunder except at Chorley, Preston and Liverpool.
Rochdale Drake St 0.83 in 20 m

Storms were reported by BS throughout Lancashire but without flood impact.

Liverpool: Streets in every part of the town were flooded but no reports of flooding to property.

Blackburn: A woman was killed by lightning and her husband badly injured.

Middleton: At Middleton Junction at an open space near Firwood Mills a child narrowly escaped drowning from a sudden rush of water. A house was struck and damaged and a tree splintered.

Heywood: A number of new houses in Hopwood were struck and partly destroyed. A mill was struck and damaged. The low lying ground was flooded and the mill and gasworks were flooded extinguishing the fires.

Heavy and persistent rainfall in the Calder and Darwen valleys with generally 2.5 to 3 inches in the area from Darwen to Preston. At Preston water encroached many feet on the slopes of Avenham but no significant damage done there and none was located within the Ribble catchment. However there were reports of flooding on the Irwell and Medlock, the Croal at Bolton, the Douglas at Wigan, the Irk and Mersey.

Lower Broughton: With the observed rising of the Irwell inhabitants of Lower Broughton took action to protect their possessions. This was justified as the river first overflowed at the suspension bridge whilst it had already backed up through the drains and flooded many houses. Cellars in Lower Broughton road were full to the ceiling. The water flowed down Clarence street towards Great Clowes Street and along Sussex Street and Cumberland Street. All these streets were impassable for several hours. The open space between Earl Street and Lower Broughton road was covered to a depth of over one foot and Grosvenor Square resembled a lake. The Bridge Inn opposite the suspension bridge had its lower rooms flooded to 2 feet as well as its cellars and the same circumstances prevail at scores of other locations. It is said to be the worst since 'the great flood' (Date?) The water swept over the footbridge at the bottom of Springfield Lane. All the works along the bank are flooded with the water rushing through the windows. The Springfield land bridge was damaged by a large floating tank. Some 30 sheep were drowned. The Medlock was swollen to a considerable extent. An engineer noted that if a sewer scheme under construction had been completed the flooding would not have occurred in Lower Broughton.

Bolton: It was one of the most severe floods ever remembered. The River Croal flooded many mills, dwellings and fields. The railway near Lady Bridge was submerged. At Eagley a cotton mill was flooded to 3 feet. Mills were also flooded at Longworth and Belmont. A man was drowned in crossing a wooden bridge which gave way.

Blackburn: Three men were drowned at Witton Blackburn in the swollen River Darwen.

Barton: the River Irwell rose to its highest level since 1872

Chorley: Some thunder was reported during the persistent rain. The railway at Horwich Junction was flooded to two feet. The cellars of Lancaster's brewery were flooded to a depth of 3 feet.

Leigh: A score of houses were flooded at Pennington, Westleigh and Bury Lane.

Liverpool: thunder was also reported but little damage was done by flooding.

Middleton: The water flooded several houses in Irk Street from the overflow of the River Irk. Several mills had to stop work and a footbridge at Little Green was washed away.

Preston: Two thunderstorms passed over the town from the southwest on 15th. In the Fylde the River Wyre overflowed and caused much flooding of crops especially potatoes in Sowerby, Nuteby, Inskip and around Garstang.

Northwich: due to the overflow of the Weaver which rose 6 or 7 feet above its normal level. It rose to a depth of 18

inches in the High Street. About 20 shops were affected as well as the Crown and Anchor Hotel.

Southport: The Lancashire and Yorkshire railway has suffered severely with rails and sleepers washed away at Newburgh. Cattle pigs and fowl have been carried away.

Wigan: the River Douglas overflowed and submerged an immense track of country. Seven mills were flooded and 7000 hands are temporarily idle. Many mills and houses are flooded and cattle horses and timber have been washed away.

Carrington: A man was drowned when he slipped into the River Mersey when the bank gave way.

Middleton: The river Irk overflowed its banks in many places. A seven year old boy fell into the river at Old Road Middleton and was drowned.

Rochdale: A mill chimney was struck by lightning and the top 20 yards fell off into the works in Drake Street.

Thunderstorms were reported at Blackburn, Preston, Wigan and Ormskirk with some effect of lightning but no reports of flooding.

Preston: the River Ribble rose at a rate of 18 inches per hour from 6 until 9pm and the promenades and parks were flooded. At seven places between Leyland and Preston the road was impassable. Much land is flooded especially affecting the potato crop.

Liverpool: The storm caused the sewers to be flooded and pools gathered in the streets and sand accumulated in some places to a depth of several inches.

Ormskirk: Two houses were struck and damaged by lightning.

Preston: the River Ribble was said to be at its highest since the great flood of 1868. The water reached the foot of Frenchwood. Walks at Miller and Avenham Parks were submerged. Cellars in Ribble Place and Broadgate were flooded. In cottam the roads are 5 or 6 feet under water. A man was drowned in the Ribble at clitheroe.

Chorley: the principal streets and low lying parts of the town were flooded to a depth of one to 2 feet and many tradesmen's cellars were flooded to a depth of 2 to 3 feet.

Accrington: Many parts of the town suffered flooding and shopkeepers suffered damage. Houses in Church Street were flooded knee deep. There was some damage to buildings from lightning.

Liverpool: Two horses, in different places, were struck and killed. The streets of Bootle were completely flooded.

Lancaster: The water flowed in streams through the streets several inches deep. Houses were flooded in Lower church Street, Stonewell and Rosemary Lane. Even in the higher parts of the town water got into the cellars in some cases to a depth of 2 to 3 feet.

Morecambe: A house was struck and damaged by the only lightning strike on the town.

Liverpool: A waterspout was seen travelling from the Mersey to the northeast of the town. No other effects ere noted.

Liverpool: The thunderstorm lasted nearly an hour but the rain continued for some time afterwards. In several low lying districts the cellars were flooded and caused considerable damage to commercial goods stored there, notably in Byrom Street, Scotland Place and Lord Street, including the Morning Star Hotel. Cellars were also flooded in Waterloo Road and Bath Street, Athol street and Regent Road and Vauxhall Road and Whitechapel. Sewer manhole covers at Queen's Dock Gate were forced up.

Warrington: A man was killed when struck by lightning at Stockton Heath. A horse was also killed. The storm caused

22 Aug 1877
Manchester
Courier 25 Aug

Thunderstorms
 Rochdale Drake St 0.50 in 30 m

14 Sep 1877
Leeds mercury
17 sep
18 May 1878
Lancaster Gaz
25 May
BR

Preston 1.23 inches rain
 No reference to thunder.

Thunderstorms
 Over Darwen 0.68 in 15 m

8 Jun 1878
Lancaster Gaz
15 Jun

A raingauge on the Greaves
 registered 1 ½ inches in 24 hours.

17 Jun 1878
BR
24 Jul 1878
Manchester
courier 27 Jul

Broughton Hall 1.08 in 1 h
 Thunderstorm
 Allerton Liverpool 0.53 in 1 h

6/7 Aug 1878

Thunderstorms
 Blackburn witton 1.39 in 45 m

**Lancaster Gaz
10 Aug
Greater
Manchester
SFRA Appendix
B**

**19 Aug 1878
Manchester
courier 26 Aug
18 Sep 1878
Westmorland
Gazette 21 Sep
Burnley Express
21 Sep
8 Sep 1878
BR
8 Jun 1879
Westmorland
Gazette 14 Jun

12 Jun 1879
Burnley gazette
14 Jun
Preston
chronicle 14 Jun
16 Aug 1879
Blackburn
Standard 23 Aug
7 Sep 1879
BR
13 Jul 1880
Burnley Gaz 17
Jul
Liverpool**

Thunderstorm

No thunder noted.

Buglawton 0.63 in 1 h

Thunderstorms

Thunderstorms

Thunderstorm ?
Prolonged rainfall

Torver Rectory 0.27 in 10 m

Thunderstorm

considerable damage by the flooding of streets.
Blackpool: The storm lasted about an hour and caused flooding of shops and cellars. A boundary wall at Bailey's Hotel, 90 feet in length and 8 feet high, was thrown down by the force of the water. One man was reported killed by lightning. The Palatine hotel was flooded as was the neighbouring bazaar.
Prescot: Streets were soon flooded and houses in Warrington Road were flooded to several inches. 'It is many years since the town has experienced so heavy a storm'.
Blackburn: Rainfall lasted for several hours following a thunderstorm. The Calder, Hodder and Ribble were all flooded and crops on the bank damaged or destroyed. The Blakewater was flooded and many mills stopped.
Burnley: A young boy was killed by lightning.
Bolton: The Canal was breached at Nob End flooding Little Lever.
Eccles: Heavy rain quickly flooded the cellars and street of the district. Houses were struck by lightning and damaged.
Stockport: Streets were flooded through the choking of sewers and homes in low lying districts were flooded by the rush of water.
[The strong wind was widespread and caused damage at Morecambe, Blackpool and Hull]
Burnley: A severe storm with high winds caused the rivers to rise and many houses were flooded and one shop destroyed.
Blackpool and Liverpool: Damage was caused to coastal properties by the high wind.

[Thunderstorms also reported at Lancaster, Carlisle, Bradford, N Staffs, Monmouth and N Scotland]
Chorley: Two cows and sheep were killed by lightning, a building was struck and people inside were injured.
Garstang: A thunderstorm occurred but no flooding was reported.
Lancaster: Slight damage to a building was reported due to lightning.
Liverpool: Buildings were damaged by lightning.
Skelmersdale: A row of houses was struck by lightning and all were more or less damaged; chimneys were demolished, windows broken and roofs partially carried away.
Lancaster: Some flooding occurred in low lying parts of the town but no flooding of property was reported.

Oldham: Several cottages and mills are flooded. On the Lancashire and Yorkshire Railway waters accumulated on the line to a depth of several feet extinguishing the engine fires.

Manchester: Large quantities of water collected in the streets due to the inadequacy of the drains. In Albert Place and a building was knocked into the river by a lightning strike and three people killed by the rubble and several other injured.
Lower Broughton: A waterspout in Lowcock street carried a pool of water to a considerable height and several houses were seriously damaged. Roofs were carried off by the wind. Many cellars were flooded here as well as in parts of

Mercury 14 Jul

Manchester and Salford in some cases to 4 feet deep causing much damage.

Liverpool: rain was mixed with hail. One house was struck and damaged by lightning.

Prescot: Severe storm lasted over one hour. The cellars in many houses were flooded. The pavement in several streets was completely washed up owing to the rush of the water.

St Helen's: Low lying streets were flooded and one street off Liverpool road had 4 feet of water around the houses.

Cellars were flooded in every direction to a depth of 2 to 3 feet. The Windy Harbour Inn was struck and set alight.

Blackburn: the streets in the south side of the town were flooded and flooding of houses ensued. A boy was seriously injured by lightning. The Blakewater, Ribble, Hodder and Calder were all flooded causing damage to crops.

Oldham: Two mills were set on fire by lightning.

Bury: several streets were flooded.

Heywood: Several buildings were struck by lightning

Lancaster: Some streets in the lower part of the town were flooded causing much discomfort to residents. Two horses were killed by lightning at Yealand.

Oldham: Floods caused damage at Derker, Walshaw and Soho Mills, injuring the stock.

Greenacre: Houses were flooded at Greenacre.

Accrington: A woman dropped dead from fright during the storm.

Eccles: the storm did a great deal of damage to property. Rain fell heavily and sewers were unable to take the water and streets were flooded knee deep. Cellars were flooded from the blocking up of the River Irwell (?). A congregational church at Patricroft was stuck and damaged.

Liverpool: A man was killed by lightning in Park Road. The belfry of St Philemon's church was knocked down and several houses struck.

Bolton: Several animals were killed by lightning and several houses struck and damaged.

[Six railway bridges were washed away in North Wales on the line between Bala and Dolgelly]

Accrington: Storm lasted one hour and a public house was set alight.

Syston Junction of Leeds Manchester Railway: A viaduct was damaged by a rush of water in the brook below and a disaster narrowly averted.

Leigh: The road to Westleigh and Golborne became impassable and the Railway Inn and a number of houses were flooded.

The Lune and Ribble were much flooded

17 Jul 1880
Lancaster Gaz
21 Jul
Manchester
courier 19 Jul

Widespread thunderstorms

23 Jul 1880
Burnley express
23 Jul

Thunderstorms throughout
Lancashire and Yorkshire

7 Aug 1880
Lancaster gaz 11
Aug

Widespread heavy and incessant
rain; no reference to thunder

13 Nov 1880
BR
Westmorland
Gazette
20 Nov

Elterwater Woodlands 3.28"
Seathwaite 4.75"
High Close 3.15"
No reference to thunderstorms.

30 Jun 1881
BR
Westmorland
gazette 9 Jul

Elterwater Woodlands 2.65"
Hawkshead 3.04"
Wythburn 3.50"
Stapleton 3.62"
Ambleside 2.79"
Ambleside Lesketh Howe 2.93"

[Widespread thunderstorms were reported from London, Liverpool, Wales and Cornwall]

(Not sure whether the date should be 5 Jul)

5 Jul 1881
Liverpool
Mercury 6 Jul
Manchester
courier 7 Jul
Burnley Gazette
9 Jul

Thunderstorm for upwards of three hours.

Thunderstorms following oppressive heat with temperature up to 82.5F

Liverpool: Rain flooded the streets and flooded cellars in low lying districts to a depth of several feet. In Byrom Street, Whitechapel and paradise Street kitchens were also flooded.

Manchester: Streets in the lower parts of the town were flooded and many cellars were inundated.

Salford: The cellars of many houses were flooded from a few inches to three feet. Public buildings including the Town Hall were struck by lightning.

Accrington: The streets were flooded from the flow from the steep hills which surround the town. Market Place and Church Street appeared like a large lake and all the adjacent shops were flooded. A large stream of water came down Plantation Mill Road and flooded the houses in several streets. In Cunliffe's Mill water came to the top of the looms

Preston: it was said to be the worst thunderstorm in Preston for 16 years. Three weaving sheds are flooded. A boy was killed by lightning at Croston Station. A horse was also killed nearby.

Bury: Rain flooded the streets, the market place and the island near Bury Bridge. A mill struck by lightning sank bodily into the river (at the time unoccupied). Three other mills were flooded from the overflow of the Irwell. A horse was washed away by the sudden rising of the water. A sewer at the corner of Crow Lane and Bridge Street burst with a sudden rush of water flooding houses. Cottages were flooded at Summerseat. At Tottington the bridge over the Brookhouse Mill Brook was swept away. The brook overflowed and flooded four cottages to the second storey.

Blackburn: The railway line between Entwhistle and Over Darwen is seriously damaged, sweeping away a great portion of the embankment at Spring Vale. The earth was washed away a yard underneath the rails. The water in some houses in Spring Vale was a yard deep and inmates escaped by ladder through a window.

Burnley: the storm continued for two hours. The greatest damage is from the river Brun which runs through the lower part of the town; houses mills and workshops along the bank for a mile have all been flooded some to a depth of 6 feet. Some years ago the bed of the river was paved and in the flood these stones were lifted up and created an embankment which has diverted the water into houses etc. The old brewery was flooded and barrels carried down river. All the houses just off Bridge Street and several in that street were flooded, many of them to the height of the doorway. The bridge was unable to take the water and all along the embankment the wall is swept away. A dead horse was seen floating. A litter of pigs was washed away. BG notes that the flood rose two feet higher than the great flood in 1866. In 1871 the Calder (rather than the Brun) was most affected; this time it was the Brun and the Calder was not extraordinary.

Nelson and Padiham: Similar scenes to Burnley were seen. Several bridges were swept away. A cow and a calf were killed by lightning at Meuclough. The Brun flooded adjoining streets six feet deep.

Haslingden: Lightning struck a row of houses at Baxenden, completely demolishing them. At Acre Mill water flooded the warehouse and also Cloughend Mill and Brittannia Mill. Victoria Mill was four feet under water.

Heywood: The River Roach is flooded and Roach Mills have had to stop because of flooding.

Darwen: The chimney at Two gates mill was struck and partly demolished. A great number of houses and shops in the lower part of town has been flooded. A landslide occurred on the railway at near Entwhistle at Sough Tunnel. The

embankment near Carr How has been washed away and houses flooded.

Bacup: The storm lasted eight hours. An immense amount of damage has been done to shops and houses from the flood waters. The streets are covered by rubbish washed down from the neighbouring hills. Three people are known to have drowned. The River Irwell overflowed and burst down boundary walls and many streets in the town were 2 to 3 yards deep. Two bridges were swept away. Many mills are flooded.

Clitheroe: The storm raged from half past eight to midnight. Hundreds of houses were flooded to 2 to 3 feet. Stone walls were knocked down and huge trees were prostrated.

Warrington: Hailstones of great size fell at the beginning of the storm. Sewers were choked and cellars were flooded.

Leigh: Brooks overflowed and a mill was flooded. Houses were struck by lightning.

Sabden: The water came down Pendle Hill in torrents and swept through the village of a depth above a yard. Two men attempting to cross the street were carried away and one was carried downstream a mile and a half and drowned.

Cobden Mill was both struck by lightning and collapsed and flooded. The road through the village has been rendered impassable.

Higham: One shop and several houses were flooded.

Barrowford, Barley and Roughlee: The flood carried away 8 bridges, did serious damage to at least 5 mills, took away numerous weirs and in more than one place lowered the bed by 9 feet (Roughlee). At Barrowford nearly all the cottages in the village were flooded.

Bacup: A storm of wind hail and rain occurred in the Rossenden Valley. Torrents came down from the surrounding hills. Several hotels and dwellings were flooded and residents were alarmed that another severe flood was approaching but the rain stopped after about one hour.

Manchester: A thunderstorm was also reported but without damage.

Ashton: Heavy rain for one hour. The low lying streets were flooded. Gravel and earth were swept away and deposited on grids causing ponding. At the lower end of Coch Brook the water accumulated to 2 feet depth. The cellar of the Sycamore inn was flooded; the Horse and Jockey Inn was also flooded. The River Tame suddenly rose to an abnormal height and three pigs were seen being carried along.

Preston: Streets were flooded and the gratings blocked up; low lying parts of the town were seriously inundated. Most of the paths in the parks are damaged with channels being scooped out to a depth of up to 18 inches. Both the Avenham and Miller are partially flooded caused both by surface water and the backing up from the river through the drains. The Ribble rose with alarming rapidity, at least 7 feet in 3 hours. At the tram bridge below Avenham the water was within four feet of the roadway. Damage was done to the new Penwortham rail bridge under construction where the coffer dam was overtopped and filled.

Chapel en le Frith: Very severe rain at Goyt's clough causing serious damage at the Ferniles Gunpowder factory. A footbridge was washed away and another near Taxal Church. 'The water came with such a sudden rush that it rolled down the river course like on huge wave'. A bleach works at Whaley Bridge was also flooded.

Middleton: Considerable damage was done in low lying parts of the town. A boy was washed into the brook at Slack's Valley and drowned. Another had a narrow escape having been rescued 100 yards downstream.

Clitheroe: the Ribble was said to be higher than in the previous thunderstorm. Much damage was done at Waddington where the brook running through the village was blocked with debris and its course was diverted and caused much

26 Jul 1881
Manchester
Courier 30 Jul

Thunderstorm

31 Jul 1881
Manchester
courier 2 Aug

Heavy rain but thunder only heard
after the downpour.
Macclesfield Park Green 0.52 in 30
m
Congleton Buglawton 1.01 in 45 m

Blackburn
standard 6 Aug
BR (Buxton
Advertiser 6
Aug)

flooding. The Sun Inn was flooded and great holes gouged in the road nearby. A number of houses behind the Buck Inn were flooded. At Bolton-by-Bowland the Skirden brook overflowed and flooded the temperance hotel and adjoining houses.

<Buxton> (Derbyshire): At Buxton the fall was only just above 1 in. Much more must apparently have fallen near Goyts Moss, about three miles W. of Buxton. Buxton was visited by a heavy thunderstorm on Sunday afternoon, July 31st, about one o'clock. Rain fell in torrents, and the gutters being unable to carry away all the water, the footpaths and roads were swept by streams, which cut them up and damaged them to a great extent. It is said that £100 will not repair the damage to the roads and footpaths. A by-wash at the new reservoir in Lightwood burst, and the embankment was carried into the reservoir, doing damage to the extent of £100. So severe a storm has not been known in the neighbourhood for years. At the head of the old reservoir Mr. Sawyer Smith's wall was washed down, and also a great deal of rock and stone. Scores of tons of stone, earth, and trees were washed down from the collecting springs to the head of the old reservoir. A number of pipes was also displaced, and the connection between the springs and the pipes was severed. What with the damage to the reservoir and the roads also, it will probably cost the Local Board £200 to restore the same. In <Hogshaw>, the brook was considerably swollen, and the water found its way into some of the houses. Many of the lower parts of Buxton were also flooded, and the Gardens did not escape the ruthless influence of the water.

<<Goyt valley>>: One of the most singular occurrences which has taken place since the memorable flood in 1872, was manifested on Sunday afternoon, and while it lasted created very great concern and fears for the safety of both persons and property. It appears that suddenly, or with very little warning, the high wind in the morning, freshened in the afternoon into a storm, and caused either a cloud or a waterspout to burst with great violence near the Cat and Fiddle at the head of the Goyt Valley, which was quickly flooded to such an enormous extent that the roar of the rushing water could be heard some distance, as it advanced madly carrying trees and stones before it, and in its descent to <Whaley Bridge> it carried away three foot-bridges, besides sundry planks crossing the stream. In the valley in which the gunpowder manufactories of the Fernilee Gunpowder Mills Company are situate, the works were deluged, the valley being like an immense lake, the tramways to the various buildings were torn up and washed away, the roads destroyed, and much loose timber carried away. A cottage near, which had only been repaired lately, and inhabited, was half filled, and surrounded with water, the inhabitants managing to escape and obtain shelter elsewhere. Reaching the valley above the Botany Bleach Works of Messrs. Hall Brothers, at Harwich End, the banks of the Goyt became a vast lake; sand, stones, timber, and even a large foot-bridge being carried off and deposited high and dry on the shore after the water had receded. A large wall had its top portion lifted away some distance. At Messrs. Hall's works the water pipes were broken for a great length, and some of the supports of a wooden trough were bent and twisted almost from their places by the force of the flood. The noise of the stream at Whaley Bridge was very great, and the fury of the torrent which moved down in one vast volume was astonishing. It subsided very quickly, though till about six o'clock there was a great stream flowing. The banks below Whaley Bridge were torn down and much damaged. At the village of <Combs>, near <Chapel-en-le-Frith>, considerable damage was done to the hay crops as the water rolled down the hillsides like small rivers. The large reservoir which supplies the Peak Forest canal was very low at the time, and so was capable of receiving a large portion of the water. Had not this been the case the damage must have been most serious. The water came with such a sudden rush that it rolled down the river course like one huge wave.

24 Aug 1881 Manchester Courier 26 Aug 29 Aug 1881 Manchester courier 31 Aug	Heavy continuous rain	Manchester: The River Irwell rose rapidly during the afternoon to 11 feet above its ordinary level and just short of flooding at Lower Broughton. A body was carried down by the river.
	Thunderstorm after prolonged heavy rain	<p>Sefton: flat land in the area was covered to a depth of several feet all the way to Ormskirk along the River Alt.</p> <p>Accrington: Considerable loss was sustained at Oswaldthistle where Brookside Mill was flooded.</p> <p>Darwen: the Sough Tunnel was again flooded and ballast washed from the line; the embankment was also washed away at Spring Vale station and trains between Darwen and Bolton had to be diverted. Damage was done to cottages in Carr Row.</p> <p>Blackpool: Streets were several inches deep in water which cut ruts in some roads.</p> <p>Blackburn: The Rivers Blakewater and Darwen were much swollen and a woman was drowned trying to cross a flooded bridge; she was clinging to a wall when the wall collapsed.</p> <p>Ormskirk: At Aughton several families were driven from their homes. Several animals were drowned at Altcar. Two people were killed [It doesn't say whether drowned or hit by lightning].</p> <p>North Lancs: Hundreds of acres of farmland are under water including at Inskip, Sowerby and the whole of Myerscough Hall Farm.</p> <p>Manchester: A girl was killed by lightning.</p> <p>Patricroft: Liverpool Road was flooded to a depth of 2 feet. Cellars of shops were flooded several feet.</p>
1 Jul 1882 Manchester Courier 8 Jul 7/8 Jul 1882 Liverpool Mercury 10 Jul	<p>Thunderstorm following oppressive heat of variable duration within short distances</p> <p>Thunderstorm</p>	<p>Manchester: Wheat Sheaf hotel in High Street was struck by lightning causing the three storey building to collapse. [Heavy rain with large hail occurred in Staffordshire and Cheshire]</p> <p>Accrington: The sewers proved inadequate to take the water and cellars were flooded and also the highway between Accrington and Church.</p>
15 Jul 1882 BR 25 Jun 1883 Westmorland Gazette Jun 30 Lancaster Gaz 27 Jun BR 5 Jul 1883 Burnley express 7 Jul 7 Jun 1884 Manchester courier 14 Jun 6 Jul 1884 Manchester	<p>Macclesfield 0.33 in 40 m</p> <p>Thunderstorm Woodland Rectory 1.95 in 1 h 5 m Highfield Northwich 1.19 in 2 h</p> <p>Thunderstorm</p> <p>Thunderstorm</p>	<p>Storm also occurred at Kirkby Stephen and Appleby (See Eden chronology) and also at Cambridge, Warwickshire, Leicester and Clyde.</p> <p>Widnes: Rain fell mixed with hail and the streets were soon flooded and many shops and houses were soon inundated in some instances to a depth of four feet. Waste land at Anderson's corner where St Pauls Church is being constructed was submerged. The police court and offices were nearly surrounded by water and in Witt Road and Moor Lane large lakes have formed.</p> <p>Burnley: At Laneshaw Bridge the storm lasted 2 hours. In a short time the river bed which had been almost dry was amass of seething waters, the flood coming down in a breast 18 inches high carrying before it parts of hedges, gates and trees in quick succession. Two men were injured by lightning and several animals killed.</p> <p>Chorley: Rain was accompanied by hail. In a few minutes the streets were flooded, the sewers being inadequate. Streets were impassable and tradesmen in Market Street suffered damage to stock in their basements and ground floors.</p> <p>Warrington, Wigan: Storms were reported with houses damaged by lightning but no flooding reported.</p> <p>Liverpool: A child was struck and killed whilst in bed. Holy trinity church was struck and damaged.</p>

**Courier 12 Jul
9 Jul 1884
Lancaster
Gazette 12 Jul
BR**

Thunderstorm preceded by several weeks of high temperatures
Lancaster nearly 3 inches on 8th and 9th.

Lancaster: Houses and shops in Stonewell and Church Street were flooded, the water backing up the latter for some distance. Cellars were also flooded in high lying districts such as Ullswater Road on 8 Jul. But the storm was far more severe the following day. Water bubbled up from sewers adding to the flood in Stonewell as high up as Lower church Street and Little John Street and as far along Rosemary Lane as St John's Church, being 3 feet deep in the deepest part of the street. Houses and shops alongside were flooded equally. Two cottages in Rosemary Lane had water to a depth of 3 feet 8 inches. The houses in White Horse yard were flooded. In the Crooked Billet Yard in Lower Church Street, cellars of houses were flooded, an event never known in the past. In Chapel Street, Damside Street, North Road cellars were flooded in consequence of the water backing up. Even in Common Garden Street and Penny Street thought to be out of reach of flooding, cellars were also flooded. The top of Moor Lane bridge at the junction with St Peter's Road was almost impassable for pedestrians, the grates being blocked by debris. In Ullswater Road the water reached completely across the Street from the Freeholders Arms to the Post Office and several inches deep in houses. At the Britannia Inn the casks floated off the gantry. The Workhouse Green and the upper part of Park Road are deeply furrowed. Some low lying cottages at the end of West Road were flooded to a depth of 2 feet. The Boy's National School was flooded both on 8th and 9th. Four lambs were struck and killed by lightning.

Oldham: At Royton nearby, two men were killed by lightning and 2 others injured.

Preston: A mill was set alight by lightning but extinguished.

Thunderstorms were also reported in Blackburn and Accrington but without damage reported.

BR notes that at Lancaster, at the top of East-road, adjoining the workhouse grounds, a considerable portion of a wall was washed down by the pressure of water at the back ; and stones were hurled with great force a long distance down the road.

Two men were killed and three injured by lightning at Royton near Oldham.

Lancaster: Several parts of the town were again flooded notably in Stonewell, Lower church Street and Rosemary Lane affecting houses and businesses. Similar conditions applied in Cable Street, Ullswater Road and the Bowerham Estate. At the foot of Rydal Road the water spouted up through the pavement a couple of feet high. A horse and sheep were killed by lightning.

Fleetwood: A barn was struck and its contents destroyed.

Rossenden Valley: At Waterfoot a thunderstorm resulted in much loss of property, extending from the source of the River Irwell to Haslingden and Accrington Moors. The Irwell rose several feet in 20 minutes. For a quarter hour there was a fall of ice in fragments globular conical and square varying from 3 inches long to an inch in thickness. The damage has been caused to property over two miles. Rows of houses, churches and mills have had windows broken, many every square. Windows facing south are riddled as if shot. Hothouses, skylights of mills and fruitworks are all demolished.

Roadways are washed up with furrows in some cases several feet deep. Mills and cellars were flooded. By far the most serious damage was in the Cowpe Valley from a small rivulet that rises in The Craggs. Numerous dye and printing works are in the valley and their connected 'water lodges' overflowed and flooded the works causing much damage. A stone bridge was swept away and the main road to Cowpe was washed up with 15 tons of pavement having been carried to the bottom of the road.

Burnley: Severe storm with 2 killed by lightning and others injured. Hailstones fell thickly at Sabden. There was no

**13 Jul 1884
Lancaster
Gazette 19 Jul
BR**

Thunderstorm. The early part of the storm was accompanied by hail and a hurricane wind.
Broughton 1.75 in 1 h

**10 Aug 1884
Westmorland
Gazette 16 Aug
Liverpool
Mercury 11 Aug.
Manchester
courier 16 Aug
BR**

Widespread thunderstorms in England following record high temperatures – 94.2F at Greenwich (only Jul 1881 higher).
Sunstroke fatalities

reference to flooding.

Darwen: a man was killed by lightning

Ashton-under-Lyne: Houses were struck by lightning and also flooded. An inch and a half rainfall fell in 45 minutes.

Hailstones the size of beans were mingled with the rain. A warehouse was inundated and partly wrecked. Two chimney stacks were demolished.

Manchester: A 9-year old boy was killed by lightning.

Stockport: A man was killed by lightning.

Bury: the streets were flooded and the theatre and a school were struck by lightning.

Oldham: the streets were flooded and a mill was struck by lightning and suffered fire damage.

BR reports HAILSTORM AND FLOOD IN N.W. DERBYSHIRE AND S.E. LANCASHIRE.

At Charlesworth, and Chisworth, two villages between Glossop and Marple, R and H fell literally in torrents. After the storm had continued for about half-an-hour, water streamed down the hillsides in vast sheets, washing down walls, and ploughing up the roads to such an extent that locomotion was next to impossible. Stones of immense size were hurled from their places, and lodged in the ruts made by the water, and here and there, sand and rubble blocked the way. The road leading from Moorside Farm was in this way practically destroyed. At Simmondley the water flooded the houses to the depth of several feet. A party caught in the storm took shelter under a wall, but the water rose so quickly that they mounted the wall, but only to be removed as the force of the water washed away the foundation and brought down a portion of the wall.

Much damage was done at Mr. Brown's bleach works at Armhill. It is estimated that it will take about £100 to cover the damages. At Chisworth damage estimated at about £500, was done by the water gaining access to Mr. James Eowbottom's mill, at Hole House. The Kinder Lee Mills also sustained injury. The gardens of Mr. Thomas Booth, which had been presenting a most charming appearance, were in one half hour changed to a complete ruin. Hundreds of valuable plants were swept away or buried. The sewers on the roads had speedily become choked by the flood, and all efforts were unavailing to release the rapidly accumulating water, or dam up the narrow entrance to the premises. Soon the water burst through the temporary barrier, and an impetuous torrent a yard deep, rushed down the gulley with a loud roar, sweeping all before it in its headlong course to the narrow gorge leading to the Etherow. At Chew the water rushed down the highway from the direction of Alma Pit, where it washed away a large quantity of coal, and completely tore up the road and a portion of the footpath. Mr. Kowbottom's property stands in a hollow near the roadside, consequently the whole weight of the water swept with terrific force against it. In front of the houses and near the mill a pond stands, and after the water had forced down a wall which adjoins the main- road fence, a considerable portion of it emptied itself into the reservoir, but for which, the consequences might have been serious.

As it was, the road leading to the houses was torn up to a depth of two or three feet, and several cartloads of sand and stones were washed in front of the buildings, which were considerably flooded. All along the road from Alma Pit to the boundary of Chisworth, portions of the macadamized road were cut up, and near Boar's clough about four feet of the wall on the roadside was washed down, a broad chasm some 10 or 12 feet deep cut in the field below, and a large quantity of wreckage strewn about the field. Considerable damage was done throughout the district.

