

## **South Yorkshire: A HISTORY OF FLASH FLOODING**

### **Introduction**

There is no agreed definition of a flash flood. For the purposes of this chronology and in line with the requirements of the SINATRA project to investigate 'flooding from intense rainfall', the following definition (Archer and Fowler 2016) is used:

A flood resulting from intense short duration rainfall, usually convective, that exceeds drainage capacity in urban areas or infiltration capacity in rural areas and hence can flood land and property far from rivers. River response is rapid with possible near vertical wave fronts in river channels; river users and floodplain residents may be endangered by rapid rates of rise in river level which may be enhanced by failure of upstream structures or antecedent saturation of the catchment. Flash floods may cause serious erosion of hillsides and river channels and may carry heavy loads of floating debris and boulders which may be deposited in berms and terraces.

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.

However, since the boundary between a flash flood and a 'normal' flood has not yet been clearly defined, some events are included in the following chronology which may not qualify as 'flash floods' but are retained to help establish a future boundary between flash and 'normal' events.

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 (Archer et al 2017).

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 Cumbria 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 20<sup>th</sup> 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.

<b>Newspaper</b>	<b>Place of Publication</b>	<b>Available dates</b>
Barnsley Chronicle	Barnsley	1858-1910
Beverley and East Riding Recorder	Beverley	1855-1916
Beverley Echo	Beverley	1885-1903
Beverley Guardian	Beverley	1856-1877
Bradford Daily Telegraph	Bradford	1868-1909
Bradford Observer	Bradford	1834-1880
Driffield Times	Driffield	1869-1949
Dewsbury Reporter	Dewsbury	1869-1884
Halifax Courier	Halifax	1853-1939
Huddersfield and Holmfirth Examiner	Huddersfield	1851-1856
Huddersfield Chronicle	Huddersfield	1850-1900
Huddersfield Daily Examiner	Huddersfield	1914-1918
Leeds Intelligencer	Leeds	1754-1866
Leeds Mercury	Leeds	1807-1939
Leeds Patriot and Yorkshire Advertiser	Leeds	1826-1833
Leeds Times	Leeds	1833-1901
Northern Star and Leeds General Advertiser	Leeds	1838-1852
Pontefract Advertiser	Pontefract	1858-1891
Shipley Times and Express	Shipley	1882-1957
Wetherby News, and Central Yorkshire Journal	Wetherby	1877-1879
Yorkshire Post and Leeds Intelligencer	Leeds	1866-1955

Hull Advertiser and Exchange Gazette	Hull	1794-1867
Hull and Eastern Counties Herald	Hull	1864-1871
Hull Daily Mail	Hull	1895-1950
Hull Packet	Hull	1800-1886
Sheffield Daily Telegraph	Sheffield	1855-1950
Sheffield Evening Telegraph	Sheffield	1887-1939
Sheffield Independent	Sheffield	1819-1938
Tadcaster Post	Tadcaster	1861-1879
Whitby Gazette	Whiteby	1854-1918
Whitby Times, and North Yorkshire Advertiser	Whitby	1873-1877
York Herald	York	1801-1900
Yorkshire Evening Post	York	1890-1954
Yorkshire Evening Press	York	1885-1898
Yorkshire Gazette	York	1819-1899

### ***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 Yorkshire this provided access to 15 local and regional newspapers. The earliest of these commences in 1998 but most of the newspapers have much shorter records. Only 2 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 1998. There remained a period from 1950 to 1995 during which local sources were not available online and it was therefore it was considered necessary to access local newspapers in libraries or record offices. The principal sources so far investigated were inspected at the East Riding Record Office at Beverley where copies were available either as hard copy or microfilm for Driffield Times, Beverley Guardian, Hull Daily Mail and Yorkshire Post. Further inspection of newspapers centred on Leeds and Sheffield will be inspected.

## Flood Chronology

Date and sources	Rainfall	Description
5 Jun 1594 Shann Commonplace Book Jones et al 1984		Sudden great flood on the river Aire
16 Sep 1615 <a href="http://eyeoncalderdale.com/history-of-flooding-in-calderdale">http://eyeoncalderdale.com/history-of-flooding-in-calderdale</a> Longfield 1998 Jones et al 1984		Elland Bridge is destroyed. Keighley Bridge destroyed.
26 Sep 1616 Shann Commonplace Book Jones et al 1984		Rained continuously for 38 hours with great wind from the east causing a great flood. River Aire flooded houses in Leeds with damage done where water was never known to have come before. River Calder also very great. Wakefield: water came almost up to the battlement of the bridge.
11 Sep 1673 <a href="http://eyeoncalderdale.com/history-of-flooding-in-calderdale">http://eyeoncalderdale.com/history-of-flooding-in-calderdale</a> Bogg 1904 Walker, 1813		Similar to 1615. Bridges are damaged. Bridge at Sowerby Bridge damaged. Bridges between Kettlewell and Otley destroyed
26 Aug 1680 Mayhall 1860 16 Feb 1686 Summersgill Collection, Vol 1, Brief Accounts of Yorkshire Floods From 1564-1872. Leeds City Library.	Same event as described below for June. The June date seems more likely given the occurrence of thunder.	Wakefield experienced a dreadful storm and flood on August 26th, when Thoresby, the antiquary, being in the town, waded up to his midleg[sic] in water, to get to his quarters. On the 18th February, the whole of England was visited by a tempest, accompanied with thunder, which committed great devastation. The inhabitants of Kettlewell and Starboston, in Craven, were almost all drowned in a violent flood. These villages are situated under a great hill, whence the rain descended with such violence for an hour and a half that the hill on one side opened, and casting up water into the air to the height of an ordinary church steeple, demolished several houses, and carried away the stones entirely.'
6 Jun 1686		A storm raged in Upper Wharfedale and the river rose to such a height that almost the whole valley became

Burnley express  
11 Sep 1926  
Radley and  
Simms 1970  
18 May 1722  
Mayhall 1860

X Jul 1725  
Stanley's  
Newsletter  
  
21 Jun 1729  
John Hobson's  
journal  
Jones et al 1984  
7 May 1738  
Morehouse, H.J.  
1861  
Longfield 1998  
18 Sep 1739  
Newcastle  
Courant 29 Sep  
  
18 Aug 1741  
Gentleman's  
Mag.  
11 May 1742  
Gentleman's  
Mag.  
12 Jun 1748  
Gentleman's  
Mag.  
18 May 1749  
Derby Mercury

Not clear whether this was a flood on the Ouse or a local event – but the description of prodigious rain suggests the origin was local.

Not clear whether a thunderstorm

one boiling flood and the villages of Kettlewell and Starbottom were almost swept away. Many of the inhabitants of Starbottom were drowned. The side of the hill was said to have opened casting up water to the height of the church steeple. The houses were filled with gravel up to the chamber windows and many houses were swept away entirely

At Ripponden, near Halifax, there happened on May the 18th 1722 “a most remarkable flood, which, with great violence did break into the chapel, and by its weight and pressure bear down and carry away the greatest part of the north side, with the stones and timber thereof, and pews therein, and tore up the graves and carried away many dead bodies, and left their parts scatter'd in the river and on the banks, a great many miles distance; and so undermined the remainder of the chapel, and shook and damaged the walls, that it was absolutely necessary to re-build it on higher ground, to prevent the like danger for the future. ...Between the hours of three and five in the afternoon, the water had risen seven yards perpendicular in Ripponden vale, and bore down in its course several bridges, mills, and a number of houses; many persons also lost their lives. Stirk Bridge was destroyed

At York there has been such prodigious rains and such floods that the people have been forced to go in ferryboats to get out of town through the gates of the city.

Much thunder and excessive rain. Part of the almshouses was taken down by a flood in Sheffield and several poor people that lived in it were drowned.

Severe thunderstorm. Flood forced its way into a chapel at Holmfirth

Leeds: Very considerable damage has been done especially to farmers at low levels near the River Aire and Calder. Great quantities of coal were taken off the stender (sic) at Wakefield by the strong current of water. At Mitfield the water rose so suddenly that inhabitants were obliged to use great diligence to save standing corn but much was swept away, their carriages overthrown and some horses lost.

Violent thunderstorm in West Riding, Notts and Lincs. Hailstones were as large as musket balls/pigeon's eggs with broken icicles tore and cut standing corn, killed birds and hares. Hail lay in heaps half a yard deep. The loss to farmers was estimated at £4000.

Yorkshire (unspecified): Hailstones 5" (presumably circumference) fell and did much damage to fields and gardens.

Between Scarborough and Malton the greatest storm of thunder and lightning seen here in the memory of man. One man was killed by lightning. Very large hail was observed at Boroughbridge and Ferryhill. There was no reference to flooding.

Riponden (nr Halifax): A great flood when the Beck was raised 20 feet and 15 persons were drowned and many bridges and mills carried away. (Days after severe thunderstorms in Midlands and Thames areas)

17 Oct 1877  
(Chronology)

5 Aug 1755  
Longfield 1998  
Sheffield

Mercury. 1837  
23 Jun 1763  
Leeds  
Intelligencer 5  
Jul

4 Jul 1764  
Longfield 1998  
Bogg 1906  
Speight 1906

10 Oct 1765  
Gentleman's  
Mag.  
5 Jul 1767  
Leeds  
intelligencer 11  
Aug

21 Jul 1767  
Manchester  
Mercury 28 Jul  
Leeds  
Intelligencer 11  
Aug

4 Aug 1767  
Derby Mercury 3  
Jul 1878  
(chronology)

10 Oct 1767  
Newcastle  
Chronicle 24 Oct  
23 Jul 1768  
Manchester  
Mercury 2 Aug

Gentleman's

Great flood - washed away several bridges on the River Don.

Skipton: They had the greatest fall of rain ever seen so that one whole bridge and part of another were taken down by the violence of the flood and great damage was done to the paper mill  
Sheffield: part of Ecclesfield Church was thrown down by lightning.

Ramsgill flooded (River Nidd)

Heavy rains at Ripponden (also Rochdale in Lancs), swelled rivulets, bearing down bridges, and carrying stones of incredible magnitude. Rivers changed course.

Halifax: The flood carried away two dwelling houses and part of another with a child in bed. [This was referred back from the following flood as being not as severe as the one on 21 Jul].

Leeds: Thunderstorm with rain and hail. One woman was killed by lightning in the workhouse.  
Halifax, Eastwood: In less than half an hour there was the greatest flood; the roads were impassable for the strongest horses; pavements were torn up and washed away. Most of the houses were flooded and furniture washed away. Our houses are at a great distance not only from great rivers but also from rivulets. Half a mile south of us they had little or no rain.

<Leeds>: At 3.00 am the water suddenly rose about two yards in an hour; it was higher than for 20 years. There was great damage to hay and corn and great quantities of horses, cattle and sheep were drowned. At Beamsley tow houses and two bridges were destroyed. At Morton Banks many farmers were ruined. At Woodsome a mill and 40 cottages ere destroyed

Leeds: The greatest flood for many years occurred causing a cottage near the bridge at Leeds to be washed away.

River Calder: In this neighbourhood several people had to climb into trees to save themselves.

Leeds: We had the most terrible shower of rain ever seen in Leeds. Water poured down the streets with amazing rapidity as to lay most cellars and low rooms under water. The water rose 2 yards perpendicular in the space of a hour. At Beamsley two houses were washed away. Two bridges were washed away. There was much loss of cattle, horses and sheep from drowning.

At Woodsborne (near Huddersfield ?) a mill, part of a house and 40 cottages were destroyed.

Mag 5 Aug

Mayhall 1860

The River Wharfe also rose suddenly to height higher than known for the last 20 years.

The River Nidd overflowed and caused much damage.

Bradford: a storm occurred there the following day lasting two hours. All the houses (scores of them) adjoining the river were under water and in many of them all their furniture, stables and shop goods were swept away. Three bridges were forced down and a man and a boy who were on one of them were washed away and drowned in the sight of many onlookers.

Skipton: The rain was exceeding heavy that the river rose higher than any person now living can remember. Household furniture has been spoiled.

Brighouse: At Clifton bridge [River Calder] the water rose a full four yards in less than a quarter of an hour and a girl of 15 was swept away and carried through three bridges but survived.

Several animals were killed by lightning.

13 Jun 1775

Manchester

Mercury 20 Jun,

Archer MSc diss.

1971

In July this year, a great flood carried away three bridges, and did much damage at Leeds and Bradford, where the cellars near the river were inundated, and at the latter place, great quantities of cloth, well &c, were carried away by the stream, into which a man and a boy fell with the bridge on which they were standing.

A sudden heavy fall of rain occurred at Penistone, Holmfirth, Huddersfield etc. Several bridges were carried away at Penistone. At Holmfirth several houses were washed down and the River Calder was so swelled that a man and several cattle and horses drowned were taken out of the river at Dewsbury. There was also damage to houses and shops in Huddersfield.

<Castleford>: This was said to be the highest flood ever recorded exceeding the stage at Castleford of the second highest flood in 1866 by 18 inches.

15 Jul 1777

Gentleman's

Mag.

A dreadful inundation occurred at Holmfirth near Huddersfield where a cloudburst caused a little rivulet to rise several yards in height in less than 10 minutes. The damage was estimated at £10,000 besides loss of lives.

Newcastle

Courant 2 Aug

A most terrible inundation happened at Holmfirth near Huddersfield by a waterspout or cloudburst. The torrent of water and accompanying thunder and lightning was great. Many houses which stood not near any river were soon under water and their contents including furniture and clothes were swept away. Large quantities of corn and grass were utterly spoiled. Seven mills and eight bridges were driven down by the rapidity of the current. The water in a little rivulet in the neighbourhood rose several yards perpendicular in less than 10 minutes; three men were carried away by it and unfortunately drowned, one leaving a widow and nine children. Many horses etc. were drowned.

Longfield 1998

R Nidd: Ramsgate was flooded.

1 Jun 1780

Thunderstorm

Newcastle

Chronicle 10 Jun

Yorkshire

Courant 6 Jun

York: The heavy rain left many streets impassable. A great deal of damage has been done and some lives lost by lightning. At a farmhouse at Sutton in the Forest six people were struck by lightning and 2 killed.

York Holgate: A mile from the city, lightning struck and destroyed an ash tree.

Bridlington: Rain fell with hail 4 inches in circumference and one 2 ¼ inch in diameter. Many windows were broken.

Wolds: Several cows were killed by hailstones, some oblong, some triangular and some square. It lay so deep that the next day it might be taken up with shovels.

19 Aug 1786

Thirsk: Thunder and lightning continued for more than two hours; it was so dark that one could not see across



Leeds  
Intelligencer 29  
aug  
2x Dec 1790  
Oxford Jour I Jan

13 Apr 1792  
Manchester  
mercury  
24 Apr  
21 Jul 1795  
Leeds Intell. 27  
Jul  
18 Aug 1797  
Leeds  
Intelligencer 21  
Aug

6 Jun 1798  
Mayhall 1859  
7 Aug 1799  
Longfield 1998  
Sheffield  
Mercury 1837  
16 Aug 1799  
Mayhall 1860  
The Observer 25  
Aug 1799

Persistent rainfall for 2 days  
Observer suggests persistent rain for  
3 weeks

5? May 1800  
Derby Mercury  
15 May  
Staffordshire

Thunderstorm

the street (in mid-afternoon). The rain descended in such torrents that many houses were flooded that had never been flooded before.

Aire and Calder: Melting snow combined with a succession of heavy rains have caused flooding. Many families on the banks of these rivers and rivulets have been obliged to move. The rain was accompanied by thunder and a wind of hurricane force. The waters rose so suddenly that a woman was swimming about the room in her bed before she knew what was the matter. At Timble Bridge the flood levelled the wall of a new churchyard. Holbeck Rivulet demolished the bridge at Buckram House. (Damage was done in Lancs and Leicester mainly from high winds and ships were wrecked at sea).

At Leeds a severe thunderstorm occurred. At Todmorden two girls were struck dead by lightning.

Sheffield: A man was killed by lightning whilst working in a field.

A thunderstorm in the West Riding caused the different rivers and brooks to swell to a most astonishing degree. The River Wharfe near Otley was so rapid as to force a wagon drawn by three horses that were attempting to cross the river down the river. All the horses were drowned and the driver saved his life with difficulty.

Don and Sheaf 'swelled to an amazing height'

After a thunder storm and heavy rain, on June 6th, the river Aire at Castleford rose two yards in half an hour.

Don and Sheaf overflowed

The river Aire overflowed its banks, and did much damage in the adjacent buildings and the hay and corn fields. The weather was for some time wild and tempestuous. Several mills and houses near Holmfirth and Huddersfield were swept away by the floods, but this was trifling compared with the devastation in Lancashire and Cheshire, where numerous bridges and mills were washed down, and one person lost 800 pieces of finished goods.