" The river Irwell rose several feet in 20 minutes.—The storm raged with great fury over Newchurch, Waterfoot, and

Cowpe, and for a quarter of an hour there was a rain of ice—not hailstones, incredible as it may appear, unless hailstones can be described as fragments of ice globular, conical, and square, varying from three inches long to an inch in thickness. These large pieces were not exceptional but general, and their destructive effects were to be seen in damage caused to property over an area of two miles. "Rows of houses, schools, churches, and mills, appeared as if they had suffered from a riot, wherein the rioters had wreaked their violence on the windows, many of which had every square broken. An idea of the extensive nature of the damage done to windows may be formed when it is stated that there were 186 squares of glass broken in the Catholic School at Newchurch. At St. Nicholas Church the windows facing the south were all riddled as if with shot, and only the stained glass windows protected with wire fencing remained intact. Nearly all the houses in this district had their windows broken, in one house there being no fewer than 76 panes. Greenhouses, and hothouses, also suffered severely, and gardens were broken up and despoiled. Furrows were ploughed in the roadways several feet deep, and mills and cellars were flooded. The damage sustained by shopkeepers and cottage property owners must amount to several hundred pounds. But by far the most serious damage was sustained in the Cowpe valley, which is about a mile and a half in extent. A small rivulet which empties itself into the Irwell has its rise in the Craggs— the name given to the extensive stone quarries worked by Mr. Thomas Brooks, High Sheriff of the County Palatine. Numerous dye works and carpet printing works are erected in the valley on the margin of the stream. The bank of the water-lodges connected with these works overflowed, and wrought terrible havoc, flooding the lower rooms and damaging a great amount of material. At one of these works alone, the damage is estimated at over £2,000. A stone bridge spanning the stream was swept away, and the main roadway leading to Cowpe washed up, about 15 tons of pavement having been carried to the bottom of the road. The damage cannot be estimated, but it must be many thousand pounds.

BR reports The Daily News of August 26th but the date of the flood is not specified in the news but almost certainly 8 Aug "During a thunderstorm a few days ago a singular phenomenon which is more often observed at sea than on land, was witnessed at Simmondley, a village about one mile from Glossop. Behind the village rise precipitous hills, which gird part of the hamlet in something like the shape of a horse shoe, and in the centre of this runs a deep clough. When the storm was at its height the villagers were affrighted by a terrible thunder-clap which seemed to rend the heavens. In a moment or two an immense volume of water, carrying with it large-quantities of earth and stones, rushed down the clough and flooded some of the cottages five feet deep with water. The phenomenon was described by the natives as "the bursting of a cloud " (literally a waterspout), and its tremendous force may be gathered from the fact that where the water rushed to the earth it made a great indentation in the hill side, sufficiently large in width and length to enclose a house. The cavity was about 12 yards long and nearly 8 feet deep.

Widnes: The storm was of short duration but the streets were quickly flooded. Various buildings were struck by lightning and damaged and people injured.

New Mills: Lightning seriously damaged St Mary's Roman Catholic church.

Lancaster: The storm lasted half an hour. The streets were flooded and overflowed into some houses in Stonewell and White Horse Yard. Hailstones accompanied the rain.

Liverpool: the storm lasted half an hour and the streets in the centre of the town were flooded.

21 Sep 1884
Manchester
Courier 21 Sep
6 Aug 1885
Preston
Chronicle 8 Aug
4 Sep 1885

Thunderstorm

Thunderstorm

**Manchester
Courier 5 Sep
21 Jul 1886
Manchester
Courier 22 Jul
Burnley Gaz 24
Jul**

Thunderstorm
Liverpool Walton on the Hill 1.03
in 15 m

**24/25 Jul 1886
BR
Manchester
courier 26 Jul
Manchester
Times 31 Jul**

Sale Brooklands 2.58 in 1 h
Milnrow Piethorne 1.88 in 1 h 10
m
Manchester Stretford 1.54 in 1 h
15 m

**13 Aug 1886
BR
Leeds Mercury
14 Aug
28 Aug 1887
Lancs Evg post
29 Aug**

Manchester Stretford 1.00 in 45 m

Thunderstorms following a severe
drought; rain welcomed after mills
stopped due to low rivers

**6 sep 1887
Liverpool
Mercury 7 Sep
BR**

A whirlwind was reported in
Manchester

Eccles: Hailstones as large as marbles fell and buildings were struck by lightning.

Oldham: Several low lying cellars were flooded. Rain was accompanied by hail.

Eccles: A man was killed by lightning.

Southport: Sewers were surcharged and streets were soon flooded, notably Lord Street which was impassable for a quarter of a mile.

Liverpool: Basements were flooded in the lower part of town. In Toxteth park a sewer burst whilst men were repairing it. One man was carried away and drowned and another died later in hospital.

Heywood: Buildings were damaged by lightning.

Colne: The lower part of the town was flooded. A farm was damaged by lightning.

Manchester: Rain fell for over one hour and the streets were flooded – but with the excellent drainage the water was swiftly carried away. A house in Higher Broughton was struck and damaged by lightning.

Ashton under Lyne: A mill at the confluence of the Sheepwashes Brook and the River Medlock was damaged when the culvert underneath was blocked and the water accumulated in the gorge upstream from the mill eventually bursting through into the mill and causing serious damage. A mill three miles down the river Medlock at Daisy Nook a newly erected bridge was badly damaged.

Oldham: A great deal of damage was done in the area particularly at Mumps where cellars and shops were flooded and the highway rendered impassable. A signal box on the railway was washed down and trains from Royton to Oldham could not run due to debris on the line. Cellars of mills were flooded causing damage to stock and machinery. Houses in the lower part of the town were flooded to a depth of 3 to 4 feet. In the Oldham area, a violent thunderstorm occurred. For about 2 hours every rivulet and stream was charged to its fullest capacity. In 70 minutes 1.88” fell at Piethorne and 2.19” at Denshaw. Daily rainfall at some stations exceeded 3.4”

Bolton, Belmont: Rain was accompanied by enormous hailstones. The roads converge to Astley Bridge where the water rose to the height of the lamp posts and people had to be rescued from their bedroom windows. In the fairground the hobbyhorses and swings were submerged. When the flood retreated some of the houses had 2 feet of mud. At Bromley Cross Station some wagons were thrown off the line, the water rushing with great force against the engine.

Blackpool: Said to be the most severe thunderstorm there since 1877. Rain with hail as large as marbles fell. The streets were like rivers the sewers being unable to carry the flow. Cellars in the business part of the town were flooded. Three miles inland at Staining, the dust was not washed off the hedges.

Blackburn: The storm was said to be the most severe since 5 Jul 1881. The storm lasted for half an hour but no serious damage was reported either from lightning or floods.

Bolton: A woman was killed by lightning and several others injured. Cows and other animals were killed and several houses were struck and damaged. However, the reservoirs have been replenished.

Liverpool: thunderstorm but without any damage noted.

Warrington: Some of the streets were flooded and at the junction of Mersey Street with Church Street and Irlam Street there was a considerable accumulation of water which came to the front of the bridewell. Cellars were flooded in Latchford.

Southport: Lord Street, the principal thoroughfare was rendered almost impassable but no property was reported flooded.

9 Jun 1888 BR	Macclesfield 0.78 in 30 m	
13 Jun 1888 Liverpool Mercury 14 Jun	Thunderstorms	Widnes: Hailstones as large as marbles fell and came with force against windows in some cases breaking them. The streets were flooded and sewers surcharged but there were no reports of flooding of houses. Warrington: Buildings were damaged by lightning and people injured but there were no reports of flooding. Runcorn: Large hail also occurred accompanying the rain. The sewer at Penketh Lane was insufficient to carry the flow and water rushed across bridge Street into Mersey Street. The Royal Hotel and Mersey Vaults were flooded. The Church of ST Michael and All Angels was struck by lightning and the roof crosses were shattered. Carnforth: Heavy rainfall for one hour. The Railway station subway was flooded to a depth of 3 to 4 feet. Wigan: Streets were converted to rivers and large numbers of houses were flooded. The theatre was struck and damaged
5 Jul 1888 Lancs Evg Post 6 Jul	Thunderstorm	
16 Jul 1888 BR	Warrington High Cliffe 1.50 in 2 h Heavy rain in Derbyshire with floods on Derwent.	
24 Aug 1888 BR	Chelford Astle Pk 0.63 in 7 m	
7 Sep 1888 Liverpool Mercury 8 sep	Thunderstorm	Warrington: Rain was accompanied by hail some as big as marbles breaking windows in various parts of the town. The lower parts of the town were flooded.
7 May 1889 BR	Congleton Buglawton Vic 0.43 in 25 m	
2 Jun 1889 Lancaster Gaz. 8 Jun Manchester courier 8 Jun Burnley Express 5 Jun Blackburn Express 8 Jun Lancaster gazette 8 Jun BR Webb et al 2009	Widespread thunderstorms. Generally two thunderstorms one in the morning and another much more severe with hailstones and ice in the afternoon. Rochdale Fieldhead 0.31 in 11 m Manchester Stretford 0.42 in 15 m Broughton in Furness 0.80 in 30 m	Much of northern England affected by prolonged thunderstorms said to be the worst for several years. No serious damage from lightning or floods was reported at Kendal or Windermere. Considerable damage was reported in the Lune Valley especially above Caton where works are in progress to convey water from Thirlmere to Manchester. Manchester: Hail and ice accompanied rain breaking many skylights. It was noted that at the Peel Park Museum on the parapets facing south the broad gutters had an agglomeration of drifted hailstones closely packed about 6 inches thick. Harpurhey and Blackley: The ground was covered with hailstones after 5 minutes. Afterwards when the sun came out the evaporation was so rapid that a cloud of steam arose. Glass was broken in plant houses and 35 crown glass panes. Some hailstones were round and somewhat flattened and measured 1 3/8 inches in diameter. The hailstones seemed to be of two kinds, either an agglomeration of small hailstones that had combined on descent or other perfectly round and composed of alternative layers of snow and ice. Three hailstones picked up at Blackley weighed quarter of a pound. Burnley: Scores of houses were flooded. Numerous birds were killed by the fall of solid pieces of ice. A cow near Padiham was killed by lightning. Bury: The Barnbrook speedily overflowed and the water made its way into many cellars and shops. The cellars of Barnbrook Mill were flooded to a depth of several feet causing damage to material. A sewer burst in the cemetery adjacent to the Brunswick chapel and flooded the ropeworks. The carcasses of horses, pigs etc were seen floating down the River Irwell. Preston: the Savings Bank was struck by lightning but with little damage. The Ribble rose as much as one foot in 20

minutes.

Liverpool: At Sefton Park an observer brought 68 hailstones into the house and found them to be 10 to the ounce.

Although partly melted some time later, one stone had a 1 ½ inch long.

Burnley: 'No such storm has been witnessed during the present generation'. The hailstones were as large as marbles and a few buildings and streets were flooded.

Padiham: Hailstones of unusual size fell and a large number of panes of glass in hothouses have been broken. A horse and a cow were killed by lightning and a large number of birds were found lying dead. Several low lying portions of the town have been flooded as well as some portions of Read including a warehouse.

Clitheroe: Low lying portions of the town were flooded for a short space but the damage was not severe.

Blackburn: Jagged pieces of ice half an inch square fell, causing bruises to those exposed. In many houses skylights and windows were cracked or broken. The only comparable storm was nine years ago. Lightning struck and damaged several houses. Several horses and cattle were killed by lightning.

Great Harwood: the rain was accompanied by hailstones frequently measuring 3/4 inch in diameter and 2 ¼ inch in circumference. The windows of cotton mills suffered much damage. The inhabitants of Queen street were the worst sufferers with the cellars filled from floor to ceiling. Rooms near the Plough Inn had furniture floating about in their rooms. Water forced its way through manholes in Queen Street. Six flooded mills were named. Leaves of plants such as rhubarb and cabbage were riddled with holes.

Accrington: Hailstones were twice the size of marbles and one weighed ¾ ounce. Great damage has been done mills by flooding. Four horses in a stable had water up to their necks before they were rescued. At Woodnook Colliery the water welled up several feet and the streets were covered several feet deep. At Lancaster's ironworks 500 panes of glass were broken. Huncoat station was flooded. At Baxenden, several mills and houses were flooded and hundreds of windows were broken. Much ballast was washed from the rail line between Accrington and Haslingden.

Whalley: The streets were flooded and a swift stream flowed through the village flooding the Dog Inn and many houses on that side of the road that had to be barricaded.

Lancaster: Hailstones of unprecedented size occurred, as large as marbles. Water poured down the higher streets of town carrying vast amounts of gravel and sand and accumulated at the grids and choking them and causing large pools of water in low lying districts. In Ullswater road the cellars of some houses were flooded. In Bowerham Lane the water came down with such velocity as to dislodge curbstones and also one lamp. Much damage was done at Moor Lane Mill by the bursting of a sewer.

Bleasdale: Hail fell for just a quarter of an hour but caused great damage to skylights. An observer measured 6 pieces of hail together weighing 4 ½ ounces.

Garstang: Also very large hailstones fell and a typical one measured 5 inches in circumference. Owing to the absence of wind there was not much damage to windows but greenhouses suffered disastrously. Webb reports hail 57 mm in diameter in Garstang.

9 Jun 1889

BR

20 Jul 1889

BR

St Michael on Wyre 0.82 in 1 h 5 m

Rochdale Fieldhead 0.58 in 20 m

Several cows killed at Adlington (Macclesfield).

11 Aug 1889 BR	Hoylake 0.50 in 10 m	
8 Oct 1889 Lancaster Gazette 12 Oct	Thunderstorm – though the main news was of a widespread extreme gale and persistent rain	Settle: Rain was accompanied by hailstones of phenomenal size. No flooding was reported there.
28 Jun 1890 Liverpool Mercury 30 Jun	Thunderstorm	Warrington: The storm lasted an hour and a half. The streets were flooded notably from the Police Station to Fennell Street which was flooded to 1 foot depth for 100 yards.
14 Jul 1890 BR	Broughton in furness 0.65 in 30 m	
30 Aug 1890 Lancaster Gazette 3 Sep	Thunderstorm	Fylde: The storm lasted half an hour. Two horses and five cows were reported killed by lightning. There was no reference to flooding.
17 Sep 1890 BR	Birkdale 0.87 in 1 h	
30 Sep 1890 British Rainfall	Grizedale 2.55” Seathwaite Vicarage 3.19” Monk Coniston Park 3.59”	Heavy rainfall North Lancashire and Lakes but papers have no reference to thunder or flooding. Ribble also overflowed Cartmel, Broughton Hall R 2.10 in Skelwith bridge over the Brathay washed away
27 May 1891 Preston Chronicle 30 May BR	Thunderstorm	Bamber bridge: South of Preston the storm lasted from 30 to 45 minutes initially with hail which covered the ground then with rain which flooded the weaving sheds at School Lane. he storm only extended from one end of the village to the other. A man was killed by lightning at Chorlton cum Hardy
24 Jun 1891 Manchester courier 26 Jun	Thunderstorm	Rochdale: Streets were flooded. A warehouse at Milnrow was struck by lightning and set alight but quickly extinguished. Liverpool: St Pauls Church was struck by lightning and the dome set on fire. Basements of shops and offices have been deluged. A man was killed by lightning. A house was struck at Nantwich; a cow was killed at Chorley; and a house struck and four pigeons killed at Crewe. In Lancashire in the evening two men were in a rowing boat on the Mersey; it was struck—one man was disabled and the other killed.—About 11 p.m. a house in Falkener Street, Liverpool, was struck and ignited, as was also the church of St. James in the same city. At night a warehouse in Milnrow, Oldham, was struck, the gas pipes were melted and the gas was lighted at the breach
25 Jun 1891 Liverpool Mercury 26 Jun	Renewed thunderstorm from the previous day	Liverpool: The spire at St Saviour’s School was struck and damaged and many other buildings were struck and damaged. Cellars in the lower parts of town were flooded including some in Byrom Street and also in Whitechapel, Paradise Street Strand Street and Dale Street and Houghton Street. Bootle: The police office on Strand Road was partially flooded. Birkenhead: The lower parts of the town were flooded but locations or property were not specified.

1 Jul 1891

BR

13/14 Aug 1891

BR

Frodsham Dunsdale 1.50 in 2 h

Persistent rain no thunder
British Rainfall reports that at no station was this the highest daily rainfall in a day with the largest recorded fall in the area of 2.42 inches. Floods were said to be due to the preceding wetness.

Oldham: A large number of houses were flooded. The cellars of a few mills were covered to a depth of a few inches. Buildings were struck.

Thunderstorms were reported widely through the county but most had little damage or no flooding reported.

Heavy and persistent rainfall caused widespread flooding most especially in the Darwen valley. Several mills stopped work at Blackburn. The Darwen rose 10 feet and all the fields on its banks were flooded. The upper and lower ends of the town suffered most, although in dozens of houses at the foot of the Darwen moors the cellars were flooded. At the upper end of the town between Grimshaw Street and Pilkington Street, water burst from a culvert and the walls of several houses fell down. Many mills were stopped owing to being flooded.

BR reports that the very heavy and continuous rains of the past week have done serious damage in East Lancashire, especially in the district extending from Blackburn to the Darwen Valley and away to Heapey. Low lands near Preston were covered with water, and the Ribble and its tributaries overflowed their banks. At Blackburn the Irwell overflowed, and several mills stopped work. At Bacup two streets were flooded 2 ft. deep, and a corn mill 4 ft. Forest Mill and other mills were temporarily stopped, boiler fires being put out. In the Darwen Valley there was enormous damage. During Thursday night (13th) very heavy rain fell in Darwen, and very great destruction of property occurred. The river Darwen rose 10 ft and all the fields on its banks were flooded. During the forenoon the water subsided to about 3 ft. or 4 ft. The upper and lower ends of the town suffered most, although in dozens of houses at the foot of the Darwen moors the cellars were flooded. At the upper end of the town between Grimshaw Street and Pilkington Street where the culvert takes a bend, the volume of water was so great as to burst the culvert near a row of houses in Pilkington Street, and at 9 o'clock the walls of some of the houses fell down with a crash, and were rapidly swept away by the stream. At the bottom of Longford Koad the water from the Moors came down with considerable force and brought down to Bolton Road loads of dirt and sand, which had to be carted away. The Darwen Company's mill is in the same district, and at 6 o'clock yesterday morning (14th), it was found impossible to work the pumps, in consequence of the quantity of dirt which had been swept into the reservoir. The workpeople to the number of 450 had to remain at home until dinner time, when another effort was made to start the pumps. The Spring Vale end of the Sough tunnel was flooded for over three hours yesterday morning, and traffic had to be conducted on a single line. The culvert at the side of the tunnel was too small for the water, and at 5.30 the up line to Manchester from Darwen was flooded. In the hilly district of Heapey the rainstorm raged with fury, and houses and mills suffered seriously. Yesterday morning (14th) at 3 o'clock it was found that the embankment about half-a-mile beyond Heapey station was giving way, and the engine drivers were warned. A couple of hours later the swollen brook, which runs beside the highway from Heapey to Chorley, overflowed its banks and forced its way under the railway bridge; this caused the wall to give way and part of the bridge and tons of earth were flung across the rails. The water then rushed across the line and a large volume flowed down the line, and undermined the foundations so seriously that traffic had to be stopped. The first to discover the mishap to the bridge was an engine driver, a couple of waggons being thrown off the track. It was some hours before the traffic could be resumed. A third slip occurred at the bridge, close to Heapey station, but this was not serious. Great damage was done to White Coppice Mills, about three-quarters of a mile from the railway station. The mills^ which belong to Mr. A. Eccles, are situate at the bottom of the bank of a large reservoir which feeds the boilers. The top of the bank is nearly level with

the roof of the mill. About half a mile further back runs the sluice which carries the surplus water from the Eoddlesworth to the Eivington reservoirs of the Liverpool Corporation. This sluice also collects the water from the mountain rivulets along its course. One of these brooks comes down the centre of a particularly deep clough at the Chorley end of the sluice, and early yesterday morning several thousand tons of earth from the hill-side fell into the boiling stream and were carried into the sluice below, completely blocking it. The result was that the dammed up waters rushed over the sluice bank and into the White Coppice Reservoir. The bywash of the lodge proved insufficient to carry off the water,, which began to roll over the embankment a yard deep. The flood forced its way into the mills through the windows of the mechanic's shop and swept everything out by the front door. The main body of the stream was then deflected by a wall into the boiler house, which was quickly filled. Eventually the water burrowed its way under the foundations of the mill carrying with it tons of earth. Fortunately a man on duty in the mill went across the dam, and the occupants of the houses were aroused from their sleep and got out of danger, as were also a number of others who resided along the course of the stream. The water flooded the shed, and spoiled a lot of warp, and some cloth was carried into the road. The stock was fortunately low, but the damage must be great. Low down several bridges which crossed the brook have been carried away and the water which supplies the Dacca Twist Company was so dirty that work had to be stopped. Twice before within a month the valley has been flooded, but not to so serious an extent. On this occasion there can be little doubt that if the flood had continued much longer the embankment of the White Coppice Reservoir would have gone, and the loss of life might have been heavy.

Preston: River Ribble was in high flood and low lying fields on the banks are under water.

The rain and strong winds were also reported at Lytham, Blackpool and Fleetwood.

The Lune and Wenning were also in a state of flood the worst for 15 years.

Southport: The lower half of Lord Street became a river with tributaries from Duke Street, Talbot Street Portland Street and parallel streets. A canoe was used in Talbot street. Cellars were flooded in Chapel St and Neville St. This was said to be the worst flooding for 2 years but were not so bad because of improvements in sewers. At Birkdale where no improvements had taken place there was flooding at Weld Road opposite the convent to several feet. Lulworth road became impassable and Aughton Road also flooded.

Wigan: Water poured into houses until it reached half a yard.

Bolton: Several mills are stopped through the floods. Several houses have been struck by lightning and a child was seriously injured. At a stable 50 horses were up to their necks in water. **The streams in the district rose one foot a minute.**

Houses were also reported flooded in Ashton, Ince, Platt Bridge, and Hindley.

This storm, yielding much rain in a short time, caused flooding in many places, and drains or sewers were burst in Manchester, Castleford, and Leeds. **In Castleford it is stated that the local authorities removed nearly 100 cartloads of hail.**

Manchester. At Blackley a reservoir burst and sent a rush of water which tore away part of a joinery and entered cellars in Market Street.

St Helens: The storm lasted half an hour and all low lying parts of the town were flooded. A building was struck and seriously damaged.

25 Aug 1891
Liverpool
Mercury 27 Aug
26 May 1892
Liverpool
Mercury 27 May

Persistent rain with strong winds –
no thunder reported

Thunderstorm
Southport Birkdale 0.97 in 2 h

3 Jul 1892
Manchester
Courier 5 Jul
BR

Thunderstorm
Bolton The Park 1.00 in 9 m (1.14
in 33 m)

23/24 Aug 1892
Manchester
courier 27 Aug
Liverpool
Mercury 25 Aug

Thunderstorm following a period
of oppressive heat.

1 Sep 1892
Liverpool
Mercury 3 Sep,
Chapman and
Buchanan 1966

No thunder reported in N Lancs but thunderstorms later in the south.
Chelford Astle Pk 0.50 in 20 m

Preston and the Fylde: Rainstorm caused the swelling of the Ribble and caused damage to crops in the Fylde. The river Wyre overflowed at Scorton station and the road nearby was under 4 to 5 feet of water.
The River <<Lune>> overflowed near Lancaster and the ballast at Hindburn bridge had been washed away. Chapman and Buchanan give a list of flood peaks at Caton Low Mill with a flow of 977 cumecs estimated being the 6th highest from 1892 to 1962.
Southport: A storm with hailstones occurred in a thunderstorm with high winds; no flooding was reported.
St Helens: Another thunderstorm again caused flooding in the lower part of town.

18 May 1893
BR

Gawthorpe Hall 0.93 in 1 h

7 Jun 1893
Blackburn
Standard 10 Jun

Thunderstorm

Nelson: Heavy rain fell for 2 hours quickly flooding the lower parts of town. In the Walverden district weavers had to wade to get back to work after lunch and the Walverden Mill was flooded along with the adjacent Leeds Road. Cellars of houses were flooded in Carr and Scotland Roads and ran right through houses in George Street. Paving on Pendle Street was lifted and destroyed. The football and recreation field were under water and there was widespread flooding in the Newbridge area. A chemist's shop was struck and destroyed in Burnley.
Hyde: Shops and other buildings were flooded to a depth of 2 feet. Buildings were struck by lightning.

3 Jul 1893
Lancs Evg Post
4 Jul

Thunderstorm

8 Jul 1893
Lancs Evg post
10 Jul

Thunderstorm
Southport max temp 83.5 F; daily rainfall 1.33 inches

11 Jul 1893
Manchester
courier 12 Jul

Thunderstorm
Whittle le Woods (10th) 1.35 in 1 h
25 m

Lytham: Sewers were blocked and streets almost impassable.
Southport: Lord street sewer was surcharged and the basement of Scarisbrick hotel was flooded. Cellars in Stanley street were also flooded.
Rochdale: A mill chimney was struck and demolished and the mill set alight. No flooding was reported.
Hayfield: in the High Peak (Mersey catchment) several houses were flooded seriously.
Chorley: Low lying houses in Water street were flooded and the furniture floated about. A furniture store was struck by lightning.
Houses were struck and damaged by lightning at Accrington and Burnley.

10 Aug 1893
Lancaster Gaz
12 Aug
Lancs Evg Post
11 Aug
BR

Thunderstorm
Longridge 2.09" in 35 minutes; 2.4 inches in the day
Preston — some hailstones the size of walnuts.
Preston Corporation Off: 1.25 in 5 m

Blackburn: Buildings were struck and seriously damaged. The rain did much damage in Shearbrook and Limbrick. In Shearbrook large quantities of stones and gravel were carried down to Preston new Road. The water was 18 inches deep near St Andrew's street in Limbrick and a number of houses were flooded in King William Street and Market Place. At Mellor a cow was killed and Eslwick Mill was flooded to a considerable depth.
Burnley: Rain fell for nearly 3 hours causing flooding to a large number of houses in various parts of the town. A mill was flooded in the Trafalgar district.
Preston/Longridge: The railway line between Preston and Longridge was torn up by the stream of water. Sewers in various parts of the town were unable to carry the water which shot up from manholes several feet high. Walls were washed down and cellars were almost universally flooded. Lightning strikes caused some fires. Syke Street main sewer which runs through Winckley Square under Mount street burst forming a huge chasm and the bottom of Mount street was flooded. Many mills were flooded to a depth of 2 to 3 feet. Friargate sustained great damage and tradesmen suffered loss through water up to 3 feet deep in shops. Park paths have been damaged by streams of water which have furrowed them and gravel is spread over the grass. A cow was killed by lightning. Hailstones of large size smashed

windows and several shops were flooded.

Nelson: Sewers were inadequate and cellars were flooded. In Highborn Road the subway under the railway was flooded. The houses on the higher side of Bradshaw Street were flooded.

Clitheroe: Most of the streets in the town were flooded and in the lower parts houses were flooded, to the extent in some that furniture was floating about.

Fulwood: The floors of some houses were burst out by the rush of water from bursting sewers. Water rushed down sloping streets, ploughing up the roads and carrying silt and debris. House gutters were insufficient capacity and water streamed off in sheets.

Garstang: Low lying lands were completely under water and the Wyre and Brock rose between 2 and 3 feet in half an hour. Five cows were killed by lightning.

Walton le Dale: Several houses had their cellars and kitchens flooded. Flats Mill was flooded.

2 Jul 1894
BR

Rochdale Fieldhead 0.33 in 23 m

25 Jul 1894
Blackburn
Standard 28 Jul
BR

Thunderstorm
Bolton Hurst Bank Heaton 0.50 in
25 m

Burnley: An extensive works was destroyed by fire after being struck by lightning.

Blackburn: three houses were struck. There were no reports of flooding.

A factory at Burnley, one house at Blackburn, one at Bradford, and several houses in Sheffield were struck. Floods occurred at Bacup, Sowerby Bridge, and Todmorden

1 Aug 1894
BR

Whittle le Woods 1.43 in 3 h

30 May 1895
Liverpool
Mercury 31 May

Thunderstorm

Liverpool: Heavy rain with hailstones. There were no reports of flooding.

Southport: A house was struck and damaged by lightning.

Manchester: A gang of men working on sewers in Scropton Street were suddenly hit by a surge of water from an old sewer carrying five or six men off their feet – but all were rescued.

26 Jun 1895
BR

Rochdale Fieldhead 1.61 in 55 m
Eccleston 1.48 in 2 h 15 m

Malpas, Edge Hill. The most severe TS experienced in 70 years commenced about 4 p.m., and it is estimated that more than 1,000 flashes of L occurred before 5 p.m., within a mile 15 oaks and 1 ash were struck. At Thorneycroft Hall 2.40 in fell in less than an hour. Eccleston 1.48 in. falling between 3.15 p.m. and 5.30 p.m.—Macclesfield, The Park (VIII). The most violent TS remembered. 2.37 in fell in three hours from 2.45 p.m. Bolton, The Park Severe TS from 3 p.m. to 7.30 p.m.—Rochdale, Deeplish Hill 1.87 in., of which 1.38 in. Fell between 5.20 p.m. and 6.20 p.m. during a TS ; probably all of the 1.87 in. fell in an hour-and-three-quarters.—Rochdale, Fieldhead TS, and 1.61 in 55 minutes.—Southport, Hesketh Park TS in evening.

1 Jul 1895
Liverpool
Mercury 2 Jul

Two thunderstorms separated by
a couple of hours of sunshine

Liverpool: Heavy rain flooded many of the leading thoroughfares and torrents rushed along steep places such as Leece Street, Bold Street, William Brown Street and London road. Sewers became choked leading to pools in low lying districts. Many cellars and warehouses were seriously flooded. Defective sewerage has caused problems on the outskirts at West Derby and Tuebrook where kitchens and gardens have been flooded.

An incident occurred in Fox Street in the second storm with lightning striking a warehouse and setting it alight but no flooding was reported from this second storm.

26 Jul 1895
BR

Grange pit Farm 0.34 in 8 m (1.25
in 20 m)
Cartmel Fell Vic 1.50 in 1 h

Re 25 Jul A heavy fall (in places) over a large area, including N. Lancashire, the S.E. of the Lake District, and parts of all three Ridings of Yorkshire(widespread daily totals over 2.50).

	Macclesfield 2.37" in 3 h	<Macclesfield>: Many sewers burst and houses were flooded 3 feet deep. Two houses and a flagstaff were struck by lightning.
9 Jul 1896 Liverpool Mercury 10 Jul	Thunderstorm	Southport: Heavy rain for five hours with thunder at the beginning. Lord Street and parallel streets were flooded as were several parts of Birkdale notably Weld Road, Aughton Road and York Avenue. The railway became flooded at Ash Street Station covering the axles of carriages.
19 Aug 1896 Manchester Courier 22 Aug	Thunderstorm	Manchester/Oldham: The storm was accompanied by hail. The water rushed down Manchester Road like a river. A few houses and shops were flooded
13 Sep 1896 Manchester Courier 19 Sep	Thunderstorm	Pendlebury (NE of Manchester): A 9-year old boy was drowned when he was swept from a tunnel which he had gone under with some others to shelter from the rain. Initially the flow was very low but the water suddenly increased; the other boys ran out but he delayed and was carried away and drowned. Many low lying houses in Chorley and Bolton roads were flooded. Two houses were struck by lightning and inmates injured.
10 Oct 1896 Manchester Courier 12 Sep	Thunderstorm – but cold and wet throughout the day and accompanied by a high wind	Bolton, Leigh, Bury: Lightning struck houses but no flooding was reported.
28 Jun 1897 Liverpool Mercury 30 Jun BR	Thunderstorm Gateacre the Nook 0.68 on 30 m	Manchester: rain was accompanied by hail. Drains were overcharged and water flowed down the streets. Liverpool: A local football team entering their field as a group were struck by lightning; one was killed and 5 others severely injured. No flooding reported.
5 Aug 1897 Liverpool Mercury 6 Aug BR, Winsford and Middlewich Guardian 7 Aug, Heywood Advertiser 6 Aug	Thunderstorm following a period of very warm weather. There were widespread reports of lightning damage and death of animals but few of flooding Rochdale Fieldhead 0.56 in 30 m(1.54 in 45 m) Rochdale Deeplish Hill 1.60 in 40 m Rochdale Park Obs 1.31 in 50 m (1.93 in 1 h 15 m) Rochdale, Park Observatory Two TSS. The first from noon to 1.15 p.m., with 1.93in; the second from	Liverpool: In the districts of West Derby and Tuebrook several houses had their cellars flooded. Near Edge Lane a great rush of water went over the railway line owing to the bursting of a sewer. At Old Swan the furniture in several houses was floating about. Premises in low lying districts of Liverpool including businesses and warehouses had their cellars flooded in many instances to several feet. Bootle: the streets were flooded and water found its way into many cellars of houses in low lying districts. The borough police station was flooded to 18 inches. Altrincham: The storm lasted 2 hours. Rain flooded low lying quarters of the town. Two houses were struck and damaged by lightning. Nelson: The heavy rain quickly flooded the higher portion of the town; the drains in Hibson Road were quite inadequate. In the subway to Little Marsden the water accumulated to 5 feet. Liverpool: Rain was accompanied by hail. Drains were choked and many streets were flooded; business premises all over the city had their cellars flooded. A man was killed by lightning at the Docks. Clitheroe: The storm was of short duration but a farmer was killed in a field. Streets and gullies were filled. Bury, Blackburn: two men were killed by lightning. Burnley: A number of cellars were flooded. St Helen's: Rain was accompanied by large hailstones and lumps of ice. Most of the streets of the town were flooded and damage was done by water getting into cellars of houses and shops. The most serious flooding was at the bottom of Bridge Street, the water being several feet deep and filling the surrounding shops and causing the upheaval of the pavement. Southport and Ormskirk: Lightning damage to Portland hotel and three cows killed. Wilmslow: Hailstones as large as marbles fell with great damage to greenhouses and fruit trees. Middlewich: the rain came down in torrents but in an incredibly short time the sewers were incapable of taking the vast

	<p>5.25 to 6.15 p.m., with 1.31 in., making a total of 3.24 in. Rochdale, Fieldhead In 45 minutes, from 0.15 p.m., 1.54" of R fell, and in 30 minutes, from 5.30 p.m., 0.56 in. Southport, Hesketh Park TS. A chimney stack and two trees were struck by L at Birkdale, and three cows were killed and a pony was injured on Birkdale Common Stretford 0.95 in 30 m</p>	<p>volume of water which rushed along the streets. The wind was very violent and a large quantity of hailstones fell with the rain. Lower Street from the Bullring was converted into a rapid river. The water boiled up 2 or 3 feet high at each grid and the water was 3 to 4 inches deep across the whole street. A number of houses were flooded. At the bottom end of Lower Street the water was 3 or 4 feet deep for a distance of 30 yards and the houses there were flooded to a depth of 2 or 3 feet. Wharf Bank and Leadsmithy Street and a number of houses there were similarly inundated. Cellars of shops at the Bullring were flooded as were those at the White Lion. Roofs and ceilings also suffered as a consequence of the extreme violence of the storm. The storm only lasted half an hour. <Heywood>: John Street Mill was flooded to a depth of a few inches.</p>
<p>8 Aug 1898 BR 20 Jun 1899 Liverpool Mercury 21 Jun 28 Jun 1899 Liverpool Mercury 29 Jun 1899 BR 12 Jun 1900 Burnley Gaz 13 Jun Blackburn standard 16 Jun Manchester times 15 Jun BR</p>	<p>Thunderstorm following several weeks of warm dry weather</p> <p>Thunderstorm following 2 days of oppressive heat Aughton springs 0.95 in 1 h</p> <p>Thunderstorms on successive nights with preceding very hot weather BR observers note thunderstorms at Bolton Astle Hall Chelford Cheshire had 0.55" in 7 m</p>	<p>Formby: A labourer was killed by lightning. A storm was also reported at Liverpool with no damage reported and no flooding in Lancs.</p> <p>Liverpool: Low lying streets were flooded. Part of Smithdown road was flooded to a depth of several feet. Many cellars of houses and businesses were flooded, notably in Byrom Street. Bootle: At Seaforth, Bridge Street was flooded to a depth of 2 feet and streets were like rivers.</p> <p>Burnley: cellars were flooded but damage limited. Several chimney stacks were demolished. Some lambs were killed. Ashton under Lyne: Several houses in the lower part of town were flooded with furniture floating about. Blackburn: Large hailstones came down in torrents and caused considerable damage to windows. Cellars were flooded Eccles and Worsley: Lightning damage to buildings was reported. Manchester: A boy was drowned in the River Medlock. He was playing in the bed of the river near Palmerstone Street, Beswick with the stream in a comparatively shallow state when the water suddenly came down in a flood. Three boys managed to escape with no more than a wetting, a fourth clung to a river wall until he was rescued, the other was carried downstream where the river wall was 30 feet high and attempts to rescue him failed. Sandbach: The hailstones were like lumps of sugar and some were considerably larger. The sewers were quite unable to cope with the voume of water which well up through grids and manholes. Down Bradwell road the water collected to such depth that a horse was up to its belly. Two cottages on the same road were flooded one with a child left floating asleep on a sofa. Many cellars were filled to capacity. <Holmes chapel>: Hailstones were solid pieces of ice, of all conceivable shapes many picked up 1½ to 2 inches long and weighing 2 or 3 oz. Fields of potatoes are severely damaged. Chickens and ducks were killed by falling hailstones.</p>
<p>16 Jul 1900 BR 3 Aug 1900 Burnley Express 8 Aug</p>	<p>Liverpool Huyton 0.30" in 10 minutes: .51" in 30 mins</p> <p>Heavy daily rainfalls were reported at Liverpool (2.75" and 2.91")</p>	<p>Earby (N of Nelson): The storm did considerable damage to property and stock. The rain overflowed the back which runs through the town. Water St was properly named, the water being 2 feet deep. From the top end of the village to Albion Hall and grove Shed, the streets were impassable. Behind Victoria Inst and in Ireland Square the water was 3 feet deep in</p>

**Manchester
courier 11 Aug
BR**

**6 Aug 1900
Manchester
Courier 8 Aug
Lancs Evg Post 6
Aug**

Thunderstorm
Manchester Rainfall 1.37"

**21 Jul 1901
Lancs Evg Post
22 Jul
BR**

Thunderstorm with accompanying
very high temperatures - 90F
recorded following a drought of 20
days
Storms widely reported in Lancs
but no significant flooding.
Manchester Stretford 1.00 in 30
mins
No thunder reported – persistent
rainfall

**25 Jul 1901
Manchester
Courier 26 Jul
11/12 Nov 1901
BR**

Not a thunderstorm

**17 May 1902
BR**

Ormskirk 1.18" in 1 hour

**5 May 1903
BR**

Rochdale 0.40" in 15 m

**25 Jun 1903
Burnley express
27 Jun**

Thunderstorm

**17 Jul 1903
Manchester
Courier 18 Jul**

Thunderstorm

houses. Some of the shops in the main street were flooded a yard high. Nothing like this has occurred in Earby since 1866.

Woodhead (Upper Etherow/Goyt): A cloudburst was followed by a great rush of water down the hillside. Trees and undergrowth were carried along and large boulders some 6 feet long were carried in the direction of the rail line. In places it was piled in drifts 10 feet high on the line with the heaviest obstruction a mile on the Manchester side of the Crowden Station and a second not so serious a quarter of a mile from the station. A building near the station was covered with mud and partly demolished and the inhabitants escaped with difficulty.

Rochdale: two men were killed by lightning

Tyldesley: A man was killed by lightning.

Bury: Hamilton Street was flooded to a depth of 2 feet. A wall 100 feet long was carried away at Chesham.

Lancaster: Water rushed down the streets from the higher parts of the town causing floods at lower levels. Sewers were surcharged and water from the sewer grates added to the flood. Stonewell and Lower Church Street had a sheet of water 1 foot deep. Several shopkeepers whose shops are below the level of the street were flooded. On receding, the road was covered with debris and sewage five inches deep.

Morecambe: A number of houses in low lying parts of the town were flooded.

Langho (N of Blackburn): A house was struck by lightning.

Accrington: two houses damaged by lightning.

Barrowford (N of Burnley): A man was killed by lightning.

Manchester: The road at Fallowfield Station was flooded from water flowing from a sewer combined with the overflow of a brook in the Burnage area; a considerable length of line was flooded. Water was as high as the platform at Alexandra Park. Rail services were disrupted.

Widespread heavy rainfall from a deep depression moving across Ireland and northern England extending over 2 days. Rainfall on 11th exceeded 1 inch over the whole of Ireland except the extreme NW and SW, and parts of Lancs and W Riding of Yorkshire. On 12th the heavy rain continued in NW England and extended to Northumberland as well as southern Scotland and south to Derbyshire.

Burnley: The town suffered immense damage. Several rows of houses in the town were under water.

Burnley: A half hour storm caused flooding of streets. A spinning mill was struck by lightning and set alight. Other buildings were struck.

St Helens: At St Thomas Cemetery the bell tower was struck and the bell fell to the ground. Cellars were flooded in several public houses in Liverpool road.

Warrington: Low lying streets were flooded. People were injured by lightning strike.

14 Aug 1903 BR	Rochdale 0.46" in 24 m	
8 Sep 1903 Burnley Express 12 Sep	Preston had daily rainfall of 1.33"	<p>Burnley: All the contributing streams swelled the Calder to a great height. The Ribble also overflowed in places.</p> <p>Barrowford: Low lying places were flooded. On the back of Gisburn Road, houses were flooded as well as the mill.</p> <p>Padiham: Although the river rose to a great height, none of the mills were flooded.</p> <p>Clitheroe: Albion Mill and Shawbridge mill were flooded from the river Ribble. Houses in Shawbridge Street and Taylor Street were flooded due to the overflowing of a brook at the top of Walker Street. Houses in Waterloo, Duck Street and Salford were also flooded.</p> <p>Earby: The lower part of the village was flooded. The beck which runs past Victoria Mill overflowed and a neighbouring shed with 800 looms was flooded to a depth of 9 inches. Houses in Victoria Street were flooded to at least 1 foot.</p> <p>Hapton(W of Burnley): The farmer at Shuttleworth Hall Farm had land flooded that had not been flooded for the last 23 years and managed to save most of his farm animals by wading chest deep for up to two hours.</p> <p>Manchester and E Lancs: Rain was accompanied by large hailstones which broke greenhouse glass. The streets were deluged for hours.</p>
15 Oct 1903 Manchester courier 17 Oct 4 aug 1904 Burnley Express 6 Aug BR	Very widespread rain with some thunderstorms	
28 Jun 1905 Burnley Gazette 1 Jul BR	Thunderstorm Wilmslow Parkside 0.60 in 30 m	<p>Burnley: Lightning struck and damaged 2 houses in Barracks Road.</p> <p>Lightning damage was also reported at Liverpool and Leyland.</p> <p>Liverpool: Torrential rain caused a serious fire by flooding an oil-works and raising the floating oil to the level of the gas jets.</p> <p>Wilmslow (S of Manchester): Rain was accompanied by hail almost as big as marbles. The roads and low lying areas were flooded and great damage was done to strawberry crops.</p> <p>Northwich: A whirlwind was observed. At noon, after a thunderstorm with hail, a whirlwind did much damage, unroofing houses and workshops, driving in gables of three houses, and sucking up nearly a ton of hay, carried it for nearly a quarter of a mile. A bookstall in the station was denuded of its contents, and a porter's cap was carried into a football field three hundred yards distant, where also were discovered some hundreds of postcards from the bookstall.</p>
9 Jul 1905 BR	Rochdale Fieldhead 0.85 in 30 m	
3 Aug 1905 Lancs Evg post 4 Aug	Thunderstorm	<p>St Anne's: Many cellars in the town were flooded. A house was struck and damaged.</p> <p>Carnforth: the main road from Lancaster to the north was flooded to 2 feet.</p>
8 May 1906 Lancs Evg Post 9 May Manchester Courier 9 May BR	Thunderstorm	<p>Hyde: Tramway and railway traffic was interrupted, houses were flooded and the roof of a hat factory fell in while part of the machine room of another factory was washed away. In the Godley Valley separating Hyde and Newton, most damage was done. 200 to 300 houses were flooded to a depth of 2 to 6 feet. Some people were taken out of their homes by ladders. A retaining wall adjoining Newton Bank Printworks was washed down and part of the building swept away with the water 7 feet deep. Kingston Mills and Hollow Factory were flooded. North and sons Leather works was destroyed.</p> <p>(Hyde Great rainstorm. "Tramway and railway traffic was interrupted, and houses were flooded so that many people left them in fear. Part of a leather works was destroyed, a roof collapsed at a hat works, and part of the machine-room at a</p>

calico print works was washed away. The total damage is estimated at over £10,000."—The Times.)

Stalybridge: A culvert at high elevation in the southeast of the town burst and water descended to the centre of the town washing up a portion of the road in its passage and flooding a large number of houses. Within an hour the inundation at Portland Place through which the River Tame flows had reached 5 feet. Part of the side of the bridge was washed away. Houses in the vicinity were flooded to a depth of a foot or two of water. In Old Street water flowed in the front and out the back and carried furniture etc. Heavy rainfall between Godley and Mottram flooded the rail line to Sheffield and caused delays. An adjacent village was flooded to a depth of 2 feet and into 10 to 12 houses.

Colne: All over the town the streets were full of water and cellars of houses and mills were flooded. Great Holme Mill suffered greatly where the water swept away the gable end which collapsed. Stanley Mill was also flooded with water bursting through a window. The water was knee deep in the Waterside district and at Primet bridge residents had to wade to reach their dwellings. Some large mills at the bottom of Derby Street were flooded. The rails were submerged between Colne and Nelson.

Nelson, Reedyford: Foundations of a new bridge were washed away and mills and houses in the vicinity also suffered.

Buxton: houses were flooded in Dale Road. The storm was also experienced in Chinley, (where hailstones of tremendous size were reported), New Mills, Chapel-en-le Frith and Hayfield. The river Goyt was a torrent and large trees were carried down.

Preston: A building was struck and damaged. No flooding reported.

Chorley: Rainfall for 2 hours but no flooding reported. Houses were struck.

Whalley: Storm of rain and hail for half an hour and the main street had the appearance of a river. Several cottages were flooded.

Bacup: Steeper streets ran like rivers. Large quantities of debris choked the gullies. In Market St and Newchurch Strets the gravel was sufficient to block the tram service. One part of Gas Street was 12 inches under water. Irwell Mill was flooded.

Burnley: Very local storm affected only parts of the town. One or two mills had their floors covered with water in the Accrington Road district.

Manchester: some bye-streets were flooded and traffic was affected on some main streets also. No damage to life or property was reported.

St Helen's: A house was struck and damaged.

Lytham and St Anne's: Fairhaven and Clifton Drive were almost impassable, the water being one foot deep and right across the road. Cellars were flooded. The waiting room at Lytham Station was flooded.

Blackburn: several streets were flooded. The junction of Sudell Close and Preston road was like a lake and much sand and gravel swept down the hill.

Pendleton: A house was struck by lightning and some sheep were killed.

Storms without damage or flooding were reported at Burnley, Clitheroe and Accrington.

Wirral: Hailstones the size of marbles did much damage to crops

12 Jun 1906
Lancs Evg post
12 Jun
Burnley express
13 Jun

Thunderstorm following a spell of very hot weather

14 Aug 1906
Manchester
Courier 15 Aug

Rochdale Fieldhead 0.52 in 30 m

1 Oct 1906
Manchester
Courier 5 Oct
BR

Thunderstorm following a long dry spell – the drought was said to extend for 4 months
Rochdale 0.16 in 7.5 m

11/12 May 1907
Burnley express
15 May

Thunderstorm with preceding very hot weather

9 Jun 1907

Thunderstorm
Liverpool Knotty Ash 1.71 during

Manchester Courier 11 Jun Lancashire Evg Post 10 Jun BR 29 Jun 1907 BR 4 Jul 1907 Manchester Courier 5 Jul 20 Jul 1907 Lancs Evg Post 22 Jul Burnley Gaz 24 Jul BR	Ts (duration not specified)	Fylde to Garstang: many roads are flooded Preston: The storm was not as severe as a month ago which was of longer duration. A house was struck by lightning. Garstang: Low lying roads are flooded. A cow was killed by lightning at Nateby. Ashton on Ribble: A house at Cannon Hill was flooded.
4 Jun 1908 Lancs Evg Post 5 Jun 14 Jul 1908 BR 28 Aug 1908 Lancs Evg Post 29 Aug 20 Sep 1908 Burnley Gaz 23 Sep BR 16 Aug 1909 Manchester courier 17 Aug BR	Liverpool Huyton 0.90 in 1 h 15 m Thunderstorm Thunderstorm Hampson in Ellel 1.50 in 1 h Cartmel Several sheep were killed and other damage done. The storm was most partial, little over half an inch falling at Flookburgh, Cark and Holker, while nearly 1 ¼ in. fell at Cartmel, and 2 ¼ in. at Grange Thunderstorm Macclesfield 1.16 in 1 h 30 m Blackpool 0.32 in 20 m Widespread thunderstorms Thunderstorm in Lancs and in West Riding Rochdale Fieldhead 1.07 in 3 h Thunderstorms affecting most Lancashire towns – brief but severe. Liverpool, Huyton Vicarage Violent hail storm. Large pieces of ice fell in early morning. Hulme (Lightning struck St. Gabriel's Church and set fire to the roof. A hand-cart was struck in the street and the wheels forced off,	Bolton: the storm was accompanied by rain and hail. A house was struck and damaged at Deane. St Helen's: The traffic was stopped for a time by flooding. Lightning damaged houses. Morecambe: There was much flooding of cellars in various parts of the town and lakes were formed on the promenade by the blocking up of gullies. Hailstones the size of marbles fell for several minutes. During the storm 1.85 inches fell in a short time (duration not specified). Fylde: Rain fell in torrents for a long spell resulting in floods. Hay was damaged. Leigh: Two houses were struck and damaged by lightning. Blackburn: A mill was struck and set alight – but no flooding was reported. Burnley: Altham's shed in Heasandford was flooded. Haydock Street near Victoria Hospital was flooded due to inadequate drainage. When the water got level with Sailor Street it flowed away. Briercliffe road was also impassable and the Baltic Fleet Hotel cellar was flooded. The school in connection with Mount Zion Methodist church in Colne Road was flooded Manchester: An inch of rain was registered in less than half an hour. The water became excessive for the grids and the roads were quickly flooded to a depth of several inches. Buildings and telephone services were struck by lightning. Cellars were flooded but there is no reference to location or to flooding of property. Oldham: Blackriddings Mill and the Spindle Works were flooded; boilerhouses were flooded at the Hartford and Avon Mills. At many houses the water reached a level to put out the fires and at Chadderton Police Station the cells were flooded. A woman in a cellar tenement in Dorothy Street was in danger of being drowned. The low lying districts of Crompton also suffered severely. Heywood: The sewer in John street was unable to take the volume and the water backed up into Singletons Weaving shed which was flooded to 2 feet.

	the man pushing it was severely shaken but not injured. Wigan 0.40 in fell in 15 minutes. Hail as big as peas. Filey 0.37 in fell in 13 minutes.	Blackpool: Lightning damaged the Cemetery church. Rochdale: Lightning struck the Providence Church. Two horses were killed by lightning. Eccles: The cellars of the Town Hall and adjoining shops were flooded. The water under Slack Lane bridge rose to a height of 3 feet and houses were invaded. The floods reached Togo Mill Barton and Bridgewater foundry. The storm was also reported in Liverpool, Widnes, Accrington but without any reports of flooding. Burnley: The streets were soon flooded and the rivers rose rapidly. The only damage occurred at Burnley Wood District where a house was struck by lightning. A woman was killed by lightning. Barnoldswick: The Primitive Methodist School was flooded and a thick layer of mud left. The water in the cellar of the Liberal Club was 2 feet deep and the Albert Hall was invaded. Damage was done to houses in Albert Street. Houses in Walsmote were flooded several feet. Earby: A storm burst on Pinhope Pike and caused havoc in Lothersdale valley and also in Earby valley the stream which flows through the older part of the town became a rushing torrent and swept down walls and bridges. Owing to the succession of bridges and buildings erected across the stream in Water Street, the street became like Venice. Houses and shops in the lower part of the street were flooded and Victoria Shed was entered. Ireland Square suffered the most and houses were 2 to 3 feet deep in water and mud. The damage in Water Street would have been greater but the water flowed across the fairground and joined the other stream which proceeds from Kelbrook Blackburn: Rain tore up masses of road metal on steep streets and washed down into the centre of town choking the tramway lines. The river Blakewater rose rapidly and cellars in lowlying parts of the town were quickly flooded. Many shops were flooded. Stalybridge:" The Bridge Street Cotton Mills were struck by lightning, and the fire which followed did considerable damage, the two top storeys of the building being completely destroyed."— The Times. Clayton-le-Moors " During a severe thunderstorm which passed over the Accrington district Thomas Henry Haworth, aged 50, a spinner, of Church, who was walking to Clayton-le-Moors with his wife and child, was struck by lightning and killed." The Times.
8 Jun 1910 Burnley express 11 Jun		
12 Jun 1910 Burnley Gazette 18 Jun	Thunderstorm	
27 May 1911 Manchester Courier 29 May 17 Jun 1911 BR	thunderstorm	
5 Aug 1911 BR 4 Aug 1912 BR 27 Oct 1913 Manchester courier 28 Oct 17 Jun 1914 Manchester Evening News 18 Jun BR	Southport Hesketh park 0.48 in 15 m Thunderstorm	Carke in Cartmel: A horse was killed by lightning Widnes: The storm was accompanied by a whirlwind and hail with rain. Houses were partially demolished with the gale; in Kent street windows were blown out. Manchester: It also experienced heavy rain with thunder but for less than an hour with no reports of damage or flooding. Saddleworth: Wharnton Hill seems to have been the centre of the storm. Water rushed down the gullies carrying thousands of tons of rocks and sand. A wall at Greenfield Station was washed down and blocked the line. At Uppermill a culvert burst and blocked the road. All the houses in the valleys were flooded. The mill at Dobcross was brought to a standstill and the flood did much damage. The cellars of the Railway Hotel Greenfield were filled. BR notes from the Ribble Valley observer that a terrible thunderstorm burst on Red Shaw Hill near Newby Head 2 ½ miles from Gearstones and the same distance from Ling Gill Bridge and flooded the Dent Valley as well as the Ribble. The water was very muddy and a kind of marl deposit was left on the bed of the river. The backwaters were several inches

18 Jun 1914
Burnley Echo 20
Jun
Manchester
courier 19 Jun

Thunderstorm, local in effect
Temperature in Manchester
reached 76 F, the hottest of the
year.
Burnley 0.73 inch in 1 hour

1 Jul 1914
Liverpool Echo 2
Jul
Burnley News 4
Jul
Manchester Evg.
News 1 Jul
Rochdale
Observer 4 Jul

Thunderstorm following hot
weather – temperature reaching
77F.
Frodsham Simonsdelf 0.46 in 15 m

12 Jul 1914
Manchester
Courier 13 Jul

Thunderstorm lasting less than 1
hour

17 Jun 1914
BR
Westmorland
Gazette 20 Jun

Kendal (Holmcroft) 0.64" in 40
mins

20 Jul 1914
Chester
chronicle 25 Jul
30 Jul 1915
Chester

Downpour with very little thunder
and lightning

thick with the stuff. A few tons of stones were removed by the torrent.

WG has no reference to rainfall or flooding.

Burnley: The storm affected the west of the town whilst the east was untouched. Heavy rain fell for nearly an hour. A pub, Malakoff Tavern was struck and damaged. In the hollow under Cog Lane rail bridge water reached almost to the top of the lampposts partly due to blocked gullies. In Gannow Lane houses at the lower end were flooded to two or three feet. Woodbine Mill was flooded and the Grey Mare Inn Gannow Lane had barrels floating in the cellar. A house was struck and damaged by lightning.

Mossley: Water swept down steep streets carrying debris. In Stamford Road there was 12 inches of water running down, emptying in the railway station and the Empire cinema which was like a swimming bath with 3 feet of water in the dressing rooms. Jacob's Ladder abutting Stamford Road was swept by rain and carried much debris. A mill was struck by lightning and set alight. The Clark and Wilson and the Croft Mill were flooded.

Scores of houses were flooded in Mid-Cheshire.

Birkenhead: A number of houses, Birkenhead Hotel were struck and cattle were killed by lightning.

Rochdale: A haymaker was killed by lightning whilst sheltering under a farm cart. A number of buildings were struck and damaged. A horse and a cow were killed at Littleborough.

Lightning damage was also reported in St Helens and Widnes and Pendleton where 4 houses collapsed.

Broughton: several streets were flooded.

Burnley: Just one or two cellars flooded

Padiham: A house was struck by lightning and damaged.

Nelson: Various buildings were also struck.

Sabden: There was flooding at Cobden Union Mills mainly from the inadequacy of roof gutters. Steiner's printworks also suffered flooding. The Water was several feet deep on Whalley Road.

Accrington: Surface water flooding occurred at the end of Scaitcliffe Street and Ormerod Street near the railway bridge where the road was 2 to 3 feet under water. Howard and Bullough Departmtnets were also flooded.

Manchester: Limited damage was caused by lightning and flood effects were limited to sporting events.

Mossley: The downpour swept from the upper to the lower part of town. Many tons of sand were swept down Jacob's Ladder on to the main road, Stamford road. Abney Congregational Church was struck by lightning.

Ashton: A man was found dead in bed, thought to have been struck by lightning. Many houses were struck and several people injured by lightning. Streets were turned into torrents. A street in the Smallshaw district had a foot of water.

Frodsham: For the first time since the main sewer was built down Bank Street the sewer was unable to carry the flow and backed up as far as the Post Office on Main Street. Lower Main Street represented a river and Booth Street and Marsh Green were flooded.

Ellesmere port: Heavy rain shortly flooded one of the main streets, the water running through several low lying homes, owing to the inefficiency of grids to take away the water.

Chronicle 31 JUL
9/10 Aug 1915
Manchester Evg
news 13 Aug
Rochdale
Observer 11 Aug

Thunderstorm

Manchester, Hulme: Two men working in a sewer forty feet below York Street were swept off their feet by a sudden flood and drowned. The inquest noted that the water in the sewer rose from 12 inches to 2 feet 9 inches in 4 minutes and shortly afterwards to fill the 4 foot 6 inch sewer and rise in the manhole.
Rochdale: Heavy rain fell for more than half an hour. Streams dashed down every incline and flooded houses on the way and carried masses of debris. The Flying Horse Hotel and the shop adjoining the church Steps were flooded. The cellars of a bank were flooded. The water level in Sudden Brook rose four or five feet in an incredibly short time; it overflowed the bank and flooded the Sudden Manufacturing Company's mill. Several other mills were flooded.

23 Jun 1916
BR

Southport Hesketh 0.37 in 10 m

3 Jul 1916
Rochdale
Observer 5 Jul

14 Aug 1914
BR

Blundellsands Myra 1.09 in 30
15th daily rainfall
Heysham 3.33 in
Morecambe 3.69 in

Rochdale: Rain fell in torrents for nearly one hour. The river and streets became swollen with water in a short time. Several mills were flooded and debris washed into the street.

17 Aug 1916
Burnley News
19 Aug

12 Aug 1917
Lancs evg. Post
13 Aug
Burnley News

Thunderstorm

Burnley: Several houses were struck by lightning but no flooding was reported. (Note also flooding at Todmorden)

Nelson: Several houses in low lying parts of the town were flooded. The subway at Hibson road was flooded and impassable.
Burnley: cellars and basements were flooded.

15 Aug.
14 Aug 1917
Rochdale
Observer 18 Aug

Thunderstorm

Rochdale: A severe thunderstorm occurred at Crompton between Rochdale and Oldham. Many houses and cellars along the Beal valley were flooded. The tower of Lyon Mill was struck by lightning and water poured into the basement of the mill to a depth of 2 feet.
Chorley: Downpour of hail and rain. Low lying portion of Market street and Water Street were flooded. Some houses were struck by lightning.

21 May 1918
BR

Bolton Queens Park 0.47 in 15 m

20 Jul 1918
Rochdale
Observer 24 Jul
BR

Thunderstorm accompanied by hail

The last of the series of thunderstorms which characterized the third week of July brought highly localized splashes of heavy rainfall in the Midlands and north of England.

Rochdale: Much damage was caused by flooding especially at Littleborough, Smallbridge and Milnrow. In Rochdale itself there was little damage although the River Roach as well as the canal was very high after the storm.
Littleborough: Here and Summit (apart from Walsden) were the greatest sufferers from the storm. Clough Mill was flooded to a depth of 7 feet after the mill dam overflowed in the Summit District. Much water also found its way along Clough Road with debris carried as far as Denhurst. Cottages on either side of Blackstone Edge Road were flooded. Flagstones and kerbstones were torn up. At Dearnley water rushed down side streets on to the tramway and debris was 2 feet deep in places. Pigs and fowls were drowned. The river completely overflowed its banks in three quarters of an

hour. Several houses were flooded in Smallbridge. Basements of houses and shops in lower parts of Milnrow and Newhey were flooded.

A Littleborough resident noted that the first effects of rain and hail were the stream of water down Temple Lane bringing a load of rubbish. A few minutes later a much larger stream came crashing down the road taking the water from Cloughhead into the Roach. In a few minutes it was 4 feet wide and 9 or 10 inches deep. A few minutes later it covered the whole width of the Todmorden road carrying stones and debris and knocking down walls. It dug a deep channel in the roadway.

Elsewhere the Burnley Express notes that there is still a shortage of water and presumably the storm had no serious effects there.

Thunderstorms were widespread in Westmoreland, north Lancashire and West Riding of Yorkshire.

Carnforth: Torrential rain washed potatoes etc out of the ground. The surface of the main roads was much damaged and houses were flooded.

BR notes that owing to the hilly nature of the district serious damage was done by flood water, roads having their surfaces torn away and being blocked by debris. At one point a beck was diverted from its natural course, a hole 40 ft. deep being cut out, and a bridge almost washed away.

St Helens: The town and district suffered considerable damage after three periods of intense rainfall and hail. The road to Warrington at Peasley Cross was flooded to a depth of 5 feet and was closed to traffic. A wall at the borough sanatorium was knocked down by lightning and the adjacent stream flowed into the grounds and the administration block. Water burst up from grids and manholes. Many houses were flooded at Parr and Moss Nook with water reaching the kitchen ceilings. The St Helens newspaper office basement was flooded. At Reigate, Sutton, Thatto Heath and Watery Lane, scores of houses were flooded. Macadam roads all over the area have been badly damaged.

Leigh: The town experienced its worst flood in years and for hours numerous people were trapped in upstairs rooms. Leigh Road towards Bolton was flooded and the Firs Post Office was badly flooded. Water was pumped out of houses, shops and the Hippodrome.

Blackburn: Cellars and basements in low lying parts of the town were flooded and many streets were badly damaged by water. In Shear Brown portions of the road were torn up and several cottages in other parts of the town were flooded. In King William Street and Sudell Cross, shopkeepers were engaged in diverting the water or sweeping it away from their doors.

Burnley, Accrington, Preston: Thunderstorms also occurred but were of brief duration and no damage was reported.

Eccleston (S of Preston): The Sid brook rose and flooded adjacent fields. Trees, hedges and fences were torn down and footbridges swept away. At Heskin three houses were flooded and at Dog Kennel residents had to take refuge upstairs. Much damage was done to gardens and poultry and pigs were lost or had to be rescued.

Woodplumpton (North of Preston): Secondary roads were extensively flooded. At Sowerby Hall 3 lambs, a foal, cows and poultry were drowned.

Leyland: Newsome Street off Hough lane was worst hit with water up to 3 feet deep in houses. Chapel Brow was flooded and the Gasworks fires were in danger of being extinguished (but escaped). Seven Stars Hotel was struck by lightning.

Croston (SW of Preston): The River Yarrow rose about 10 feet and reached the crown of the bridge leading to the Hillocks

10 May 1919
BR
Westmoreland
gazette 17 May
BR

Caton The School House 1.82 in 1 h 30 m

27 May 1920 BR
29 May 1920
Lancs Evg post
31 May
BR

Whaley bridge 0.80" in 20 m
Thunderstorm
2.82 inches in 24 hours at Preston most of it in 3 hours.
Leyland Worden Hall 1.65 in 20 m (3.23 in day)
Upholland Grammar Sch 1.50 in 38 m
Leigh Leesrigg 1.00 in 1 h

The most intense rainfalls of the day, however, occurred in a tract extending from Lancashire to Lincolnshire, particularly at the two extremities. At the western end the principal centre was to the south of Preston at Worden Hall, Leyland.

At Walton-le-Dale, out of a total of 3.25 in., nearly 3 in. fell during an hour and a half from 17 h., but no precisely timed measurement appears to have been made. Local accounts suggest that the rainfall was at least equally severe on Bleasdale Fells and Beacon Fell, and an extraordinary rise took place in the Barton Brook, a

tributary of the River Wyre.

This was also the occasion of the great floods at Louth in Lincolnshire.

which was entirely flooded out. Town road, Station Road, Highfield Lane, Grapes Lane and Westheads Road were under water to a depth of 2 feet, as was also the Rectory grounds and The Rectory. The church escaped. Croston Brickworks were flooded.

Thornley (NE of Preston): Tens of acres of land are under water in the Loud valley. There were no reports of houses flooded.

Serious damage was done to railway lines and roads. Near Brock Station the floods washed out a small bridge and made a 15 yard gap in the railway embankment. The valley between Preston and Deepdale station on the Longridge line was flooded and trains were cancelled. Caldwell bridge (Stonebridge brow 4 ½ miles from Preston) across the Barton Brook collapsed cutting road traffic.

The most serious damage was in the Brock valley between Cloughton and St Michaels where the rains rushed down Fair Snape, Parlick Hill and Beacon Hill causing the river to rise at a great rate, sweeping everything before it. The banks were quickly overflowed and cattle had to be rescued with difficulty. Trees were torn up and blocked bridges, notably at Brock Station where backed up water flooded houses in Parlick Terrace to a depth of 3 to 4 feet. The bridge was endangered and damaged and rail traffic was stopped in time. The embankment failed and the water poured through the gap into Brock village where houses at the lower end were flooded to 3 feet. Brookhouse farm was also flooded. Roebuck Hotel and the Post Office were flooded.

The centres of heaviest rainfall were in England, and more than 2 in. fell in three districts respectively in Lancashire, South Yorkshire, and Lincolnshire. To the south of Preston more than 3 in fell. In the district surrounding this centre of great rainfall more than 1 in. was observed over an unbroken area stretching from the Mersey to near Kirkby Stephen, and from the coast at Southport inland to Rochdale.

A secondary depression of no great importance crossed the south of England but at Bramhall near Stockport 2.00 in. fell in an hour,

The passage of secondary depressions gave considerable falls from 9 to 11 Oct, the principal centres lying in the west of Ireland on the 9th, and in the centre and east of England on the two following days.

BR notes that the falls reported on 21st from Grimsby, Otham and Hampson-in-Ellel were accompanied by severe hail, and the amounts given must be considered as minima. (See The Meteorological Magazine, June, 1922, pp. 129-130.)

Burnley: A local thunderstorm was reported in relation to egg laying! But no other information was provided.

A depression reached central Scotland on the 31st, being very shallow, and then started to move southwards. The heavy rain on the Lancashire coast during the night August 31st-September 1st appears to have been connected with this movement.

The main damage was in the Clitheroe district where 300 houses were flooded and two quiet streams became raging torrents. The floods stopped mills including Albion, Holmes, Brewere and Waterloo Mills. Schools were closed. Floods also occurred from the overflowing of the Pendle Water.