Holmfirth: Several mills and houses were swept away (and other places in the West Riding). The canal at Huddersfield was damaged. The River Ouse rose considerably high. The Dunn (sic) and Sheaf overflowed (see 7 Aug) inundating houses and the country nearby.

Hull: A severe thunderstorm continued for half an hour but no serious damage was reported.

Thixendale (S of Malton): Soon after the storm abated the houses were suddenly inundated by a large body of water which came down the valley like a large wave and in a few minutes almost every house had three feet of water in it. Inhabitants were obliged to take to their chambers or to the hillsides. One child in a cradle which

Advertiser 17  
May  
Stamford  
Mercury 16 May

filled with water was saved by a girl who broke a window into the house to rescue the child. The houses were all left with 4 inches of mud in them. In its descent from the summit of the hill the flood left two holes in the rock nearly six feet deep. The flood continued its course to Raisthorp and Birdsall, a large body 30 yards broad taking with it all the hedges and fences. It was thought to be occasioned by a waterspout on hills around Garrowby. At nearby Leavening and Acklam numbers of sheep were washed away and drowned and the posts and rails of an enclosure together with the banks were carried for some distance.

[Thunderstorms with large hail were also reported at Bourne in Lincolnshire and at Stamford and Kettering with much damage to window and hothouse glass At Lincoln pavements were forced up and much debris carried down the streets to the lower part of town.]

Wakefield: At Woolley near Wakefield in a thunderstorm the rain fell in such torrents as to destroy several cottages, force its way through the gardens and overflow the lower apartments of Wentworth's mansion.

13 Jul 1801  
Caledonian  
Mercury 25 Jul

Thunderstorm

7 Aug 1801  
Derby Mercury  
20 Aug

Thunderstorm

10 Aug 1802  
Hull advertiser  
14 Aug

20 Jul 1803  
Mayhall, 1860  
11 Jul 1806  
Hull Advert 19  
Jul

Thunderstorms

Aberford (E of Leeds): At Aberford many houses were filled to three or four feet. At Milford the water was 3 or 4 feet on the turnpike road. At Parlington a mansion was surrounded by water; the stable were filled as high as the mangers; walls were knocked down and large stones scattered.

Hull: Many streets of the town were for some time impassable owing to the water exceeding the capacity of the sewers. Animals were killed by lightning.

A dreadful storm of hail and wind occurred on July 20th, which unroofed several houses, tore up trees, and broke many windows, the hailstones being some of them three inches in circumference.

Hull: A sailor was killed in a boat and many other injured by lightning strike. A man was killed at Patrington. There was no reference to flooding.

[Thunderstorms were widespread throughout the country with a number of lightning fatalities but there was no reference to flooding].

2 May 1807  
Leeds City  
Library. ND  
Longfield 1998  
Lancaster  
Gazette 16 May

The inhabitants of Silkstone near Penistone in Derbyshire were visited by the most alarming phenomenon ever remembered. A torrent of water (Upper Dearne?) appearing from 4 to 6 feet in diameter deluged the town which is situated in a valley and several people were unfortunately drowned. In one house a woman and her four children were seated in her house when the flood rushed in and rising so rapidly that it was with the greatest difficulty she saved herself and three of the children by rushing upstairs. The fourth a 7 year old girl ascended the sinkstone but perished. In an adjoining house a woman and her two grandchildren were also drowned. Two horses in a neighbouring mill were killed, the mill was shattered and corn and flour carried away. Two other horses saved them selves by getting their forefett on the manger and keeping their heads above the stream. On the low ground the water rose 5 yards in 3 minutes and was 3 hours in subsiding. A shoemakers shop and its contents were also destroyed.

The greatest transition from cold to heat ever remembered occurred in the last week of April and the following thunderstorms on broke in the parish of Bradfield and taking a course down the Rivelin and Loxley, thence into the Don which became swollen. Near Doncaster it was said to have risen nine feet in an hour and a half.

Windows were broken at Hickleton by a hailstorm with some oblong pieces of ice more than 2 inches long. Hay, timber sheep and pigs were precipitated down in the current. Thunderstorms with large hail were also reported in Leicestershire and Northampton.

11 Jul 1807 Hull Packet 14 Jul Yorkshire Courant 13 Jul 25 Jul 1808 Public Ledger and Daily Advert. 6 Aug 31 Aug 1810 Public Ledger and Daily Advertiser 10 Sep Morning Post 5 Sep Hull Packet 11 Sep	Thunderstorm	<p>Hull: Heavy rain rendered the streets impassable with water nearly a foot in depth in some places. No lightning or other damage was reported. The storm lasted from 9.30 until near 12.00.</p> <p>Halifax: In a two hour thunderstorm the roads were flooded in half an hour at Barkisland to a depth of many feet. The foundations of houses are laid low and the whole place would have been swept away but for the fact that it is built on rock. The road to Stainland is broken into holes that would bury a wagon. The place is at a high elevation away from any river</p> <p>Wensleydale: the storm occurred between 7 pm and midnight between Hawes and Gale. It was accompanied by hailstones of enormous size. Streams of water from the hills laid waste all before them and tearing the surface. In many places the bed of the river was diverted having stopped its former course and covering valuable ground with sand mud and gravel. Several bridges were carried away and 2 or 3 small houses together with several hundred roods of stone walls. A stone bridge at Gayle which had stood for over a century was entirely swept away. The water rose 4 to 5 feet above the height known in the greatest flood; many houses were filled four feet deep having burst open the front doors and carried away furniture. From the sudden rising of the water and its overwhelming rapidity it was with the greatest difficulty that inhabitants escaped from their houses. A flaz mill is nearly demolished and machinery carried off in the flood.</p> <p>Richmond, Sandbeck: Very large hail broke glass in windows skylights and gardens. Cattle were drowned in the flood which followed the storm. Hailstones were picked up the next day by the bushel and measured from 4 to 7 and a half inches in circumference.</p> <p>Doncaster: Torrents of rain beat down the grain and swept away the fences.</p> <p>Wakefield: severe storm of rain and hail consisting of transparent ice encrusted with snow and 6 inches in circumference. Gardens and hot houses have suffered severely. Storms with hailstones were also reported in Derbyshire at Ashbourne, Wirksworth etc where it was accompanied by a whirlwind or tornado. Houses were unroofed and barns thrown down, hay and corn stacks carried away, trees torn up by the roots. Effect was mainly in Ireton, CowLow and Hopton. Lumps of ice 9 to 12 inches in circumference occurred.</p> <p>Sheffield: A hailstorm lasted an hour with stones and large pieces of ice encrusted with frozen snow fell; they were three to five inches in circumference. 12,000 panes of glass were broken and much damage was done to gardens. A tornado was observed at Beanchief Abbey; others were bserved at Matlock Bath and at Wirksworth.</p> <p>[There were no reports of flooding]</p> <p>West Yorkshire thunderstorm: Much damage was done at Todmorden from the torrents from neighbouring hills. A mill dam was burst and carried away along with an adjoining cottage. Several other dams on the course of the Calder were also swept away. A bridge at Hard-Hippings near Hebden Bridge was carried away. The water elevated by between two and three yards in little more than as many hours. Almost every house in Hebden bridge was inundated and was higher than any former flood in the memory of man. The storm was also severe in Craven and in the neighbourhood of Skipton.</p> <p>Sheffield: Great damage was done by large hailstones to windows and gardens</p> <p>At Cottingham a man was killed by lightning.</p>
12 May 1811 Manchester mercury 28 May Caldeonian Mercury 20 May	Thunderstorms	
8 Jun 1811 Manchester mercury 25 Jun		

At Wentworth west Yorks 3500 panes of glass were broken in the gardens of a great house.

[Storms were also reported in Edinburgh and South Wales]

Green Hammerton (between York and Harrogate): The water was very soon three to four feet deep and pieces of ice were three inches in circumference. A horse was killed near Boroughbridge.

Leeds: Severe thunderstorm was reported to the southwest. Several people were injured by lightning.

Leeds was visited by a violent thunderstorm which lasted for two hours. Houses were struck and a horse was killed but there was no mention of flooding.

Sheffield: the storm resembled an 'East Indian monsoon' and has done much damage to growing crops which are much beaten down. Many houses in the lower part of town were flooded to a considerable depth.

Black-Sike Mill reservoir Burst

Holmfirth and Huddersfield: The towns themselves had very little rain in a thunderstorm. However, a cloudburst on the hills above Holmfirth and Meltham sent down by the two channels of those valleys and immense flood of water which joined at Steps. A breast of water from 7 to 9 feet high rushed down the valley and spread desolation along its course. All down the river a sudden and unaccountable flood took place which astonished all who saw it. The effect of which was "to send people fleeing to their top chambers or to the high ground behind their dwellings, and to keep them up all night in fear and trembling lest worse things should befall them."

Kirkheaton: A waterspout burst in the neighbourhood of Whitley Hall and inundated the valley of Kirkheaton. The flood washed down 3 mill dams and swept away the front of several cottages, floated down some fields of hay and damaged the walls of the parsonage garden.

Four miles from the village of Haworth a part of the high lands on the Moors opened into chasms, sunk to five or six yards in places with two principal concavities, one six hundred yards in circumference and the other two hundred yards. A dark slimy mixture of mud and water three or 4 yards in depth followed the course of a rivulet for a distance of six or seven miles, spreading mud mixed with sand and timber. It broke down one solid stone bridge and made huge breaches in two others. It also entered some houses. Thunder was frequent with forked lightning.

The inhabitants at the banks of the river Aire were greatly alarmed by the disruption of a bog at Crow-Hill, above Haworth, in a wild part of the county of York, adjoining Lancashire, which kept the water of the river Aire in such a turbid state, that for some time it could not be used, either for culinary or manufacturing purposes. The event was thus described in the Leeds Mercury as follows: Crow Hill, the scene of this phenomenon, is about nine miles from Keighley, and six from Colne, at an elevation of about 1000 feet above the former place. The top of the moor, which is nearly level, is covered with peat and other accumulations of

31 May 1812 Thunderstorm

Oxford Uni and  
City herald 13  
Jun

17 Jul 1816  
Lancaster Gaz 20  
Jul

12 Jul 1820 Thunderstorm  
Sheffield  
Independent 22  
Jul

21 Sep 1821  
Longfield 1998  
Leeds City Lib  
ND

20 May 1822  
Manchester  
Mercury 4 Jun

18 Jul 1822  
Leeds Mercury  
27 Jul

2 Sep 1824  
Westmorland  
Gaz 11 Sep/  
Leeds  
Independent

Mayhall 1860

decayed vegetables of a less firm texture; the whole appeared saturated with water, and in most places trembled under the tread of the foot. The superfluous water at the east end of the moor drained into small rivulets at the bottom of a deep glen or gill, down a precipitous range of rocks, which presented the appearance of a gigantic staircase. This rivulet passes down the valley to Keighley, and enters the Aire, near Stockbridge, about a mile below that town. At the distance of about 500 yards from the top of the glen, the principal discharge seems to have taken place: here a very large area of about 1200 yards in circumference, is excavated to the depth of from four to six yards; and at a short distance from this chasm there is a similar excavation, but much less in extent. These concavities have been emptied, not only of their water, but also of their solid contents. A channel about twelve yards in width, and seven or eight in depth, has been formed quite to the mouth of the gill, down which a most amazing quantity of water was precipitated, with a violence and noise of which it is difficult to form an adequate conception, and which was heard to a considerable distance. Stones of an immense size and weight were hurried by the torrent more than a mile. It is impossible to form any computation of the quantity of earthy matter which has been carried down into the valley; but that it is enormous is evident from the vast quantities deposited by the torrent in every part of its course.

This destructive torrent was confined within narrow bounds by the high glen through which it passed, until it reached the hamlet of Pondens, where it expanded over some corn fields covering them to the depth of several feet; it also filled up the mill-pond, choking up the water course, and thereby putting an entire stop to the works. A stone bridge was also nearly swept away at this place, and several others in its course were materially damaged; and it is remarkable that it was not fatal to life in a single instance. The torrent was seen coming down the glen before it reached the hamlet, by a person who gave the alarm, and thereby saved the lives of several children, who would otherwise have been swept away. The torrent at this time presented a breast of seven feet high. The track and extent of this inundation of mud may be accurately traced all the way from the summit of the hill to the confluence of the rivulet with the Aire, by the black deposit which it has left on its banks. The first bursting of the bog took place at six o'clock in the evening of Thursday, the 2nd instant, and another very considerable discharge occurred on the following day, about eight in the morning, and it is highly probable that other extensive portions of the bog will, from time to time hereafter, be discharged into the Aire in a similar manner. No human being on the spot to witness the commencement of this awful phenomenon and of course, we cannot arrive at an absolute degree of certainty as to its cause; the most probable one, is the bursting of a water-spout. The suddenness and violence of the disruption strongly favours this supposition. It would evidently require a power acting with a great degree of momentum to move and break in pieces the large and almost solid masses of peat and turf which were forced down the hill, to say nothing of the detached rocks which were moved. The state of the atmosphere about the time when the disruption took place, also renders this solution highly probable, the air being fully charged with electric matter". "At the time of the interruption", says Mr Bronte "the clouds were copper coloured, gloomy and lowering; the atmosphere was strongly electrified, and unusually close". These appearances, as they indicated, were followed by a severe thunderstorm, during which it is more than probable that some heavily loaded cloud poured its contents upon the spot. We may add, in support of this hypothesis, that more water seems to have been sent down the glen than could be been supplied by the contents of the two bogs which have been excavated. But, perhaps, a still more important inquiry is, what can be done to prevent a recurrence of similar

eruptions? This is a rather difficult question; there is, however, no doubt but the drainage of the moss would remove the danger, as no instance exists of either the bursting or floating away of a drained bog. Probably the channels now made, should they remain open, will give the requisite stability to the peaty soil."

Craven: the storm was worst in the area of Barden tower and Bolton Abbey where crops have been washed out of the ground.

Addingham: damage was done to houses and the bridge. Gardens have the appearance of the bed of a river. Several bridges between here and Bolton were washed down. Two cattle were killed by lightning.

Hailstones at Bolton Bridge and Silsden measured from 5 to 6 inches in circumference and at the latter lay on the ground upwards of a foot thick. The flood descending from Rumbles Moor swept away a mill at Cringles and five bridges and three houses were destroyed in the Silsden area. A brook which passes in the lower part of Skipton rose within a few minutes to a level never before achieved, deluging the houses and sweeping everything before it.

Thirsk: In less than 3 hours the river rose above ten feet rendering several streets impassable and damaging farms and gardens. Many sheep were drowned, including 30 by one farmer.

R Nidd: Severe flooding occurred around Pateley Bridge.

In this year, one of the most severe thunder storms ever remembered, prevailed in the neighbourhood of York.

At Poppleton, to the west of that city, hail-stones fell in great abundance, and of unusual dimensions, some measuring five inches in circumference. Several inhabitants had every square of glass in the premises broken, and many of the gardens were laid waste by the storm.

Near Tadcaster bar, on the York road, a man, by trade a wire worker, was struck by lightning, and killed on the spot. During the same storm, a young woman was killed by the electric fluid, whilst working in a hay field near Wetherby. The thermometer was at 85° on Saturday and Sunday in the shade, and in the sun at 124°. Such was the drought and sultriness of the weather, that even in the midst of the hay harvest prayers were offered up in the churches and other places of worship for rain. In the month of July the extensive moors in the West-Riding of Yorkshire were in a state of conflagration, which not only spread over a wide extent of surface, consuming the moss, but also burnt to a great depth, igniting the peat underneath. Hawksworth moor was entirely consumed; on Ilkley moor five hundred acres were burnt; Thornton moor was entirely destroyed; Burley moor was on fire. With the destruction of Thornton moor is to be enumerated the loss of all the young plantations, which cost upwards of £2,000. Oaksworth moor was entirely burnt; and Ovenden moor, Holme moss, Burnsall fell, also Hebden, Grassington, Rombalds and Harden moors were on fire. The flames and smoke together presented an imposing and formidable appearance from high grounds, whence a view of them might be obtained. Following a very severe drought and very high temperatures, prayers were offered for rain and a violent thunderstorm affected the Malton area with large hail which destroyed much glass.

8 May 1825  
Bells Weekly  
Messenger 16  
May  
Lucas 1887

Thunderstorm

28 Jun 1826  
Mayhall 1860

Morning  
Chronicle 4 Jul

12 Jul 1828  
Lancaster Gaz.  
19 Jul  
Chester  
Chronicle 25 Jul  
Sheffield

Persistent rain followed by  
thunderstorms causing floods  
throughout the country.

Following four days of continuous rainfall thunderstorms were reported in some areas but floods were widespread in northern England. Swale, Tees, Ure Wiske and Codbeck overflowed.

Rivers were swollen and vast tracts of land inundated especially in the southeast part of Yorkshire from Doncaster to Hull but there was also much damage in the Barnsley and Wakefield areas.