BR notes that according to the Liverpool correspondent of The Times, writing on November 14th, the floods at Sale on the Mersey were the most severe within memory, the water being 11 ft. deep at Sale Priory. At Clitheroe, 300 houses were flooded, and at Bury fire engines had to be requisitioned to pump water out of houses.

12 May 1921
BR

Bramhall Bramhall Lane 2.00 in 1 h

11 Oct 1921
BR

Newhey sewage Wks 2.28 in 2 h

21 May 1922
BR

Hampson in Ellel (Lancaster) 1.13 in 20 m

1 Sep 1922
Burnley Express
4 Oct 1922
BR

Burnley 1.5 inches in 75 minutes in a local thunderstorm
Daily totals
Southport Hesketh Park 2.56
St Annes on Sea 3.71
St Annes on Sea Lawrence Ho 3.75
Blackpool Obs 3.06

12/13 Nov 1923
Burnley Express
17 Nov
BR

Ingleton 3.52
Not a thunderstorm – 41 hours continuous rain
(The annual rainfall to this point was reported to be a record)
Rainfall on 2 days 11 and 12th
Oldham gas works 1.58 2.53
Oldham Brushes Clough .. 2.69

**31 May/1 Jun
1924 Lancs Evg
Post 2 Jun
Burnley Express
4 Jun**

Rochdale (Spring Mill, Whitworth)
1.90 2.50
Rochdale (Cowm, Whitworth) 2.14
2.80
Sedbergh (Brigg Flats) 1.78 2.69
Sedbergh (Havera Bank) * 2.75
Widespread flooding from
thunderstorms and more
prolonged rainfall affecting
Birmingham, Welsh Borders and
Cheshire mainly.
Wirral 3.30 inches in 24 hours but
nearly 1.6 inches in 1.25 hours
Daily rainfalls
Garston 2-81
Garston (Grassendale Pk.) 2.50
Liverpool (Rathbone Rd.) 2.70
Liverpool (Lark Lane. 2.75
Liverpool (Newsham Pk.) 2.66
Many daily totals in Cheshire were
> 2.50
Heysham Harbour 0.40 in 10 m

**11 Jun 1924
BR
19 Jun 1924
BR
17 Aug 1924
Lancs Evg Post
21 Aug**

Leyland Worden Hall 0.42 in 10 m
(0.35 in 4 m approx)
Thunderstorm

**22 Aug 1924
Lancs Evg post
23 Aug
BR
19 May 1925
Br**

Thunderstorms widespread in
South of England
West Kirby (Cheshire) 1.59 in 1 h
30 m
Bolton Queens park 0.95 in 30 m
In May, thunderstorms and hail
showers were widespread and
numerous. Liverpool had as many
as 10 days with thunderstorms.

Cheshire and Wirral Peninsula: The river Weaver at Nantwich rose 18 feet during the night and houses on the western side were flooded. There were no reports of flooding in Lancashire.
Burnley: A three year old boy fell in the swollen river and drowned.

Ribblesdale and Bowland: Miles of road surface was completely washed away. Brooks which were a mere trickle became raging torrents in a few minutes. Hundreds of tons of earth and stones were washed on to roads which were blocked at two places. Fences, footbridge and trees were carried down the valley. At Langden Valley waterworks from which Preston gets its water supply; the flood rose several feet above the concrete dam. There was also serious damage at the Blackburn Works in the Brennan valley where many sheds were dislodged from their foundations and several landslides occurred. Hodder and Ribble were both in flood causing widespread agricultural damage.
An embankment collapsed between Clitheroe and Whalley blocking the railway line.
Colne: the river rose and flooded house in the Waterside area.
Sabden: The Union Mill was temporarily stopped as flood water entered the boiler room.
Stalybridge: Two houses were seriously damaged by lightning. Lightning strikes were also reported around the Manchester region.

22 Aug 1925 BR	Leyland Worden Hall 0.50 in 19 m	
9 Jul 1926 BR	Northwich Barnton 0.38 in 10 m	
18 Jul 1926 BR	Southport Hesketh park 0.20 in 5 m Lancaster Greg Obs 1.20 in 15 m Blackpool Met Obs 1.00 in 20 m West Kirby in Cheshire 1 -55 inch fell during a thunderstorm lasting from 16 h. to 16 h. 55 m. Birkenhead 0.41 in 10 m (0.55 in 15 m)	Entries occur in the table for Lancaster, Southport and Blackpool. At Lancaster the intense rain occurred just after and at Southport and Blackpool just before midnight on the 19th.
20 Sep 1926 BR		On the morning of 20 th thunderstorms accompanied by heavy local rains, were associated in northern districts with the incursion of a cold northerly current. Entries for this day are for West Kirby, to the west of Birkenhead; Birkenhead and Southport. At West Kirby the rain fell shortly after midnight, at Birkenhead -41 inch fell between 3h. 25 m. and 3 h. 35 m., and -55 inch between 4 h. 15m. and 4 h. 30 m. At Southport, during the most intense portion of the storm, 0.20 inch fell in 2 ½ minutes.
4 Nov 1926 BR	Ulpha 2.68 Duddon Seathwaite Sch 4.43 Hawkshead Tower Bank 2.87 Ambleside Skelwith Fold 3.75 Windermere Hammar Bank 2.68 Windermere Holehird 3.18 Windermere Brockhole 3.21 Ambleside White Craggs 3.64 Ambleside Wansfell 3.32 Ambleside Market Sq 3.57 Rydal Stepping Stones 3.91 Rydal 3.96 Rydal High Close 3.18 Rydal The hall 4.02 Dungeon Ghyll 3.28 Grasmere The Wray 4.29	Rain was widespread in western Britain in the southern portion of a depression the centre of which skirted the NW coast of Scotland. Heaviest rain fell on high ground. Many rivers overflowed their banks and caused considerable damage by flooding, roads were made impassable and railway services were delayed. BR has rainfall distribution map and synoptic charts for 4 and 5 Nov.
5 Jul 1927 BR	West Kirby St Andrews vic 0.63 in 19 m Southport Hesketh park 0.20 in 6 m	
12 Jul 1927 BR	Poynton waterloo 1.31 in 70 m Liverpool Monument Place 0.20 in 5 m	
14 Jul 1927 BR		At Strinesdale Reservoir, in the Oldham District, the fall for the rainfall day was 4.21 inches and "the bulk of this rain fell in from three to four hours." The storm was local and apparently confined to a width of two miles and travelled up from the south-west, subsequently receding in the same direction."
21 Jul 1927 Burnley Express	Thunderstorm Nelson 1.45 inches in 24 hours	Burnley: The streets in many areas were flooded to a few inches and the river rose very rapidly. A heifer was killed by lightning. The Thursden valley was flooded and a new reservoir there was damaged. The torrent flowed over the bank

23 Jul
BR

Stalybridge 1.62 in 50 m

and flooded the engine room.

Nelson, Colne: Floods resulted in the death of a man by drowning at Nelson when he was carried away by the river that flows through Victoria Park. Low lying places and buildings were quickly flooded from the intense rainfall. The subway under the railway between Hibson Road and Hibson Street was flooded to a depth of 4 feet. At the junction of Railway Street and Waids House Road there was flooding to a depth of 2 feet, and similarly at Carr Hall Road. Nearly all the mills in low lying districts were flooded with water finding its way into cellars and warehouses. In the Clover Hill district operatives were engaged in baling water out of the mills. In the Netherfield Road and Waterworth street area houses were flooded severely.

Trawden: The river adjacent to Chapel Street overflowed and carried away a strong stone wall and flowed into the houses to a yard deep. An old resident said that he had not seen anything like it in his 65 years connection with Trawden. Rock Lane and the road in front of residences leading to Stunsteads farm had the road demolished, creating a trench a yard deep in the middle of the road. Huge boulders were carried down to the foot of Rock Lane. Trawden sewage Works was submerged and a nine foot boundary wall was knocked down. The Black Carr Mill and forest shed were both flooded.

Brierfield: The Every Street District was most affected. Garden crops were destroyed at Fence.

BR notes that on July 21st, heavy rain caused severe flooding in the district of Glasgow, the north-east of England generally and near Stalybridge. At Chew Reservoir, a few miles to the east of Oldham, rain began about 15 h. 45 m. and was particularly intense after 16 h. In the Swineshaw Valley, to the north-west, 1.62 inches fell between 15 h. 40 m. and 16 h. 30 m. The run-off was very rapid so that the stream was practically normal the same night.

Ribblesdale: In the Bawdlands district water flowed across fields into a road and several cottages were flooded to a depth of 1 foot (the third time within one month that these houses have been entered). A house at Low Moor and another at Shaw bridge were flooded. Moorland stream became raging cataracts and footpaths were cut into furrows, sweeping away fencing and in some cases sheep which were seen carried down the Ribble.

BR reports as follows with the Liverpool Mercury quote "The intense rain at Bidston Observatory, near Liverpool, on the 8th occurred between 17 h. 15 m. and 17 h. 20 m., and is reported as being rather heavier than the last severe thunderstorm which occurred there on July 28th last year. The following details are taken from the Liverpool Post and Mercury for the 9th :—

Seldom in this country is the approach of a storm so clearly heralded as was that of the one which struck Liverpool shortly after six o'clock last evening. Passengers on the ferryboats and the waiting crowds on the landing stage saw what appeared to be a wall of thick mist rapidly approaching across the water, and within a few seconds the deluge burst upon them with tropical intensity.

So heavy was the downpour that those who were unprepared with mackintoshes or umbrellas were drenched to the skin in the few seconds taken in rushing from the boats to the shelters on the stage. Scores of people ready to cross to the Cheshire side waited for the following steamer, rather than venture into the open the few yards necessary to cross the gangway.

In the centre of the city the gutters were turned into foaming waterways in a few minutes, and taxicabs and other vehicles raised showers of spray as they cleft the swimming streets. Water Street, Brunswick Street and James Street were converted into miniature streams. Pedestrians making their way to the pierhead quickly took shelter in shops and

20 Aug 1927
Burnley News
24 Aug
BR
8 Aug 1928
Liverpool Post
and Mercury
BR

Thunderstorm
Daily rainfall for 18th
Bolton W.W. (Delph) 2-51
Brindle (Whiteholme) 3-15
No daily rf given for 20th
Birkenhead Bidston 0.35 in 5 m

office buildings, and watched the water swirl over the kerb on to the pavement. The street grids were inadequate to cope with the fall, and only low spouting fountains indicated their position."

Sabden: Watts Street was flooded as well as one house on Whalley road.

Rainfall was widespread throughout England and Wales and a total of 8.31 was recorded in the Rhondda valley. Full description with synoptic chart in BR 1929

Burnley: Several mills in the Burnley Lane District were flooded and work was suspended. Basements and cellars of houses in Briercliffe Road district were flooded in some cases to a depth of several feet. Victoria hospital received much flood water from Haydock Street and the basement of the Institution was flooded to a depth of 3 and a half feet. A culvert under Haydock street gave way and all the houses from 15 to 37 were invaded and the water also affected Wilton Street. Heasandford Mill and the neighbouring Heasandford house were flooded from the goyt which comes down from Rukin valley Farm and the river Doe. The cellar of Baltic Fleet Hotel was flooded to a depth of 8 feet and numbers 50 and 52 on Briercliffe Road were flooded to a depth of one foot. All the mills in the vicinity of elm Street were affected including the Livingstone Mill and Hargreaves New hall Mill.

Chorley: two men struck by lightning and injured. Lower parts of the town were flooded as drains were unable to take the flow. Market Street was affected (including the royal billiard Hall) and at one time had 12 inches of water. Shops and cellars were flooded and a sewer burst in Moor road flooding neighbouring property. There was extensive flooding at several local mills and in some work had to be suspended. Leyland Works was flooded. Brown's Mill was flooded.

Burnley: Flooding at Manchester Road, Summit interrupted the tram service. Houses were flooded at Read and in the Sabden Valley. Kemp's weaving shed at read was flooded from a sudden rush of water. In Hambleton View several houses were flooded to a depth of 2 feet and the Stork Hotel was also flooded. The Baltic fleet Hotel in Briercliffe road had again water in its cellar but not as bad as in May but the two neighbouring cottages were flooded. There was again a certain amount of flooding at Livingstone Mill and New Hall Mill in Elm Street. At Higher Trapp the water broke down walls and piled stones on the roadway in whins Lane and excavations 3 or 4 feet deep were made.

Sabden: Walls were knocked over on the Whalley Sabden road. The road was torn up on the Clitheroe Road. Many houses were flooded as the water rushed down the streets in great volume.

River Ribble: The torrential rain is believed to have been the cause of the complete destruction of fish life in the Ribble for a length of 30 miles from the junction with the Calder to the sea. Fish were found dead in the deposited sludge – roach, dace, gudgeon, eels etc. This was caused by flood waters in the Calder, Darwen etc. As a result of 2 inches of rain in a very short period.

Bolton: Hailstones were packed together to give pieces of ice.

31 Jul 1929
BR

6 Aug 1929
Burnley News
10 Aug

11 Nov 1929
BR

26 May 1930
Burnley News
28 May

11 Jun 1930
BR

18 Jun 1930
Lancs evg post
19 Jun
Burnley News
21 Jun
Lancs Evg post
28 Jul

29 Aug 1930

Southport Hesketh Park 0.20 in 6 m

Nelson Walton Lane 0.32 in 8 m

Thunderstorm

Bolton Queens park 0.50 in 15 m

Bolton, -36 inch fell between 12 h.

55 m. and 13 h. -50 inch by 13 h.

10 m. and -75 inch by 13 h. 35 m.

Seathwaite Vic 2.95

Ambleside (White Craggs) 2.59

Rydal (The Hall) 2.57

Grasmere (The Wray) 2.62

Thunderstorm

Burnley Queens Park had a daily

total of 1.39 inches and most of

this fell in one hour

Thunderstorm

Sabden Whinns House 2.66 in 2 h

Thuderstorms after a heatwave in

Lancs evg Post
30 Aug
Burnley News
30 Aug
BR

which 46 deaths were reported
94F reported in London
Hail in some places as big as
pigeon's eggs.
Helmshore Clough House 1.18 in
30 m
Goyt Valley Oldfield 1.70 in 70 m
Goyt valley Upper Hall 1.40 in 70
m
Storms were reported in Scotland,
Wales and London etc.

Buxton: Very large hailstones also occurred. In the Goyt Valley near the Cat and Fiddle, the rain was described as a cloudburst and the stream rose at an astonishing rate and soon became a torrent. Trees were uprooted and two stone bridges were swept away.
Burnley: Streets were quickly transformed into flowing streams but there were comparatively few instances of flooding. One schoolroom was flooded and the Bankhouse Shed was affected.
At Helmshore, near Manchester, the observer notes that, " the hailstones were fully the size of pullet eggs "

BR quotes an observer that "on the west side of the Goyt Valley there was an area of rainfall of tremendous intensity, for on the sites of what are normally very small tributary streams flowing in from the west, great masses of rocks and boulders have been hurled down and a chasm fifty yards across has been torn in the valley side. About 2 miles from its source an old set of stepping-stones has been entirely removed and the whole aspect of the spot changed. I was told that the water came down in a great wave several feet high."
The storm was said to be very local.

Blackpool: Reference back from later flood to the flood a week previous when water in some houses reached a depth of 4 feet and left behind quantities of sand and sewage.

11 Sep 1930
BR
6 Jun 1931
Lancs Evg post
15 Jun
14 Jun 1931
BR
Burnley News
17 Jun
Lancs Evg. Post
15 Jun

Formby The Dunes 1.53 in 75 m

Barrow-in-Furness (Gas Works)
3.00
Barrow-in-Furness (Sewage
Works) 2.65
Southport Hesketh Park 0.39 in 10
m
Burnley 0.87 inches in one hour
Blackpool 1.53 inches between 1
pm and 6 pm
Widespread storms and floods
occurred in SW, London and
midlands.

Concurrently line squall gave thunderstorms and intense rains in the Midlands and a tornado in Birmingham. In the Lake district there was a 'cloudburst at Bootle as follows:
THE CLOUDBURSTS NEAR BOOTLE (CUMBERLAND) JUNE 14th, 1931. F. Hudleston
On the afternoon of Sunday, June 14th, 1931, thunderstorms and very heavy rain occurred over the whole of north-western England and cloudbursts were reported at various places
Burnley: Thunderstorm for an hour and a half. Flooding of houses occurred in the Brunshaw area. In Brockenhourst Street cellars and kitchens were flooded to a depth of 10 to 12 inches. Drains were incapable of coping and manhole covers were lifted. Elsewhere in the town cellars and lower floors were flooded to a couple of inches.
Clitheroe: The church at Waddington was struck by lightning and the roof was damaged leading to internal flooding; a brook running through the village rose a yard in 15 minutes and houses at the lower end of the village were flooded. Two cottages at Leewood Brow were flooded. The flood seemed to be initiated near Cob Castle on Waddington Fell and the road down from Moorcock Inn became like a river carrying all before it before reaching the Ribble at Brungerley. The teahouse attached to the Moorcock Inn at the foot of Waddington Fell was flooded. The streets were littered with debris and trout and large quantities of tar macadam were ripped up. At least 30 cottages were flooded. The Higher Buck Hotel and Dugdale's shop were also flooded. Lower down the village, houses that usually stand high above flood level were also flooded and beyond the church several farms and cottages were also flooded. Sheep and poultry were carried away. A camping party at Waddington Fell heard an unaccountable roar before the flood swept away a wall close to the camp and they had to make a bolt for it through swirling waters.
Chorley: Low lying parts of Chorley and district were flooded in some cases to a depth of over one foot. A manhole top was blown off in Astley Park. The heavy rain was accompanied by strong winds (which blew away Jubilee decorations).
Fleetwood: the thunderstorm lasted over an hour. Water entered homes in Milton Street, Poulton Road, Warrenhurst

road, Park Avenue, Birch Street and Willow Street.

Lytham St Annes: Some streets were flooded axle deep at Church Road, St Annes and Freckleton Street, Lytham. Heavy rains at Warton flooded the main Preston to Lytham road to a depth of 3 feet.

Blackpool: Thunderstorm for nearly 3 hours. Houses were flooded in the Victoria Road District in some cases to over one foot deep and two feet deep on the streets. There was reference back to the previous flood which was even more serious; in this case there was no sewage in the flood. Rain made cracks in the macadam at Whitegate Drive and the tram service was suspended.

Lancaster: Manhole covers were forced open and the road surface lifted by the force of water, including Railways Street, South Road, Penny Street Bridge, Quarry Road, Bowerham street and Owen Road. Houses in emerson Street, Scotforth were flooded and shops in Lower Church Street were flooded to several inches. The water was several inches deep in the Parade Room of the Town Hall.

At Dolphinholme the River Wyre was in full spate and farmers had to drive cattle, knee-deep to safety.

Hoghton: The Boar's Head Hotel was flooded to 5 or 6 feet in the cellars and other neighbouring property suffered.

Preston: Torrentil rains lasted two hours and many streets of the town were underwater, the drains being incapable of carrying the flow. Damage was done in the Tulketh road district of Ashton on Ribble; a shop cellar was flooded to road level and subsidence occurred; a score of houses were flooded seriously and dozens of others required mopping up. Other parts of the town were affected to a lesser extent; a cellar of a hotel in Deepdale was flooded. In the avenue in Moor Park the water accumulated to a depth of several inches. At Caterall, the Calder overflowed on to the Preston Lancaster Road to a depth of up to 4 feet.

At Walton le Dale many cottages were flooded and water flowed into the subway at Bamber Bridge.

Hale: Low lying houses and works in the Hale district were flooded.

Stockport, Heavilly: the main Buxton road was flooded to a depth of 3 to 4 feet. Cellars of shops were flooded.

Bury: Cellars and shops were flooded and residents waded knee-deep among their furniture

Blackpool: Pumps are working night and day in the Victoria Street district after another thunderstorm today where houses have been flooded to a depth of 3 feet and cellars engulfed in three storms during the previous 10 days.

17 Jun 1931
Lancs Evg Post
17 Jun
7 Jul 1931 BR
15 Aug 1931
Burnley News
19 Aug
Burnley Express
19 Aug

2-hour thunderstorm after recent
previous thunderstorm

High Lane (Cheshire) 1.03 in 45 m
Thunderstorm

Burnley: Flooding was reported in several districts but the damage was said to be light. Effects were mainly from lightning which struck and damaged houses and affected electrical fittings. At the junction of Bacup Road and Todmorden Road the water was about a foot deep. The Rivers Calder and Brun were bank high. Clowbridge had its greatest flood for many years and a number of houses and cellars were flooded. Oak Mill was flooded to 4 inches. A footbridge was washed away at Dunnockbridge Farm. Water swept down Swinshaw Lane carrying stones which blocked the road. At Lovcroft houses were flooded to several inches. On the Bacup Road several houses were flooded and a cow was killed by lightning.

Haslingden: In the Acre district damage was done by the bursting of culverts and Acre Mill Lodge overflowed. The pressure on the culvert blew up parts of Pilling Street where water rushed 10 inches deep through houses and cellars were flooded to nearly 8 feet.

Darwen: Scores of houses were flooded and several mills had to be stopped because of water coming through the roof.

19 aug 1931

Thunderstorm
Southport hesketh Park 0.39 in 13

**Lancs Evg Post
20 Aug**

m
Liverpool Monument Place 0.78 in
15 m
Darwen: over an inch of rain in
less than half an hour

**11 Jul 1932
Burnley Express
16 Jul
Lancs Evg post
11/12 Jul
BR**

Thunderstorm most severe and
widespread in east south of
England and Midlands. Two killed
by lightning in Bradford and
Derbyshire.

More than 3 inches was recorded
over small areas near Stalybridge.
As much as 4.74 inches was
measured at Broadbottom
(Harewood Lodge) (Cheshire) and
5-33 inches at Barnoldswick
(Rainhall Road), this fall being the
largest daily rainfall in 1932. At
Barnoldswick (White Moor
Pumping Station) rain commenced
after 13h. 30m. and was at its
heaviest at 15h. 30m. and was
practically continuous in a heavy
downpour up to 1h. on the 12th.
During the first two hours hail as
large as a shilling and up to half an
inch thick was experienced.
More than 2 inches was also
recorded over small areas at
Retford and Bawtry, to the south

The main roads in the town were turned into lakes with the water spurting up from the drains to the height of a few feet. In Bridge Street and Market Street where the roads were turned into rivers, shops premises were affected and had their cellars flooded. Paving stones were dislodged in the steep Wraith Street. In Police Street the water entered the police station by the back yard. Furniture and carpets were floating about in the stream that inundated a row of cottages between Hillside Avenue and Astley Bank. A chip shop opposite Bury Fold was inundated to at least a foot. Four houses in Union Street, two in Hollins Grove Street, two in Blackburn Road and three in Greenwood Street were also flooded. A house at 222 Bolton Road was also badly flooded.

Withnell: the main Blackburn Wigan line was flooded to a depth of several feet at Withnell Station. Water rushed between the platforms of the moorland station like a stream in spate; it caused damage to the embankment.

Chorley: Low lying streets were flooded; there was no mention of houses.

Blackburn: Lightning fused lights in the centre of town and stopped the railway clock. Houses had furniture damaged by the flood, pavements were lifted by the water and much litter was left in the streets. Blakewater foundry at the bottom of Addison Street was flooded and left with a covering of mud. Shops were damaged by lightning.

Sawley: Near Smithies Bridge the water was nearly a foot deep on the road. Several houses in Sawley were flooded as water swept down the hillside.

Accrington: A five year old boy fell in the River Hyndburn and was washed away and drowned. No parts of Accrington were seriously flooded. The road at Church Railway Bridge was several feet under water.

Burnley: 'This was one of the worst floods Burnley has experienced'. Burnley Lane was the area most affected and from Harle Syke to Duke Bar, Briercliffe road was submerged causing havoc to property on the level with the road. The drains were quite inadequate. The stream which flows into Harle Syke Mill caused the reservoir to overflow and pour down the Burnley Road forming a lake near Briercliffe Mill where the boilerhouses was flooded to 4 to 5 feet. Surface water from Finsley Hill poured down Milton Street and Finsley Street. Under the Central club the water was 6 to 7 feet deep. Houses in Oaken Place were badly flooded and in Cop Row the water rose to about 3 feet. Houses were flooded in Haydock Street and the cellars of Victoria Hospital were flooded to a depth of 3 feet. The cellars of the Baltic fleet Hotel were flooded to a depth of 15 feet and water spilled on to the ground floor; two cottages next door were also flooded level with table tops.

Pendle Hill: Walkers on the hill were caught in the storm and made their way with difficulty to the New Inn Barley.

Nelson: It was said to be the worst storm in 21 years. Extensive damage was done in Railway Street and Hibson road areas. Basements of mills and houses were flooded some to a depth of 3 feet. The cellar of Elliott Printers was flooded to a depth of 8 feet and the stock ruined. The Engineers Arms in Sagar street was flooded with barrels of beer floating about. Houses were struck by lightning and damaged. Flooding occurred at the Lomeshaye Mill and also in the Valley Mills area. Many houses in the low lying areas of Barrowford were also flooded and the crick ground at Seedhill was covered.

Colne: A house was struck by lightning and damaged. Mills in North Valley and Waterside were flooded but the worst experience was at Vivary Bridge Mill and Greenfield Mil. The Market hall was also flooded.

Barnoldswick: Ouseldale Foundry was struck by lightning and demolished and other houses were struck and damaged. Much damage was done by flooding from becks which supply the cotton mills. Water poured into the weaving shed at Clough Mill and people had to be rescued. Most of the town's 4000 cotton workers are out of work. Shops near Butts

	of Tadcaster, and at Knaresborough, Thirsk and Pickering, while more than 3 inches fell at Felixkirk near Thirsk.	Beck were flooded and furniture smashed and carried into the streets. Sheep cattle and pigs were drowned. Blackpool: there was flooding in Milton Street up to a depth of 1 foot. Lancaster: Shops in Lower Church Street were flooded to a depth of several inches New Mills (Derbyshire): A woman was killed by lightning Northwest information is about the intense heat and people sleeping out in their gardens!
12 Aug 1932 Lancs Evg post 12 Aug 20 May 1933 BR	Thunderstorm following 3 days of intense heat affecting London E Anglia Scotland and elsewhere West Kirby 0.24 in 5 m	
8 Jun 1933 Lancs Evg post 9 Jun	Thunderstorm following a heatwave with temperature around 85F every day for a week	Bleasdale(Between Preston and Lancaster): A great volume of water came down the River Brock like a tidal wave and bathers at Brock bridge managed to escape only in the nick of time. The river was at a low level and a group of children were paddling about on the concrete bed above the fall which was carrying about 2 or 3 inches of water. Other parts of the bed were dry and on these picknickers had established themselves. Rumbling in the distance was persistent thunder but this was too far away to anticipate any interference. A woman upstream was seen to be waving excitedly and at the same time they caught sight of the river, a few seconds ago placid and serene, now a high wall of frothing water racing down with such force that the banks were unable to confine it. The party had a wild scramble to get away from the river bed before the swelling volume of water descended on them. Two boys were fortunate to get hold of a tree branch and drag themselves clear just as the torrent reached them. Possessions including a purse and camera were lost in the rush' Burnley: There was no flooding but two houses were damaged by lightning. Garstang: A mare was killed by lightning. Calder Vale: Hailstones the size of large marbles fell and much damage was done to orchards and growing crops. Manchester: Lightning disrupted tram services. The deluge flooded many parts of the city to 18 inches, holding up traffic Bentham, Arnside, Silverdale: A thunderstorm was also reported but no details of damage given Morecambe: Intense rainfall for nearly an hour flooded streets and cellars. Bootle (Merseyside): A youth was drowned whilst attempting to cycle through floods. Chorley: A house was struck by lightning and partially wrecked. BR notes that Mr. H. J. Bigelstone, the observer at Bidston Observatory, states that " the storm appears to have travelled from North Wales, passing over Birkenhead and Wallasey, and finally over Liverpool, in the Bootle, Litherland and Seaforth districts of which its greatest violence was reached." (See the Meteorological Magazine for 1933, pp. 131-4). Blackpool: Two balls of fire were seen and people were thrown off their feet but the storm only lasted half an hour and no flooding was reported. Southport, Banks: A house was struck by lightning and damaged. Preston, Ashton: Fifty houses were flooded some to more than one foot. The greatest problem was near the foot of Tulketh Road where water rushed down the steep part of the street. In Beverley Street the water was a foot deep in houses in less than a quarter of an hour. There was a miniature lake near the Grand Junction Hotel and some nearby houses were flooded. The storm began with a whirlwind which removed a pile of sand in a side street and swept along Fishergate rendering observation difficult. Leyland: the storm was accompanied by a heavy fall of hailstones. Lightning struck and damaged a house.
20 Jun 1933 Lancs Evg Post 21 Jun BR	Thunderstorm Litherland Hatton Hill Pk 1.20 in 30 m Birkenhead Bidston 0.79 in 30 m	
7 Jul 1933 Lancs Evg Post 7 Jul	Thunderstorm West Kirby 0.60 in 15 m	

Great Harwood: A downpour turned the streets into rivers for a short time (the storm followed shortly after an earthquake of sufficient strength to send people out into the streets).

Fleetwood: Over a dozen streets and back streets were flooded to a depth of several feet. Warrenhurst road was worst affected with water several feet deep in gardens and up to the doorsteps of houses. Other flooded streets were, Milton Street, Ash Street, Blackiston Street, Park Avenue, Birch Street, Oak Street and Belmont Road. In Poulton Road the water was so deep that traffic had to be diverted and a portion of Lord Street was flooded. Buildings were struck and damaged by lightning. Cellars in Hesketh Street were flooded to a few inches and stalls in the Market Place suffered damage.

Lancaster: The fall of lumps of ice as big as a man's fist was the principal feature of the storm at Lancaster. They broke car windows and house windows and splintered in the roadway. The gutters were soon flooded with rain water. The County court was adjourned when the noise of hail drowned speech and then **windows were broken by the hail**

Morecambe: **Hailstones as big as marbles broke several windows** and hundreds of basements were flooded.

Burnley: Houses were struck and damaged by lightning.

Colne: Hailstones soon covered the ground and several streets were flooded including several houses in the Windy Bank and Waterside Districts. Vivary Bridge Mill was flooded.

Barnoldswick: A boy was struck by lightning whilst cycling but did not sustain serious injuries. Houses in the lower part of the town at Bankfield Crow Nest and Wellhouse Mills were flooded.

Worsthorne: There were several cases of flooding in the village.

Macclesfield: At nearby Rainow heavy rain caused much damage to roads and property. The road from Macclesfield to Whaby was impassable because of boulders washed from the hillsides. Hundreds of poultry were drowned. At Bollington houses were flooded to several feet and the River Dene rose 8 feet in less than an hour.

Darwen: Two adjoining houses were struck by lightning and caused serious damage. Heavy rain was reported but no flooding.

Bootle: Floods occurred in Hawthorne Road for the first time in nearly 30 years.

Longton: A man was knocked unconscious by lightning.

The storm was reported in Liverpool, Preston, Longridge with lightning effects but no flooding reported.

Lancaster: It caught the fringe of the storm. The storm battered plants and gardens and excited tourists but caused no flooding. Thunderstorms were also reported in other parts of North Lancashire but no flooding was reported.

Preston: The storm caused extensive flooding in the low lying parts of town. A culvert carrying the Moor Brook burst in Tulketh Road, breaking up the roadway, flooding houses and entering the Public Hall cellars. The burst water spouted as high as the first floor windows. Setts from the roadway were thrown 30 yards. The worst effects of the flood were in the Watery Lane district where 40 houses were flooded to a depth of 1 to 2 feet. The water was 3 feet deep on Liverpool Road. Beverley Street and Trevor Street were also flooded.

Longridge: The golf club clubhouse was flooded to a depth of 1 foot to 18 inches.

Ormskirk: there was flooding at Wigan Road and Aughton Street. Near Brookacre bridge on Aughton Street some houses

20 Sep 1933
Burnley Express
23 sep

Thunderstorm following a severe drought

26 Jun 1934
Yorkshire Post
27 Jun
23 Apr 1935
Lancs Evg Post
24 Apr

thunderstorm

14 Jun 1935
Lancs Evg Post
15 Jun

Thunderstorm
Rainfall figures in LEP were generally around 0.50 inches.

22/23 Jun 1935
Lancs Evg post
24 Jun

Widespread thunderstorms esp in Glasgow area but not so much in Lancs. Following a heatwave

17 Jul 1935
BR

Liverpool Monument Place 1.00 in 60 m

22 Sep 1935
Lancs Evg Post
23 Sep
BR

Thunderstorm
Preston daily rainfall 1.75 inches but 1.35 in a short period (unspecified)
Manchester Barton 0.20 in 5 m

were flooded to a depth of 9 inches.
 Southport: LEP 25 Sep shows a picture of road flooding at Lord Street, Southport.
 Croston: The Methodist school was severely damaged by lightning.
 Rochdale: the railway between Rochdale and Bacup was stopped by a landslide and the line from Lancs to Yorks was flooded in the tunnel at Summit.
 Bacup: many houses and some factories were flooded.
 Littleborough: A great part of the town was under water to a depth of 2 to 3 feet.
 Ramsbottom: the River Irwell reached its greatest height 'within living memory' and overflowed at several points in the Rossendale Valley. At Stubbins the road was flooded to a depth of 4 to 5 feet. At Shuttleworth a row of 12 houses was flooded for the second time in three days and a large part of Shuttleworth Paper Mill and offices was flooded.

Flooding occurred in the north of England including the Mersey, Irk, Irwell and Conway. No reference in BR to rainfall totals for S Lancs.

Nelson: Cellars in some houses in Gisburn Road were flooded as was also a shop on Railway Street near the railway bridge. The subway landing from Hibson Road to the station was flooded to a depth of 1 foot.
 Bolton: the canal breached at Nob End and flooded a paper mill and at Little Lever.

Lancaster was isolated from the south for the greater part of 14th with rail communication cut off from Preston.
 Extensive heavy rainfall also occurred in Wales and caused flooding on the River Usk and in N Wales.
 Blackpool: There were miniature lakes in the streets and manhole covers forced off. However there was no flooding of property. Buildings were struck by lightning and damaged.

"The rainfall in Liverpool was the most abnormal for more than 20 years, according to Corporation official records.

24 Sep 1935
Lancs Evg post
25 Sep
 Thunderstorms

5 Jan 1936
BR
 Rydal (High Close) 2.6
 Grasmere (Huntingstile) 2.69
 New Dungeon Ghyll Hotel 4
 Kentmere Head Reservoir 2.67
21 Jun 1936
BR
 Knutsford 0.88 in 25 m
 Daily rainfalls on 22nd
 Oldham (Brushes Clough).. 2-69
 Garstang (Barnacre Res.) 2-63
 New Hey (Sewage Works) 2-87

3 Jul 1936
Burnley Express
4 Jul
Greater
Manchester
SFRA
10 Aug 1936
BR
 Leyland Worden Hall (S of Preston) 1.97 in 95 m (1.50 in 1 h)
3 Sep 1936
BR
 Eccles 0.88 in 12 m
 Wirswall Hall 1.48 in 60 m

13 Dec 1936
BR
12 Aug 1937
Lancs Evg Post
13 Aug
BR
13 Aug 1937
BR
 Stonyhurst College 0.80 in 30 m
14 Aug 1937
 Liverpool Monument Place 0.85 in 15 m

BR
Liverpool Evg
Express (from
BR)

30 Aug 1937
Lancs Evg Post
31 Aug
BR

Manchester Oldham Rd 0.87 in 30
m

Between 22h. last night and 9h. this morning, 1.39 inch of rain fell. After slight flooding in the Bootle, Litherland and Seaforth area yesterday afternoon, further serious flooding occurred shortly before midnight, and barely had the residents left their homes when a cloudburst at 2h. today caused the worst flooding yet experienced. There was 8 feet of water in Akenside Street, Bootle, and several houses were flooded. There were reports that several houses were struck during the storm, but no serious damage occurred. Lightning struck the chimney-stack at the home of Mrs. Mary Lynch, in Marsh Lane, and a number of bricks were dislodged. Passengers were unable to enter Seaforth railway station until the railway company placed seats in the flood water to enable them to reach the entrance."

Blackburn: The storm lasted nearly 2 hours. Houses were inundated in many low lying parts of town. The water under the bridge in Galligreaves Street was between 5 and 6 feet deep. The traffic island in Brownhill was completely submerged and the cellars were flooded in a neighbouring hotel. Houses on the Wilpshire of the traffic island were flooded with water bursting through the back doors. In Primrose Terrace houses between number 2 and 26 and a Coop shop were flooded to a depth of 7 to 10 inches, leaving three inches of mud and slime. Houses in Bower Street were also flooded. The setts on Bolton Road at the junction with Longshaw Street were forced up and flags on the footpath displaced.

Whalley: New Road residents escaped as the water just reached the steps of their houses. In the Waterfall district the weaving shed of the Primrose Mill was flooded to a depth of several inches.

Liverpool: At Litherland some homes were flooded to the window sills and residents remained upstairs after heavy rain coincided with a high tide on the River Mersey

31 May 1938
The Times 31
May 1938

5 Aug 1938
Lancs Evg post 5
Aug
BR
6 Aug 1938
Lancs Evg Post 6
Aug
BR

Thunderstorm with houses struck
in Barrowford, Rochdale and
Mossley
Frodsham Castle Pk Cheshire 1.10
in 60 m
Thunderstorm
Kirkby 1.61 in 2 h
Liverpool Monument PI 1.14 in 20
m

Rochdale: lightning caused fires at two mills.

Nelson: Carr Road was flooded to a depth of 8 inches and manhole covers were lifted off.

Merseyside: The area experienced the worst thunderstorm 'in living memory'. Included in the effects were, the flooding of part of the new Queensway tunnel (3 inches of water for 100 yards), a Congregational church in Garston Old Road struck by lightning, a rail line flooded and blocked by landslide and people marooned in their houses. In Irving Street, Litherland, water reached a depth of 5 to 6 feet and surged through the houses. Houses were struck and seriously damaged by lightning.

Southport: Houses were struck by lightning.

BR reports that of the two falls in Lancashire that at Liverpool ranks as "remarkable." The City Engineer reports that 1.14 inch fell between 6h. and 6h. 24m. Mr. J. Whiteby, of Broadway (BucklandManor) reports that 1.77 inch occurred between 1h. and 3h. during a violent thunderstorm accompanied by hailstones of unusual size.

Blackpool: Some streets were flooded.

Lytham St Annes: Several streets were flooded inches deep.

8 Aug 1938
Lancs Evg Post 8
Aug
9 Aug 1938
BR
The Times 10

Thunderstorm
Blackpool 0.48 inch within 20
minutes
St Helens Windle Hall 1.66 in 80 m
Wallasey New Brighton 1.80 in
105 m (0.81 in 30 m)
Temperatures reached 79F locally

Rainfall at Wallasey, St. Helen's, ranks as "remarkable." At Wallasey 1.80 inch fell between 14h. 25m. and 16h. 10m., of which 0.81 inch fell in the last 30 minutes. Mr. W. H. Pilkington, of Windle Hall, St. Helen's, reports that 1.66 inch fell in 80 minutes from 16h. 50m. to 18h. 10m. mainly between 17h. and 17h. 30m.

Aug 12 Aug 1938 Lancs Evg Post 12 Aug BR The Times 13 Aug 1938	Widespread thunderstorms Clitheroe 1.37 inches in one hour Preston 1.15 inches in one hour Chatburn House 1.15 in 45 m Hutton Hort Stn 1.15 in 60 m Times notes storm extended from Bacup to Macclesfield	Macclesfield: A silk mill at Macclesfield was struck, set alight and completely gutted. Manchester: Many streets were flooded up to 3 feet deep severely restricting traffic movement. Water poured through the roof of Victoria Station and flooded the bookstall. Macclesfield: A silk factory was struck by lightning and burnt out in a short time. Bacup: Greenend Fibre Mill was struck and partly destroyed by fire. Another mill was so badly flooded that the workforce was sent home. Walsden: the rail line was flooded and traffic held up. Bolton: the Bolton Wanderers ground at Burnden Park was flooded. Preston: two cows were killed by lightning. Clitheroe: Holmes Mill was flooded to 4 inches. In North Street, Bawdlands and Whalley road housewives struggled to keep water from their houses. There was a pool four feet deep under the Waddington Road railway bridge. Water swept from side streets into Waterloo Road and the cellar of the Royal Oak Hotel was flooded. The Oddfellows Arms at Wellgate was flooded. Sheep and lambs were killed at Grindleton Morecambe: A woman was struck and injured. Preston: Flooding occurred between Addison Road and Lytham Road in the vicinity of the cattle market. A shop was flooded to a few inches. Surrounding areas were little affected. BR reports that at Knutsford the storm was local. Flooding occurred and lightning caused some damage in the district. At Hartford, in the same county, 0.97 inch fell in 40 minutes, commencing at 15h. 5m., the roads soon became flooded. The thundery conditions continued at Hartford until the 24th, half-an-inch occurring on the 19th, 20th and 21st. Blackpool: Rain continued for 2 hours and in the main streets the water was several inches deep. Lytham: The station was flooded
16 Jul 1939	Hartford Hollybank Cheshire 0.97 in 40 m Knutsford 1.70 in 70 m	
21 Aug 1939 Lancs Evg Post 21 Aug 14 Jul 1940 BR	Thunderstorm Northwich Sandiway WW 1.20 in 15 m Cuddington Cheshire 1.16 in 15 m Northwich 1.11 in 35 m	
16 Sep 1940 BR 22 Jun 1941 BR	Buxton Goytshead 1.63 in 90 m Rainow the Clough 1.82 in 90 m Disley Cheshire 2.55 in 2 h	BR notes several daily totals at Slaidburn over 3 inches but notes that elsewhere the rainfall was mainly orographic and prolonged. A breach was caused in the Peak Forest Canal bank due to a culvert becoming surcharged, and considerable damage occurred at Waterside Mill, Disley. At Kinder Filters, 2.26 inches occurred in four hours beginning at 14h., while between 14h. 45m. and 17h. 15m., 3.14 inches fell at Romiley, 8½ miles south-east of Manchester. Here there were occasional heavy bursts of hail and frequent lightning flashes.
12 Jul 1941 BR	Southport Gosforth Rd 1.83 in 35 m Southport Hesketh Pk 1.09 in 15 m There was an associated gale No heavy rainfall in short period.	
2 Aug 1942 BR 5 Jul 1943	West Kirby St Andrews Cheshire	At Manchester, 2.32 inches was recorded in the 12 hours commencing at 21h. on the 2nd.

BR 1.28 in 90 m
29 May 1944 Hayfield Kinder filters Derbyshire
BR 2.55 in 73 m
Daily Mail 9 Jun 1944 Arnfield Resver Cheshire 1.16 in 73 m
Birmingham Woodhead resvr Cheshire 1.94 in 2 h
Daily Post 9 Jun 1944

On the 29th rain of abnormal intensity fell over the southern Pennines from between Stockport and Glossop in the west to Sheffield in the east, especially in the neighbourhood of Holmfirth. "Very rare " falls for the region of greatest severity are not included in the Table on account of the lack of sufficiently accurate details. In some Sheffield suburbs there were heavy falls of hail. At Fulwood, near Weston Park, Mr. J. W. Baggaley reported **hailstones mainly of clear ice ½ to 1 inch in diameter and of irregular shape.**

On the 29th and 30th a shallow depression over France extended northwards and was associated with widespread thunderstorms, accompanied locally by heavy rain and hail. Mr. J. P. Beveridge estimated that about 2 inches fell between 15h. and 16h. in the Digby Valley and there was considerable damage to property from flooding. The storm affected Holmfirth, Meltham (Yorks) and Glossop (NW). **The Glossop Brook quickly swelled 20 feet above its normal level in a few minutes**, rushing into the ground floors of more than 300 houses, breaking down doors and in some cases walls

<Glossop>: Every part of the town was flooded with estimated costs of over £100,000. A man fell into a stream and was drowned when a small bridge collapsed. In just over 2 hours between 5 and 6 inches of rain fell. At the Victoria street bridge the water rose 30 feet from the brook course and flooded part of the main shopping street to a depth of 4 feet. At Leyland, Lancashire, there was heavy **hail, some stones measuring 3 ¾ inches in circumference.**

30 May 1944 Darwen Bold Venture Pk 1.51 in 2 h
BR
23 Aug 1944 Southport 0.93 in 50 m
BR
9 Jul 1945
BR
15 Jul 1945 Thunderstorm
Lancs Evg Post Clitheroe 0.90 inch in 10 minutes
16 Jul Burnley 0.50 inches in 15 minutes
BR Burnley temperature 78F
West Kirby St Andrews Vic 0.93 in 15 m
Neston Cheshire 1.65 in 20 m

On the 9th, 0.70 inch fell in 40 minutes at Hesketh Park, Southport, causing heavy flooding. On this day 0.62 in. of rain fell at Preston in 20 minutes beginning 17h. 15m.

Clitheroe: Drains were surcharged and manhole covers were blown off and fountains spurted from road and footpath. Wellgate was like a river with a big lagoon under Waddington Road railway bridge. Water flowed into houses in Bawdlands, Whalley Road, Railway View, and Kirkmoor road with heavy damage to furniture. A trail of mud was left. Burnley: A manhole cover was blown off and the roadway at Manchester road and Rosehill Road was flooded. No flooding of property was reported.

Blackburn: The storm lasted half an hour and was accompanied by hailstones of exceptional size. Roads were flooded but there was no reference to property. However, in great Horwood the Wellington Hotel on Queen Street was flooded and properties were flooded in Spring Street, Rishton.

Accrington: Hail bigger than mothballs fell in the Spring Garden District. Rivulets poured down the steep slopes in Spring Hill and the Grange Lane districts. Several houses and a shop were flooded in Frederick Street to knee depth. Manhole covers were blown off at a number of points and the macadam surface at Willows Lane was disrupted.

16 Jul 1945 West Kirby St Andrews Vic 0.55 in 10 m
BR
29 Aug 1945 Thunderstorm
Lancs Evg Post Daily totals
29 Aug Rochdale (Springmill) 2.90
BR Rochdale (Cowm Whitworth) 3.45
Bacup (Sheephouse Reservoir) 2.88
Bacup (L.M.S. Railway) 2.84

Preston: Minor flooding occurred and a house was struck and damaged by lightning.

Chorley: Lightning struck several houses.

Manchester daily rainfall was 1.25 ins, the highest since 2 Aug 1942 when 2.71 ins fell. Drains were unable to cope and flooded the basements of houses in Ladybarn Road. Floods drove occupants from their homes in the Swinton area. The

**Manchester
Guardian 30
Aug**

**8 Feb 1946
Cheshire county
Publ Feb 11
1998**

Not a thunderstorm
The article refers back to floods of the 1880's but says 1946 flood was more severe — no date was given.

**12 Jun 1946
Burnley express
15 Jun
23 Jun 1946
BR
26 Jul 1946
BR
Manchester
Guardian 27 Jul**

thunderstorm

Sale Carrington Lane 0.80 in 26 m

Arnfield resvr Cheshire 1.67 in 2 h
Manchester Apr Ringway 2 ins
Whitworth Pk 1.71 in 12 hr

**27 Jul 1946
Burnley express
31 Jul
1 Sep 1946
BR
Sep/Oct 1946
Manchester Evg
News 27 Dec
2015,
Manchester
Evening News**

Thunderstorm

No information yet found on weather conditions.
Persitent rainfall for 24 hours caused widespread and severe flooding in Lancashire and South Yorkshire. There were no reports of thunder or severe intensities.
Chatburn School DR 2.15"

Bury to Warrington Road was flooded at Patricroft Rail Station.

Ardwick: Gorton Brook overflowed and caused severe flooding in Bennett Street with 400 yards of the street under water to a depth of 1 to 2 feet. (Householders complained that this was not an uncommon experience with water backing up from a culvert).

Winsford: Very severe flooding was reported. There had been unprecedented rainfall during January and into February when the equivalent of a month's rainfall fell in one day. A fortnight prior to the flood saw five inches of rain falling in the Weaver and Dane valleys and a further two inches on the Thursday and Friday of the week of the flood. The result was that the Weaver rose 11ft above its normal level. The sluices that controlled the river were opened 20 hours before the peak of the flood. The waters had reached the then town centre the Red Lion pub's cellars were flooded as were those at the Oak and the Ark. The flood also reached a quarter of a mile along New Road and Weaver Street was also affected. The Magnet cinema was also flooded with all but the rear six rows of seats under water. By dusk, the depth of water on the roads was upwards of four feet. Small boats moored on the banks of Winsford Flash were torn from their moorings, carried downstream and smashed on the bridge. The main Post Office, next to Woolworths, was seriously damaged. Two of the Market Place pubs had water marks close by revealed that the flood had been four feet deep.

Northwich: he Dane overflowed by noon on Friday, carrying trees and everything else before it. By 1pm, the flood reached High Street, Dane Street and London Road. The Weaver could not cope with the torrent pouring out from the Dane where they met and the town was flooded at Baron's Quay and Watling Street.

Burnley: There was minor flooding in the lower parts of the town.

Nelson: A farm barn was struck by lightning and the contents destroyed.

BR notes that in the West riding of Yorkshire and also in the Manchester area flooding and damage were exceptionally severe.

Manchester: Lightning damaged houses. The basement of St Catherine's School on Collyhurst Road was flooded
Stockport: Many cellars were flooded. The fire station cellar was flooded at Stretford. Cellars in Bredbur were also flooded.

Nelson: Following local thunderstorms the fire brigade were engaged in pumping out water from underneath houses in Waids House Road where the water depth was said to have reached 10 feet.

BR reports that Heavy thunderstorms occurred in many parts of the country on September 1 and heavy rains caused flooding and dislocation of railway services in Lancashire and Yorkshire.

<http://www.manchestereveningnews.co.uk/news/greater-manchester-news/looking-back-salford-floods-were-10656774> refers to floods in September and October but does not give dates. Residents of Lower Broughton Road had to wade through 3 feet of water to get to the shops. In those two months 5300 homes were flooded in Salford. The floods of Boxing Day 2015 were said to be the worst since this occasion. The website has 4 photographs of people wading through the floods.

Wikipedia notes: 'In 1946, there was serious flooding in Salford, caused by a bottleneck at a bend in the river at

**20 Sep 1946,
Lancashire
Evening Post 20
Sep, Clitheroe
Advertiser 27
Sep**

Strangeways, on the border with Manchester. Flooding had been a problem for hundreds of years,[Hampson (1930), Book Four: 1800–1930, Chapter VI: "Peel Park and the Irwell Floods".] and, in 1946, the decision was made to straighten and widen the river to increase its capacity. Work started in 1951 but it was not until September 1970 that water first flowed through the Anaconda Cut’.

<Eccles>: four families in cottages were marooned in their bedrooms when <<Worsley Brook>> burst its banks. Water in some houses was nearly 4 feet deep.

<Leyland>: 20 families were marooned in upper rooms in the Chapel Brow district.

<Blackburn>: In one house in the Burnley Road water reached nearly to the ceiling. Mills suspended operations. Severe flooding occurred in the King Street bridge area and people were rescued from their upstairs windows.

<Middleton>: Thirty houses in the centre of the town were flooded. The <<River Irk>> burst its banks and mill work was suspended at two mills.

<Whalley>: People marooned in upper floors were supplied fish and chips by police on ladders who later took people to the Assembly Rooms Rest Centre. They were Whalley’s worst floods in memory. The River <<Calder>> rose 15 feet and transformed fields into lakes. The water surged to the right into King Street and Lord John street. King Street was submerged from the bridge to the Post Office a distance of 80 yards. Over 60 houses were flooded in King street in most cases to a dpth of 2 to 3feet. Other areas flooded included the Abbey Cornmill ground floor

<Southport>: 0.27 inch rain fell in 15 minutes. Lord Street was flooded and bus traffic diverted. A house was damaged by lightning. Thunderstorms and high winds were also reported at Blackpool and Morecambe.

14 May 1947 Thunderstorms

**Manchester
Guardian 15
May**

30 May 1947 Thunderstorm

**Lancs Evg Post
30 May**

**14 Jul 1947
BR**

<Blackpool>: A house was damaged by lightning.

<Blackburn>: The town experienced a short thunderstorm and the fire service were called to pump water from various premises

BR reports that in <Manchester>, main-line railway services were held up through floods. The Manchester Evening News reported that at Wilbraham Road Station the flood-water "first crept along the side of the track then swept down in one big wave, lapping just below the edge of the platform."

16 Jul 1947 Rochdale Roch Mills STW 1.05 in
BR 20 m

16 Sep 1947 Thunderstorm following dry
Lancs Evg post weather
16 Sep Preston, Hutton 0.25 inches in 15
minutes

Because of the preceding drought no flooding was reported.

11 Nov 1947 Coniston (Holywath) 3.4
BR Hawes Junction (Moorland
Cottage) 3.28
Ambleside (Market Square) 3.36
Rydal (High Close) 3.62

Unsettled conditions with frequent heavy rains in northern and western districts characterised November 1947. On the 11th, which provides the longest lists of heavy falls for any day in 1947, more than 3 inches was recorded widely in the Pennines and the English Lake District. There was more than half-an-inch over most parts of central and southern Scotland, the Pennines and northern England. There was serious flooding in Wensleydale and other parts of Yorkshire and Lancashire.

31 Jul 1948 Denton Resvr 1.22 in 45 m
BR Gorton Resvr 1.16 in 45 m
Southport Hesketh Pk 1.67 in 35 m

BR reports that much damage by lightning and severe flooding over much of Lancashire and Yorkshire. At Southport the storm was described as of almost tropical fury; 1.68 inch of rain fell in 35 minutes and the Fire Brigade had to deal with

13 Jul 1949
Burnley Express
16 Jul
Manchester
Guardian 14 Jul

Thunderstorm after more than a month of dry weather and temperatures before the storm of 85F. The storm raged for over 2 hours.

2 Aug 1949
Burnley Express
3 Aug
24 Sep 1949
BR
21/22 Aug 1950
Burnley express
23 Aug
BR
Lancs Evg Post
21 Aug

Thunderstorm

Rawenstall Green fold Resvr 0.48 in 5 m (2.58 in day on 23rd)

Thunderstorm
Rainfall at Preston over 7 days was 5 inches with 1.11 inches on 18th and 1.55 inches on 20th.
Prolonged rain was followed by a more intense burst and what was described as a cloudburst on Pendle Hill and Wiswell Moor.

more than 60 calls for assistance in relieving the flood. Banks, shops and cinemas were in some cases several feet under water and the famous Lord Street was awash from end to end.

<Burnley>: No damage reported here but the rain was welcomed.

<Liverpool>: Two men had to swim to safety when their car was trapped in eight feet of water.

<Warrington>: A main road caved in.

<Chorley>: A cow was killed by lightning and another in Winsford Cheshire.

<St Helens>: Extensive flooding occurred in low-lying parts of the town. The St Helens to Warrington main road subsided at Peasley Cross where the road was flooded to a depth of several feet.

<Southport>: Roads were flooded and wooden paving blocks forced up in the main street in a storm lasting 4 hours.

<Liverpool>: At Queens Drive Mossley Hill flood water forced up a manhole cover and flooded a roadway to a depth of 8 feet; a car was abandoned and its occupants had to swim and wade to safety.

<Wigan>: Rows of cottages on Gorman Street, Beresford Street and Bull Hey were flooded to a depth of 3 feet. A hotel was also flooded.

<Northwich>,< Weaverham>: A church was struck and a stone cross was knocked off into the churchyard.

Padiham: There was flooding at Britannia Mill and work discontinued in the weaving shed.

Burnley: Water forced up the surface of Brunshaw Road when the drains were unable to cope with the heavy downpour.

Burnley: two houses were struck by lightning. In spite of heavy downpours there were no reports of flooding in Burnley or Padiham.

BR notes that the Waterworks Engineer, Preston, reported that the intense rain at Langdon Brook on the 20th produced no damage, but the more intense rain of the 22nd was destructive. Heavy concrete coping blocks weighing at least 2 cwt. each were stripped from the main flood weir over a length of 30 yards and carried 50 yards downstream. The peak flow in the first storm was 270 cubic feet per second and 465 cubic feet per second in the second storm from an area of 3,800 acres.

Preston: After being undisturbed for 3 years Preston's notorious flood spot at the foot of Tulketh Road suffered again. Nearly 50 houses in Tulketh road, Beverley Street, Travers Street and Hull Street were flooded up to 2 feet deep. Water rose so quickly that little precaution could be taken. (LEP has photos of Tulketh Road and of Strand Road where part of the roadway was forced up). Flooding occurred in Church Street where the milk bar was 2 feet under water. There was lightning damage to buildings. The basement of St Vincent's Home in Fulwood was flooded.

Goosnargh: Bushells Arms had 5 feet of water in the cellars.

Blackburn to Clitheroe rail line was blocked by a landslide and the Blackburn to Clitheroe road was stopped by floods at Billington where houses were flooded in the Old Road side.

Whalley: The main street was converted to a river and King Street houses were flooded to a depth of 1 foot. The village gas supply was cut.

On the lower slopes of Pendle Hill, water entered farmhouses and cottages and brought much debris on to the roads.

Blackburn: An official noted that 'the flood in 1946 was worse but yesterday's developed more quickly'. Scores of houses

were flooded. The River Blakewater rose to within an inch of King Street Bridge and flooded the basement of the Phoenix Mill. The cellars of Broomhill Hotel were flooded to the ceiling.

Darwen: The Unity Mill in Lower Darwen had its worst ever flooding, entering the entire works, including the lower part of the engine works to a depth of 10 feet, putting out the boiler fires. The town was flooded from Lynwood Avenue to the Golden Cup Hotel where cellars were flooded to 5 feet deep.

Adlington (in the Chorley area): Houses were flooded in south Street to 2 feet and in Babylon Lane. In the cellars under the Elephant and Castle the water was 3 feet deep. The Gerard Weaving Sheds were flooded.

Brinscall: Houses in School Lane and Railway Road were flooded to 1 foot depth. Well Lane road surface was stripped.

Padiham: Flood water under the foundations of a cloth mill caused the collapse of the roof and damage to machinery.

Several Lancashire mills were flooded. The Rivers Brun and Calder overflowed.

A boy was drowned in Chatburn Stream [Where?].

Dunsop Bridge: The flood was said to be the worst in more than 50 years. Sheep, a caravan, hen coops and farm machinery were washed away. All the bridges in a 4 mile length of river from Dunsop to Brennand and Whittendale were washed away and stretches of the road disappeared. A water main was washed away and the village supply stopped. In the vicinity the Blackburn waterworks level was 3 feet higher than in the previous serious flood in December 1936. A farmer from Dunsop Bridge had 9 sheep washed away.

Brock: The River Brock overflowed and 4 houses in Parlick Terrace behind Brock Railway Station were flooded to a depth of 3 feet. The Preston to Lancaster canal came over the bank near Brock Viaduct flooding fields and the Barnacre Weaving Shed at Calder Vale to a depth of 4 inches.

Penwortham: The Leyland Road was inundated.

Preston: Houses in Tulketh Road and Strand Road suffered again.

Preesall: Two milk cows were killed by lightning

Lytham St Annes: A thunderstorm caused flooding affecting 23 hotels where the water rose up to 4 feet mainly on the front. In four hours 1.51 inches of rain fell. At Lindrum Hotel a new ballroom floor was ruined. Grand Hotel was also flooded. 'Water came running through the windows like a tidal wave'.

Fleetwood: Warrenhurst Road was flooded to a depth of 2 feet – for the second time in 2 years..

Southport: Streets were flooded including parts of Lord Street to 2 feet and also between Duke Street and Coronation Walk.

Blackpool: Flooding occurred at Devonshire Square where manhole covers were lifted.

Preston escaped flooding.

Preston: Houses and roads in the outskirts were flooded up to 2 feet.

Catterall (nr Garstang): A cottage was flooded to 2 feet in Sheeley Road and under the rail bridge was 2 feet 9 inches.

St Helens: The road to Warrington was flooded at Peasley Cross.

22/23 Aug 1950
BR
The Times 25
Aug
Lancs Evg Post
23 Aug

Thunderstorms intense but of short duration
Rawenstall 1.70 in 30 m

28/29 Aug 1950
BR
Manchester
Guardian 30
Aug
Lancs Evg Post
28 Aug

Squires Gate Blackpool Apt 1.22 in 95 m 1.42 ins in 3 hrs; 1.77 in 24 hrs)
Southport 1.22 ins
Fleetwood 1.11 ins
Wallasey 1.11 ins

6 Sep 1950
Lancs Evg Post 7
Sep
9 Aug 1951
BR
Manchester
Guardian 10
Aug

Thunderstorm
St Helens Eccleston Hill 1.28 in 75 m
Rainford Rookery STW 1.38 in 105 m

21 Apr 1952 BR	Southport Bedford Rd 0.73 in 20 m	A brief storm that flooded parts of Southport
18 May 1952 The Times 19 May	Temperature at Manchester was 80 F and thunder was reported though with little rain	
1 Jul 1952 BR Daily Mail 2 Jul Manchester Guardian 2 Jul	Bredbury Cheshire 1.73 in 25 m Romiley The Greave 1.50 in 30 m Arnfield Resvr Cheshire 1.03 in 13 m Ringway Manchester Apt 1.04 in 45 m	At the end of a heatwave thunderstorms occurred in various parts of the country. Manchester: A 45 minute storm over Manchester and parts of Cheshire and Derbyshire caught workers unaware on the way home. Temperatures reached over 90F in the London area. Houses were struck by lightning at Chorlton. The heaviest rain was in Stockport where as in Hyde and a few places in South Manchester many cellars and ground floor rooms were flooded. Motorists in the Cheadle Hulme, Cheadle and Gatley areas were held up by road flooding to a depth of 2 feet. Hempshaw Lane in Stockport had a brewery and 5 cottages under a foot of water. Glossop: A power failure affected 6000 houses.
7 Aug 1952 BR Eden (2008)	Rawenstall 1.08 in 40 m Slaidburn 105 mm	
15 Aug 1952 BR 25 May 1953 Burnley Express 27 May BR The Times 26 May Lancs Evg News 25 May	Blackburn Witton 1.19 in 2 h Thunderstorm following high temperatures 82.6F in Burnley falling to 58.6 F after the storm Temperatures reached 89F in the southeast.	Burnley: Hollins farm at Brunshaw Top was flooded. Also slightly flooded was the cafe at Queens Park and the road to Padihams Reservoir and Rattan Clough Sabden was under water. Half an inch fell in 30 mins. The heavy falls of May were confined to the 25th and 26th. They occurred in severe thunderstorms associated with a cold front accompanying a small depression which moved eastward across Scotland. Blackburn: Several streets were flooded to a depth of 2 feet. Houses were flooded in Appleby Street and Derwent Street and lapped at the doorsteps in Brecon Road and Devon Road. The storm also affected Blackpool, Morecambe, Fleetwood and Southport but there were no reports of flooding. Three houses were struck by lightning in Fleetwood; the temperature there fell from 79.3F to 57.1 following 3 hours of storm. Blackpool: 0.4 inches of rain fell in 15 minutes but no flooding was reported. St Annes: A wine cellar in a hotel was flooded. Thunderstorms caused flooding in Sedbergh and further downstream in the Lune Valley. LEN has no reference to rain or flooding.
16 Jun 1953 Eden (2008) Lancs Evg News 26 Jun 1953 BR The Times 27 Jun Eden (2008) Lancs Evg News 27 Jun	Sedbergh 106 mm Severe thunderstorms were reported at Eskdalemuir, Cumbria and W Yorkshire. Nelson Walton Lane 1.72 in 15 m Langley Trentabank Cheshire 2.09 in 39 m Rochdale Queensway 1.32 in 45 m Crookburn 84.1 mm Note: Fish were found dead in the	BR reports that At Nelson great damage was done to mill property. The Nelson Leader reported "the most northerly mill off Hallam Road caught the full weight of the water . . . and the cellar was quickly flooded to a depth of over ten feet. Water poured through windows broken under the strain and about a hundred cases of weft and warps were submerged." The "very rare" fall at Walton Lane was the heaviest recorded in 20 minutes or less in Lancashire. A wooden railway station at Bott Lane Halt floated in 10 feet of water after a 15 minute storm at Nelson. Sewers collapsed in three roads. A fallen wall blocked another road. The main Leeds road was flooded when a mill lodge overflowed. Hundreds of homes were flooded in Nelson. More than a score of people were evacuated from Bradley View where a

Ribble below the Calder
confluence with disgorged poison

row of houses was undermined. Floors and internal walls collapsed when a mill bridge near the row overflowed. Houses in Hemdon, Hallam and Hilddrop Roads and Hey Street were flooded. Hundreds of households opened doors to let water run through. An inch of rain fell in 15 minutes.

Burnley: The storm lasted 30 minutes ut no effects were noted.

Snake Pass: The road over the pass from Manchester to Sheffield was hit by a cloudburst washing silt and mud off fields. Farm houses and cottages were flooded. Livestock were removed to safety as floodwaters rushed down hillsides.

12 May 1954
BR
Lancs Evg post
13 May
16/20 Jul 1954
JBA Ribble
report

Intense thunderstorms affected mainly urban areas.

18 July - the central area of Burnley was completely awash in some places to 2-3 feet deep; washed into shops and offices. In Accrington, some houses flooded to 12 feet.

20 July Torrential rain in the Waterfall district of Blackburn where there was the worst flooding for 20 years (since 1936?). Many houses were flooded. A woman was swept off her feet in Princess St and carried for 50 yards. In Darwen, the Stakes Hall hotel had its wine cellar flooded. Spring Bank Terrace was flooded.

Headline - Storms Lay Off Burnley Mills - Water nearly 4 feet deep covered a cotton firm's shed. Also affected were furniture shops in the town centre including Marshalls in St James Street Healy Road and Osbornia factories affected.

Preston: There were reports of flooding from the Serpentine.

Burnley: At nearby Mereclough a culvert collapsed resulting in road flooding to a depth of 1 foot.

21 Aug 1954
BR
Lancs Evg Post
21 Aug
10 Sep 1954
BR
Lancs Evg Post
11 Sep

Sale Carrington Lane Cheshire 0.72
in 23 m
Severe flooding at Mythomroyd
(See S Yorkshire Chronology)

Only two falls were noted in September, one at Morecambe on the 10th apparently associated with intense cyclonic rain rather than thunderstorms. In Morecambe and Heysham streets were flooded so deeply that traffic was stopped.

Morecambe: A deluge blocked the shopping centre. Gardens were flooded in the vicinity of Marine road, Queen's Square Morecambe Street and Thornton Road. LEP has a photo of flooding at the junction of Euston road and Moss Lane.

Grange over Sands: Shops were flooded and heavy manhole covers were lifed on Kent Bank Road.

Thunderstorms were frequent in October and a particularly severe one occurred in northwest England on the evening of the 3rd. A landslide brought about by heavy rainfall occurred on the railway between Liverpool and Manchester. Houses were struck by lightning and badly damaged in Stretford and Blackpool, and flooding occurred in many places.

<Congleton>: A half hour storm flooded basements and cellars.

BR notes that this was the only noteworthy short period record in 1955.