There were serious floods on the Don at Doncaster and it overflowed the piers of the new bridge at Blonk street Sheffield. The low land between Pocklington and York is entirely under water and serious flooding was

Independent 19  
Jul  
Hull Packet 22  
Jul  
Yorkshire  
Courant 12 Jul

24 Jul 1828  
Yorkshire  
Gazette 2 Aug  
3 Aug 1828  
Lancaster Gaz 16  
Aug  
Yorkshire Gaz 9  
Aug

11 Jul 1829      Thunderstorm with hails  
Manchester      between 12 and 1 o'clock  
Mercury 21 Jul

Mayhall, 1860

Leeds  
Intelligencer  
16 Jul

reported from Wetherby and Tadcaster.

In Hull many of the lower streets were flooded especially in English Street, Pottery, Wincolmllee and the Groves.

Near Whitby a suspension bridge at Ruswarp was carried away by the torrent along with several smaller bridges. The flood on the Esk was higher than has been known for forty years which from a mark on Ruswarp mill was 3 inches higher. The bridge at East Row (a county bridge) near Whitby was damaged and became impassable.

The Aire, Calder Ouse Don and Trent have overflowed their banks. In Holderness 100,000 acres were said to be under water. Two men were drowned in Sheffield attempting to cross a river.

The River Sheaf rose so suddenly and so high that it was assumed to have been caused by a cloudburst near Dore as Abbeydale was completely inundated. The wooden bridge at Heeley was carried away. Some residents had to be rescued from their homes.

York: Rain almost instantaneously flooded the narrow streets and the water rushed into cellars. Severe damage was caused to houses by lightning.

Halifax: Thunderstorm in water overflowed into houses in the lower part of town, bursting sewers and causing very serious damage to poorer people. The stream advanced down Crown Street, The Wool-shops and Smithy-stake to Bridge Street where a great number of houses were flooded. The main sewer under Bridge Street which communicates with Hebble Beck burst from water pressure and ripped up a paving slab with water gushing from the opening. Many cottages of the poor were flooded notably the cottage of a shoemaker where the water was up to his window sills. The water flowed over North Bridge to a depth of 2 feet coming in the direction of Northowram. The storm did not extend any distance from the town.

Pontefract: Thunderstorm in which streets were flooded and a house set on fire by lightning.

Leeds: Due to the high rainfall, a dam burst on the Addle brook near Blackhill and many mills along the stream were affected as far as the River Aire. The whole course of this rivulet is studded with mills almost forming a continuous street especially it approaches Leeds.

On the night of July 11th, a dreadful inundation occurred in Leeds and the neighbourhood, occasioned by the bursting of a reservoir, situate in Black Hill, near Addle, about seven miles north-west of Leeds, which broke down its banks. The reservoir is situated nearly at the head of the stream known by the various names of Adle Beck, Woodhouse beck and Sheepscar Beck, through which places it passes in its course to Leeds. The dam occupies an extent of from twenty to twenty-five acres and is rather formed by natural than artificial means, the only embankment being at the east end, which is about fifteen feet high, and it was the breaking or giving way of this embankment, which caused the flood. A breach having been made, the water rushed through with dreadful impetuosity, swelling the small rivulet of Adle beck to a mighty stream, and carrying ruin and destruction along with it, until it emptied itself into the River Aire, at Leeds. Nothing could arrest its progress. It threw down bridges, levelled walls, uprooted fences, and carried devastation into all the adjoining lands.

Nor was the injury confined to mill owners and those of large property. The dwellings of the humble cottagers were deluged, many of whom suffered severely, and some were deprived of every vestige of clothing and furniture they had in the world. The reservoir was completely emptied in 2 hours. The whole contents of the flood reached to a greater height than any that had occurred since that at the close of the contested election in 1807, known at Leeds by the name of the Milton flood

Date is uncertain. A severe thunderstorm occurred in Sheffield and neighbourhood. The owner of the Cornish Inn after carrying a passenger on his boat on the River Don to Neep End, there was a sudden and violent swell in the river, the boat was carried off with great force until he came near the Wicker-tilt where he was carried over the weir and drowned. The swell was attributed to a cloudburst at Breefield where a bridge and a great quantity of sand has been washed away.

The drains and ditches became as full as in November with much damage in the neighbourhood of York and the Derwent. In 19 days of August the rainfall has been 5.46 inches or double what occurred in 1828.

Hull: Heavy showers occurred in quick succession and quickly flooded the streets. Hail caused much damage to wheat. A thunderstorm with hail caused some destruction of wheat.

Wetherby: Roads were completely flooded and the River Wharfe was high but not much damage done.

In the vicinity of York all the low lands along the Ouse and Fosse are again under water for the third year.

In the neighbourhood of Sheffield a bridge was carried away and some cattle were seed drifting down. The River Hipper which separates Walton and Brampton and passes Chesterfield overflowed to an unparalleled extent and broke down a number of bridges and damaging factories along the banks. At Castleford a man carrying a scythe was struck dead. The spire at Rotherham church was struck and damaged. At Shipley Colliery, railway ballast was washed away; most houses were inundated to a depth of two feet and windows were shattered by hail.

A Foundry at Chesterfield and an iron works at Duckmanton beyond Staveley were greatly damaged.

Leeds: a man was killed by lightning at Woodlesford. Several people struck by lightning were seriously injured.

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

X Aug 1829 Bells  
Weekly  
Messenger 3  
Aug

13 Aug 1829  
Hull Advertiser  
21 Aug

14 Jun 1830  
Yorkshire  
Gazette 19 Jun

25 Jun 1830  
Manchester  
Courier

8 Feb 1831

Westmoreland  
Gazette

30 Jul 1831  
Mayhall 1860  
Yorkshire Gaz 13  
Aug  
York Courant 16  
Aug

Said to be a year with an exceptional number of thunderstorms. YC also notes that the present summer has not been equalled for the number of thunderstorms. Two gypseys were killed by lightning at south Ormesby

On Saturday, 30th July, Leeds and its immediate neighbourhood was visited by a thunderstorm between two and four o'clock. An immense quantity of rain fell in a very short time. The highways and streets were literally converted into rivers; and in Briggate, some of the market people had no little difficulty in preventing their various articles of sale being contributory to the Aire, the volume of which very soon nearly doubled. The water did much damage to buildings and goods in cellars in various parts of the town. The stream ran down Richmond Street from Richmond Hill

Keighley: The most dreadful thunderstorm was reported since July 1781. The rain poured down for four hours and flooded nearly every street. A cow was killed by lightning.

Tadcaster: many houses were overflowed.

Bradford: The heavy fall of rain caused flooding in George Street where 20 families were deprived of their all. They had no time to save anything but their lives and that of their children. The water ran down the whole



breadth of the Leeds Road like a river. Several windows were forced in and internal wall were broken down. This was downstream from the Bowling Iron works where gates were opened at the reservoir. Water ran down the Leeds road opposite the new Methodist Church.

Dewsbury: A man was killed by lightning.

Wetherby: The storm was accompanied by very large hailstones doing great damage to crops. Some streets were flooded to a depth of 1 and a half feet.

Beverley: A man was killed by lightning.

Thirsk: 25 sheep were killed by lightning.

West Riding: Widespread thunderstorms occurred. At York the rain was accompanied by hail at Fulford and Poppleton and wheat sheaves were set alight by lightning. Streets in York were flooded when the sewers were surcharged. At Moor Monkton hail broke window glass. Thunderstorms were reported at Wetherby, Beverley, Scarborough and Malton and Hull where various animals were killed by lightning but without reference to flooding.

A little after mid-day, a severe hail and thunder storm took place at Leeds and the vicinity, to the West. The electric fluid struck the spire of the new church at Kirkstall and destroyed it to the depth of fifteen feet, the stones and mortar being thrown to the ground. A very large stone which capped the spire, was shattered to atoms; another block of large dimensions was thrown a considerable distance into an adjoining field; and the whole of the spire was so much injured that it had to be taken down and rebuilt. Some of the fragments forced their way through the church, damaging some of the pews and the organ pipes.

A storm of hail and rain, with thunder and lightning, burst over the greater part of the West-Riding. The principal damage was done to hot-houses by hail-stones. . . . At Pontefract, the storm was very alarming and did much damage. It is said that some of the hailstones which fell there measured from four and a half to five inches in circumference, and weighed an ounce.

Hull: At Hull the effects of the storm were less severe than in neighbouring areas. The storm lasted 2 hours and was accompanied by hail. To the west of Hull windows were broken and flowers and fruit damaged.

The thunderstorm also affected Beverley, Driffield, Scarborough and Bridlington. At Hornsea the hail as large as hazel nuts broke many windows. A man was killed by lightning at Burton Pidsea. Very large hailstones, as large as hazel nuts fell in Holderness causing damage to windows and crops. The storm also extended to East Anglia and southeast England but with reference mainly to hail and lightning effects and not to flooding.

Beverley: The hail was larger than peas and some were considerably larger and some windows were broken. Ripon and the whole neighbourhood was shaken by a tremendous explosion, occasioned by a convulsion of nature, about a mile from the town, by which the earth had been affected to such a degree as to leave a fissure nearly twenty yards in width, and twenty-four in depth

Widespread thunderstorms in Northern England. Heavy rain between Huddersfield and Marsden causing the river Middelup to overflow and sheep hay and corn were swept away. Part of the road from Standedge to Huddersfield was carried away.

Brampton, Melton, Wath, Swinton, Greasborough, Mexborough (Don catchment): The thunderstorm was accompanied by large pieces of ice 7 inches in circumference and of irregular shape. Much glass was broken in Wath and damage done to growing crops but the storm lasted only 10 minutes.

Leeds: The storm continued for 3 hours. A child was killed by lightning and several buildings were struck and

15-17 Aug 1831  
Yorkshire Gaz 20  
Aug

29 Apr 1833  
Mayhall 1860  
Leeds  
Intelligencer 4  
May 1833

Thunderstorm of short  
duration

15 May 1833  
Mayhall 1860  
Leeds Mercury  
18 May  
14 Jun 1834  
Hull Advertiser  
20 Jun Hull  
Pakcet 20 Jun

12 Jul 1834  
Mayhall 1860

23 Jul 1834  
Manchester  
Times 26 Jul  
31 Jul 1834  
Derby Mercury 6  
Aug  
3 Aug 1834

Thunderstorm

Yorkshire  
Gazette 1834

27 May 1835  
Manchester  
Courier 13 Jun  
Bradford

Observer 4 Jun  
12 Aug 1835  
York Herald 15  
Aug

5 Jul 1836  
Westmorland  
Gaz. 9 Jul

20 December 1837  
Continued rainfall over  
several days

Bradford Obs 10  
Jun 1858

3 Jul 1838  
Kendal Mercury  
14 Jul

Manchester  
Times 14 Jul  
Sheffield  
Independent 7  
Jul

4 Sep 1838  
Manchester  
courier 8 Sep

Thunderstorm

Continued rainfall over  
several days

damaged.

Bradford: A woman was killed by lightning. The houses in the lower part of town were flooded by the stoppage of the sewers.

Bradford: The storm was accompanied by very large hailstones. Several houses in the lower part of town were flooded. The storm also affected Leeds.

Sheffield: The hail was drifted to 2 feet deep and broke a quantity of glass. People were injured and buildings struck by lightning.

Wilsden: Several buildings were seriously damaged by lightning; there was no reference to flooding.

York: Many cellars were completely flooded and residents had to wade up to their knees.

A thunderstorm with heavy rain came up from Morecambe Bay ....

Bradford: There is a reference back to this flood from the severe thunderstorm flood in June 1858 as being perhaps more severe in its effect. Four people were carried away by the flood and drowned. The whole of the lower part of town was flooded.

Silkstone: A very severe hailstorm hit the Stainboro, Dodworth and Silkstone areas doing great damage to gardens and windows. Vales from Dodsworth to Worsborough Vale wee severely flooded with cattle floating down the streams, wall laid waste. Wentworth Castle suffered extreme damage from loss of window and garden glass and 4000 yards of walls destroyed. Hailstones measured 4 ½ inches round. The entire village of Silksworth was under water

A Thunderstorm with hail caused great damage and loss of life. Hail which fell on Wednesday had not dissolved on Thursday broke all the glass at Wentworth Castle. Great damage was done in the valley from Little Houghton to Silkstone. Windows were broken in all the houses from Round Green to Silkstone and water was 4 to 5 feet deep in Silkstone. In a coal pit near Silkstone the water rushed in and 27 children, boys and girls aged from 7 to 17 were drowned. The youngest girl was 9 and the youngest boy 7. Upwards of 10000 panes of glass were broken in the Barnsley area.

The chief violence seems to be in a belt only 200 yards wide from Grenoside passing over Stainboro' Birdwell, Silkstone, towards Worsboro'. Hailstones fell in Grenoside at 2 pm at the Norfolk Arms as big as filberts. At Bury Moor, Dodsworth and Birdwell the hail cut up crops and were ice four to five inches in circumference. The floods have swept down walls to a width of 40 yards scattering the stones over the next field, ploughed the roads into deep furrows, carrying away soil and leaving only the bare rock. Two streams converged at Silkstone and each was a scene of devastation upstream. Below the confluence at the road bridge the water rose 8 to 10 feet above its ordinary level, overturning walls and bursting across the bridge and uprooting a line of trees. The water rose five feet high in a house in the timber yard and similarly many other houses in the village.

Leeds: the thunderstorm continued for more than one hour. Various people were struck by lightning and injured but none reported killed. Various animals were killed.

30/31 Jul 1839 York Herald Derby Mercury 7 Aug	Widespread and persistent rainfall on Tuesday night and all of Wednesday with strong NE wind	York: The Ouse overtopped its banks and caused agricultural damage. Rotherham and Doncaster: The Don and tributaries rose and flooded much land. Very extensive flooding occurred at Crimpsall. In Doncaster the flood in Frenchgate reached as far as the Brown Cow Inn and was higher by 2 feet than ever remembered. The water rushed over the new road to Selby. At Rotherham, the water extended part way up Bridgegate and was in some parts several feet deep. The turnpike from Rotherham to Attercliffe was impassable. A man was drowned at Kilnhurst. At East Retford the flood was the highest since 11 February 1795. Chesterfield had the largest flood with one exception ever known with flooding from the Hipper and Rother. Most of the houses in the lower part of town were flooded. Water rose to a great height on Derby Road. At Horn's public house the water was 2 feet deep.
20 Sep 1839 Manchester times 28 Sep Yorkshire courant 26 Sep 14 May 1840 Bradford Observer 21 May 1 Jun 1840 Yorkshire Gaz. 6 Jun 13 Jul 1841 Hull Packet 23 Jul Sheffield Iris	Widespread and perisistent rain caused flooding in various parts of the country including Derbyshire, Hastings Wansbeck and Coquet. Thunderstorm Thunderstorm Thunderstorm	Whitby: The River Esk overflowed to such an extent that several herds of cattle with sheafs of corn were carried into the North Sea. The railway bridge was damaged. It was said to be at least a foot higher than 'the last flood we had to notice'. [Not convinced!] Barnsley: The River Dearne overflowed its banks to a considerable extent and flooded cottages at Mill Street and the Town-end Bradford: Rain was mingled with hail and ice half the size of a man's hand, causing some damage to gardens and crops. Thornton and Bradford Brook rose to fill cellars along New Street. In some low situations the water was 3 feet deep but the effects were not severe.
5 Jul 1843 York Herald 15 Jul Sheffield Ind. 15 Jul	Thunderstorm following a day of intense heat but in a period of 6 days each with thunderestorms	Ripon: Oppressive weather during the day was followed by the thunderstorm at midnight. A farmhouse was struck at Littlethorpe and badly damaged. The storm was of limited extent and Ure Skell and Laver were unaffected. Beverley: The ground was covered by hailstones of unusual size. One farmer lost a cow and calf to lightning and another a horse and heifer. Sheffield: Thunderstorms affected the Whittington area and especially the River Rother where farmers on the banks have sustained great injury at Brimington and Staveley. Great damage was done in Bolsover and Duckmanton. At Southwingfield the churchyard was filled with water from the River Amber. York: Rain and hail fell in torrents. Low Skelgate and other parts of the city resembled a river and several houses on the street were flooded. Greenhouse glass was broken. Norton and area: Considerable damage was done to crops at Aighton and Coal Aston. At Whirlow, soil and crops were washed away by the rain and hail. A stone weighing 2 cwt was carried out of the field and over a gate. Darfield, Wombwell and Hemingfield: All experienced great breakage of glass in windows and hothouses. Hailstones were as big as large pigeon's eggs. Huddersfield: A man was killed by lightning.
21/22 Nov 1843 Westmorland Gaz. 25 Nov		In consequence of the heavy rain on 21 <sup>st</sup> and 22 <sup>nd</sup> 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.

24 Jun 1844  
Manchester  
times 29 Jun  
Bradford  
Observer 29 Jun

A thunderstorm was experience in much of the West Riding affecting Halifax Huddersfield, Bradford and Otley. At Halifax every street was a stream almost impassable with Gibbet Street and Crown Street covered to a considerable depth. On North Bridge the water was 2 feet deep and stones of considerable size had been brought down by the current. Glass was broken by hail. A horse was killed at Otley. Numerous houses in the lower parts of Huddersfield were flooded, some to 4 or 5 feet deep. Further descriptions are mainly concerning effects of lightning on buildings and animals rather than flood effects.

3 Jul 1845  
Bradford  
Observer 10 Jul

Thunderstorm

Sheffield: Rain and hail continued for 20 minutes and house cellars were flooded in the lower part of town. South Street, Duke Street Park were like flowing rivers and a woman was carried off her feet attempting to rescue some ducks and only stopped by a grate over a sewer. The shops and cellars in Broad Street and at the end of Duke Street were flooded with mud and water. Houses and trees were struck by lightning and damaged. The storm was most violent at Wharnccliffe where the hail, as large as a nutmeg, tore trees to pieces and broke windows facing the wind. Furrows a foot deep were made in paths.

Hull: The thunderstorm lasted less than one hour but Lowgate, Market Place, Mytongate and High Street were completely flooded and in part of the Market Place east of the statue, the water was nearly two feet high and flooding nearby houses.

7 Sep 1846  
Bradford  
Observer 10 Sep

Bradford: Following another period of extreme heat, a thunderstorm occurred in Bradford, lasting three hours. Streets were soon flooded. Leeds Road opposite Laura Place was covered from side to side and rushed like a river. In Ivygate and church Stree the water burst up from the sewers on to the road covering it in some places to more than a foot. There was scarcely any rain a few miles from the town. A woman was killed by lightning at Pudsey.

2 Apr 1848  
Manchester  
Courier 8 Apr  
Sheffield  
Independent 8  
Apr  
Hull advertiser  
14 Apr

At Huddersfield a thunderstorm was accompanied by rain and heavy hailstones lasted for 4 hours. In the south east of the town where the hills rise above the River Holme the water bore everything before it. Many houses and mills were flooded especially at Mould Green. Three boys were killed by lightning at Almondbury Bank; a woman was killed at Horley and a man was killed at Mirfield. Much damage was done at Lockwood with many houses flooded some as much as 6 feet deep and Armitage Bridge where a house was destroyed. At Horbury yards and courts were covered to nearly a yard and not a house in the village escaped being flooded. Water rushed in from the fields. The storm was also reported at Leeds, Bradford and Normanton (without flooding reported)

The country all round from a few miles from Derby to within a half hours journey from Hull was flooded including roads and railway. A woman was killed by lightning at East Moor Wakefield.

28 May 1848  
Manchester  
Courier 7 Jun  
Bradford  
Observer 1 Jun

Thunderstorm less fatal to life  
than 2 Apr but more  
damaging to property

A severe thunderstorm occurred mainly at Bingley and Morton. Rain was accompanied by large hail which broke many windows and skylights notably at Castlefield where 500 panes were smashed. Sunny Bank Reservoir rose 4 feet in little more than 15 minutes. The reservoir overflowed and destroyed a bridge downstream. The water was a yard deep in houses in the village downstream and undermined the foundations. Mills downstream were also flooded. At Morton Banks three cottages were destroyed by the sudden rush of water from the heights.

At Barnsley the storm lasted 4 to 5 hours and was accompanied by large hailstones. Winney Nook Beck overflowed and flooded from Summer Lane into houses in Town End before people could save furniture. Flooding also occurred in Mill Street, Jumble Lane and The Nook. The cellars of shopkeepers in Seugh Bridge and Queen Street were also flooded. Peel Street was much flooded and occupants had difficulty getting out of

their houses. (A storm similar in its effects occurred 16 years ago on Whit Tuesday 1832).

Sheffield: the water rose in the River Sheaf more than 2 feet in half an hour. On the Derbyshire Moors near Totley and Dore the soil was washed out of a turnip field and knocked down a stone wall. Hailstones lay until the following day.

At Idle some houses were flooded up to the third stair. The ground was covered with a thick mass of ice. The hail had a circumference of more than an inch.

Leeds: Reference was made to damage to buildings by lightning but no reference to flooding

At Farsley a man was killed by lightning.

The storm extended north to Leyburn where lightning effects were noted but not flooding.

Hull: A church was struck by lightning but damage was limited due to the conductor.

Pontefract: A horse was killed by lightning.

Todmorden: Thunderstorm and the River Calder overflowed its banks. A number of cellar houses in Salford and other places were flooded.

Todmorden: A thunderstorm from a little before noon to 8 in the evening with some slight intervals. Lightning struck a school causing much distress to students who ran out. At Charlestown a little below Todmorden three men repairing Charlestown Mill were down in the 'goit' when the water rose so quickly that no warning could be given. All three were drowned.

A severe thunderstorm occurred at Altringham, Bacup, Todmorden and Dunford Bridge. Lightning damage occurred at Bowden and a pinnacle of Rostherene church was knocked off. At Bacup rain started at 12.00 and in 20 minutes the town was flooded. The water continued to rise until 1.20 and at 2.00 the streets became passable again. The water was 6 inches higher than in a similar flood 18 years before. Some houses were flooded to a depth of 5 feet. Parapets of bridges and outhouses were destroyed, pigs and sheep were carried off. The storm commenced at Todmorden a little later and in little more than an hour the Calder had overflowed its banks filling cellar houses and warehouses.

Holmfirth: Severe thunderstorm. Local streams were at their highest recorded. The rain was especially heavy on the hills between Dunford Bridge and Holmfirth where the railway passes. The Holm stream swept away several weirs and damage was done to fields, fences and crops. At Holmfirth buildings on the margin of the river were flooded to several feet depth and damage was done to stored property. The flood also descended from the New Mill Stream and the water flowed through the windows of the Dobroyd fulling Mill. The miller's house was filled to a depth of six or seven feet. **The flood came so suddenly they had only just time to escape with their lives.** The substantial dam at Dobroyd Mill was washed away. At Jackson Bridge Mill the weir was again washed away. At New Mill the water was in several dwellings.

Hebden Bridge: **Rivulets and the Calder were swollen to an unusual height in very few minutes.**

Halifax: Streets were soon rendered impassable. The main sewers were torn up and houses flooded with great damage to furniture in places below Smithy Stake and the neighbourhood of the Hebble. At the top of King Street the main sewer was blown up. Wreck accumulated near Clark Bridge. A house near the Miller and Dyer Inn was flooded to a yard and a half and after the flood 16 cartloads of rubbish had to be removed. Great damage was done to the baths. The water rushed down Lilly Lane and tore up the road and the outside bath

4 Jun 1848  
Hull Advertiser 9  
Jun

23 Aug 1848  
Manchester  
courier 26 Aug

9 Aug 1849  
Manchester  
Times 11 Aug

Thunderstorm embedded in a  
longer period of rain.  
Hull: 1.24 in Th;

Royal Cornwall  
Gaz 16 Aug

Bradford  
Observer 16 Aug

was partly filled with rubbish and several doors were forced in.  
Wakefield: A cow was killed by lightning. In the Bradford area many animals were killed by lightning.  
Sheffield: The most severe flood occurred for several years. SI has extensive description but not a flash flood.

6/7 Oct 1849 Sheffield Independent 13 Oct	Persistent rainfall – no thunder reported
16 Jul 1850 Bradford Observer 25 Jul Sheffield Independent 20 Jul	
8 Aug 1850 Bradford Observer 15 Aug Hull Advertiser 9 Aug	Thunderstorms for a week
21 Jun 1851 Manchester Courier 28 Jun Leeds Times 28 Jun Yorkshire Gaz 28 Jun Hull advertiser 27 Jun	Widespread thunderstorms from North Wales to Nottingham and West Yorkshire moving from west to east. Hull: 1.68 in 2 hr Th
28 Jul 1851 Manchester courier 2 Aug Hull Advertiser 1	At Hull the storm commenced in the south and passed to the NE.

The severe flood in Lancashire and elsewhere was less severe in Yorkshire. However, South of Barnsley 4 heifers and a foal were killed by lightning and buildings were struck and cattle killed at Rotherham. At Rotherham the water ran down the streets from the higher parts accumulating in Wellgate, College Street and bridge Street to a depth of 2 feet, flooding shops and cellars in its progress. Under the railway bridge it was nearly 6 feet deep.

Halifax: A boy was killed by lightning in his home.  
Keighley: A boy was killed by lightning and two horses were struck dead. Rivers and brooks were much swollen.  
York: The rain made roadways almost impassable. Buildings including public buildings were struck and damaged.  
Bradford: A thunderstorm of 12<sup>th</sup> caused flooding in Market Street; some shops opposite the Leeds and Bradford Railway Station were flooded to several inches.  
Beverley: The thunderstorm was the worst known for years. Heavy rain was followed by hail which lay 2 to 3 inches deep.

Todmorden: Thunderstorm with a hurricane wind (as in neighbouring Lancashire). The rivers rose in the short space of half an hour and overflowed their banks. At Shade, on the Walsden Water the water burst its embankment and covered the road to 3 feet; houses and the Cooperative store level with the road were immediately inundated. Also at Salford cellar houses were full to the ceiling and several people narrowly escaped with their lives. Pigs were swept away. Many houses on the hillsides were flooded.  
Keighley: The whole width of the main street was like a river, the sewers being unable to cope.  
Dewsbury: The streets were flooded.  
Huddersfield: Hail combined with rain to damage gardens but the storm was short lived and no flooding was reported.  
Hull: Buildings in Jarrett Street and Mason Street were flooded up to a foot and a half of water. Water spouted up in the streets through the gratings.  
Partington: The thunderstorm was the worst for a long time  
Spurn: Hailstones 1 ½ inches in length broke many squares of glass.  
Scaqrborough: Hail and rain fell for nearly an hour. A ship was struck and lost its mast.  
Market Rasen: The thunderstorm lasted two hours and nearly inundated the streets and caused damage to houses.

Todmorden: Thunderstorm in which the streets and roads became like rivers. At the top end of the town cellared houses were immediately flooded. At Cragg a mill bank was burst and the water took down a bridge and entered a storehouse.  
Huddersfield: Hebble Brook was flooded and the water rose to such a height that Whitworths Mill yard and



Aug		<p>lower rooms were flooded, rising above the warp of the looms. The stream carried away pig stys and pigs.</p> <p>Hull: The channels of the streets became miniature torrents and wading was necessary to cross the street. One house was struck by lightning.</p> <p>Beverley: The storm occurred after hot sultry weather. The Market Place was flooded and some other streets.</p> <p>Driffild: The thunderstorm lasted several hours. In some farmhouses in the neighbouring dales the water passed through like a rivulet.</p> <p>Barton: A whirlwind was observed.</p> <p>Barnsley: Thunderstorm with rain and hail of immense size. The rain did considerable damage by flooding houses and weaver's shops which were from 2 to 3 feet deep in water on the low east side of the pig market spoiling work in the looms and provisions of many poor families. The hail covered the road ½ an inch thick an hour and a half after the hailstorm.</p> <p>Sheffield: thunderstorm with hail for one hour and a quarter. Streets were flooded almost immediately and houses and a workhouse were struck by lightning.</p> <p>Wakefield: The storm lasted half an hour and many houses were flooded in the lower parts of town. Various houses and mills were struck by lightning.</p> <p>Todmorden: A great rush of water from the surrounding hills swelled the Calder and the Canal and flooded several of the cellar houses.</p> <p>Holmfirth: Heavy rain was accompanied by hail measuring 2 ½ inches in circumference causing breakage of skylights.</p> <p>Pontefract: A boy was killed by lightning and another seriously injured.</p> <p>Hull: Hailstones fell for 20 minutes but broke windows in nearly every house. There was 'an immense fall of large lumps of ice' as large as walnuts. Gulleys became choked and water was ankle deep on footpaths. There was also some house damage from lightning. In Hull all the windows facing west suffered severely, for example Kingston Chapel Holderness Road had 226 panes broken etc etc. A man was killed by lightning at Bawtry.</p> <p>There was similar damage in parishes of Brough, Welton, Melton, Ferriby, Hessle where thousands of panes of glass were broken and gardens destroyed.</p>
13 Aug 1851 Manchester Times 16 Aug Liverpool Mercury 19 Aug Hull Advertiser 15 Aug	There were many thunderstorms but the worst was on 13 <sup>th</sup> .	<p>Holmfirth: the storm lasted only half an hour but was of such intensity that many dwelling houses were inundated.</p> <p>Wakefield: A great number of houses in the lower part of town were flooded and large amounts of property destroyed.</p> <p>Keighley: Four cows were killed by lightning. Hailstones were very large and much damage was done to glass.</p> <p>Ripon to Thirsk: The storm was severe but no details are given except a man injured by lightning.</p> <p>Easingwold; Lightning struck the school. No flooding was reported.</p> <p>Beverley: Thunderstorms occurred on 4 successive days and the streets were flooded.</p> <p>Driffild: 4 sheep were killed but there was no mention of flooding.</p> <p>The storm was also reported at Pickering but without mention of flooding.</p>
13 Jul 1852 Leeds Intelligencer 17 Jul	Thunderstorm	
9 Aug 1852 Yorkshire Gaz 14 Aug Eastern Counties herald 12 Aug 29 Sep 1852 Longfield 1998	Not clear whether this was a thunderstorm or persistent rain	<p>River Nidd: The height of water at the Mill threshold at Pateley Bridge was 2.0 feet the third highest in a list between 1777 and 1881</p>

10 Sep 1853  
Halifax Courier  
17 Sep  
30 Jun 1854  
Hull Packet 7 Jul  
1 Aug 1854  
Hull Advertiser 5  
Aug  
Hull Packet 27  
Jul 1860  
Hull Advertiser 5  
Aug

Thunderstorm

6 Jun 1855  
Halifax courier 9  
Jun  
Huddersfield  
Chron. 9 Jun  
24 Jul 1855  
Manchester  
courier 28 Jul  
Huddersfield  
Chron. 28 Jul  
Leeds Times 28  
Jul

Thunderstorm lasting 4 to 5 hours

Todmorden: Rain was mingled with hailstones of unusual dimensions. Inhabitants of York Street and Cobden Street were flooded to a depth of 5 or 6 inches. The storm was brief lasting only about half an hour.

Bawtry: the thunderstorm flooded the streets and it is feared the large hailstones will have damaged crops.

Hull: A protracted thunderstorm from before noon to nine in the evening brought hailstones which broke glass and damaged crops. Buildings were struck and damaged by lightning and animals killed.

Hull: Two thunderstorms of about 2 hours each; 3.68 inches fell in 24 hours. The hail broke glass and damaged gardens.

Bridlington: A thunderstorm was centred over North Burton 7 miles NW of Bridlington. Hailstones 1 to 2 inches in length of different shapes lay on the road between North Burton and Hunmanby up to 15 inches deep causing damage to wheat and turnips. Lightning damage was reported at Flamborough.

Beverley: A horse and 2 cattle were killed by lightning but there was no reference to flooding.

Driffild: the storm filled the streets and flooded several cellars. At West Litton 9 sheep were killed.

Barton on Humber: Lightning killed a horse and sheep and struck and damaged a house. The middle part of the town was flooded for 2 to 3 hours up to 2 feet deep.

Halifax: The thunderstorm lasted upwards of an hour making the streets like watercourses. Shop cellars were flooded in the Old Market and in Northgate some shops were flooded to 2 to 3 feet. Houses in Cross Hills were also flooded. The thunderstorm was also reported in Huddersfield and Meltham without reports of flooding or other damage.

Doncaster: a man was killed by lightning and another severely injured and sheep killed nearby.

Halifax: A heavy thunderstorm completely flooded the town and neighbouring countryside. A man was swept away and drowned at Waterside. It threw down the walls of a house in Water Lane and a child was killed. At Bottoms a logwood mill was emptied of its contents. Villages in a NW direction were severely damaged including at Queenshead.

Huddersfield: Some houses in the lower part of town were flooded but the event was not so serious as in Halifax and elsewhere.

HC reports bridges swept away, houses, shops and cellars filled with dirt and debris. 'It is about 12 years since anything approaching this storm has occurred' (the bursting of Bilberry reservoir?). The greatest injury was to property near the Hebble Brook where various tributaries meet where the brook rose nearly 10 feet above its ordinary level. Two or three wooden bridges were carried downstream. Whitworths Mill and Pilling Dyers on the banks were damaged. The arches of North Bridge were completely stopped up and the battlements gave way for about 35 yards. A man was killed attempting to recover timber from the river. A man's body was seen floating down the river. The logwood mill at Bottoms was entirely gutted by the flood. At Clarke Bridge the water spread into houses to a depth of 4 feet 6 inches. The bridge at Salterhebble was washed away. The east wall of the parish churchyard fell and skulls and bones were strewn. Great damage was also done at Ovendon, Bradshaw, Queensland etc. At Castle Carr reservoir the water was seen to roll down the hills in a sheet and the water level was raised 40 feet in as many minutes but water passed down the byewash.