12 Jul 1955
BR

Congleton Cheshire 1.20 in 30 m

17 Jul 1956
BR

Chorley Common Bank STW 0.92
in 45 m

18 Jul 1956
BR

Birkenhead Bidston Obsy 0.59 in
10 m
Squiresgate Blackpool Apt 1.57 in
50 m

During the fall at Bidston Observatory, Cheshire, two of the observers independently reported **hailstones of an estimated diameter of at least half an inch.**

Little damage was done on the Blackpool airfield although the main entrance was temporarily flooded to a depth of 2 feet. Considerable damage was caused in nearby Blackpool, however, where many basements were flooded.

At Galgate near Lancaster it was said to be the worst storm in 50 years. The A6 was flooded to a depth of 2 feet. Cellars of homes and shops were flooded. The village garage and a sweet shop were flooded to a depth of 1 foot. However the

27/28 Jul 1956
BR

Colne Judge fields 0.86 in 20 m
Galgate the storm lasted ¾ hour

Lancs Evg Post 28 Jul 19 Aug 1956 The Times 20 Aug Lancs Evg Post 20 Aug	No mention of thunderstorms	neighbouring River Conder did not flood. Manchester: A thunderstorm at 4.30 affected the Test Match. Ormskirk: At Lathom over 200 acres of crop and meadow were flooded when the Ellerbrook broke its banks with a breach 18 feet wide. The Ellerbrook joins the River Douglas just downstream from the breach and the Douglas backed into the Ellerbrook adding to the flooding. Wallasey: At Moreton bungalows and flats were flooded. Water was 3 feet deep around three storey blocks of flats. The River Birket overflowed and swirled through the streets; more than 100 families were evacuated. Bungalows were also flooded at Meols. Two children were swept down the flooded River Ribble and one girl was drowned. Preston: Lightning damaged 2 houses at Lea near Preston.
3 Jul 1957 Lancs Evg post 3 Jul 7 Jun 1958 BR 24 Jun 1958 BR Lancs Evg post 24 Jun 2 Jul 1958 Lancs Evg Post 2 Jul 10 Aug 1958 BR	Severe storms spread north from France and affected mainly the south of UK Widespread flooding from Essex to Shropshire and yorkshire	Bury: A heavy rainstorm on the evening of the 7th brought floods to the Manchester area. Streets in the Ardwick area were flooded to a depth of 3 ft., and trains were diverted because of floodwater, 4 ft. deep, on the track between Fallowfield and Wilbraham On the 24th flood damage occurred at Wrexham and Wigan. Longridge, Alston: Lightning shatters a house and blasts a village. There were no reports of flooding. Southport: Cellars and basements were flooded including the Post Office, the Gaumont Cinema and boarding houses. Lord Street was flooded to a depth of 1 foot. Westcliffe Road, Birkdale was also seriously flooded. Some of the worst flooding on the 10th occurred in the central lowlands of Scotland and in Blackpool. One of the most seriously affected areas was the Mere Road district of Blackpool; flood water was waist deep here soon after the commencement of the hour-long storm. The Cricket Club's ground was flooded in a matter of minutes, water pouring onto the pitch from the surrounding roads; it was still under water the next morning.
20 Aug 1958 BR 22 Aug 1958 BR The Times 23 Aug Lancs Evg post 22 Aug/23 Aug	Speke Apt 1.15 in 1 h Bury STW 1.89 in 1 h Ringway Manchester Apt 0.98 in 39 m	In the north-west of England, where storms reached their peak in the afternoon but continued into the evening, trains were diverted because sections of line were under water near Chester. Hundreds of buildings were flooded and houses struck by lightning during a violent storm over the Wirral. Families were marooned for more than an hour in at Granville Terrace Wallasey Village as water 3 feet deep swirled round their houses. There were two successive storms with hotels, shops and schools flooded. Cellars in the Head Post Office and Telephone Exchange a bank and 2 cinemas were flooded. Manchester Wythenshawe: Rain was mixed with hail. Of the many areas of Lancashire from which storm damage was reported, the Wythenshawe area of Manchester probably suffered most— a girl was drowned when a bridge across a swollen stream was dislodged by flood-water and families in Moor Road were evacuated where houses were flooded to a depth of 4 feet. At Manchester Airport, about 3 miles to the south of Wythenshawe, a "noteworthy" fall was recorded. At Trafford Park six factories were flooded. Trains were diverted due to blocked or flooded lines.

Bacup, the River Irwell overflowed its banks and flooded houses and shops in the town centre.
Preston: Two houses were struck by lightning and badly damaged.
E and S Lancashire were hit by thunderstorms.
Chorley: A hospital (Withnell Hospital had 10 feet of water in its boilerhouse) and public houses had to be pumped out.
At Brunswick street under the railway the water was waist deep. Property was flooded in Water street, Blackburn Road, Wheelton and Withnell.
Wigan: Boundary Street Ince flooded from an overflowing culvert. There was also flooding in Platt Street, Platt bridge.
Houses were flooded in Hindley.
Whittle le Woods, Waterhouse Green had 3 houses flooded from the river Lostock.
Darwen: Houses shops and factories were flooded notably at Perserverance Mill Olive Lane. Sunnybank Paper works also had 5 feet of water in its boilerhouse.
Power failures and telephone failures were widespread.
There was extensive flooding at Barrow-in-Furness, north Lancashire, on the 10th, after a "remarkable" fall during a storm reported to be unequalled in severity in 36 years of detailed records. Thunderstorms were unusually severe and lightning unusually frequent over much of north-west England; at Squires Gate, where lightning killed a number of cattle, it was reported to be the most frequent since May 1947.
Liverpool: Streets were flooded and water stood several inches deep at the entrance to the Mersey Tunnel.
Rochdale, Littleborough: Water 4 feet deep flooded 10 houses in Box Street; cars were marooned in floodwater on Hare Hill Road.
On the 11th "remarkable" falls were recorded at Northwich, Cheshire. At Blackley (NE Manchester), houses were flooded; some roads were a foot deep in water, while **hailstones were reported to be as large as golf-balls.** At Middlewich, a boy of 11 was killed by lightning while sheltering beneath a tree on the bank of the river Dane.
Bury: A cellar was flooded at Buxton Street and several homes in Central and South Avenue at Warth were flooded.
Hailstones fell at Eccles and Tottington near Bury.
Warrington: Streets were flooded to a depth of 1 foot. There was also flooding at Winnick, Walton and Stretton.
Northwich: Roads and businesses were flooded. The front stalls of the Plaza Cinema were under 3 feet of water. The cellar of Roebuck Hotel in Witton street was flooded. At Comberbach householder were rescued from the upper storeys of houses by firemen working up to their waists.
Huge hailstones crashed on car roofs and caused traffic hold ups on the roads south from the Lake District near Preston.
Southport: **Hailstones as large as marbles fell.**
Fleetwood: Roads were flooded to a depth of 1 foot and closed parts of Poulton road and Milton Street and Warrenhurst Street. Water was in the hospital boiler room to a depth of 2 feet and also affected basements of houses and shops.
Further storms at Fleetwood occurred on 12th.
Blackpool: It was the hottest day of the year but there was an afternoon storm of huge hailstones.
Burnley: Houses were flooded due to inadequate drainage. It was the hottest May day in 6 Years reaching 71 F (since 25 May 1953 with 78F).
Leyland: four cattle were killed by lightning.
Nelson: The tower of Station Hotel was struck and broken and the building damaged.

10 May 1959
BR
Manchester
Guardian 11
May

Sale Cheshire 0.64 in 15 m
Barrow STW 1.35 in 40 m

11 May 1959
BR
Manchester
Guardian 12
May
Lancs Evg Post
11 May

The day produced both the hottest and wettest day of the year
Bury STW 0.81 in 30 m
Rawenstall Green Fold Resvr 1.03 in 55 m
Northwich Marbur Rd 2.43 in 2 h
Temperature reached 78F at Manchester

26 Jul 1959 BR		Sudden thunderstorms flooded roads and houses in many northern towns. At Lytham St. Annes, firemen pumped 2 ft. 6 in. of water from the kitchen of a hotel, while parts of Lord Street, Southport, were flooded to a depth of 6 in. There was a "remarkable" fall at Garstang, north Lancashire, when 1.80 in. of rain was recorded in 60 minutes.
27 Jul 1959 BR	Garstang Scorton 1.80 in 1 h Whitefield Pk 2.37 in 105 m Squiresgate Blackpool 1.56 in 119 m	July record of LEP is missing
21 Aug 1959 BR	Liverpool Monument Pl 1.60 in 23 m	Liverpool: The Mersey Tunnel was flooded to a depth of 18 in. during thunderstorms. This was the first time in its 21 year history and caused serious traffic jams.
The Times 22 Aug		
6 Jun 1960 Liverpool Echo 6 Jun		<St Helens>: A number of houses were flooded in Silkstone Street and Alexandra drive and fire brigade were called out with respect to a damaged sewer. A roof collapsed during a thunderstorm due to the weight of rain on the roof.
30 Jul 1960 Lancs Evg News	Fleetwood 1.48 ins	Fleetwood mops up after the storm flooded homes. Poulton Road households had water running in the back and out the front to a depth of over a foot. In the lower part of Poulton Street traffic sent waves into a dozen houses. The cloudburst overwhelmed the drains. A resident said it was the worst for 20 years.
1 Aug 1 Aug 1960 Lancs Evg news		Morcambe storm brought large hailstones. No flooding was reported but the holiday revenue was down.
2 Aug 13 Aug 1960 BR	Squiresgate Blackpool 0.51 in 2 h	
23 Aug 1960 Liverpool Echo 23 Aug	Floods followed thunderstorms in Merseyside and North Wales	<Liverpool>: A supermarket in Norris Green was flooded; traffic was stranded at Queen's Drive. Supermarket in Broad lane was flooded to a depth of about 4 inches. There was flooding also at Neterfield Road near the Braddocks Flats. <Wallasey>: After a 15 minute thunderstorm, roads were flooded and there was also flooding at Liscard and New Brighton with shops and houses flooded. Worst affected were the Royal Oak Hotel, Liscard Village and a cafe in Victoria road New Brighton and 2 houses in Seabank road. <Bootle>: Road flooding was reported in Stanley Road and Strand Road. Birkenhead: Heavy rain marooned people in the homes at William Street and flooded the basement of the supermarket and turned many roads into rivers as surface drains overflowed. Garston: Streets were flooded. Fleetwood: Poulton Road was again flooded to a depth of one foot but only streets were affected but not houses. Chorley: ½ inch of rain fell in 39 minutes but only slight flooding was reported.
27/28 Aug 1960 BR The Guardian 28 Aug Lancs Evg News 27 Aug	Speke Apt 0.79 in 30 m	
13 Apr 1961 Liverpool Echo 13 Apr 5 May 1961 Lancs Evg post	Thunderstorm in the Liverpool area with lightning damage but limited flooding No mention of thunder	<Birkenhead>: In a thunderstorm with rain and hail streets were flooded. 'Rainstorm swept wide areas of Lancashire'. Telephone services were seriously disrupted. Preston: 1 ½ inches rain in 24 hours but damage limited. There was 6 inches of water on the road at the bottom of

5 May

Pedder's Lane Ashton and barrels were flooding in the basement of Butchers and Commercial Hotel on Blackpool Road and the Acregate Labour Club.

Garstang: Water was 3 feet 6 inches deep beneath the rail bridge.

Penwortham: Lark Avenue was flooded to a depth of 6 inches and the sewers in Priory Crescent could not cope.

Lea: Flooding was reported in Gill Lane, Hall Carr Lane, Marsh Lane, Longton, Lea Road, Hoyle's lane and Fiddler's Fold caused by watercourses not being able to take all the water.

Blackburn: Rainfall was more than 1 inch in 24 hours. Several houses in Montreal Road Lammack and the boilerhouse at Florence mill were flooded.

Roads in Wigan, Leigh, Warrington and St Helens were flooded to a depth of several feet.

Newton le Willows: All roads leading out were blocked.

Wigan: Homes were flooded and furniture ruined. Manchester Road and Higher Ince were worst affected with three feet of water. Water swept down from the old Beehive Colliery site and seeped into half a dozen houses and flooded Manchester Road; a machine shop was under water. A house in Darlington Street was flooded for the second time in 4 years. Scores of calls were made to the Fire Brigade from occupiers of flooded houses

Bolton: Cottages were flooded to two feet at Barrow Bridge. Parts of the main street were flooded to a depth of 4 feet.

Leigh: It had its worst floods for 20 years in a storm which lasted 3 hours. From 500 yards of Leigh Road the water swirled out on to a dozen streets on either side. St Helens road and Twist Lane were both under 2 feet of water.

Manchester, Lower Irlam: The Liverpool Road was covered to a depth of 3 feet.

Stalybridge: Water washed under front doors in Hawk Street.

Preston: The Penwortham district was affected by flooding at Leyland Road, Cop Lane, Pope Lane to depths of 18 inches – including the old world cottages off Pope lane. (LEP has photo of Pope Lane)

Bowland fells: Two inches of rain fell in 6 hours causing serious flooding in the valley and damage to the Flyde Water Board conduit bridge at Whittendale near Dunsop Bridge.

12 Jul 1961
Guardian 13 Jul
Lancs Evg Post
12/13 Jul

Thunderstorm late on 12th
The Open golf Championship was
delayed at Birkdale, Southport.

2 August 1961
Lancs Evg post
15 Aug
3 Sep 1961
BR
Lancs Evg Post 4
Sep and 7 Sep

Thunderstorm (not reported on
the day of occurrence)

BR notes 'There appear to have
been very few years in the present
century which could match 1961
for the paucity of intense rains.
Among those worth looking into in
this respect are 1919, 1922 and
1945'.
Ringway Manchester Apt 1.39 in
60 m

'Houses, roads flooded as storm hits Lancashire' A thunderstorm occurred late on night of 2nd and early 3rd.

Preston: Many houses were flooded with muddy water. A protest to the town council was reported on 7th by residents of Tulketh Road They reported that waster had swept down from a neighbouring high area and flooded nearly every house in the street and also Travis street, Hull Street, Beverley Street, some up to 1 foot deep. A Market Street decorating shop was flooded, also Eldon Street and Greenbank Street. Giant hailstones fell in some areas and the Saddle inn at Lea had windows cracked.

Gisburn: The main road was flooded through the village.

Parbold and Bispham: streets were flooded

Blackburn: The only reference was to a collapsing wall and a manhole being forced up in Ramsey Road.

21 Jul 1962
Lancs Evg post
21 Jul
26 Aug 1962
Lancs Evg post
27 aug

Heavy rain during the night – no
mention of flooding

Reference was mainly to high
winds Squires Gate Met Stn
(Blackpool) reported gusts of 70 to
80 mph

'Gale lets Lancashire off lightly' (Lake District more seriously affected).

The Coast Road from Blackpool to Lytham St Annes was virtually impassable due to the covering of sand blown inland. There were also general reports of flooding at Balckburn, Langho, Billington, Ribchester (LEP photo of road flooding),

Dinckley, Accrington, Clitheroe, Padiham, Rawansthall, Croston, Horwich, Orrell and Ince. For none of these were details given and it is not clear if any properties were flooded.

Preston: Many houses were flooded in Hull Street Ashton. One resident reported carpets ruined for the second time in 12 months. Other streets affected were Tulketh Brow, Miller road, Acregate Lane, Manning Road and Honeysuckle Row. The Goss printing Works in Greenbank Street was flooded. The Sheatsheaf Hotel had 18 inches in the cellar. The Neptune and the newquay Pubs also suffered basement flooding. Water spouted 4 to 5 feet in the air from manholes in Bray Street, Tulketh Road and Travers Street. Water swept down Stead Street West. Flood calls were also received from Beverley Street, Turner Street and Wimmerleigh Street
LEP has no reference to rainfall or flooding.

5 Sep 1962
Lancs Evg Post 5
Sep

13 Jun 1963
BR

Speke Apt 0.79 in 26 m

Lancs Evg Post
12-14 Jun

2 Jul 1963
BR

Dukinfield 1.85 in 2 h

LEP has no reference to rainfall or flooding.

4 Jul 1963
Lancs Evg post

Thunderstorm

The only reference is of a photo showing Southport in a thunderstorm for 30 minutes which sent holidaymakers scuttling for shelter.

4 Jul
6 Jul 1963
BR

Ringway 1.30 in 111 m

A thunderstorm was reported at Morecambe with ½ inch rain but no flooding was reported.

Lancs Evg Post
6 Jul

30 May 1964
Guardian 1 Jun
Lancs Evg Post
30 May-1 Jun
Eden (2008)

Lightning did serious damage to a bungalow at Halton near Lancaster – one man was injured. Intense thunderstorms occurred over the central Pennines. Brushes Clough near Oldham collected 123 mm.

<Oldham>: At Denshaw the River Tame burst a culvert and washed away part of the road. Scores of families left their homes in Delph, Denshaw , other Saddleworth villages and Milnrow, Newhey and Shaw. Forty families were evacuated at Delph. A ninety year old woman was rescued in Delph after being found lying in 2 feet of flood water in Brookside terrace. At Denshaw, five families were taken to the village school. Fifteen homes were flooded at Shaw. At Ribchester near Blackburn scores of houses were flooded. Roads became rivers, water rushed through homes; a canoeist paddled along Blackburn Road. A two hour deluge was followed by a break then a renewal of the storm. The drains in Preston road, Blackburn Road, Church Street and Stonygate Lane were unable to cope. The Police Station in Preston Road and a neighbouring house were flooded knee deep. Blackburn road (and the New Hotel) was flooded to 3 feet in places. In Water Lane 2 houses were affected. The Bee Mill was filled with water. One resident noted: ‘I have lived here more than 40 years and have never seen anything like it’. At Delph near Oldham a lake threatened to overflow and people downstream were evacuated until water was pumped to reduce the level.

The Huddersfield to Manchester railway between Marsden and Diggle was blocked by 5 feet of floodwater and tons of sludge, rocks and floating debris. Passengers were trapped in the Marsden tunnel for 4 hours.

LEP has no reference to rainfall or flooding.

12 Jun 1964
BR
Lancs Evg Post
12-15 Jun

Hardham 18.0 in 21 m

18 Jul 1964
BR
JBA Ribble
Report
Gt Manchester
SFRA Appendix
B 2008
Lancs Evg Post
18-20 Jul,
Liverpool Echo
18 Jul

Hailstones were widely reported.
Bolton 55.9 in 15 m (60.2 in 30 m)
Habergham Eaves 35.8 in 25 m
Leigh STW 38.1 in 45 m
Light Alders Fm 30.0 in 45 m
Warrington highways Yd 34.3 in 90 m
Chorley 0.31 ins in 20 mins

Serious flooding on the Calder and Darwen with rainfall of more than 3.0 inches in places in the Darwen/Burnley/Blackburn area. A five foot high tidal wave on the Darwen carried away the parapet of Hollin St bridge and 236 houses in Blackburn were flooded including Princess Street. There was also flooding in Padiham, Colne, Barley, and Accrington. Blackburn Road Darwen was flooded. In Darwen, residents in Cross Street were cut off and a house in Sough Street partially collapsed. In aptly named Watery Lane, water poured into the front of a row of cottages and out through the rear windows and one house partially collapsed. In India Mill in Darwen the floodwater was waist deep.

<Bolton>: Localised flooding occurred from the Croal.

<Oldham>: 350 properties were flooded from the River Beal at Shaw.

<Burnley>: Hailstones pelted shoppers; the central area was awash; a supermarket and shops were flooded. A high lodge wall behind Burnley Mill collapsed under water pressure. The Hindley supermarket was flooded. In Burnley centre, traffic came to a standstill in two feet of water, littered with debris, after the steep Manchester Road became a raging torrent, while at Crawshawbooth poultry cabins and sheds floated down the river.

<Higham>: A grocer's shop was flooded to the downstairs ceiling; owners and 12 customers took refuge upstairs.

<Rising Bridge> (S of Accrington): Three people were rescued after cottages fell down with river floods.

<Nelson>: Residents in Thomas Street were forced to move upstairs and one housewife said: "I cannot get into the house, my furniture is floating about in the living room and water is neck high."

<Warrington>: Roads were flooded up to 1 foot deep. In Bridge Street newspaper placard boards floated away; market stalls were washed out. Warrington Rugby club dressing rooms were flooded to a depth of 1 foot. Many mills were flooded; one had 4 feet of water in acotton shed; machines were ripped up and electrical equipment ruined (Healey Wood Mill Co). Marshalls furniture shop in St James Street was seriously flooded. At the factories of Lambert Howarth, 800 workers were laid off. Town hotels including the Sparrow Hawk at Wheatley Lane had cellars flooded. Market stalls were smashed by hailstones, some as big as golf balls. The hailstones piled up 2 feet deep in Holmes Street as water swept down from Bradshaw estate. Several cars and a tanker stuck in hailstones had to be dug out. Two windows in the police station were broken by hail. Water flooded through Warrington Fish Market and Warrington General market and a lot of stock was ruined. The main road between Warrington and Liverpool was flooded at Great Sankey.

Ormskirk: The open air market was washed out and streets in the centre were flooded. There was some flooding on Wigan Road.

Blackburn: The thunder and rain caused the river Darwen to spill over – said to be the worst for 20 years. The river rose so rapidly many households were taken unawares before water swept through their homes in the Waterfall district. An elderly woman was swept from her feet and carried 20 yards in Princess Street before being rescued. The water demolished a 5 foot stone wall buttressing one end of a stone bridge and smashed part of the bridge ironworks. Albert Street was flooded 2 feet deep. The River Darwen filled the Stokes Hall Hotel wine cellar to the top step

<Rossendale Valley>: A freak hailstorm made roads completely impassable. Hailstones piled up like snowdrifts.

<Haslingden>: Houses were 10 feet under water and cars were covered with flood water.

A landslide blocked the M6 South of Newton le Willows.

Floodwater from the surrounding moorland seeped through the mile-long Sough Tunnel and crumbled part of the inner wall on to the track. Both ends were then blocked by mountains of earth and train services were disrupted for several days.

7 Oct 1964 The Guardian 8 Oct Lancs Evg Post 6-8 Oct	Thunderstorms	<p>At Worthington near Standish a farm barn was struck by lightning and set the building and hay alight. In Wigan 2 houses were struck by lightning.</p> <p>Haslingden: A factory was flooded and the road to Accrington was under 4 feet of water and cars abandoned.</p> <p>Ormskirk: Lightning caused electricity supplies to be cut off.</p> <p>LEP refers to severe flooding in the West Cumbria area but nothing in Lancashire.</p>
11 Sep 1965 Lancs Evg post 11 Sep		LEP has two photos of flooding in Garstang but no additional text.
17 Jun 1966 BR Lancs Evg Post 16-18 Jun	Speke Apt 20.4 in 20 m	LEP has reference only to heavy rain affecting Old Trafford cricket.
22 Aug 1966 Lancs Evg Post 22 Aug	Thunderstorm	A thunderstorm washed out a Lancashire Gala and waterlogged the ground at Euxton, Chorley.
5 Sep 1966 Lancs Evg Post 5 Sep		<p>Ulnes Walton: A whirlwind tore through the village smashing everything in its path.</p> <p>Preston: Traffic built up on the Warton Road because of flooding. Road flooding occurred at Pope Lane where trouble was caused by traffic swishing water towards houses. Cellars were affected by flooding at the Rose and Crown, Hoole and at the Railway Inn Ribbeton.</p>
11 May 1967 BR The Guardian 12 May Lancs Evg Post 10-12 May	Fallowfield Platt Fields Pk 85.9 in 6 h Manchester Airport –nearly 1 inch of rain in 2 hours.	<p>Winds E to NE light; frontal, thundery; slow-moving cold front affecting area.</p> <p>Flooding was reported widely in the Manchester and north Cheshire area. The River Irk overflowed and motorists abandoned their cars in Collyhurst on Rochdale Road and at Victoria Park in the Finney Lane area of Heald Green. Houses were flooded in Westwood Road Heald Green. Traffic was also halted at the Downing Street end of the Mancunian Way and under the railway arches at Store Street, London Road. Flooding was also reported at the Platt Lane area of Princess Road. At Manchester University the Student's Union basement was flooded.</p> <p>Salford: Roads in the Kersal and Broughton areas were flooded and several houses were reported flooded.</p> <p>LEP has no reference to rainfall or flooding.</p>
27 May 1967 The Guardian 28 May Lancs Evg Post 26-28 May	Thunderstorm	<p>Warrington: Water was 2 feet deep on the Orford Road Bypass.</p> <p>There were also reports of flooding of a school at Tydesley, a hotel in Atherton and three houses in that district.</p> <p>LEP has no reference to rainfall except 'the rain had set in for the day'.</p>
29 May 1967 BR Lancs Evg Post 29May – 1 Jun	Swinton STW 28.7 in 1h 10 m	<p>Winds S to SE light; thundery; unstable airstream.</p> <p>LEP has no reference to rainfall or flooding.</p>

20 Jun 1967
BR
Lancs Evg Post
19-21 Jun
25 Jun 1967
Manchester Evg
News 14 Jul
2011

Liverpool Knotty Ash 23.6 in 40 m

LEP has no reference to rainfall or flooding.

Middleton: A terrific thunderstorm followed by torrential rain caused severe flooding. At 5.29 pm on Sunday June 25 a call was logged at the Middleton Fire Brigade that the White Hart pub at Birch was under water. Three feet six inches of rain water had surrounded the building which burst open the front doors causing severe damage to the interior. One internal door was ripped from its hinges such was the impact of the torrent of flood water. Its cellars and ground floor were completely flooded. Several other houses in the area also became flooded. One resident said it was the worst that he had seen within the last 50 years. In Middleton centre the Magistrates Court and Police Station became flooded. In total the torrential rain that day caused GBP50,000 worth of damage in the town. An emergency generator had to be brought in when all the mains power failed at the Police HQ. The telephone and radio communications were put out of order, as an emergency measure a police radio car was positioned outside the Oldham Road station to maintain contact with the Preston headquarters.

14 Jul 1967
BR
Eden (2008)
Lancs Evg Post
14 Jul, Liverpool
Echo 14 Jul

Squiresgate 31.0 in 1 h 32 m
Southport 47.0 in 2 h
Clifton: A fireball dropped into the
Irwell Valley at 4.30 am.

Winds light, variable; thundery; col with unstable air.

Serious flooding occurred in parts of Merseyside and the Wirral from thunderstorms.

LEP refers to 'Worst storm for 20 years'. It damaged homes, roads and valuable crops.

<Morecambe>: Seafront hotels were flooded including those in Carlton Terrace and Marine Road East such as the Troughton Private Hotel.

<Southport>: Rain caused widespread flooding and one house in Norwood Road was hit by lightning. Firemen responded to 30 calls to pump out flooded basements of houses and shops.

<Fleetwood> and <Thornton>: Low lying roads were under water.

<Ormskirk>: Moss Delph Lane at Aughton and Wigan Road were flooded and pumped out by firemen as was Hattersley' Brass Foundry.

<Southport>: The storm was described as the worst for 20 years and lasted for 4 hours; 30 shop basements were flooded and had to be pumped out.

<Preston>: There was extensive flooding in the Blackpool Road, Ashton near the secondary school and also in the Beverley Street, Tulketh Road (to a depth of 4 inches) and Watery Lane area. At Horrock Observatory at Moor Park 1.23 inches fell between 1.30 and 6.00 am.

<St Anne's>: Ormerod Home, a convalescent home for children in Clifton Drive North was flooded several inches deep. Several private hotels on the South Promenade were also flooded, including Langcliffe Private Hotel, Carleton, Oceandene and Clifton. St Anne's College for Girls and Woolworths on Clifton Drive were also affected.

<Blackpool>: A number of houses were flooded (location not specified).

<Merseyside>: Thousands of telephone lines were out of action due to the flooding of cable ducts.

<Liverpool>: Nelson special School was flooded. Amongst other places affected were Alser Hey and St Pauls hospitals. The George Henry Lee store had flooding in the basement as had Woolworth's in Church Street.

<Birkenhead>: The emergency bay at the General Hospital was flooded. Heavy paving stones in Borough road were carried 60 yards. The library was flooded in the children's department; the Borough treasurer's office was flooded.

8 Aug 1967
BR
The Guardian 12
May
Lancs Evg Post 9
Aug

Burnley 44.7 in 45 m
Betham Summerhill 34.8 in 2 h
Pedder Potts Resvr 56.1 in 2 h 30 m
Croasdale house 14 63.0 in 2 h 52 m
Ogden resvr 80.5 in 2 h
Buttock 82.5 in 2 h
Stodday 38.1 in 2 h
Stocks 21 D 39.4 in 2 h 42 m
Phynis No 18 52.1 in 2 h 42 m
Slaidburn 41.7 in 2 h 42 m

9 Aug 1967
BR
Lancs Evg Post
10 Aug,
Birmingham
Daily Post 10
Aug

A second thunderstorm in 24 hours
Burnley 40.6 in 65 m
Nelson 42.9 in 2 h
Foulridge Lower resvr 35.6 in 2 h 15 m
Bailrigg 41.1 in 1 h 15 m
Hampson in Ellel 44.2 in 1 h 30 m

10 Aug 1967

Chatburn 38.6 in 1 h 35 m

<Ellesmere Port>: the Vauxhall factory was flooded to a depth of several inches but little damage done.

<Wallasey>: Flooding occurred in Poulton Bridge Road and the water was 3 feet deep.

Bootle>: The library in Oriel Road, St Winefride's Primary school and several local factories were flooded.

<Crosby>: Roads flooded included Endbutt lane, Kershaw Avenue, Edgemoor Drive and the junction of Liveerpool Road and college Road.

Winds E light to moderate; frontal, thundery; almost stationary cold front with wave over area.

There were several lightning deaths in other parts of England.

Lancashire County Council donated £500 to a relief fund at Wray and £250 at Barrowford (See South Lakes chronology – River Lune) .

<Wray>: 16 families (37 people) were made homeless caused by flooding of the <<River Roeburn>>.

Nelson: Hundreds of homes were flooded in the area especially in the village of Barrowford where cars and motor cycles were floating down the main street in waist high water. Shop fronts on the main street collapsed as the central area of the village became a huge lake. Scores of families were trapped in their bedrooms. Caravans and cows were washed down Pendle Water

In nearby Barley, one family left their cottage on the river bank just minutes before part of the building collapsed.

Clitheroe: 'The water rose so rapidly the town was helpless.' Houses were flooded in Taylor Street where the water ran in the front and out the back. The A59 was blocked in Whalley road. Some streets were flooded to 3 feet. The villages of Bolton-by-Bowland, Grindleton, Downham, Sawley and Dunsop Bridge were all flooded in the early stages as the water rose in some places in village streets 5 feet deep.

Heysham: The town centre was flooded. In Hawksworth Grove the water poured through a building site and into pensioner's houses. Muddy water lifted carpets and floated furniture. Old folk were carried out by rescuers through thigh deep water. In Tibicar Drive 30 homes were flooded.

Morecambe: In a 90 minute storm hotels and houses over a wide area were flooded. Troughton Hotel in Calton Terrace was flooded to 7 inches. A resident of Heysham road said that it was the third time in 9 months that she had been flooded, this time ankle deep. Clarendon, Wellington and Imperial Hotels were affected and the Davy Jones Locker at the Clarendon which is lower than the Promenade was a foot deep in water.

<Barrowford>: Residents were baling water out of their houses.

Lightning struck and damaged buildings in Chorley and Southport.

Winds light, variable; depression, thundery; slack area of low pressure affecting area.

Preston: A violent deluge swamped a row of terrace houses in Beverley Street off Tulketh road flooding homes to a depth of more than 12 inches. Residents claimed that the council had allowed drains to block up but the Borough Engineer responded that the storm would have required drains the size of railway tunnels to carry away the water; the new northern sewer laid ten years ago has helped but some properties are still flood prone.

Nelson: Pendle Water nearly rose to danger point but there was very little flooding. A stream overflowed on Hibson Road; 6000 chicks were drowned when a stream overflowed in a low lying part of Nelson.

<Burnley>: Emergency services responded to 50 emergency calls for flooding; among the worst were terraced houses in Gannow Lane where about 20 houses were flooded to a depth of 3 feet.

Winds W light; thundery; unstable airstream

BR 13 Aug 1967 Lancs Evg post 13/14 Aug, Acreman 1989 re Hydraulics Research Station (1968)	Thunderstorm during the night	<p>Slaidburn: Farmers on the Slaidburn and Brennand fells reckoned that many cattle, hundreds of sheep and poultry perished in the renewed floods. Some of the fell farms are almost in ruins; fences and hundred year old stone walls have been washed away.</p> <p>Dunsop Bridge: It was badly hit by the flooding; occupants of 4 houses had to be evacuated. Acreman lists a peak flood discharge of 271.8 cumecs on a catchment of 28.7 km² on the Dunsop Water, Bowland Forest.</p> <p>When the River Beck broke its banks farms were engulfed and buildings and farm machinery were washed away. An official said hundreds of acres of pasture land have been ruined and will be out of production for a couple of years. Acres of land are covered by thousands of uprooted trees and tons of silt. Flood levels in some farm houses were 5 feet 6 inches to 6 feet. In one case when a sheet of water came down the hillside 100 sheep were lost.</p> <p>Acreman on the basis of a HR report also lists floods of 637.0 cumecs on 83.4 Km² on the Hindburn, 52.3 cumecs on a catchment of 6.9 km² on the Blacko water and 66.5 cumecs on a catchment of 2.2 km² on the Claughton Beck</p> <p>LEP has no reference to rainfall or flooding</p>
23 Aug 1967 BR Lancs Evg post 21-23 Aug 21 Sep 1967 BR, Liverpool Echo 21 Sep 26 Sep 1967 BR	Hunts Lock 37.3 in 45 m Crosshill Resvr 50.8 in 2 h Lyme Pk 38.6 in 1 h Disley High Lane 29.0 in 1 h Glossop STW 32.0 in 1 h Chew Mount 35.5 in 1 h	<p><Brimstage> (Wirral): An early morning thunderstorm flooded the village roads but houses were not flooded since they were at a higher level. Brimstage Hall Farm was badly flooded. Many parts of the Wirral were similarly affected causing road and rail delays but no reports of houses flooded.</p>
1 Jul 1968 BR The Guardian 2 Jul Lancs Evg post 2 Jul	Thunderstorm Warrington 17.0 in 10 m Cholmondley 26.9 in 10 m Ringway 15.0 in 10 m Widnes Lab 21.3 in 12 m Greenfield STW 24.4 in 15 m Widnes Corp Depot 18.5 in 20 m The hottest day in Britain for years.	<p>Winds variable light becoming NW strong in west; depression, frontal, thundery; depression over northern France extending northwards with associated front stationary over western districts of England and Wales.</p> <p>Rochdale: Three boys fell in the River Beale and one was drowned. The river usually a trickle had grown to 6 feet deep</p> <p>Manchester: 150 trains were held up due to lightning and floods. Roads at Collyhurst and Longsight were flooded.</p> <p>Warrington: several roads were flooded. The police station was flooded.</p> <p>Oldham: Works and houses were flooded and several houses damaged by lightning. Par of the town centre at Middleton was closed because of floodwater breaking up the road.</p> <p>Hyde: Flooding occurred in hotels, shops and schools, the public library and the Income tax office.</p> <p>Newton le Willows: A ten minute storm blocked all roads in and out of the town. Houses were flooded and evacuated in the Eagle Street area. A British Legion Club was flooded. A man had to climb out of the roof of his car when it was enveloped in 6 feet of water.</p> <p>Nantwich: 19 cows were killed by lightning.</p> <p>Saddleworth: Water flooded down the hillside and houses in many parts of the district were flooded.</p> <p>Ribchester: a house was struck by lightning and set alight.</p> <p>Chorley: the fire brigade reported floods in Weldbank and four houses in Railway Road Brinscall</p> <p>Winds W moderate to strong; depression, orographic thundery; complex depression over the U.K. deepening in the</p>
2 Jul 1968	Saddleworth 16.5 in 6 m Arnfield Resvr 28.7 in 10 m	

BR	Kinder filters 17.0 in 12 m	north of England. Blackpool: Storm winds were reported causing damage along the coast; trees were blown down. There was flooding in East Park Drive. Ormskirk: A house was struck by lightning as well as a primary school at Aughton. Farmers reported losses of poultry swept into the River Ribble and Hodder.
2 Sep 1968 BR 20 Sep 1968 Eden (2008) 6 May 1969 Liverpool Echo 6 May 30 May 1969 Liverpool Echo 31 May 7 May 1971 The Guardian 7 May	Brushes Clough 33.0 in 1 h 30 m Cold greave 31.5 in 1 h 30 m Not clear if this was a flash flood; no mention of thunder. Thunder with hail Thunderstorm Manchester Airport 0.58 ins	 Flooding occurred in mid and east Lancashire and West and South Yorkshire. Great Heys had 117 mm and Yateholme 115 mm. <Brimstage>: The centre of the village was turned into a lake and <<Brimstage Brook>> overflowed in a torrent of muddy water. Brimstage Village Hall was isolated but most of the cottages and farmhouses are on higher ground. Roads were flooded but there was no reference to flooding of property <Crewe>: Hundreds of homes were flooded an maternity hospital evacuated and a Cumbeerland Arms Hotel badly damaged; the water in the cellars was 6 feet deep. Worst areas of the town affected were Wistaston and Covpenhall where hundreds of homes were flooded Stretford Barton Road: Cars were stranded in thunderstorms with water 2 feet deep under a railway bridge. Other areas affected were Crewe and Sandbach. Houses were struck in Bury and set alight, also the Bull's Head Arms near Altringham lightning caused damage.
19 Oct 1971 Guardian Oct 20 21 May 1973 The Guardian 22 May 15/16 Jul 1973 Eden (2008) 30/31 Jul 1973 COL 3 Aug 1973 COL 14 Jul 1975 COL, Liverpool Echo 14 Jul	Heavy but prolonged rainfall Manchester 2.49 ins Oldham 3.44 ins in 18 h 15 th 26 raingauges recorded more than 100 mm Over the 2 day period rain fell in 42 to 44 hours. Not a thunderstorm Manchester = very wet month Thunderstorms	 Road flooding was widespread in South Lancs and on the Fylde coast. A thunderstorm lasting an hour caused flooding in the northern and eastern suburbs of Liverpool. The water rose more than a foot in places. Widespread flooding occurred. Areas affected included north Derbyshire, east Cheshire, and Greater Manchester. Heavy thunderstorms occurred over East Cheshire and W Derbyshire with resulting flooding but there was no rainfall at Manchester Airport. Cheadle Hulme observer notes that a local thunderstorm caused some flooding near Stockport. Thunderstorms caused structural damage and flooding in many places in northeast Lancashire. Houses were struck in Burnley and Brierfield. Rawensthall: The town centre was flooded to a depth of 2 feet and at nearby Stubbins a Dormobile had to be rescued from 4 feet of water under a railway bridge. <Warrington>: Some Warrington roads were under a foot of water and the floods entered shops houses and other premises.
17 Jul 1975	Thunderstorm	Bacup: A thunderstorm in the valley north of Bacup caused extensive flooding of property and cut off the town centre

COL		from surrounding areas for several hours.
14 Jun 1977	Thunderstorm	St Helens: A young man was killed when struck by lightning.
The Guardian 15 Jun		Many Merseyside roads were flooded including the M57 and M62 near Huyton where firemen pumped away flood water.
1 Jun 1978	Accrington 44.5 mm in 70 m	
COL		
4 Jun 1978		Heswall, Merseyside: 23.3 mm in 40 m was the heaviest rainfall on a thunder day since 1969. Flooding was widespread especially in Heswall but also in central Liverpool.
COL		
5 Jun 1980	Thunderstorms	Accrington: six boys were struck by lightning on an Accrington school playing field; one dies and others were injured.
COL		Flooding at Darwen followed rainfall of 567 mm(?) in less than 2 hours.
Eden (2008)		The boy was killed moving from one part of Moorhead Comprehensive School to another.
The Guardian 6 Jun		Floodwaters up to 2 feet deep blocked roads in Leigh Wigan and Oldham areas.
23/27 Oct 1980	Prolonged rainfall	Darwen: Sewage flowed into 40 homes and shops when at temporary sewer could not cope with flash floods.
COL		Two days of heavy rain caused flooding from the Ribble combined with high tides. Flooded blackspots included Ribchester near Blackburn, where the village was completely cut off by the swollen Ribble, Samelsbury near Preston where the Tickled Trout Hotel was marooned in acres of water and Dunsop Bridge in the Hodder Valley where agricultural land was said to have suffered the worst flooding in 50 years. On 27 October, St Michael on Wyre was cut off from surrounding districts for several days.
5/7 Aug 1981	Thunderstorms on 5 and 6 Aug when 2 day totals of more than 80 mm occurred in an area from Cheshire to South Yorks.	Manchester: 3 ½ inches fell in 24 hours and some roads were closed by landslides. There were waterlogged tracks in Cheshire.
Daily Mail 7 Aug	Eaton nr Tarporley 132 mm	
COL	Manchester Arpt 95.9 mm in 12 h to 09.00 on 6 th	
1 Jun 1983		<Liverpool>: Flooding occurred at Aigburth road, Ullet Road and Alexandra Drive area. At Aigburth Road flooding occurred for the second time in 9 months. Cellars were filled with silty water and two stores have had to close to replace damaged stock and shelving. The flood locations included the Aigburth Home Care Centre where there was 2 feet of water outside and a foot of water inside. The storm flooded roads and gardens and forced motorists blinded by giant hailstones to pull up at the side of the road.
Liverpool echo 2 Jun		Observer reported lumps of ice about as big as golf balls of various dimensions but all had a cloudy or opaque core surrounded by clear ice. Hail fell for five minutes followed by heavy rain for 10 minutes. There was much flooding in southern parts of Liverpool. Conditions towards Warrington were more severe and glasshouses and nurseries were completely destroyed by the hail.
7 Jun 1983	Liverpool Sefton Pk hailstorm	<Manchester>: Hailstones were big enough to shatter windows. Hail caused the roof of a house in Prestwich to collapse. There were general reports of flooding and hail round the country. Hailstones 50 mm diameter or more were reported at Sale, Manchester airport, and golf ball sized hail at Parrington, Urmston, and Barnoldswick.
COL, Webb and Elsom (2016)		
8 Jun 1983	Southport: Giant hailstones recorded 1 ½ by 1 ¼ inch	
COL		
Guardian 9 Jun, Webb abd Elsom (2016)		
21 Aug 1987	Widespread thunderstorms	Serious flooding affected the Wigan area.

COL Eden (2008) Lancs Evg Post 22 Aug 23 Aug 1987 Lancs Evg post 24 Aug	following the wettest August since 1958 Longridge 48.5 (daily) Preston: 64 mm occurred over the weekend. Damage was done by 'flash floods' with extremely heavy rainfall in a very short time	Preston: Sudden storms occurred around Preston. In Hartington Road houses were flooded including the NORWEB office which had 3 feet of water in its basement. Thousands of homes were without electricity. Roads in the vicinity of Woodplumpton, Broughton and Catforth were impassable by car. Worst hit was Bentham area of the Lune Valley. Homes were without electricity or gas in Leyland, Chorley and Croston. Croston: More than 200 houses were flooded when the River Yarrow overflowed. Leyland: More than 60 houses and 27 businesses were flooded LEP has a photo of Leyland town centre with people with water up to their thighs. The Yarrow and Lostock Rivers flooded Leyland affecting Chapel Brow, Seven Stars, Western Drive and Mendip Road. Chapel Brow was under 4 to 5 feet of water. 'Children were diving off the top of bus shelters'. Men of 80 said they had never seen flooding like it. Wigan: Appley Bridge, a 40-home estate had to be evacuated. Families were rescued from bedroom windows. 'It happened in no time at all. The door burst open and the water gushed in'. Whittle le Woods: 20 cottages were flooded. The River Lostock poured out several feet high into a pub the Roebuck Inn and a row of cottages across the road. Preston: Savick Brook was affected and Savick house cellar was flooded. Astley village had one house flooded to a depth of 5 feet. Heswall Merseyside: A heavy thunderstorm occurred in the Wirral causing local damage due to a lightning strike. It was reported to be the worst such incident in several years. A thunderstorm let to severe flooding in Liverpool and the Wirral. Crosby had 82 mm mostly in 75 minutes.
3 May 1988 COL 19 Oct 1988 Eden (2008) 19 May 1989 Liverpool Echo 20 May 24 May 1989 The Times 25 May Lancs Evg post 24-26 May, Aberdeen Press and journal 25 May 25 May 1989 COL 26 Jun 1989 COL Lancs Evg Post 27 Jun 30 Jun 1989	Thunderstorm following hot humid weather with much of the rest of the country remaining dry. Temperature in London reached 85F the highest in May for more than 40 years. Thunderstorm with hail Thunderstorm Longridge 54.9 (daily) Thunderstorm Heywood 43.7 (daily)	<Formby>: At Cross Green firmen had to pump water out of flooded houses. The rain was accompanied by hailstones about half an inch across – 'but it was the rains which did the real damage with quite a number of houses flooded'. <Crosby>: There was no rain but a fierce electrical storm causing lightning damage including a factory chimney. Manchester, Chorlton: Two boys were drowned as a flood swept away their boat in a covered river outlet that flows into the Mersey at Chorlton. <Kettleshulme> (near Whaley Bridge).A man was killed when his car was carried away by a flooded stream. The report says he was swept away by a 'wall of water' as he drove across a bridge over a stream. His car was carried away and left on its roof in a field. He tried to climb out of the car window but his route was blocked and he drowned as the car filled with water. LEP has no reference either to rain or flooding. A flash flood affected Wildboarclough East of Macclesfield in Cheshire. A plaque on the bridge commemorates the event. Heywood: Lightning struck Siddal Moor High School and caused damage whilst the school was also flooded. Many streets in Heywood were flooded. 'Floods cause chaos throughout the country' Preston: Houses in Fishwick Bottoms were trapped by floods after the drains were unable to cope. Chorley: Ahouse in Jackson Street was flooded and also Ollerton Terrace in Withness near Chorley

COL		
6 Jul 1991	Heswall Merseyside: 8 mm in 15 m	A golfer was struck by lightning at Leyland but escaped injury.
COL		
Lancs Evg Post		
8 Jul		
30 Jul 1991		Preston observer notes 'Day of the Southport downpour' but only a trace was recorded at Preston.
COL		Southport: Homes and hotels were swamped. 50 homes had cellars and basements flooded. Nursing homes and hotels were also hit. The tide was high and the water was just not draining away. Homes in The Promenade, Knowsley Road, Latham Road and Albany Road were worst hit. Crosslyn Nursing Home with 21 residents was also flooded. It was said that there was nothing so severe since the floods of 1973. Roads are below sea level and pumps operate in wet weather (but in this case were inadequate).
Lancs Evg Post		
31 Jul		
29 May 1992	Heswall Thunderstorm for 1.5 h with 10 mm and minor flooding	
COL		
9 Jun 1992	Heswall daily total only 16.3	'A thundery day on Merseyside' A storm occurred over Liverpool and SW Lancs. North Liverpool to Formby suffered from severe flooding and hail variously described as the size of 10p pieces or golf balls, which blocked the drains. A succession of three storms was reported. 2mm fell in 2 m.
COL		Bolton: Thunderstorm caused lightning and flood damage.
		Bolton: Surface water flooding was reported at Horwich.
October 1992		
Gt Manchester		
SFRA		
24 Jun 1993	Radcliffe: 5 mm in 10 m	Bury: House struck by lightning
COL		Radcliffe: Several thundery cells passed; first thunder since Oct 1993
24 Jul 1994		Wirral, Heswall: Two thunderstorms 'possibly the worst since July 1967; widespread minor flooding and lightning damage. (Second observer notes longest storms since 1 / 2 Jul 1968)
COL		
30 Jul 1994	Thunderstorm	Turton: House damaged by lightning.
COL	Turton: 12.4 in 30 m	Liverpool: Severe thunderstorm reported.
3 Aug 1994		Heavy downpours reported in the Oldham area
COL		
10 Jul 1995	Widespread thunderstorms reported	Preston, Howick: A farm worker was killed by lightning.
COL	Turton: 25.8 mm in c 30 m	Bolton: thunderstorm with local flooding and lightning damage, the most serious for several years.
4/5 Sep 1995	2 Heswall Wirral observers report thunderstorms	Heswall 1: Liverpool was badly affected by flooding, notably central and south with many shops and houses flooded.
COL	Heswall 1 66.1 on 5th	Parts of North Wirral also had bad flooding. The storms appears to be generated over the sea, possibly the unusually high sea temperature was a contributing factor. The last notable occasion with such conditions was on 20 Sep 1967 when over 3 inches fell at Crosshill Reservoir 3 miles away.
	Heswall 2: 38.4 up to 9 am; 27.5 in following daylight hours. Lightning damage reported locally.	Heswall 2: The storms were not forecast and formed over the warm waters of Liverpool Bay.
26 Aug 1996	Bidston 25.8 in 40 m (tot 32.6)-	Wirral: flooding reported, severe in north Wirral. Water was up to 4 feet deep in Moreton

COL	the heaviest rainfall in any month since 9 Aug 1959 Heswall 1 20 mm most in 15 m Heswall 2 16 mm in 60 m A funnel cloud on Mersey estuary.	
13 May 1997 COL	Turton (N of Bolton) Thunderstorm with hail (under 5 mm), flooding reported in locality	Bolton: Flash floods caused chaos all over Bolton on Tuesday night and several roads and buildings were badly affected. Water poured through the letterbox at The Spinners on Brownlow Way and at one point boxes were floating around on four feet of water. Matthew Brown hostelry was severely flooded. Liverpool: thunderstorm with marble sized hail which covered the ground and damaged garden plants.
21 Jun 1997 COL		
6 Jun 1998 COL	Longridge Violent thunderstorm for 45 m	
15 Jun 1998 COL	Macclesfield 3 hour storm 25 mm at station but Prestbury 38 mm and Hurdsfield 58 mm	Macclesfield: 60 houses flooded in the town centre where the River Bollin burst its banks.
1 Sep 1998 COL	Thunderstorm Preston 26.5 mm	Leyland: flash floods wreaked chaos across the area. Hundreds of local school children flocked to Chapel Brow after the bottom of the road became submerged in three feet of water following just 15 minutes of torrential rain. Some houses and shops were affected. "It is the worst we have seen it for 13 years."
Lancs County Publs 10 Sep 7 May 1999 COL	Turton 33.3 Th Radcliffe 29.3 Th	Both stations wettest day in May for >10 years
5 Jul 1999 COL Lancs County Publs 6/7/9 Jul	Isolated Th Kearsley 62 mm in 1 h 45 m (2" in 1 h) Hail 7-10 mm Diameter Radcliffe 25 mm in 45 m	Stoneclough, Radcliffe: 13 properties flooded up to 2 feet. One pub reported to be 10 feet under water. Kearsley: Road flooding all round the area. It was the heaviest rain since recording began in 1949. Bury: Freak weather within half-an-hour, turned roads in Bury, Radcliffe, Ramsbottom and Tottington into rivers, and flooded houses and businesses. At the height of the flooding five fire engines were deployed to Ramsbottom and Tottington. Worst-hit in Bury was Holme Avenue, Brandlesholme, where the flood water was at least 18 inches deep after the drains failed to cope with the heavy rainfall. The road was impassable and cars had to be abandoned on near-by streets. Dirty water complete with sewage seeped into nearby houses. Ramsbottom: Part of the surface on Walmersley Road was raised nearly a foot by the pressure of the water. Crow Lane in Ramsbottom and Scobell Street in Tottington had to be closed and traffic diverted. Sandbags could not prevent gushing water coming off a school playing field and flooding houses on nearby Bolton Road West. Radcliffe businesses were washed out when flash-floods hit parts of the town. Water Street was covered in 18 inches of water. The cellar at The Colliers Arms, Water Street, was flooded - the fourth time in less than three months. Ainsworth Road in Radcliffe was also affected. Three units at the Bradley Fold Industrial Estate were flooded and a fire crew spent around an hour at the scene to clear away water. Rossendale: In Crawshawbooth village, a grid to prevent a culvert under Burnley Road blocking up, filled with debris as the river rose, causing Limy Water to burst its banks sending several feet of water cascading through the village. A Bowling Supplies and a Bakery were flooded 6 inches deep. "It was the worst flooding we have seen in the 24 years I have lived here." At one time, flood water in Crawshawbooth was six feet deep and the main road through the village

was closed. Kenross Containers and Offices at James Killelea and Co Ltd, structural engineers, of Stoneholme Road, Crawshawbooth, were also flooded.

Rawtenstall : The main road was turned into a river as cars were swept along. Water at a garage in Burnley Road was estimated to be 10 feet deep.

The cellars of about 50 houses in Colne were flooded and water also had to be pumped from mills in Nelson and Earby. Floods caused chaos in Kelbrook with homes flooded and areas up to three feet deep in water. The 4.30pm deluge closed the main Foulridge to Earby road in the village for two hours, with flooding reaching its height near Preston's garage at the New Road junction to Barnoldswick, causing long traffic holdups.

Water lifted tarmac and swept away manhole covers in Dotcliffe Road and Main Street.

The storm came from the Bury area where the road surface was lifted three feet. It then swept up through Rawtenstall, Crawshawbooth and over in the Earby direction." "Several cars were swept away down the road where the water was two metres deep in places. At a house in Burnley Road the river came over the wall and went through the house after bursting in through the door." "It was amazing how fast the river rose. The culvert and drains just could not take the volume."

10 Jul 1999
COL

Isolated Th
Carnforth > 50 mm in 40 m

1 Aug 1999
Lancs Count
Publs 6 Aug

Thunderstorm
temperatures soared to the high
80s,

Horwich and Chorley bore the brunt of a deluge which knocked out electricity supplies, flooded buildings and disrupted traffic.

Horwich: Waist high flood water poured into a council house in Longworth Road."Within just 10 minutes of rain we were flooded out".

Chorley and Whittle le Woods: Sunday's flash floods which are believed to have caused hundreds of thousands of pounds worth of damage throughout Chorley. Residents on Water Street, Chorley reported cars floating by as the storms raged. Police underwater search teams were even called to Ashby Street on Sunday afternoon as many of the town's roads were submerged, while Brindle Street was also under several feet of water. Several town centre shops were closed on Monday following the floods, and local schools were also affected. Mayfield School suffered more than £50,000 damage, while the Pre-School Centre, Water Street, faces closure if staff are unable to find an alternative home for the nursery by next week. Lightning struck the Baron's Rest pub in Astley Village. A landslide on the Bolton to Preston line at Chorley led to rail service disruption.

Heswall: Worst flooding in centre of town for many years; manhole covers were raised and some roads under 6 inches of water.

14 Aug 1999
COL

Thunderstorm in a very wet
month
Heswall 15 mm in 20 m

4 Jun 2000
Lancs Count
Publs 5 Jun

Police and fire crews were inundated with calls as the deluge also struck Burnley, Pendle and Rossendale early yesterday (as well as Todmorden and neighbouring areas in Yorkshire).The Colne to Haworth road was closed for several hours and part of the Padiham-Barrowford by-pass was two feet deep in water and flooding stopped traffic on Keighley Road, Colne.

In Barrowford, homes in riverside Sandy Lane, Newbridge, were hit, with two feet of water flowing into ground-floor rooms at 2am. Nelson firefighters pumped out water for four hours. There was also flooding in Romney Avenue,

Barrowford. At Whitworth, water from the Irwell swept into houses in Daniel Street, with one cellar five feet deep in water. Fire teams were able to divert the river to prevent it sweeping over the nearby electricity sub-station in a two-hour operation early on Sunday. Houses in Blackburn Road, Haslingden, were hit, with six inches of water flowing into properties.

Slow moving fronts over northern England led to flash floods. At Walney island Cumbria 46 mm fell in 6 hours. (Severe thunderstorms were reported in Chester, Nottingham, Stoke and Derby).

Chester: A storm lasting a matter of minutes left more than 50 offices under 3 feet of water.

Wirral: Roads were reported flooded

Wigan: Some flooding reported

2 Jul 2000

COL

3 Jul 2000

Thunderstorms

27 Jul 2000

Thunderstorm

COL

21 Aug 2000

Thunderstorm

COL

Bowland 54 mm in 1 h

28 Aug 2000

Local thunderstorms in Lancashire

COL

and Merseyside

Southport 23 mm

29 Sep 2000

SW Lancashire

COL

Wrightington 1 hour

thunderstorm

17 May 2001

Lancs County

Publications 18

May

Oswaldthistle: Flash floods after a deluge left 20 people homeless on Wordsworth Close. The flooding took hold around 3pm yesterday. At 5.30pm 25 properties were declared unsafe. Families moved out to stay with friends or in temporary accommodation provided by the council. Many other houses in the Thwaites Road area were affected and fire officers were yesterday putting up sandbags. Residents say the area gets flooding because it slopes down towards the White Ash Fields, and drains cannot cope.

Seaton: Some property flooding.

Daubhill: Ten homes in Longfellow Avenue were swamped with sewage after the downpour caused drains to overflow and the sewer to collapse.

Little Hulton: A pub sustained hundreds of pounds worth of damage after its cellar was flooded. At the White Lion Hotel in Manchester road West, the proprietor said the water was up to the top of his legs and the juke box was ruined. Homes in Longfellow Avenue, Over Hulton, Fletcher Street and Windermere Road, Farnworth, and Newearth Road, Walkden, were also hit.

Roads in Westhoughton, Farnworth, Walkden and Over Hulton were all hit by floods as drains failed to deal with the downpour. Park Road, a major route into Westhoughton, was brought to a standstill for an hour as drains overflowed to block both carriageways. A manhole cover was knocked out by the force of the water at the junction with Molyneux Road.

3 Jul 2001

Thunderstorm

COL

Heswall 1 32.0 in 1 h 35 m

Lancs County

Seaton 43.8 in 2 h (Tot. 53.7)

Publications 9

Jul

7 Aug 2001

Thunderstorm

COL

Radcliffe 35.3

Flooding reported at Congleton (Weaver catchment) with heavy rain at Harsehead

26 May 2002

Thunderstorm?

COL

Oldham 26mm in 2 h

14 Jun 2002
COL
Manchester Evg
News 15 Jun
Lancs County
Publications 18-
26 Jun

Daily
51.4 Turton (nr Bolton)
37.3 Accrington
35.6 Burnley
33.8 Oldham
30.9 Casterton (nr Kirkby
Lonsdale)
28.0 Standish (nr Wigan)
26.7 Radcliffe
Bolton : 56mm (was recorded in a
two-hour period.

During the evening there were reports of torrential, thundery rain in Lancashire, in the Blackburn, Accrington and Ribble Valley areas, that led to localised flooding. The thunderstorms moved NE across NE England later. A slow moving cold front deposited 22.7mm in 1 hour at Radcliffe - resulting in local flooding. Elsewhere flash floods occurred widely from N Manchester to the Ribble valley with 25 - 50mm rain falling in 1-2 hours over a large area. A violent thunderstorm at Burnley led to flash flooding in the area. A severe thunderstorm on the 14th dropped 25mm of rain in the hour 1800-1900 at Oldham. At Turton it was the wettest day on records (1987); 31mm rain fell between 1700-1800h with a heavy thunderstorm. Local flooding occurred and streams bursting their banks, while the local road filled with debris. The local ASDA store closed as floodwaters burst through the store. Some roads were locally impassable. Widespread falls in East Lancashire were reported. At Loveclough (Rossendale) marble-size hail fell and 23mm of rain fell in 1 hour.

Manchester: Royal Exchange Theatre was closed due the thunderstorm.

MEN notes: An average month's rainfall fell in only two hours in some parts between 4.30 and 6.30pm, leaving standing water up to 3ft deep. On the railways the track between Manchester and Preston blocked for a number of hours by landslides at Adlington and Westhoughton and more flooding. The areas worst hit by flash floods were Bury, Wigan and Bolton, where the Asda store at Horwich was forced to close. The standing water, which in some areas was as deep as 3ft.

LEP notes: Darwen, Sunnyhurst Woods: Flash floods left a 40ft by 12ft chasm at the woods, damaged two bridges and washed away all the footpaths. Some 60 tonnes of rubble were washed down on to Sunnyhurst Lane and Borough Road. The repair bill is expected to reach £500,000.

Rain started around teatime and lasted for three-quarters of an hour, but left a trail of devastation across the region. In the Ribble Valley, the A59 trunk road was blocked by several feet of water at Sawley, creating major tailbacks, and there were problems in Blackburn, Darwen and Hyndburn. Houses and businesses in Whalley New Road, Blackburn, were among the hardest-hit and residents in Lower Darwen had to evacuate properties where floodwater reached waist level. Flash flooding also hit parts of Burnley and Rossendale. Householders in Oswaldtwistle were affected for the second time in less than two years.

Blackburn: The branch of Booker Cash and Carry had to close temporarily when the store in Amberley Street was swamped after the flash floods.

Rishton: Residents were left counting the cost of flooding for the fifth time in two years. People in Spring Street were hit during the deluge across East Lancashire last weekend despite flood prevention work six months ago. "It was just like a river coming through the house. It came up to the top of the skirting board and we are in a bit of a mess now."

Bury, Ramsbottom was brought to a standstill when Springwood Lodge burst its banks, flooding into Carr Bank Road and cascading down Bridge Street. Water seeped into cottages in Springwood Street, Ramsbottom. Memories in Bridge Street, Ramsbottom was forced to shut off half of his shop on Saturday after mud and water seeped into the store. The water in Bridge St was 3 inches deep but fast flowing. Torrential rain caused traffic chaos as roads became gridlocked throughout the borough, and many commuters took hours to travel home and some were even forced to abandon their cars. Extensive flooding was also reported at Stubbins Street which was closed off after a car broke down and was immersed in water. The notorious Stubbins Bridge was also flooded. Manchester Road, Shuttleworth; Bolton Road West, Ramsbottom; and Greenmount Cricket Club also suffered. Elsewhere in the borough, commuters abandoned their cars on Peel Way and flooding was reported in the Ainsworth area while the pressure of water forced up manhole covers in

Manchester Road.

Water Street in Radcliffe, and Hilton Lane and Rainsough Brow in Prestwich were also badly affected. At Darcy Lever the River Croal overflowed (said to be the first time in 40 years) causing a heavy flood at Smiths Road, Moses Gate. In Astley Bridge, Berkeley Road was deluged by water. Houses lower down the road were water-logged destroying carpets and electrical appliances and a driveway was uprooted. In Smithills, Arkwrights Ale House and seven cottages were flooded. Five houses in Thorn Well, Westhoughton, were left under three feet of water, destroying carpets and furniture. Bradshaw, Bradshaw Brow: Terrace of houses found their carpets soaked and their electrical equipment dangerously wet.

Lostock: In Pocket Nook Road, Lostock, people arrived home to find their houses under eight inches of water. They blamed inadequate draining on a nearby new housing estate and a culvert having burst its banks. The cellar at Lostock Arms was flooded with two-feet of water.

Wigan, Lowton: The village was one of the areas worst hit by the heavy rainfall and 150 householders suffered sewage flooding their homes whilst hundreds more faced rapidly rising water levels. The deluge inundated not only the public sewerage system but also the connecting private drains - so that rainwater could not enter the drainage system because it was already full to capacity. Several pumping stations also failed.

Glossop: The storms caused localised flooding; entry into Glossop was impossible after floods in late afternoon. MEN reports Riverside Cottage Old Glossop was flooded. This was one of several hundred people affected by floods after thunderstorms. The River Etherow burst its banks; drivers were left stranded in the town centre. Several vehicles were washed down the High Street while one car was left leaning upright against the Junction pub at Turnlee Road. Woodhead Road and the A57 at Brookfield and the junction with Primrose Lane in Glossop were closed, but police said the Snake Pass was "passable with care" despite a section of the road being washed away.

Stalybridge police station had to be evacuated and five patrol cars in the car park became submerged in water.

Oldham: The 30th proved to be the wettest day (81.2mm) since 5.8.1981 (83.0mm). The day was characterised by a series of thunderstorms, which began at 0900h and grew with intensity as the day progressed. The final storm between 1715h and 1800h produced 31mm in just 45 minutes. The observable effects were quite shocking, as you do not expect to see cars being washed down roads with 1 in 7 gradients in hilly areas like Oldham! Many of the drains could not cope and access from the east of the town on many of the main roads was closed for 24 hours after the storms. Flooding between Piccadilly and Stalybridge and at Reddish North caused problems on the railways. These were made worse by a points failure affecting services from Manchester Airport before 8am.

Oldham: Properties roads and land flooded from fluvial and surface water.

Droylsden: Edge Lane was closed due to flooding.

Rochdale:

Heswall 2: 31.4C on 16th is the highest July temperature since 3.7.1976, and the highest for any month since 3.8.1990. Rainfall was the greatest daily July fall since 15.7.1973. There were very close lightning strikes to earth in the evening of the 16th - one strike at 1920h was the closest for many years and struck some 25m to NW; only 3mm of rain fell from this heat-induced storm.

Heswall 1: A brief heavy thunderstorm in the morning with 9mm of rain in 6 minutes around 0930h with further showers

30 Jul 2002
COL
Gt Manchester
SFRA Appendix
B 2008
Manchester
Evg News 31 Jul
& 1 Aug

Thunderstorms
Turton 22 mm in 1 h
Oldham 81.2

19 May 2003
COL
17 Jul 2003
COL

Rochdale 9.8 mm in 1 h
Heswall 2 34.4

10 Aug 2003

COL

21 Jun 2004
COL

3 Aug 2004
Manchester Evg
News 4 Aug
Cheshire County
Publ 11 Aug

Said to be a weather system
sweeping up from Spain
Rochdale 23.5 mm in 1 h

10 Aug 2004
CBHE
(Lancashire
Evening
Telegraph,
Wednesday
11th Aug 2004)

The downpours, which first began
Monday night 9th, prompted the
Environment Agency to place
much of East Lancashire on 'flood
watch'

later.

Heswall 2: 32.2C on the 9th was the highest temperature for any month since 3.8.1990. A dramatic thunderstorm early on the 10th moving from the SW accompanied by severe squalls; exceptionally frequent lightning and near continuous thunder. Storm lasted from 0700GMT to 0745GMT, with about 10mm of rain in 8 minutes at the peak, being driven horizontally in squalls. There was a further, much less intense storm from 0815GMT to 0900GMT although it was still overhead.

Turton: Heavy thunderstorm 0900-1100h on the 10th produced 20mm rain, with some local damage due to lightning strike.

Buxton Derbyshire: A severe storm with hail and thunder produced 32.4mm of hail in about one hour. The hail lay to a depth of 3cm, and caused serious damage to the potato and sugar beet crops, shredding their leaves. It was still lying in patches the next day. The surface wind was easterly as the storm approached from the west. Lightning was flashing every 10 seconds and the thunder was continuous.

Altringham: Forty homes were flooded when sewers burst notably in Brunswick Street and Bridgewater Street.

Heywood: In Pilsworth Road floods were 3 feet deep after the drainage system collapsed. More than 20 houses were affected. The fire station was hit by a flash flood and firemen had to pump it out.

Rochdale: the Bamfor area many residents experienced flooding.

Flooding was also reported at Bolton Oldham and Rochdale.

15-year-old Adam Charlotte after he was swept away during a flash flood in the River Bollin at Dunham Massey. The water had risen from its usual depth of 4ft to 12ft.