Holmfirth: The waters in the River Holme suddenly rose but little damage was done. Cattle were killed by



lightning. The storm was also reported at Meltham and Kirkburton but without reports of flooding.

[Storms were also reported at Derby Loughborough and Leicester.]

Huddersfield: The lower part of the town was inundated flooding cellars 3 or 4 feet deep especially in Stable Street near the Model Lodging Houses. Buildings were struck by lightning.

Todmorden: The storm was greatest near Gandy Bridge on the road below Cobden. The turnpike road opposite the national school is covered with sludge. Houses below Gandy bridge are completely flooded. A six foot high thick wall has been cut down. The storm lasted two hours.

Slaithwaite: The rain was mixed with hailstones and ice 5 to 6 inches in circumference. At Crimbles near Slaithwaite, houses were flooded to 5 feet deep so that furniture floated about. At Mealhill and Clough much damage was done to crops, in some instances with potatoes washed out of fields. The storm was also reported at Marsden and Huddersfield but with no reference to flooding.

Barnsley: Rain was accompanied by hail considerably larger than marbles. Many houses were quickly flooded to a depth of 2 to 3 feet and windows were broken by the hail. Damage was done to crops and soil washed out.

Lindley, Salendine Nook: Hailstones or ice 1 to 2 inches in diameter fell and broke windows including those in the Baptist Chapel and the mill at Longwood.

Harewood: Lightning killed 25 sheep.

Driffield: Low situations were flooded and water swept down hillsides carrying away the soil. A horse and 3 sheep were killed by lightning. Large hailstones and pieces of ice measuring 3 inches in length fell at Rudston and Burton Agnes.

Bridlington: Buildings were damaged at nearby Flamborough. On some sloping fields soil and turnips were carried down into the valley.

Scarborough: There has been changeable weather for 3 weeks The rain rushed along roads in small rivers – little damage was done.

Huddersfield: Rain for 21 hours caused flooding at Folly Hill where a blacksmith's shop was partly carried away. At Moldgreen an outbuilding was carried away. The River Colne and tributaries overflowed and at Milnsbridge part of the churchyard wall was carried away. Houses in the lower part of town were flooded.

Holmfirth: Considerable unspecified flood damage was done. The River Holme was in flood. Netherly Valley was first affected in the headwaters and premises were flooded at Holmebridge, banks burst at Bottoms, Pogson's Iron foundry flooded, Victoria Mill flooded to 2 yards deep in the spring room along with adjoining cottages, and also at Thongsbridge and Mythom Bridge take away.

Kirkburton: The thunderstorm with hailstones broke a large number of panes of glass. Streets and roads were cut into deep furrows by the continuing rain.

Sheffield: The storm last 16 hours but had been preceded the previous 2 days by thunderstorms. Following the continuous rain flooding occurred at Spring Street, Green Lane, West Bar, Shales Moor and elsewhere, where families abandoned their houses. The river Don overflowed and houses on the banks were filled up to their ceilings. The flood ran through streets and the Wicker like rivers. A stone wall was carried away, at Holdworth's rolling mills the foundations of a chimney were undermined such that it will have to be demolished, great numbers of bridges have been washed away or damaged, including the iron girder bridge at Ball Street, the

7 Aug 1855  
Huddersfield  
Chronicle 11 Aug

Thunderstorm for about one hour

17 Aug 1855  
Halifax Courier  
25 Aug  
23 Jul 1856  
Huddersfield  
chronicle 26 Jul  
Leeds Mercury  
26 Jul  
Hull Advertiser 2  
Aug

29 Jul 1856  
Hull Advertiser 2  
Aug

9 Aug 1856  
Manchester  
Times 16 aug  
Huddersfield  
Chronicle 16  
aug.

Thunder on 2 days was followed by persistent rain which mainly caused the flooding.  
Woodhead 12 hr rainfall 2.96 inches.

wood bridge at beechy Wood Works, another at Storrs, another at Little Matlock, a fourth at Middlewood, a stone bridge at Oughtbridge and another at Deepcar and another at Hierholmes. Houses were deeply flooded at Hill Foot Neepsend with 3 to 4 feet of water. At Groverow a girl was drowned in her flooded cellar. It was said to be the worst flood for 20 years. Several houses were struck by lightning and set alight and people injured and animals killed. At Ranmoor the Inn was flooded and water flowed through the house in a torrent for 2 hours. At Philadelphia, a sewer burst near the bottom of Oxford Street, flooding the Penistone Road and flooded a tanyard.

Leeds Bradford: Streets were flooded but there were no reports of property flooding.

Wakefield: the Carlder rose to a great height and there were reports of large numbers of cattle being surrounded but rescued. Again No reports of property flooding.

Rotherham: Damage by flooding was also reported. Bridgegate and other low parts of town were flooded with many houses flooded and also in Masbrough. A new bridge being erected below Rotherham across the Don was carried away. A large wooden bridge downstream was carried away.

Doncaster: Marshgate at the lower end of town was flooded from the River Don with many properties flooded. Crimpsall became one expanse of water.

York: the city appears to have suffered the early thunderstorms with trees and buildings struck and a cow killed but did not suffer and reported effects of the subsequent persistent rain.

Todmorden: A house at Woodshad on the River Der on the Rochdale Road near Gauxholme was carried away. (It had been built 4 years previously and was expected by locals to be washed away.) Blockage of a bridge caused greater flow on the turnpike road and caused extensive flooding of a densely populated neighbourhood. The flow down the turnpike caused great devastation past Bridgeend and WatergateThe higher part of Todmorden called Salford suffered greatly; the road at Cheapside was impassable and all the houses were deeply flooded. The Burnley Road was visited in a similar manner and Gandy bridge was partially destroyed. Houses in Cobden were all deeply flooded, a yard and upward.

Wakefield: On Westgate common in the lower part of Wakefield ground floors of houses were flooded driving inhabitants to their upper stories. Fifty yards of a brick wall was swept away.

Huddersfield: the Rivers Colne and Holme overflowed their banks flooding numerous mills and destroying crops. The level in the Holme was 18 inches higher than in the flood when Bilberry Dam burst. A bridge leading to Armitage bridge Church was much damaged and part of the walls of the churchyard was swept away. Damage was done at Dungeon Mills and Lockwood Baths where the water rose 3 feet in 20 minutes. The river Colne overflowed all the way from Mossley and did damage at Marsden, Slaithwaite, Milnsbridge and Paddock. One house at Morley was swept away and many were flooded. Stone piers of Hathorn's bridge were swept away. A woman was struck by lightning and killed.

Halifax: In the Ripponden Valley a mill reservoir burst at Rishworth and also one at Ripponden Old Mill. In the lower part of Ripponden all the houses were flooded. Part of the yard wall of Ripponden church was washed away and dwellings below were suddenly flooded so that families were lucky to escape with their lives.

Morley: A house opposite the railway stations was washed away

Sowerby Bridge: the bridge was carried away.

Barnsley: the River Dearne overflowed its course for several miles, flooding Old Mill, Hoyle Mill, The Grange

10 April 1857  
Yorkshire Gaz 18  
Apr

13 Aug 1857  
Manchester  
Times 22 Aug  
York Herald 22  
Aug  
Hull Advertiser  
15 Aug

Widespread thunderstorms  
over North, East and West of  
England

and Darfield. A boy was drowned when swept off a bridge at Grange.  
 East Yorkshire: The storm also occurred at York where the River Foss overflowed and flooded many houses. Lowlands and roads were flooded to several feet.  
 Selby: Much land was under water in the Bubwith, Skipwith and Barlby areas and crops are much damaged.  
 South Yorkshire: The River Don overflowed and at Mexborough was at the highest level ever known and there was great destruction of property.  
 Hull: Lightning damaged houses but there was no report of flooding.  
 Driffield: The storm here was mild compared to the coast.  
 Chesterfield: The River Rother overflowed and flooded several houses.  
 Scarborough: Rain caused becks and streams to fill rapidly with water. Roads then were soon covered by flood water tearing up stones and trees. Streets were deluged. Cross Street and Dunple strett had water 6 feet deep in houses. In Merchant's Row a breach was made through the Britannia Inn and tore up the pavement and foundation of houses. The houses there are so undermined that they may have to come down. In Aberdeen terrace the gardens and walks were more like a river with kitchens filled to 7 feet deep. A horse was drowned in its stable and pigs were also drowned. On North sands there were broken bathing machines and trees strewn. Scalby mill on the North Sands was damaged. A bridge crossing at Barmston was torn away and a mill near to it. The bridge near the cemetery also fell. A landslide occurred on the eastern face of Castle Hill leaving a precipitous face 200 feet high.  
 Scalby: One house was washed down and all the furniture lost. Two bridges near the church were washed down.  
 Newby: The mill was nearly washed down  
 A landslip also occurred on a railway embankment at Warmsworth in South Yorkshire.  
 Todmorden: The thunderstorm lasted at least 3 hours. The rivers Col and Der overflowed their banks. Omerods New factory with arching over the River Col was seriously damaged as were others in the vicinity. The river Der on the Burnley road broke its embankment at Toad Carr and filled the Shoulder of Mutton Inn to a great depth. [Severe flooding was also reported at Nottingham, Lincoln and Derby].  
 Heckmondwike: The storm lasted one hour and flooded Flush Mills and a warehouse. The storm was said to be the worst there for 40 years.

8 Sep 1857  
 Leeds Mercury  
 12 Sep

Thunderstorm

3 June 1858  
 Mayhall 1860  
 Bradford  
 Observer 10 Jun  
 Leeds Mercury 5 Jun

Repeated thunderstorms

On Thursday afternoon the 3rd of June, a severe and protracted thunderstorm passed over Leeds and the neighbourhood. One of the pinnacles of St Johns church tower, Leeds, was struck by the lightning, as was also a house at Burley, but in neither case was the damage extensive. The Bramhope tunnel on the North Eastern line gave way at the Leeds end, and the water rushed through in a perfect torrent, and with tremendous noise. A train proceeding through the tunnel about six o'clock, was met by the current and forced to put back, this was effected very slowly, the train being in the tunnel more than an hour. On its re-arrival at the north end, the accumulation of rubbish had been made so great, that the passengers had to leave the carriages and walk back to Arthington. They were subsequently sent round by York, and reached Leeds about midnight. Considerable damage was done to property at Bradford and Halifax. The streets at the former place had not been so much flooded since February 1838, when according to the "Bradford year Book" a man swam down Market-street.

Bradford: BO reports that the storm was the worst ever experienced with the water flowing down streets like rivers. Well Street received much water from Church Bank, Kirkgate from Cheapside and Darley Street, Hall Ings from Leeds Road. Tyrell Street and Bridge Street from Manchester Road, Little Horton Lane and Wakefield Road. As a result many houses were flooded and cellars were flooded in Hall Ings, Market Street, Kirkgate, well Street, Broadstones, Tyrell Street, Bridge Street, Peel Place, Leeds Road etc. All this was in the first storm. In the second storm even more was flooded and in the places mentioned above the water was nearly 2 feet deep. The storm continued on both occasions for nearly an hour. In Market Street barrels and casks were floating about and a group of pigs was seen swimming. Manningham Valley was a broad sheet of water and Valley Road was impassable and water spread to Busy Bridge Fields. Steep roads were completely stripped of their covering; sand and heavy stones were washed into the valleys. The fields looked as if they had been ploughed. The extensive cellars of the George Hotel, the White Swan, the Boar's Head and Rawson's Arms were all flooded to a depth of more than 5 feet and liquors of all sorts were destroyed. Several houses were struck and damaged by lightning. The beck which runs under the cotton mill at Birksland Street, New Leeds broke its confines and filled the mill to a height of four feet. The warehouse at Penny Oaks Mill was flooded. A boy was killed by lightning at Wibsey. At Sheif a mill and a number of houses were flooded. Although seen by many as the most severe ever seen in Bradford the paper notes a flood equally if not more severe ion 20 December 1837 as the result of persistent rainfall rather than at thunderstorm and four people were carried away by the flood and drowned.

Bingley: There was quite a flood in the River Aire and the streets got a washing but no property flooding was reported.

Leeds: No flooding was reported but the tower of St John's Church was struck and destroyed.

Halifax: The rain was accompanied by hail but no flooding was reported, said to be the result of the new sewer system recently installed.

Otley: The storm caused flooding in all directions but the damage was mainly to farmers and gardeners.

Huddersfield: Within a few minutes every street in the town was flooded. Many of the houses in Manchester Street were flooded as were also those at Newton, Copper Row, Dock Street, Castle Gate and all the lower end of town. In many the depth was 2 to 3 feet with furniture floating.

Harrogate: A large area was flooded in Low Harrogate opposite the White Hart and ahorse and driver narrowly escaped drowning. In Cheltenham Square, Royal Parade very serious damage was done to houses and shops. In one house in Cheltenham Square the water rose to 2 feet from the ceiling. The water penetrated the newly decorated Cheltenham Pump Room and flooded a portion of the grounds.

Knaresborough: Rain was accompanied by hail the size of a good sized hazel nut. The streets were completely inundated. Shops and houses were flooded including in the market place.

Barnsley: Heavy rain was accompanied by hail and the streets had the appearance of rivers.

[Storms were reported from London to Northumberland].

Sheffield: A hailstone measured 6 ½ inches in circumference; 12 collected randomly weighed 8 ounces and another 20 weighed 10 ounces. Over 10000 panes of glass were broken at Sheffield Botanical gardens.

Barnsley: the thunderstorm was also accompanied by large hail which did great damage to beans and potatoes and glass greenhouses were shattered in villages to the northwest of Barnsley.

Dodsworth: hailstones fell as large as walnuts.

15 Jun 1858  
Preston  
chronicle  
19 Jun  
Leeds

Thunderstorm with  
temperature 80 F mainly with  
lightning and hail damage but  
little flooding.

Intelligencer 19  
Jun

12 Aug 1858  
Sheffield  
Independent 14  
aug  
6 Jun 1859  
Manchester  
Courier 11 Jun  
Leeds Mercury 7  
and 9 Jun

Thunderstorm for little more  
than an hour with weather  
sultry for several previous  
days.

Thunderstorm

16/18 Jul 1859  
Manchester  
times 23 Jul  
Bradford  
Observer 28 Jul  
Huddersfield  
chronicle 23 Jul

Thunderstorm with hail and  
masses of ice.  
Boston spa: Temperature at  
outset of storm was 75F but  
fell to 68F during the storm  
returning to 73F.

Huddersfield: A horse was killed in a field.

Dewsbury: Hail and rain occurred and at Mirfield great damage was done to greenhouses with several thousand panes broken.

[Thunderstorm extended from Newcastle to the E Midlands where several people were killed by lightning; there was little reference to flooding]

Sheffield and Rotherham: No flooding was reported but houses and mills were affected by lightning.

A miner was killed by lightning at Bolderstone.

Chesterfield: Streets in some places were flooded 2 feet deep. Principal roads are like the beds of rivers and the top soil has been washed away leaving only the road stones visible.

Bradford: Cows were killed and houses damaged by lightning. Flooding occurred both in mills and cellar houses. A cart and wagon were swept into the current. A mill reservoir burst and flooded the mill and house. Inadequate drainage in the town was said to be the principal problem. At Thornton a woman and her daughter were killed by lightning. The flooding was mainly due to the overflowing of the Bradford Beck, backing up the drains into the streets and the streets assumed the appearance of rivers. The principal flood extended from Tyrell Street to Well Street and from Market Street to Peel Place but in several other places the cellars were flooded. At least 20 streets were under water and in Well Street and Broad Stones the water rose 3 to 4 feet. Halifax: Cellars of a few houses were flooded and a school was struck by lightning but the new drainage system was said to have save houses in the lower part of the town from flooding.

Hebden bridge: A man was killed by lightning.

Huddersfield: Houses were flooded in the lower part of the town. Huddersfield escaped the fall of hail.

In Holmfirth, Upperthong and Honley, very large hailstones fell and shattered windows facing north, in one house 60 panes. Several thousand panes altogether were broken.

Meltham: Hundreds of panes of glass were broken by enormous pieces of ice including 800 at a Silk Mill at Bent Ley, and also at St James church and Meltham Mills. Many houses were flooded with the furniture swimming about.

At Netherthong some houses had not a pane of glass remaining in the windows facing the storm. 2000 panes were broken in Thongsbridge.

Honley: The storm raged from 30 to 40 minutes and scarcely a window remained where exposed to the storm, being riddles as with small shot. An estimated 30,000 panes were broken in th 12 mills, warehouses schools and churches. Streets were like rushing rivers their whole breadth and all the cellars and low dwellings were flooded several feet deep with damage to furniture. Stores were also flooded. Potatoes, turnips with the soil has been flooded from the fields. The storm was said to be unprecedented.