Northwich: A downpour wreaked havoc for households and businesses in Northwich. Shops in the town centre were forced to close and roads turned into rivers on Tuesday, as Northwich experienced some of its heaviest rainfall in years. Shops on High Street, Northwich were affected and Sarnies, Vision Express and Holland and Barrett had to close because of flooding. According to the fire service, Whitegate, Hartford, Cuddington and Davenham were some of the worst affected areas in the county. At Moss Lane, Cuddington water levels had reached around 30in by 10am Davenham was awash with water and two cottages on Church Street experienced floods of almost 2ft.

<Colne>: Homes in Southfield Terrace and Laneshawbridge were severely flooded around 6am yesterday when water ran off nearby fields. Firefighters used a mechanical digger to create a dam and channel the water away and spent most of the day pumping flooded cellars....The Clitheroe to Blackburn [rail] line was swamped at Wilpshire Tunnel and at Brownhill, while the East Lancashire line was also closed between Blackburn and Preston due to running flood water, delaying local and Transpennine Express services. At Lostock Hall trains stopped after the whole line was submerged. A spokesman for Network Rail, said: "A train was stopped at Wilpshire Tunnel after the driver reported running flood water on the line.

<Blackburn>: The manager and regulars at the Brownhill Arms, in Whalley New Road, saved the pub from severe damage by activating flood barriers. The pub has experienced problems with flooding for a number of years as the drainage pipe under the road is not adequate for the amount of rainfall. Thwaites brewery recently had the flood boards installed.....if it wasn't for the flood defences the water would have caused thousands of pounds in damage." On the A666 in <Wilpshire>, water running down steep side streets flooded the road and nearby gardens, while the Oakes Bridge, in Ribchester Road, Clayton-le-Dale, flooded when drains became blocked. Police were called to direct traffic

12 Aug 2004
Lancs County
Publications 20
Aug

through the water. Both the River <<Ribble>>, near Ribchester and Low Moor, Clitheroe, and the Hodder at Whalley threatened to burst their banks as water flowed in off surrounding fields.

Brinscall: Flash floods left houses under water in School Lane after an hour-long downpour on Thursday, August 12. Flash floods left a trail of devastation.

Entwistle Reservoir: Rangers say boulders the size of cars left 15ft craters in the ground near Entwistle Reservoir. And many bridges linking popular walkways were ripped up by the force of the water. Heavy rains last Thursday night brought water cascading down Cadshaw Valley and into the reservoir. The torrential downpour caused a stream to burst its banks and spark a mini-landslide. Trees were uprooted and footpaths across the West Pennine moors, near Rivington, were wiped out.

Bolton: It was hit by flash floods when rain poured off the moors into Egerton and Belmont. The Cross Guns Inn pub was flooded. Firefighters were also called to flash floods in residential streets in Radcliffe and Ainsworth, Bury.

Warrington: Gardens were flooded in Pycroft Close and Brook Way, Great Sankey; Densham Avenue, Longford; Withers Avenue and Smith Drive, Orford; and streets around Penketh, Appleton and Hatton.

Heswall 1: 19th Very heavy rain without thunder for 25 minutes around 1000h; nearly all the day's 26.7mm of rain fell during this time.

Heswall 2: 20th - 20mm in 30 minutes in the morning with the worst local flooding seen since moving here in 1970. Fire brigade called out to 50-60cm deep floods on local roads and my garden was under water for several days afterwards, probably as much as a result of previous severe saturation as much as anything.

Galgate, Near Lancaster: 20th - The River Condor burst it's banks after more than 25mm fell at nearby Hazelrigg between 0345GMT and 0500GMT, from a slow-moving storm. At the peak of the storm about 9mm fell in ten minutes.

Oldham: What will almost certainly be the warmest day of the year (8th - 28.0C) was followed by what will probably be the wettest day of the year (9th - 60.5mm). The 30-hour total from 0700h on the 9th was 79.0mm. The daily total for the 9th was the fourth highest total on record (1978). The night of the 8th/9th was the warmest night on record, with the temperature failing to fall below 20.1C. Flooding of homes occurred at Royton and Irk.

Bury Ramsbottom: Homes and a pub flooded

Manchester: Flooding occurred at Chorlton Brook, Manchester University and Fallowfield where homes and halls of residence were flooded.

Bolton: Flash floods hit many parts of Bolton leaving motorists stranded in several feet of water. In one 30 minute period at Egerton and Belmont, water poured off the moor like waterfalls flooding local pubs and home. The water level was so high at one point that the A666 was closed near the Turton and Entwistle reservoir because it was covered in five feet of water.

Since early August, East Lancashire has been hit by a series of sudden, snap deluges lasting just a couple of hours, which have left homes and businesses up to five feet under water. Yesterday's floods in Brownhill, Wilpshire and Ribchester were the fifth serious night of floods this month. Bolton-by-Bowland, Sawley, Clitheroe, Darwen, Oswaldtwistle, Great Harwood, Rishton, Laneshawbridge, Earby, Colne, Waterfoot and Cowpe had previously been affected as drains failed to cope with the volume of water. On the Brookside Industrial Estate, staff at MD Furniture, in Vine Mill, were cleaning up after their second flood in three weeks.

19/20 Aug 2004
COL
Gt Manchester
SFRA Appendix
B 2008

25 Aug 2004
Lancs County
Publications 26
Aug

2 May 2005 COL	Heswall: 8 mm in 10 m	In N England thunderstorms resulted in a tornado at Hoghton (Lancashire) with 30 houses being damaged. There were also reports of flooding on the M60 in Greater Manchester.
21 May 2005 COL	Neston Wirral: 10 mm in 45 m (Tot 15.1)	Neston: There was an afternoon thunderstorm with torrential and hail. A house, about 1.5km away, was struck by lightning with considerable damage. There were many close lightning strikes and some very large bangs, and also some local flooding. Water was coming out of the drains with considerable force, and there were piles of hail everywhere .
25 Jun 2005 Lancs county Publications Bolton	Thunderstorm Temperature reached 28C.	Bolton, Bromley Cross: Hailstones 'half an inch wide' battered the area in mid afternoon. The storm brought flooding to parts of Bolton and visibility on the local motorway was down to 5 metres. Chorley New Road was awash. [Severe flooding reported in North Yorkshire – River Rye].
12 May 2006 COL		Around lunchtime there was a very severe storm near Manchester Airport with darkness, severe lightning, large hail and flooding.
2 Jul 2006 COL Gt Manchester SFRA Appendix B 2008 Manchester Evg news 4 Jul	Oldham 49 mm in 1 h 15 m	Large hail and flooding was reported in Lancashire and Cheshire. Houses were set alight by lightning and a funnel cloud was seen near Manchester. At Oldham the observer counted over 100 fork lightning strikes. On the M62, one strike caused a tree to explode, blocking both carriageways of the motorway. In Wigan, one house was known to have been struck by lightning and the town's fire service took 70 emergency calls in just 30 minutes. Manchester was hit by torrential downpours and flash flooding which closed two lanes of the M60 motorway and damaged homes. A Greater Manchester Fire and Rescue service spokesman said it had received more than 630 calls in four hours; in the Irlam area, fire-fighters rescued a 90-year-old man and six other people from two cars after they became trapped in water 4ft deep. Bury Ainsworth: Basements and gardens were flooded from surface water. Gorton: Wright Robinson High School was hit during a fierce thunderstorm Warrington during The storm appeared very localised but many of the roads were 2 feet deep in water and the nearby M6 was closed by of flooding for two hours. Heswall: 30-minute thunderstorm with hail around 1400GMT. 11mm of precipitation reported in nearby Fazackerley. Lymm: It may have been the hottest few days of the year, but villagers in Lymm were left under inches of water on Sunday. The village was struck with a flash flood on Sunday evening following a violent rainstorm. Eagle Brow was left under several inches of water while surrounding roads were also affected.
4 Jul 2006 COL Cheshire and Manchester Publ 6 Jul	Warrington 50 mm in 1 h Radcliffe: 15mm in 15 m	A depression centre crossed the British Isles across Northern Ireland and N England on the 2nd, with widespread rain to the S as a result. No thunder was reported. Elsewhere in the N rain lasted 6 hours and reached an intensity of 17.5 mm in an hour at Pateley Br. Torrential rain and thunderstorms were reported across parts of Lancashire and Cheshire.
2 Sep 2006 COL	Coniston 68.7 Grasmere 52.4 Grizedale 49.5 Ambleside 48.3 Windermere 41.4	
12 Jun 2007 COL		
15 Jun 2007 COL	Fleetwood 30-40 mm in 3 h (Tot 58 mm)	Fleetwood: West of the Pennines rainfall totals were lighter on the 15th than in Yorkshire and some other areas but Fleetwood had a very heavy cell.
17 Jul 2007 COL		Heswall 1: The most notable feature of the month was a heavy storm on the 17th. Heavy thunder was reported over central Birkenhead and the centre of the heavy rainfall (judging by the very dark clouds) appeared to be several miles N

Gt Manchester
SFRA Appendix
B 2008
23 Jul 2007
COL
Lancaster
Guardian 26 Jul

Intense rain for 45 minutes

of Heswall. Flooding was reported at Greasby, 4 miles to the N.
Bury Summerseat: Roads and gardens were flooded from surface water

Morecambe: Minor flooding in the town on the evening of the 23rd when 35.6mm fell in two hours at the official station.
Lancaster: A flash flood struck homes in Willow Lane on the Marsh at around 5.30pm and blocked drains struggled to cope. The road was blocked off from Coronation Field along to Wharfedale Road and round to Forrest Park. Willow Lane resident James Mawson said: "It came through the back door. The Stonewell Tavern was left in a couple of feet of water. Lancaster Goji restaurant (formerly Ask) had been open for business just four nights before the flood hit.
Meerseyside: At Shortwood Road, Dovecot, 10 houses were overwhelmed with contaminated flood water gushing up from drains and through homes. The main problem was with road flooding and the airport terminal building.

10 May 2008
Daily Post
Liverpool 12
May
26 Jun 2008
COL

Timperley 37.6
Heswall 1 25.9
Todmorden 34.9
Rochdale 73.3 (9h)
Accrington Torrential rain for five minutes at 1405h on the 26th.
Radcliffe: 56.4 in 12 h
Brightmet 52.2 (mainly 14.50 to 21.10)

Timperley 15m thunderstorm with
hail 5-7mm diameter

2 Sep 2008
COL
5 Sep 2008
COL
Liverpool Echo
Sep 6

Puddington, Wirral 56.7
Timperley 45.0
15mm of rain fell over Moreton in an hour.

Heswall 1: Notable wet spell on 5th and 6th; flooding occurred in several parts of the Wirral where brooks overflowed.
Merseyside: It was hit by severe flooding as torrential rain fell across the region, homes were evacuated and there were a series of traffic accidents as 15mm of rain fell in just one hour. Wirral was particularly badly hit. In Greasby, elderly residents of sheltered housing bungalows were evacuated after flood water poured into their homes. Schools in the Prenton were flooded. Cheshire police said flooding had also been bad in the Ellesmere Port and Ne-ston areas.
Morecambe: 33.4mm of rain fell on the 9th, 90% of which was concentrated between 1745h and 1852h. This was a localised downpour which caused flooding in the vicinity of the official weather station.

9 Sep 2008
COL
19 May 2009
COL

Timperley Thunderstorm 1320-13.50
At least 10mm of the day's 14mm rain estimated to have fallen during this period.

Timperley had a thunderstorm 1320-1350h which produced a probable lightning strike on Altrincham bus/rail interchange in whose car park the observer was trapped at the time! Stanton had a moderate intensity thunderstorm during the afternoon, with lightning strikes very close to the station. Harriseahead, had thunder 1250-1405h with a discharge rate of one per 10 minutes at the peak (around 1300h).

15 Jun 2009
COL
St Helens Star
16 Jun

Thunderstorm

Torrential downpours led to the closure of roads in St Helens in the afternoon.
St Helens: Worst-hit was Boundary Road which was left under several feet of water and had to be closed by highway chiefs for hours. Some cars and vans became swamped. A Community Centre was struck by lightning. Other areas to be affected included Moss Bank, where the library was closed and Millbrook Lane in Eccleston. Water swept down from the Ecclesfield area down to Millbrook Lane.

18 Jun 2009		Timperley: During a thunderstorm 2035-2100GMT a house in nearby Bowdon was badly damaged by fire after a lightning strike according to the local paper.
COL		
27 Jun 2009		Huncoat: A rainstorm caused flash floods locally. This very localised downpour started around 1600h and lasted just over an hour. At the height of the storm roads and properties were flooded and drains became fountains. I know from being out and about that Accrington, Blackburn and Clayton (8km radius) were badly affected whilst nearby Huncoat and the Ribble Valley stayed relatively dry. At Huncoat I only measured 6.4mm but under a mile towards the town centre two rain gauges reported 46.7mm and 34.3mm.
COL		
28 Jun 2009		Timperley: Although only a light shower occurred at the station around 1300GMT we experienced flash flooding in the Wilmslow area and heard thunder at Pott Shrigley in the hills of east Cheshire.
COL		
30 Jun 2009	Thunderstorm	Puddington 10.2 mm (25% of month's fall)
COL		
8 Jul 2009		Acton, Nantwich: On the 8th the rainfall total was 48.3mm; 43.0mm of the rain fell in one hour.
COL		
19 Jul 2009		Smallwood, Sandbach: 1-min rainfall rate of 76mm/h, 11.4mm in 15 minutes on 19 th
COL		
1 May 2010		Morecambe: 26.9mm of rain fell between 1600h and 2000h with over 10mm falling in the 30 minutes ending 1800h. The downpour was localised with places 12km away recording only 6mm.
COL		
20 Jul 2010	Puddington Wirral 57.2	Puddington: It was the highest one day total since I started taking readings on the Wirral in 1957. Between 1130GMT and 1200GMT rain was falling at the rate of 40mm/h. There were several other less intense downpours during the rest of the day.
COL	Liverpool Hunts cross 60.9	
Liverpool Echo	Heswall 1 33.0	TORRENTIAL downpours and flash flooding brought Merseyside to a standstill and left hundreds of residents fearing for their homes. Huge parts of Liverpool were under water yesterday, with many main roads closed and schools across the city forced to send children home early. Floods forced the closure of the Seaforth flyover. Routes such as Allerton Road, Queens Drive at Childwall Fiveways and Aigburth Road were cut off by floodwaters. Other areas hit hard were Alexandra Drive, Aigburth, where wheelie bins and rubbish were left floating in the middle of the street, and Melwood Drive, West Derby, which trapped motorists when a miniroundabout was submerged. Many householders reported rapidly rising water levels outside their homes
21 Jul	30mm of rain fell in Crosby in the 24 hours before 6am	
Daily Post Jul 21		
12 Aug 2010	The presence of low pressure, and its attendant cold pool, over northeast Britain resulted in a crop of thunderstorms developing out of showers during the day.	The main activity was over northern and eastern England. Persistently recurring storms around the southern Pennines led to 45mm of rain at Woodford (southeast of Manchester), and flooding affected the adjacent Bramhall area.
COL		
23 Sep 2010	Sandbach Smallwood 9.4 mm in 15 m with hail	
COL		
10 Jul 2011		Huncoat Nelson: Up to 90mm of rain may have fallen 7 miles away in Nelson during a very localised storm around 1200h. This was according to a nonstandard gauge and accounts of a prolonged downpour with roads awash even though local newspapers did not report any storms or flash floods. At Huncoat I recorded 7.8mm whilst at Higham 4 miles closer to Nelson recorded 13.2mm, Other trusted sources reported widespread heavy rain over the entire Ribble and Pendle Valleys).
COL		
Lancs Telegraph		
Jul 28		

8 Aug 2011
Manchester Evg
News

Thunderstorm
Manchester 0.50 ins in 30 mins
The worst weather was further
north in Cumbria

6 sep 2011
COL

A heatwave heralded the end of a
mixed month with 170mm of rain
falling, 177% of the average.

17 Sep 2011
COL

14/15 May 2012
COL

22 Jun 2012

COL

Manchester Evg
News 30 Jun/13
Jul

Bolton le sands 56.0 (rain
persistent from 7 am till after
midnight.
Huncoat 73.0
Oldham 50.2
Rochdale 44.5

28 Jun 2012
Lancs Telegraph
30 Jun

4-6 Aug 2012
COL
Manchester Evg
News 6/7/10
Aug

Met office forecaster said 'The
radar did show a very narrow core
of torrential rain. Unfortunately it
was so narrow, it was not picked
up by any of our rain gauges.

"We would estimate it could have
been something like 10 to 15mm
of rain, which is not a huge
amount in itself.

"But what causes the damage is
the intensity. If it all comes down
in 15 minutes it is too much for

Nelson: The Post Office was flooded said to be due to a blocked drain

Oldham: flooding occurred at Old Lane Scouthead.

Mossley: A lightning bolt hit the roof of a semi-detached house in Roaches Way, Mossley.

Morecambe: The local press reported flooding around the district after the downpours of the 5th/6th.

Morecambe: The most noteworthy rainfall was 17th when 49.2mm was recorded. Most of that fell between 0300h and 0900h that day when Lancaster University recorded 34.8mm for the period.

Puddington S Wirral: (14) Heavy storm between 1735 -1800 h with much hail; most of it greater than 10 mm in size.

Timperley (15) - Heavy hail shower 1235-1250 GMT produced stones of up to 8 mm diameter. 25th -

Bolton le Sands: 56.0 mm of rain, and some violent swings on the rainfall chart recorder. It represented the wettest June day since my records began (1992), The high level of rainfall rate and high winds at the same time left a substantial amount of debris (mainly leaves and broken branches) in the roads and elsewhere. There was much standing water around, with minor flooding in the usual local places.

Huncoat: 22nd - 73.0 mm rainfall was my wettest June day in 39 years.

Crawshawbooth: Nearly 100 properties were flooded in Crawshawbooth when rainfall of 80 to 100 mm was experienced. More than 40 tonnes of silt were removed from the Follyclough Brook by EA staff on July 6 in advance of further heavy rain.

Hemshore in Rossendale: A homeowner referred to severe road flooding. They were told by the EA 'it was the wrong type of flood. They only deal with where rivers are breached. Because ours was coming from a mountain'.

Whitworth: At Whitworth's swimming pool rainfall caused the baths to fill with water and six inches of sludge.

Dozens of homes in Salford and Prestwich faced huge clean-up bills after being swamped with water.

Darwen: A downpour on Thursday (28th) saw roads once again turned into rivers, while homes and businesses fought against the incoming torrents. "The initial flooding was caused by a blockage in a culvert, where the River Darwen runs in a tunnel for more than 500m. Heavy showers led to surface water flooding in Blackburn Road where some properties were affected."

Morecambe: 4th-6th - Sporadic showery, torrential rain fell in the NW during this period. One of the areas worst affected was Glasson Dock where a total of 75.5 mm fell over the two days. Local press reports stated that rainwater ran down hills and into the cellars and garages of low-lying houses overnight on the Saturday and Sunday. One resident reported 0.5 metres of water in his garage. The downpours were very localised as 5 km away Lancaster University reported only 33.9 mm of rain in the same period.

Manchester: Devastating flash floods hit Greater Manchester. The worst-hit areas were Prestwich, Whitefield and parts of Salford, where houses and cars were flooded. Residents on Albert Road in Whitefield had to be helped out of their homes by rescue boats after being swamped by two feet of water. Around 50 homes were flooded and a couple had to be rescued from a car which had become partially submerged in the road. Another 17 houses were flooded on Butterstile Lane, Prestwich, with residents having to be carried to safety via boat. Crews with lifeboats were also called to waterlogged spots on Sheepfoot Lane and Carr Avenue in Prestwich. At one point, the water at Butterstile Close, Prestwich, was waist height and one resident's car floated from her drive.

the drains to deal with.
The storm was accompanied by lightning and hail

Bury: The council said it was aware of 10 people who were evacuated from their homes.
Parts of the M60 were shut because of the extreme conditions.

Bacup: Flash floods wreaked havoc (MEN). More than 20 tonnes of debris had to be removed from streets after water swept down from hillside lanes towards the town centre. Pubs in the centre of Bacup closed after water filled their cellars and a takeaway was also flooded. Farmer Jim Laycock, who has run Tong Farm and Tong Quarry for the past 35 years, cleared 20 tonnes of debris from the junction of Pennine Road and Tong Lane after the 30- minute downpour. He said: "I have lived in Bacup for 50 years and I have never seen rain like it. "The lanes near us and other farms just turned into rivers and washed all the debris down them towards the centre of Bacup. It was like a torrent. "Somehow the houses at the bottom of our lane didn't flood which was lucky."

13 Aug 2012
Liverpool Post
14 Aug

30 Aug 2012
Manchester Evg
News 30 Aug

Nearly 25 mm fell at Davyhulme in under an hour.
Hulme 17.6 mm in 1 h

Firemen dealt with incidents in Wirral and Sefton where drainage systems failed to cope with the torrential conditions. In Formby, a house in Gores Lane was damaged by two to three inches of flood water. The occupants said they had not seen flooding like that for around 30 years. A house was flood to a depth of 6 inches in Leasowe Road, Leasowe. A brook overflowed at Rylands Hey, Greasby causing house flooding.

Greater Manchester: Trafford ' particularly Urmston, Flixton, Irlam and Partington ' bore the brunt of the storm as thunder, lightning and hail brought chaos to the region. Incidents were predominantly in the Urmston and Partington areas, including localised flooding putting property and lives at risk. There were several reports of flooding in Urmston ' in Sunningdale Road, Princess Road, Moorside Road, Wharfside Way and Sumner Way.

In Davyhulme, Highfield Drive was hit and Westmorland Road, Urmston, also flooded. There were delays on the M60 in Chadderton and near the Trafford Centre. There were also delays to train services between Manchester and Huddersfield following flooding near Mossley near Hyde.

24-25 Sep 2012

The period 23 to 25 had heavy persistent rain with totals approaching 100 mm

Oldham, Moorside: 23rd-26th - In the 60 hours from 7.00 pm on the 23rd until 7.00 am on the 26th, 90.1 mm rain fell in what appeared to be a continuous fall.

Radcliffe: 24th – 25th - The 48 hour rainfall total was 70.1 mm (39.7 mm and 30.4 mm respectively). This is a new all-time high 48 hour rainfall total since local records began in 1983 and the second time this year that a 48 hour rainfall total of 60 mm has been exceeded (61.8 mm 21.06.2012-22.06.2012).

Macclesfield, Sutton: The Fools Nook Inn on London Road was submerged under two feet of water. Barrels were floating around the cellar which was left waterlogged, and electrical equipment and stocks of beer were ruined. The flood was caused by an overflowing stream and drains off Radcliffe Road.

Bollington: Firefighters had to help pump water from a house in Princess Street.

Nothing mentioned of detail in station notes.

Nothing on flooding in Lancashire newspapers

11 Oct 2012
Manchester Evg
News 17 Oct &
14 Nov
14 Jun 2013
COL

Thunderstorms developed out of an area of rain as it moved northeast across central England in the afternoon – mainly affecting the west and north Midlands, parts of Lancashire, Merseyside and Greater Manchester, and Lincolnshire and Humberside. It was connected to a small cold pool running

northeastwards ahead of the next frontal system from the Atlantic.

30 Jul 2013
Manchester Evg
News 30 Jul
Lancs telegraph
31 Jul
19 Jul 2014
COL

CHEETHAM HILL 16 shops were forced to shut at the Manchester Fort shopping centre because of flash flooding. Shawforth in Rossendale was also affected by flash floods on Monday night and firefighters were called to six homes in Edgemoor Close which needed pumping out at around 5.45pm.

Bacup: Pioneer Health Studio in Bacup was hit by floods again on Monday after suffering more than £15,000 of damage in the early hours of Sunday.

West Kirby: Wirral received the dying remnants of imported overnight storms from France in the morning, but in the late afternoon, 2 km away, a developing cumulonimbus cell overhead gave torrential rain in West Kirby for 15-20 mins - (just after the close of play at the adjacent Hoylake Open). Local flash flooding on side streets observed. Just 5 mm of rain recorded back home.

No other stations reported significant rainfall.

The tail end of ex-hurricane Bertha slammed into the UK on Sunday, bringing with it heavy rains and strong winds as a severe weather warning was placed over all of the UK. The main brunt of the storm arrived at 3am yesterday morning.

10 Aug 2014
COL
Bolton News 11
Aug
1 Jul 2015
COL

Heswall 9 mm in 13 m 24 mm in 35 m)

A thunderstorm developed near Shrewsbury around sunset and grew into a major storm that affected Cheshire, Merseyside, Greater Manchester, West Yorkshire and Cumbria towards midnight.

Lancashire newspapers had no reports of flooding.

<Heswall> (Wirral): There was a fierce 35 minute rainstorm which struck at 9.45 pm on the 10th, only some 4 hours after an uneventful ex-hurricane Bertha had cleared away. I measured 9 mm rain during the last 13 minutes of the storm, which followed even heavier rain in the first 22 minutes- I estimate 24 mm fell altogether. This is not far from the 25.4 mm in 30 minutes recorded at the one-time Bidston observatory back in 1959, on 9th August that year, a 'noteworthy fall'. However, what was also unique was the very high wind from the WNW which accompanied the storm, which subsided immediately the rain ceased. There were only 2 peals of thunder; also a brief fall of hail in the middle of the storm.

Timperley: Extremely heavy and persistent rain in the morning totalled 38.1 mm between 0705 and 1110 GMT. The daily total of 39.3 mm was the highest in August records (1989) and the highest for any month since September 2012.

The storms were particularly severe over northern England, with torrential rain, hail, and frequent thunder and lightning. Lightning set fire to houses at Oswaldtwistle, near Accrington, and Calderbridge (west Cumbria), and a restaurant at South Shields, and flooding affected various districts.

Heswall 1: moderate thunderstorms in the evening were severe locally but not in Heswall.

Morecambe: Crews were called to properties including Parliament Street, Morecambe; Fairfield Road, Heysham; Albert Road, Morecambe; Oxcliffe Grove, Heysham; Westborough Close, Heysham; Heysham Road, Heysham; and Westminster Road, Morecambe.

Residents in Colne, Earby and Barnoldswick reported flooding issues, while takeaways in Blackburn also had problems. A flood warning was issued by the Environment Agency to police and residents for the River Aire in Barnoldswick on Saturday night, but the deluge of rain caused only small pockets of localised water inundation of premises. The residents of a property in Skipton Road in Earby had to call the fire service at 9pm after flooding affected its electrics. At 8.40pm

14 Aug 2015
COL
22 Aug 2015
COL
The Visitor
Morecambe 25
Aug
Lancashire
Telegraph 24
Aug

Heavy rain was forecast but no flood reports were found in papers
Thunderstorms

31 Aug 2015
COL
Liverpool Echo
Sep 3

Heswall 27.2 in 1 h

on Saturday fire crews were called to a property on Curzon Street, Colne where water seeped into the electrical system. Heswall: 31st to 2nd Sep- exceptional heavy rain and floods in the Wirral. In the 36 hours from 1053 GMT on the 31st to around 1100 GMT on the 2nd, 97.3 mm of rain fell at Heswall station. The first 'storm' gave 27.2 mm in 60 minutes from 1053 GMT as the rain soon became torrential. This was then followed by 6 hours of moderate to heavy rainfall, resulting in a further 12.2 mm. Quite a number of households in lower-lying areas had possessions ruined, with the worst affected areas being in a part of Moreton in north Wirral where the Birket brook overflowed. People there said the floods were the worst in lifetime memories. In an incident in mid-Wirral some people had to be rescued from their car and in another a man was rescued by an inflatable boat.

Torrential rain early yesterday morning burst the banks of the River Birket, River Fender Greasby Brook and Prenton Brook and Arrowe Brook, causing chaos on Wirral's roads and forcing families to flee their homes. Moreton bore the brunt of the flooding, with Carnoustie Close, Oakham Drive, and Tern Way among the worst-affected roads. A bungalow on Wastdale Drive, Moreton was reported flooded. Moreton councillor Chris Blakeley said the floods were the worst he could remember. He said: "I've lived in Moreton since 1982 and I've never seen flooding quite as bad as this. Flash flooding also forced the closure of the Spital Road/Bromborough Road roundabout in Bromborough, Arrowe Road in Greasby, Saughall Massie Road, Saughall Massie and Millhouse Lane, in Moreton. Twenty-eight homes owned by housing association Magenta Living were affected and tenants who are not staying with friends or relatives have been put up in temporary accommodation for a second night.

9 Jun 2016
Manchester Evg
News 9 Jun

Thunderstorm

Greater Manchester: Middleton Shopping Centre and Middleton Arena were forced to close when flood water seeped into the buildings as heavy rain lashed the town. The fire service pumped out the entrance and several ground floor shops. Part of the M62 was closed for a time at Rochdale, while motorists on the M60 faced delays at Chadderton when rainwater collected at junction 22. Near North Manchester Hospital serious flooding occurred along Charlestown Road, Crumpsall.

17 Jun 2016
Manchester Evg
News 17 Jun

Manchester: Parts of the city centre were flooded with rain water after torrential downpours struck during rush hour. One of the worst affected areas was outside Debenhams department store and Primark, on Market Street, where shoppers, football fans and workers trawled through more than a foot of water. Flood water also seeped into the ground floor of Harvey Nichols where staff have been forced to clear the shelves of expensive stock. There was also heavy rain and flooding around Victoria Station, outside the Printworks and close to the NOMA development on Dantzic Street.

13 Sep 2016
Manchester Evg
News 15 Sep
Lancs telegraph
15 Sep, COL

Thunderstorm

'The equivalent of half a month's rain fell in just one hour during last Tuesday's storm.'

Bands of violent thunderstorms, with heavy hail in places, moved northwards over southwest and central southern England, south and east Wales and much of the Midlands, Pennines and Lancashire. There were many reports of flash flooding, houses and other buildings were struck by lightning

Greater Manchester: The region was battered with two weeks' worth of rain in just one hour, with flooding hitting scores of residents and businesses. Fire crews received almost 200 calls as floods and lightning caused havoc. Shop owners in Bramhall, Stockport - which was left 'looking like Venice' - were assessing the damage yesterday morning after the area was deluged with water gushing into shops. Costa Coffee and The Mounting Stone pub were shut following the storm. Bramhall high street was left with floods at least a foot deep. Traders at Longsight Business Park off Hamilton Road say stock worth an estimated £1.5m was ruined when foul water cascaded into the units. "All 37 units were affected. There were no sandbags and the drains had not been cleaned out". The Airport was unable to accept incoming flights for a short time, and Manchester Metrolink was completely suspended. Market Street was transformed into a river and flash floods affected various other parts of the city. Manchester City's UEFA Champions League match was called off shortly before it was due to start because the roads and walkways around the stadium were flooded. The Vanarama League matches at Macclesfield and Stockport suffered the same fate because their pitches were under water. 32 mm of rain fell

in an hour at Prestbury, whilst there were reports of large hailstones damaging roofs and car windscreens in the Peak District and Sheffield and Barnsley areas,

Earby: Flash flooding inundated around 40 homes and businesses after torrential rain caused a river to burst its banks for the second time in nine months. Witnesses said water levels at around 7pm on Tuesday in Earby were about four to five feet, even higher than similar flooding on Boxing Day, as 35mm of rain fell in less than an hour. More than 10 people were carried from the Madras Indian restaurant to safety at the height of the deluge and the town's bus station was also under feet of water. The flood occurred when Earby Beck breached its banks, despite high flood protection walls surrounding it. The proprietor of S&B Fruits grocery shop, on Water Street said: "It's the fifth time my shop has been flooded since 2004 but I've never seen the water levels as high". Properties in Water Street, Victoria Street, Victoria Road Cemetery Road, Brow Hill and Sherborne Terrace were affected.

Stalybridge: Millbrook village (Huddersfield Road) nearby had homes virtually destroyed by floods. The front door of Andy Vaughan's cottage was caved in by rush of water from a stream running off the Walkerwood Reservoir as storms battered the region on Monday. They and neighbours were rescued by boat from an upstairs window. "The water levels were rising and we were out unblocking the drains and putting sandbags out. "But then there were about three or four big pulses and the front door just bulged and gave way and the water started rushing in. A home on Demense Road was submerged in more than three inches of water. Debris was left scattered across Mottram Road and Stalybridge town centre streets following the downpour.

<Liverpool> Hailstones 2 to 2.5 cm across were observed in a day of widespread thunderstorms.

<Laxey> (Isle of Man): A major incident has been declared on the Isle of Man after severe flooding left people trapped in their homes. The village of Laxey was cut off for a time when the river burst its banks and poured into the streets. The fire service helped to evacuate several properties in the Glen Road area. While many roads had reopened, Glen Road had "suffered severe damage" and flood water had caused "major damage to houses" in the area. Heavy rain caused a landslip which shut the Mountain Road and flood damage closed the Laxey to Ramsey coast road. Flooding occurred when the swollen river Laxey burst through a gap in a wall that was being repaired. A digger being used to carry out the work was almost washed away by the force of the water. The flooding has also led to the closure of Laxey and Dhoon primary schools, the Department of Education, Sport and Culture said. A fire engine was washed away in flood waters.

20 Nov 2016
Manchester Evg
News 22 Nov

25 Jul 2019 COL
1 Oct 2019 BBC
News

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General Note from BR 1931

A comparison of the intense falls year by year is given in a diagram on page 59 of the Q.J.R. Meteor. Soc., 1931. This diagram indicates that intense falls were relatively frequent in 1924, 1927, 1930 and 1931, during the period 1897 to 1900, and again in 1874 and 1878; while they were relatively infrequent during the periods 1916 to 1923, 1907 to 1909 and 1881 to 1887.

There appear to have been very few years in the present century which could match 1961 for the paucity of intense rains. Among those worth looking into in this respect are 1919, 1922 and 1945. Also very small number in 1962 (in fact no records for either Lancashire or Yorkshire) – and 1963.