York: A man was killed by lightning.

Snaith: The hailstones were larger than hen's eggs and windows were broken everywhere.

Malton: Storm lasting 5 hours caused the death of sheep from lightning. Shops and cellars were filled with water. Streets presented the appearance of rivers.

Wakefield: Houses were flooded and many windows broken by the hail. In the lower part of town houses were flooded to a depth of 5 or 6 feet especially at the bottom of Kirkgate and at Westgate Common. After a church service at St Mary's Chantry parishioners were trapped in the church by flood waters for some hours and then had to be conveyed away in cabs. In Back Lane an 8 foot wall next to the Unitarian Church was swept away; the

flood broke open the school room doors and destroyed the interior. At Chevet park, the home of the Yorkshire high Sherriff, all the windows and a great deal of furniture were Utterly destroyed and crops and gardens were ruined.

Leeds: Some houses and warehouses were flooded.

Almondbury (SE Huddersfield): Many houses in the village were flooded. Large hailstones fell and vegetables were riddled. Roads were stripped of their metal to a depth of 6 inches.

Kirkburton: many houses were flooded.

Huddersfield: Som cellars in low areas were flooded.

General: Crops were uprooted and soil carried a great distance and roads ripped up and farmyards flooded.

Campsmouth: 1000 panes of glass were broken and walls were washed down by the flood. Other places nearby were untouched.

Campsall: Heavy damage was inflicted. Pigs were washed away by the flood.

Norton and Sutton: large tracts of land are under water.

Skelbrooke: 60 sheep were washed away and drowned from a brook that runs through Robin Hood's Well.

Doncaster: At the village of Wath midway between Doncaster and Barnsley a violent storm occurred. Walls were washed down and the inhabitants of many houses had to take to the upper storeys. Potato and turnip crops are much damaged. Severe effects were also experienced at Wombwell, Hemingfield and other towns of the South Yorkshire coalfield.

Wombwell: An immense body of water carrying with it stones and debris made its way from the hillsides through the village. Large walls and much property were destroyed. By flooding of cellars. Turnips and soil have been washed out to a depth of 2 to 3 feet.

Great damage was caused by the wind in much of East Yorkshire but with limited flooding. Many trees blown down and animals killed. Off the coast 100 vessels were wrecked with great loss of life following the northwesterly gale.

Sheffield: Buildings were struck and damaged.

Ecclesfield: Roads are torn up by the flood and crops of turnips damaged. The Wesleyan Chapel was struck and badly damaged.

Leeds: Cellars were flooded in Boar Lane and marsh Lane from choke sewers.

[Storms were reported around the country but mainly with respect to lightning rather than flooding]

Beverley: Three people from the same family were killed by lightning at the village of Eske whilst sheltering under a tree. One girl survived injured but managed to crawl for help. There were no reports of flooding.

1 Aug 1859

Huddersfield

Chron 6 Aug

14 May 1860

Manchester

Courier 19 May

Yorkshire Gaz 19

May

Leeds

Intelligencer 19

May

Thunderstorm

Several localised

thunderstorms

Wath 1.63 inches fell in 1 hour.

28 May 1860

York Herald 2

Jun

Hull Advertiser 2

Jun

26 Jul 1860

Sheffield

independent 28

Jul

7 Jul 1861

Leeds Times 13

Jul

26 Jul 1861

Hull Packet 2

Aug

Beverley

Guardian 27 Jul

Hurricane and persistent rain.

Very cold with snow on N

York Moors

Thunderstorm

Thunderstorm

Thunderstorm

7 May 1862 Manchester courier 10 May Liverpool Mercury 9 May Rochdale Observer 10 May Sheffield Independent 10 May	Thunderstorm with a strong wind which broke boughs of trees.	Sheffield: A thunderstorm was accompanied by large hail, some measuring 3 inches by 2 inches and weighing two ounces. Streets and yards were very rapidly flooded though there were no further details. Houses were struck and damaged by lightning. At Attercliffe the hailstones were an inch and a half in circumference and 3 quarters of an inch thick. The heavy rain caused a flood in the Rother Valley. Rotherham: the hailstones were 2 inches in length and half an inch thick and many windows were broken. Chesterfield: Cellars in the lower part of town were flooded. Dronfield: Windows were smashed everywhere by hailstones up to 5 ½ inches in circumference and one flat piece measured 2 inches in diameter. The river was swollen and flooded cottages alongside. Worksop: the railway station was damaged by lightning. Leeds: Hailstones were fully 1 inch in diameter. At Bramley, the hail was 5 inches in circumference and weighing 4 ounces each; 3000 panes were broken in Town Street alone; the whole village presents a scene of devastation. At Morley thousands of panes were also broken and a horse was killed by lightning. Bradford: the River Aire was swollen to a great height. A man was drowned attempting to ford the river. Todmorden: The flood was described as the 'old enemy' of Todmorden. The river rose to a great height, overflowed the banks and caused considerable damage. Streets and houses in Cobden were flooded from 3 to 4 feet. Cellars were also flooded in Cheapside but not as severely as expected. Leeds: A severe hailstorm occurred with hail 1 inch in diameter. At Bramley on the outskirts masses of ice 5 inches in circumference and weighing 4 ounces fell causing great damage to glass. In town Street Bramley 3000 panes were broken. At nearby Morley thousands of panes were also broken and a horse killed by lightning. Skipton: The thunderstorm with large hailstones affected the Skipton area and flooded Sidgwick's mill. Halifax: In a thunderstorm with large hailstones the river Calder was speedily swollen and some houses were flooded. Todmorden: Two cows at the Heights near the Holmes Chapel were killed by lightning. There were no reports of flooding.
2 Sep 1862 Rochdale Observer 6 Sep. 11 Jun 1863 Sheffield Independent 13 Jun	Thunderstorm  No mention of thunder.	Hebden bridge: Heavy rain continued overnight and in the morning the rivers overflowed. It entered many houses and the streets were impassable. Todmorden: The key stone at Gandy bridge was lifted by the flood and water flowed on to the road and flooded houses at Cobden by 2 to 3 feet. Mills have had to stop work. The other parts of the town are also flooded.
7 Jul 1863 York herald 11 Jul	Thunderstorm very heavy rain for half an hour	York: Several of the streets were flooded and houses struck by lightning and damaged and several people injured. Malton and Yorkshire Wolds: 14 sheep killed by lightning at one location. There was no mention of flooded property.
12 Mar 1864 Sheffield Independent 14 Mar	Dambreak at Bradfield	Sheffield: A new embankment burst at Bradfield and 150 to 200 lives were lost. Above Malin bridge everything in the way of the flood was washed away. Below that all is ruin and devastation. The event occurred at midnight. Property losses were estimated at half a million.
15 May 1864 Liverpool	Thunderstorm	Wensleydale and Swaledale suffered severe flooding; bridges and structures were carried away and farmers suffered severely from loss of stock and crops. Note Swale Record.



Mercury 20 May		Nithsdale: Lightning struck a barn and set it alight – but there was no reference to flooding. [this was the occasion of the great flood on the Stocksfield Burn which is described in detail in various papers]
20 May 1864 Leigh Chronicle	Thunderstorm with hail	York: Hail fell as pieces of ice the size of pigeon's eggs. It affected on side of the city only but did great damage to trees and young plants
28 May Yorkshire Gaz 28 May		
9 Jun 1864 Yorkshire Gaz 11 Jun	Thunderstorm with hail	York: A man was killed by lightning and a house was damaged. No flooding was reported.
12 Apr 1865 Huddersfield Chronicle 15 Apr	Thunderstorm	Lindley: The storm was said to be the most memorable since 2 April 1848. Streets were in a few moments rendered impassable. The storm lasted more than an hour but no flooding was reported. Dewsbury: Rain was accompanied by hail of considerable size. Cellars in the lower part of town became quickly flooded. Some of the streets bore the appearance of small rivers.
Leeds Mercury 13 Apr		Sheffield: Buildings were struck and damaged.
23 May 1865 Manchester Times 27 May	Thunderstorm	North and East Riding suffered flooding of roads and washing out of crops. A man was killed at Bearton. Sheffield: Several people were injured and houses damaged. No flooding was reported.
Sheffield Ind. 27 May		Staveley: The hail was as big as marbles and windows were broken. The water rushed down the hillside at Springwell carrying away a wall and flooding the railway line. Gardens were destroyed and some pigs had a narrow escape from drowning. Houses were flooded at Barrows, Staveley.
May Hull Herald		Hull: A man was killed by lightning at Barton. No flooding was reported. Another was killed at Foggathorpe.
25 May		Sheffield: Rain caused streets to be flooded in a few minutes. The storm lasted 2 hours and rain was succeeded by very large hail. Agricultural damage was reported between Sheffield and Retford. Several people were struck and injured by lightning and houses damaged.
8 Jul 1865 Sheffield Daily Tel 10/15 Jul	Thunderstorm after 'several weeks of scorching heat and drought'	Worksop (Notts SE of Sheffield): The streets had the appearance of a sea and were impassable for some time, in some instances several feet deep and flowing into cellars adjoining including the cellar of the Golden Ball where the water was five feet deep. Shops were also flooded. Bradford: Many streets were flooded with the heavy rain. A sewer burst at the bottom of Hope Street and flooded many of the neighbouring cellars.
19 Jul 1865 Bradford Obs 20 Jul	Thunderstorm	
23 Aug 1865 Bradford Obs 31 Aug	Thunderstorm	Clayton (W Bradford): At Landhouse Quarry, the heavy rain caused a landslide which caused a crane to fall into the shaft. The rain was accompanied by large hail or rather lumps of ice as large as marbles. Several houses were struck by lightning.
Leeds mercury 25 Aug		Rotherham, Wath, Darfield: Many dwellings were completely flooded. A man was killed by lightning at Bolton upon Dearne.
15-17 Nov 1866	Persistent rainfall. There was no reference to thunder.	Very high rainfall in S Yorks and Lancs.
British Rainfall	Halifax had 3.25" on 15 and 16th and 4.25 between 13 and 17th.	The Aire at Leeds rose higher than had ever been known. The Ouse at York rose 15 feet above ordinary level. In the valley of the Calder the flood far exceeded anything within memory and no old flood marks are so high as the present ones.
Manchester		Wakefield: The flood was 2 feet and ½ inch above any previous flood. Many miles of land are under water.



courier 19 Nov  
Warrington  
Advertiser  
Archer MSc  
Dissertaion 1971

Collieries have been flooded and vessels stranded.

Dewsbury: Seven people were drowned. Water tore up the surface of macadamised roads, tore down walls. Between Fall Lane and Cleggford bridge 5 lives were lost when their cart was caught by a rush of water when a wall fell. Two other fatal accidents occurred on Savile Road at the corner of Wharf Street.

Leeds and District: Twenty lives were lost. A coal barge at Leeds bridge overturned; 30 people stood on an embankment to watch when the bank gave way and they were precipitated into the water; at least 20 were drowned. From Keighley to the Ouse the lower streets were under water. A railway viaduct fell between Apperley and Calverley and a goods train and engine thrown into the water. At Burley Mill the water rose 16 inches above any previous flood.

Halifax: The River Calder rose 24 inches in half an hour. The Turnpike road from Todmorden to Hebden Bridge and thence to Eastwood and Mythomroyd was impassable.

<Castleford> The flood level here was only exceeded by the flood of 1775 which was 18 inches higher.

Sowerby Bridge: Some mills were more than a yard deep in water. The village of Copley was completely surrounded. The tunnel near Low Moor was 3 feet deep in water. A high-water mark was left in Walton Street, Sowerby Bridge.

Malton: the flood came down so rapidly that sheep were carried away and in one instance a whole flock of 150 was drowned.

Yorkshire papers describe extreme floods on many rivers but not copied here in detail since it does not appear to be a 'flash flood'.

The flood was investigated by a Royal commission inquiring into pollution of the Aire and Calder. The report estimated that the damage caused by the flood in the Calder catchment was between £500,000 and £1 million. [The flood also affected the Northeast and Lincoln and Nottingham and Derby]

Wakefield: A severe hailstorm lasting only 10 minutes but covered the ground with hail the size of marbles. Some had the dimensions of 1 inch (diameter or circumference?). Two Methodist chapels had all their panes broken on their west sides and thousands of panes were broken at Portobello Mills. Cellars in the lower part of town were flooded.

**Castleford: Large pieces of ice measuring 2 inches fell and people had to escape fearing cuts to faces.**

Malton: the streets of the town were flooded and large quantities of sand and gravel washed up and the gulleys covered. Several houses had their basements flooded. Some sheep were killed in the Wolds by lightning. The town of Norton was not affected.

Brighouse: Streets were flooded in a few minutes and the street grids were inadequate to carry off the flow. Many cellars especially in Bethel Street and Market Place were flooded, some to a considerable depth.

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" Meadows are flooded from Killamarsh in the north to Ambergate in the south.

7 May 1867 Manchester courier 11 May	Thunderstorms in North and East Yorkshire
29 May 1867 Yorkshire Post 31 May Sheffield Independent 31 May	Thunderstorm lasting 2 hours
18 Jul 1867 Huddersfield Chronicle 20 Jul	Thunderstorm
19 Aug 1867 BR York Herald 24 Aug	Thunderstorm

Sheffield  
Independent 21  
Aug

Rotherham: Houses were struck in the area and damaged.

Low lying land around Chesterfield and stretching to Claycross was flooded with water on both sides of the railway and roads becoming streams. Houses were flooded in the suburbs of Chesterfield.

Chesterfield: The storm was also reported at Chesterfield with lightning effects on houses. Flooding occurred in the Dog Kennels, Brown's Yard and the whole of the lower part of the town was deluged. The water at Horn's bridge was about 4 feet deep. The water in the Hipper was said to be the highest since 1838.

Eckington: Houses were flooded in numbers and all the sewers were choked up causing the streets to appear like rivers.

Clay Cross: In Clay Lane a house was flooded to a depth of 6 feet. Three cows were killed by lightning.

Brampton: the water in the Hipper rose rapidly and houses were flooded with several feet in Shipley street.

Residents were got out of bedroom windows. Animals were washed down the river.

Dunford bridge: 2 inches rain fell in an hour and a half. There was 'a good deal of flooding in the district' but locations are no specified.

Wharfe: 'disastrous flood' in uplands'

3 Sep 1867  
LeedsMercury 5  
sep

8 Jun 1868  
Longfield 1998  
Speight, 1892

20 Jun 1868  
Leeds Mercury  
22 Jun

11 Aug 1868  
Yorkshire Post  
18 Aug  
Thunderstorm after long  
drought.

26 May 1869  
Sheffield  
Independent 28  
May  
No reference to thunder

5 Sep 1869 York  
Herald 11 Sep  
Sheffield  
Independent 6  
Sep.  
Thunderstorm after a period  
of very dry weather

17 Jun 1870  
BR  
Yorkshire Post  
18 Jun  
Malton 1.35 in 4 h  
Storm followed a drought and  
high temperatures 80F

9 Jul 1870  
BR  
JBA Ribble  
Report  
Severe thunderstorm

Keighley: Following a period of drought, the thunderstorm occurred after a day of hot oppressive weather. Many streets were flooded and the street grates were unable to take the water. Windows were broken.

Halifax: the lower part of the town was flooded.

Hull: Street gratings were unable to carry the flow and pools of water appeared in several places. **Hailstones there were nearly the size of pigeon's eggs.** A man was killed by lightning at Sunk Island.

Worksop: After heavy rain the river overflowed and flooded Stubbing Meadow. Garside's saw mill was flooded. All down to Kilton the fields are covered, only the fences being seem. The water rose very rapidly and cattle had to be quickly removed.

Bradford: Between Farsley and Stanningley, a young couple were struck by lightning and killed.

Sheffield: A heavy thunderstorm for half an hour converted some streets to rivulets. In Pond Street and other low lying streets the sewers could not carry the flow and water found its way into cellars and houses.

Leeds, Otley, Hull, Middleham, General East Riding, Peresistent thunderstorms but with no serious flood or lightning effects reported.

Scarborough: damage was done to some gardens with the soil washed away. A house was struck by lightning.

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**

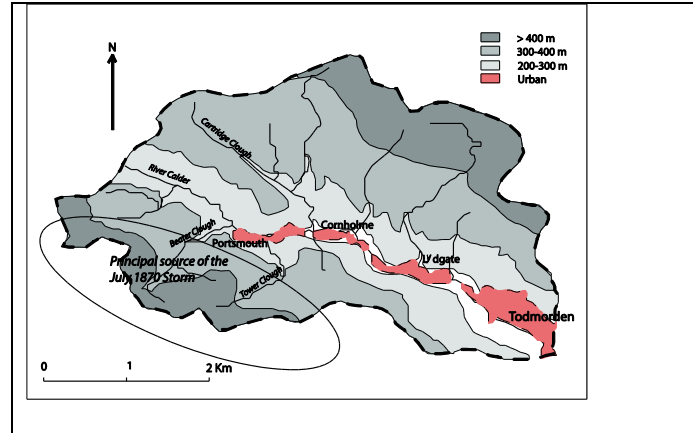
water level at Todmorden soon after which in a few minutes overflowed its banks and left the lower part of the town completely under water with one house destroyed and a woman swept away and water swept through many mills destroying looms etc. The Calder through Burnley rose 4 feet above its ordinary level in an incredibly short time

Reference was made to a similar flood in Bacup on 9 August 1849.

Todmorden: The inhabitants were alarmed at the sudden rising of the rivers from the two valleys, both of which in a few minutes overflowed their banks, and put the lower part of the town completely under water. Several houses, under which was a sewer, fell with a crash during the afternoon, in consequence of the sewer being blocked up, whilst the water could, in many instances, be seen rushing from the parlour windows. Todmorden: Some of the low-lying parts of the town, were on Saturday afternoon visited by the most sudden and fearful calamity ever known in the district causing damage to property to an incalculable amount, and which has terminated the lives of at least three persons. Lightning and thunder continued for about an hour, but to the surprise of the inhabitants very little rain fell in the town, the shower not lasting more than a quarter of an hour. Immediately, and without any warning, the water rushed in great volume down the river, washing away walls, battlements of bridges, and flooding all the tenements of Cobden Shade etc to a depth varying from two yards downwards. This was the state of things at Todmorden, but the scene of havoc and desolation was the valley from Todmorden to Portsmouth (Burnley direction). The bridges (without a single exception) were greatly damaged -the water rushing over them, taking away the battlements, flooding the pasture land, and making the road a deep running stream. Cotton mills and dwelling-houses were deluged, and great damage and inconvenience were caused. About a mile and a half up the valley (at Eobinwood), the river runs at a somewhat deep level, and here houses were flooded two feet deep, showing the stream to have run at the enormous depth of four or five yards. Here part of the road was swept away, and the bed of the river almost blocked up with debris. About 150 or 200 yards farther up is a line of houses known as Bowed Row two of the houses were completely washed down, and some of the others greatly damaged. This row of houses is built over the river on an arch. Further upstream, the scene became more fearful. Very little of the river wall remained, and the road where the water had ceased to flow was much disturbed. Barewise House was all but undermined, and shows signs of giving way. The cloud which had hung over the moorland north-east of Todmorden had rushed down the steep woodland declivity, bringing with it trees, and all manner of debris. At Vale, two and a quarter miles from Todmoden, the road was impassable for hours after the first signal of the disaster. The next scene of catastrophe was at Mount Pleasant, about three miles from Todmorden. Here the sudden deluge was heard or seen by the widow of one William Greenwood. She told her daughter to call in the assistance of a man, but when the daughter returned the end of the house was gone, and nothing could be seen or heard of the woman. About fifty yards further the water entered the loom shed of Mr. Redman, sweeping in the wall on the side near the moor and almost filling the shed with debris. At Portsmouth, the weaving shed of the Chirgee Coal Company was destroyed entirely. Towards the beginning of the storm a man named William Marshall was crossing a bridge known as Chatham Bridge with two of his children, one in each arm, whom he was endeavouring to rescue from danger. So strong was the current, however, that the two children were washed from his hold and his own life was much endangered. The hill sides were greatly disfigured and disturbed by the storm ; meadows in which was the newly-mown hay were cut up, and scores of

beds or cloughs formed. The shower which accompanied the thunderstorm at Portsmouth lasted about three quarters of an hour, and was unprecedentedly heavy. From the hill opposite to where the water fell, we hear that a waterspout was seen by persons at several points. Livestock, fowls, furniture, food, trees, and things of great variety floated down the river in abundance. The immense volume of water, however, did not all descend into Portsmouth valley, but a great part fell into the narrow vale known as Dulesgate, where, owing to the sharp fall of the vale, and its narrow and confined character, the effect was terrible to the road, especially at Cloughfoot.

There were no raingauge measurements but one container registered 3 ½ inches (89 mm) while other estimates of the storm total varied from 4 inches to 9 inches (102 to 229 mm) over the moor.



25 Jul 1870  
BR  
Stonehouse Dent 2.53 in 2 h  
30

19 Jun 1871  
Leeds Mercury

5 Jul 1871  
Leeds mercury 7  
Jul  
9 Jul 1871  
Norfolk  
Chronicle 15 Jul

14 Jul 1871  
BR  
Leeds Mercury  
18 Jul

No newspaper reports of flooding or thunder in Yorkshire

Leeds: The storm was of brief duration. A building was struck and damaged.

Bradford: Buildings were struck but the note indicated that the rain was welcome in hilly districts.

[Thunderstorms were also reported in Leicestershire, Derby, Stockton etc but with some lightning effects and little flooding reported.]

Whitby: A thunderstorm lasted 3 hours and streets and yards were flooded by the hail and heavy rain. A man was killed by lightning and several cows killed.

Malton: A thunderstorm also occurred with agricultural damage from Rye, leven, Costa and derwent rivers.

Norton and East Riding: The eastern end of the town was covered by large hailstones though the west was dry. The storm travelled towards Scarborough and the whole wold foot has had glass broken and crops cut by the hail. Near the village of Scragglethorpe the torrents washed up crops where the hailstones were as large as walnuts.

Otterburn. Heavy rain between 1.15 and 3.15 p.m. in. which two hours 1.23 in. fell; the effect of this sudden fall was seen at 4 p.m., in one of the largest floods in the Otterburn ever remembered ; the district is grass, but very well drained. [This is a striking illustration of the effects of drainage in such districts; in less than three hours from the commencement, and less than one hour after the close of the heavy rain, the bulk of it is rushing down the rivers in its course to the ocean]. The Otterburn is one of the feeders of the river Aire.

Pateley Bridge: Carts were being used to cart stones across the river Nidd. The rains subjected the river to a

18 Aug 1871  
BR  
Westmorland  
Gaz 26 Aug  
6 Sep 1871  
BR

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

18 Jun 1872  
Westmoreland  
Gazette 22 Jun  
Manchester  
times 22 Jun  
Yorkshire Post  
18 Jun  
Sheffield  
independent  
19 Jun  
Lucas 1887

Warter Pocklington 3.00 in 3 h  
Old Malton. The fall, 2.33 in., took place principally between 8 p.m. on 6th and midnight, and very much exceeds any previous 24 hours during the last 13 years.  
North Lodge, Ripon A succession of thunderstorms from 11 a.m. to 8 p.m. Olterburn-in-Craven The destruction of floodgates, culverts, and small bridges on the streams flowing down the sides of these ranges into the Ribble and Wharfe Valley was enormous on this day. Whitby. Thunderstorm from the W. beating up slowly against the S.E. wind, distant thunder all the afternoon, the storm arrived here at 5 p.m. and continued to 9.

sudden flood and the river rose and came down with a sweep carrying away a horse and cart and a boy 15 years old. The boy was drowned.

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

Heavy rain in East Riding Yorks. Warter Pocklington 3.62" in 5 hours. From 9 to 12 pm it fell at a rate of 1" per hour. Old Malton rainfall 2.33" between 8.00 and midnight. Holme on Spalading Moor 3.19", Goole 2.38". Totals over 2.00" in Whitby and Scarborough. Heavy rain extended on that day in a line southwest to Nottingham, Stafford, Worcester and Hereford to Somerset with totals 1-2"

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

Hebden Bridge: A farmer's wife was struck and killed by lightning. Rivers overflowed and flooded many houses. The railway was blocked for a short time by reason of debris brought down from hillsides.

Sheffield: A parsonage was struck and damaged at Crookes. At Bradfield and neighbouring villages several houses were struck and ice fell, an inch and a quarter in circumference.

Barnsley: The thunderstorm lasted one hour but the streets were quickly flooded. Flooding of houses was very severe at Town End; a butcher's shop felt the full force of the water coming down Dodsworth Road and Racecommon; in it and adjoining houses furniture was floating about. Shaw Mill on Racecommon road was flooded. Houses were flooded in Sheffield Road. Shops in Calder Street were seriously flooded. A boy was drowned by a sudden rush of water. The storm was said to be equal if not greater than the storm of 1832. Several factories had to stop work because their boilers were flooded. Roads at Town end were three to four feet deep.

Worksop: Hailstones of great size fell.

Bradford: Streets became like rivers especially in the centre of town where merchants and shopkeepers were flooded. Houses and other buildings were struck by lightning and 'chimneys and walls knocked down in all directions'. The Midland Line between Leeds and Bradford was blocked by the bursting of a mill dam over Thackley tunnel. A man was drowned at Greencliffe.

Leeds: Within half an hour many of the roads were nearly impassable. Sewers were surcharged and water poured from manholes. A mill was flooded at Leighton Lane.

York: The floods entered cellars and houses and houses were struck and damaged by lightning. The Ouse and the Foss were much swollen.

Selby: A man was killed by lightning at Alcaster.

Malton: A man was killed by lightning. On the railway line between Malton and Driffeld soil was brought down on to the line at Fimber for about a mile.

Driffeld: the storm was accompanied by a whirlwind which blew down trees and carried them for a distance of 200 to 300 yards. A windmill was blown down.

24 Jun 1872 York Herald 29 Jun	Another thunderstorm	Wharfedale: Damage was caused on the east side. Doncaster: houses were struck by lightning. No flooding was reported Sheffield: Two houses were struck by lightning.
4 Jul 1872 Yorkshire post 9 Jul Beverley Guardian 6 Jul	Thunderstorm Deaths by sunstroke were reported	Wold district, Pocklington: Very Heavy rain fell for half an hour and there was much damage to hay, turnips and cereals in Market Weighton and Newton Dale between Pickering and Malton but the storms were isolated. Gardham: Three men were struck down by lightning whilst hoeing and one killed.
6 Jul 1872 BR Yorkshire post 9 Jul	Tickhill 1.30 in 35 m	Thunder rains were again excessive in the East Riding (and also all over the country)
11 Jul 1872 BR Sheffield independent 13 Jul Leeds mercury 15 Jul Huddersfield Chronicle 20 Jul	South Milford Rectory 1.50 in 45 m The impact was exacerbated by the previous periods of high rainfall. Thunderstorms on 11 <sup>th</sup> , persistent rain on 12 <sup>th</sup> and 13 <sup>th</sup>	York: thunderstorm reported but without reports of flooding. Leeds: A house was struck and damaged. The effect was said to be without parallel since the great flood of November 1866. The river Aire overflowed its banks and much meadow land with hay was flooded. Flooding occurred in higher areas as well as in lower ones. In the higher areas it was because the sewers were of insufficient capacity and water backed up from small streams into the sewers. Many cellars were flooded in houses and shops. An eleven year old boy was drowned in the Sheepscar Beck attempting to reach some floating timber. Much damage was done properties along the Sheepsear Beck (which flows into the River Aire) from Walker's Works down to Timble Bridge including Meanwood road, Meanwood Street, Cross Stamford Street, Green Road, Beckett Street, Lady Bridge, Duke Street and East Street. It was the highest of any flood since the beck was paved. Richardsons Leather Works were much flooded. The beck rose at least 2 yards in 4 hours. The Stoney Rock Stream which empties into Sheepscar Beck also caused much flooding; the water formed a small lake in Buckley Place several feet deep. At the Cemetery a portion of the surrounding wall was forced down. At Lady Bridge, the backing up of sewers caused the flooding of a pawnbrokers and the Marquis of Granby inn cellars. The Palace Inn near the parish church was inundated and the whole of Maud's Yard was under water. Bradford: The sewers were generally capable of carrying the flow although water got into some low lying cellars. Dewsbury: Several cellars were filled with water and in the Market Place almost all the lower rooms were flooded and the water running down the Batley Carr beck ran into the streets at New Wakefield where the water was 2 feet deep. Brighouse (between Halifax and Huddersfield): Much damage was done by the flooding of cellars at Clifton Bridge and at Bailiffe bridge. Firth's Carpet Works were flooded as the Clifton beck which runs underneath was surcharged and the arch burst and forced up the floor inundating it to a depth of 2 to 3 feet. At Clifton Bridge the silk works were flooded. Nearly every house in the locality was flooded. Marsden: In a very short time the Colne and Wessenden stream were swollen to an extreme height causing great damage. Upstream on the Wessenden Water the Haigh Reservoir overflowed and partly collapsed adding to the flow. Clough Lee Mill was flooded, bridges were washed away. Below the junction every house in the

locality was flooded, some several feet with water and sand. It covered Town-gate, flooded Bank Bottom Mill and Wood Bottom Mills and several others. The Swan inn was flooded to several feet when a wall collapsed. Doncaster: The Don overflowed its banks on 11<sup>th</sup> but continued to rise with the persistent heavy rain on 12<sup>th</sup> and 13<sup>th</sup> causing much agricultural loss. Steams ran down higher land ploughing up the country like a mountain torrent and washing away turnips and potatoes. Rail lines as well as roads were flooded and travel impeded. Marshgate in Doncaster was inundated and residents had to retreat to higher storeys. Cattle were washed down the River Don.

Rotherham: Many streets were quickly flooded. Water flowed down Wellgate with great violence carrying earth and stone from the Wickersley road. Sewer grating were quickly choked up. From Hollowgate, Mansfield Road, Clifton Bank, Quarry Hill and Wellgate Mount the water rushed. At Doncaster gate head the water was joined by flow from High Street. Cellars shops and houses were flooded with surprising rapidity. The water in College Street was over one foot in depth and College Square was a lake. At the end of College Street the stream received another contribution from Church Street and then along Bridgegate before emptying into the Don Which rose to a great height. Dead pigs, dogs, baskets, barrels and trees were carried down.

Chesterfield: Although the storm was not of long duration but the roads became like rivers and houses in the lower part of town were flooded.

Swinton: The rain lasted for an hour and 45 minutes. The turnpike from Kilnhurst to Swinton was impassable at Birdwell flats and houses were flooded with furniture floating about.

Dronfield: The river soon filled and overflowed and water entered houses and gardens. The Horse and Jockey Inn and The Sportsman's Inn were both several inches deep in water and at the bridge the water ran over the road since the bridge could not take the water, cutting off access to the Post Office.

Wath: Houses were flooded and in some instances furniture was washed away.

River Wharfe: there was much flooding along the river with only the tops of hedges visible in neighbouring fields. An embankment burst near Guisley and water flowed on to the railway line. At Ilkley the streets conveyed muddy water from the neighbouring hills.

Rivers Ure and Skell have risen higher than usual but not to an extraordinary height.

Wetherby: The floods washed soil into the roads which were for a time impassable and some cottages near the bridge were inundated. A high stone wall at The Grange was knocked down.

Sheffield: Thunder not as severe as in June but rainfall was heavier. Many of the streets were impassable and hundreds of cellars were flooded in many of them 4 or 5 feet deep. The Don and Sheaf rose rapidly. Some damage was done at a steel works by lightning. South street and Duke Street Park were turned into rapid torrents carrying much sand and gravel. At Broad Street the water was joined by a flow from Cricket road. Many shops were flooded. Water rushed down Sheaf Lane to the back of the Plough Inn. Much damage was done in the neighbourhood of Old Farm Road and Suffolk Road. Water got into the Duke of Norfolk's 'Old Farm' where the water rose to the top of the wainscoting. A long row of cottages on the back of Suffolk Road were entirely flooded from the River Sheaf. The steep streets above Upperthorpe became streams which rushed down with great violence. Houses were flooded in Radford Street. A body of water swept down Daisy Walk washing sand into houses. The Tilt Forge near to the Lady's Bridge in the Wicker had several feet of water in it. In Brightside the water rose to a depth of 6 feet in the centre of the village. Two boys were drowned in Sheffield.

Heeley: Every cellar was flooded within a few minutes (11<sup>th</sup>). Oak street and Well Road received flow from upper areas and were like rivers and the turnpike road from the bridge Inn to the bottom of Well Road was impassable. The water was at least 5 feet deep in the vicinity of Oak Street. Some people had to be rescued from upstairs windows.

Wakefield: Many lowing pars of the town were flooded including a large number of houses in Salt Pic Alley, Brooksbank, and on the Wakefield side of St Michael's Church were flooded from the Ings beck. In Thornes Lane the road from the Jolly Sailor Inn to Portobellow was flooded and adjacent properties.

Rotherham: the River Don rose to a higher height than known for several years.

Dewsbury: Water washed stones down the hilly streets in great quantities. Buildings were struck by lightning.

24 Jul 1872      Thunderstorm

Yorkshire Post

25 Jul

25 Jul 1872      Thunderstorm with verh high  
Sheffield Daily      temperatures (>80F)

telegraph 26 Jul

Sheffield: Streets were flooded and carried large quantities of earth and rubbish, accumulating at the foot of Upperthorpe. The inhabitants placed large stones in front of their doors to prevent the water from forcing them in. The storm was severely felt at Broomhill and houses were struck and damaged by lightning. The storm was also reported at Dronfield, Chesterfield and Whittington with houses and people stuck by lightning but no reports of flood effects.

[The storm was also reported in Derby, Wolverhampton, London, Portsmouth, Ryde (Isle of Wight) and the Channel Islands]

Hull: Some streets were flooded. A house was struck and damaged by lightning.

27 Jul 1872      thunderstorm

Yorkshire Post

29 Jul

29 Jul 1872      Thunderstorm

Huddersfield  
Chronicle 3 Aug

Kirkburton (SE of Huddersfield): Heavy rainfall was mixed with hailstones as big as marbles and in a few minutes the roads were impassable. The beck at the bottom of Yew Tree was filled and overflowed and many houses were flooded to a considerable depth; pigs were with difficulty saved from being washed away. The roads are torn up and much wreck brought down. Such a storm has not occurred for 30 to 40 years.

Harrogate: Many dwellings in the lower part of town were flooded including the George Hotel. At Pannal station the water carried away most of the platform

Leeds and Bradford: The thunderstorm was reported but without reference to flooding.

7 Aug 1872      Thunderstorm

Leeds mercury 8  
Aug

4 Sep 1872      Thunderstorm

York Herald 7

Sep

Driffild Times 7

Sep

28 Sep 1872      Widespread heavy rain (not a  
Yorkshire Post      thunderstorm)

30 Sep

Dewsbury: Heavy rainfall for one hour but no flooding was reported.

Driffild: the streets became flooded and in some cases almst impassable. Middle Street had water a foot deep all over the road. Most of the cellars and many lower storeys were flooded. 'Such a storm has not been seen in the neighbourhood for some years'.

[Thunderstorms were reported from East Riding, the Southwest, Jersey, Wales and Lancashire]

Leeds: The River Aire was much swollen and some coal barges broke their moorings and carried onto Leeds bridge. One sank and another caused damage to the bridge and caused the 'temporary' bridge to be closed.

Damage to buildings was also caused by high winds.

The storm was also reported at Bradford and Malton and in Wensleydale where flooding caused communication between Middleham and Leyburn to be cut off and agricultural damage was caused.

Leeds: Rain was followed by hailstones of very large size, and in a few moments the streets were flooded, Boar

3 May 1873      Thunderstorm



Bradford  
observer 5 May

3 Jun 1873  
Huddersfield  
chronicle 5 Jun  
13 Jun 1873  
Dewsbury  
reporter 14 Jun  
12 Jul 1873  
BR  
22 Jul 1873  
Westmorland  
Gazette 26 Jul  
BR  
Huddersfield  
Chronicle 26 Jul  
Yorkshire Post  
24 Jul  
York Herald 26  
Jul

Hull Beverley Rd 0.34 in 15 m

Thunderstorm raged for several  
hours.  
Excessive heat with 89F in the shade  
reported.  
20th to 22nd. Increasing and  
excessive heat, that on the latter day  
especially in West Yorkshire, North  
Lancashire, and parts of Wales,  
unparalleled both as to actual  
temperature, which at many  
stations, (where verified  
thermometers were properly  
placed), exceeded 90°; and also  
remarkable for the great number of  
deaths by sunstroke.  
Wensleydale: 8 deaths reported  
from sunstroke  
Leeds Chapeltown (23<sup>rd</sup>) 0.94 in 20 m

26 Aug 1873  
Westmorland  
Gazette 30 Aug  
BR  
Yorkshire Post  
27 Aug  
Huddersfield

Thunderstorm

lane running like a river. The storm only lasted 20 minutes.

Barnsley: houses were damaged by lightning. No flooding was reported.

Pontefract: Rain was accompanied by hail and west of the town the watercourses were unable to convey the water and meadows were flooded. Again the storm was of short duration.

Holmfirth: A 3 hour storm was the first severe one this year. A house at Netherthong was struck by lightning. The rain ran down steep lanes and flooded several buildings.

Batley: The rainfall was tropical in violence and caused the sewers to be flooded. A man was struck and injured by lightning. A chemical factory was struck by lightning and set alight and eventually got under control with considerable damage reported.

No reference to rainfall or flooding was found.

A dozen people were reported at various places to have died of sunstroke.

Leeds: A girl was struck and killed by lightning indoors. Houses in the west end of Leeds were flooded up to the ovens in their cellar kitchens in Meanwood Road, West Street, Kirkstall road and Kirkgate owing to the lack of capacity of the drains. Some cellars in Meanswood Road at the Sheepscar end had water in them 3 to 4 feet in depth. On falt portions of Headingley Lane there was a great accumulation of mud. Buildings were struck by lightning and badly damaged and some unroofed.

Bingley: Several houses in various parts of the town were flooded. Animals were killed, trees and buildings were struck.

Dewsbury: Cellar dwellings were flooded and several houses were struck and damaged by lightning.

The storm was also reported at Bingley, Halifax and Bradford with reported damage in many places from lightning strikes.

Huddersfield: the streets in a few minutes resembled rapid rivers. Macadamised roads were cut up. Buildings were damaged by lightning. Shade temperature reached 84F.

Halifax: Some houses at the bottom of the town were flooded.

Bradford: A man was killed by lightning.

Meltham: In many of the yards the water was knee deep within a few minutes. The coating of the road was torn up and the drains were choked with the debris.

Hull: The thunderstorm was severe at Anlaby where hail or pieces of ice of considerable size fell continuously for 20 minutes.

Leyburn: Horses, cattle and sheep were killed by lightning.

Northallerton: A woman was killed by lightning.

BR notes: At Mansfield rain was so sudden and heavy as to burst the drains.

Dewsbury: The storm was as severe as the one earlier in the summer. In several places paving stones were washed up and roads damaged.

Leeds. The thunderstorm was reported but without reference to flooding or other damage

Holmfirth: All the streets were flooded and several houses and buildings.

[More severe thunderstorms were also reported at Preston, Blackburn, Warwickshire and Wisbeach].

chronicle 27 Aug		
26 Jun 1874		Dewsbury: A man was killed by lightning in a house in which he was sheltering.
Yorkshire post		[Thunderstorms were also reported on 24 <sup>th</sup> but without reference to flooding. Chesterfield crooked spire was struck and damaged].
29 Jun		
28 Jul 1874	Thunderstorm for 3 hours at Halifax	Halifax: A heap of rubbish was piled up 3 feet high by floods near Clark Bridge whilst all the drains and gullies were choked. The rush of water towards the lower part of the town was very heavy. Many cellars were flooded in the upper part of town. 60 to 70 loads of rubbish from the sides of Beacon Hill were piled up in front of the Red Lion pub. Where the kitchen was 2 feet deep in water. Several shops and houses were also flooded as was the old corn mill at the bottom of Pineberry Hill. At Shaw Hill, Dryclough and other places drains were overcharged and burst open.
Manchester		Thornton (W of Bradford): A cow was killed by lightning.
Courier 1 Aug		Bradford: At Bowling a house was struck and seriously damaged and the two occupants severely injured.
Bradford		[Thunderstorms were also reported at St Albans (2 people killed by lightning) and in Scotland, Lancashire and elsewhere with no flooding reported].
observer 30 Jul		York: Heavy rain was accompanied by hail which was very destructive of glass. Certain parts of the city were flooded.
		Goole: A man sheltering under a tree was struck and killed by lightning and a boy was drowned when blown into a river.
2 Sep 1874		
Manchester		
courier 3 sep		
Sheffield Daily		
Telegraph 5 Sep		
17 Jun 1875	Thunderstorm	Sheffield: Very heavy rainfall fell for 30 minutes. The River Don was flooded to a serious extent. A house in the Park was nearly demolished by lightning. A carter was killed when his horse took fright at lightning and bolted over his body. Where the drains became blocked and the water rushed down lanes, houses were flooded for example in the lower part of Harvest Lane and some streets at Pitsmoor, Walkley and Crookes.
Manchester	Thunder was heard in the distance for several days	Bradfield: The hailstones were as big as beans. No flooding was reported.
Times 19 Jun		Goole: A man was killed by lightning.
Bradford		
observer 18 Jun		
Sheffield		
independent 18 Jun		
18 Jul 1875	Thunderstorm	Barnsley: A horse was killed by lightning.
Yorkshire Post		
20 Jul		
17-20 Jul 1875	Incessant rain from 17 to 20 Jul. No thunder was reported except for the above.	Halifax: The River Hebble was much swollen and the Calder and Ryburn which join at Sowerby Bridge overflowed in many places causing much damage to growing crops.
Lancaster		Todmorden: At Todmorden and Eastwood many houses were flooded.
gazette 24 Jul		Flooding of crops was described for Dewsbury and Wakefield.
Preston		Dearne Valley and low lying districts between Barnsley and Doncaster were flooded. Flooding was also reported around Wakefield.
Chronicle 24 Jul		Horbury (between Wakefield and Dewsbury): The River Calder overflowed near the Horbury Cloth Mills and filled fields near the Horse and Jockey Inn to a depth of more than 3 feet. Cardwell's Row was flooded to more than 3 feet and mills were similarly affected.
Sheffield Daily		Dewsbury: Cellars were flooded in lower parts of the town. The water did not affect the Market Place but it
Telegraph 22 Jul		
Dewsbury		
Reporter 24 Jul		

covered part of Long Causeway. The river Calder had risen above its banks below Dewsbury and above in Mirfield. Carcasses of cattle and sheep were carried in the flow as well as pigs. The flood in the headwaters must have been much greater than in Dewsbury.

[Flooding was widespread in the Midlands with reports from Birmingham, Northampton, Cambridge, Walsall, Leicester and Leamington.]

Hull: The heavy rain was accompanied by hail twice the size of peas. Great damage was done to grain crops. Streets and many cellars and Thornton Street School were flooded.

Tadcaster: A bullock was killed by lightning.

Bradford: Standing crops were beaten down.

Selby: Very large hailstones broke eggs in the open air market.

Bradford: In the Bradford Valley at Frizinghall low lying parts were three feet under water and also at Aireville.

Rotherham: three houses were struck and damaged by lightning.

Pontefract: Rain completely inundated the streets, burst open the sewers and was level with the walls of gardens. A house at Tanshelf was demolished.

Barnsley: Several streets in the town were flooded. A horse was killed by lightning and a house was struck and damaged.

Sheffield: some houses in the lower part of town were flooded. There was some hail and pieces of ice with the rain. Part of Eccleshall Road was covered to nearly a foot. In Harvest Lane the flood reached up to the fireplaces. Water rushed down from the hills overlooking Upperthorpe and overshot the gratings and many houses were flooded.

Staveley: A bridge over the Rother was carried away.

Ilkley: Four cottages in chapel lane on the banks of the Parish Gill beck were flooded to a depth of 2 to 3 feet. The Wharfe and Calder were bankfull.

Easingwold: The streets were flooded and water entered the Post Office and affected letter sorting.

Sheffield: Roadways in the lower part of the town were flooded but the damage to property was slight.

York: there was a heavy downpour of rain and some hail.

Thirsk: The Cod beck flooded the lowlying Holmes area. Many cellars in the town were flooded as a consequence of the backwater.

Northallerton: The Sun Beck flooded the town street to a great extent.

Thunderstorms were also reported at Leeds Bradford and Wakefield but with no reports of flooding.

Todmorden: The town has been almost entirely inundated owing to the overflow of the river and much damage done. For several days there was heavy rain and at Wadsworth Mill the water broke down a wall and flooded the turnpike road. The toll keeper's house at Waterside House was flooded. Cellars were flooded at Cheapside. A few houses at Meadow Bottom and Newton Grove were flooded. The water overflowed at Gandy Bridge and flooded the dwellings skirting the road. Water entered the Stansfield Flour Mill.

9 Aug 1875  
Lancaster Gaz 14  
Aug  
York Herald 14  
Aug

Thunderstorms

12 Aug 1875  
Bradford  
observer 14 Aug  
Sheffield Daily  
Tel. 13 Aug

Thunderstorm

8 Sep 1875  
Leeds times 11  
sep

Thunderstorm

21 Jun 1876  
York Herald

17 Sep 1876  
Sheffield  
Independent 18  
Sep

Thunderstorm lasting more  
than an hour

23 Apr 1877  
York Herald 24  
April

Thunderstorm following  
persistent rain

14/15 Jul 1877  
Manchester  
courier 17 Jul  
Leeds mercury  
17 Jul

The violent storms of the last  
few days culminated in a  
drenching downpour on 15<sup>th</sup>.  
Salford rainfall 14<sup>th</sup> 1.88"  
15<sup>th</sup> 2.30"

	No reference to thunder except at Chorley, Preston and Liverpool.	
15 Aug 1877 Liverpool Mercury	Thunderstorm	Pontefract: The storm lasted 2 hours and the streets were one sheet of water. The watercourses overflowed and many houses were flooded.
18 Aug 1877 Leeds mercury	Persistent rainfall – no reference to thunder.	Leeds: Three dairy cows were struck and killed by lightning.
15 Sep 1877 Leeds mercury		Halifax: the Calder, Ryburne and Hebble all overflowed their banks and pigs and sheep were carried down the river.
17 Sep		Dewsbury: the basements of several houses were flooded.
18 May 1878 Liverpool Mercury	Thunderstorm	Huddersfield: the Colne and Holme were in flood and a boy was drowned when he fell into the river.
20 May 1878 Blackburn Standard	Thunderstorm	Doncaster: A woman was killed by lightning at Arksey Station. Several houses were flooded.
1 Jun 1878 Yorkshire post	Thunderstorm	Todmorden: In the Walsden direction hundreds of tons of gravel and boulders were washed from the hillsides and deposited on the Rochdale turnpike road. The rain ploughed up the by-ways into ruts several feet deep. Several low lying houses were flooded. A joinery was struck and badly damaged.
13 Jun 1878 York Herald	Thunderstorms	Northallerton: The storm caused thousands of acres of land to be under water causing serious damage to crops. The Town Street was flooded from the overflowing of the Sun Beck.
29 Jun 1878		Easingwold: The streets ran like mountain streams and in the Market Place it covered the entire width of the street. There is no mention of property flooding.
27 Jun 1878 BR	Otterburn 2.10 in 1 h 30 m	Filey: Several of the Crescent houses were flooded and Mitford Street was much flooded and the drains blocked up. Lightning caused damage to property and injuries to people, as well as a horse and sheep. At the foot of the Wolds the roads were nearly impassable and soil was washed from fields and one large field was made completely bare with nothing left but a stony surface.
6 Aug 1878 Lancaster Gaz	Doncaster Magdalena 1.25 in 30 m	No reference was found to rainfall or flooding in Yorkshire though thunderstorms were reported in London and elsewhere.
10 Aug 1878 Sheffield Independent		Sheffield: Great damage was sustained by the extraordinary flow of water and shops, kitchens and cellars were flooded. The river Don rose rapidly but did not overflow its banks; it rose several feet in a couple of hours. Water rushed from the higher part of the town with the force of a mountain torrent. Drains were unable to cope. Pathways were torn up or bulged upward. On Carlton Road as on the Attercliffe route the water was knee deep. Cottages near the Ball Inn at Attercliffe were flooded to 2 feet. Premises at Well Road and Oak Street were also flooded. In Eccleshall road portions of the asphalt roadway were forced up. Water flowed with force down the steep streets from Upperthorpe and Walkley and flooded several cottages. Water poured down Duke Street and Broad Street and flooded the buildings in the latter to a serious extent; the Plough Inn was flooded with furniture floating about. The Industry Inn in South Street was deluged to a depth of 18 inches. Houses were damaged by lightning.
7 Aug 1878		Rotherham: A few shops in Bridgegate which are below the level of the street were slightly flooded.
		Dronfield: Rain did considerable damage to the roads and in some places the water and gas pipelines were exposed.

29 Aug 1878 Yorkshire Post	Thunderstorm	Doncaster: Storm flooded cellars and low-lying buildings. Storms were also reported at Leeds and Bradford but without flood reports. Barnsley: Many streets were one sheet of water and some houses in the lower part of town were flooded.
31 aug 8 Jun 1879 Sheffield Independent 13 Jun		Rotherham: Buildings were struck and people injured by lightning. The Rother Valley was inundated to an unusual extent from Woodhouse to Catcliffe.
12 Jun 1879 Burnley Gazette	Thunderstorm	Bradford; A seven-year old girl was killed by lightning. The low lands were partially flooded. Wakefield: Several buildings were struck by lightning and people injured.
14 Jun 17 Aug 1879 Leeds mercury	Prolonged rainfall with embedded thunderstorms	Sheffield: The foundations of five houses in Martin Street under construction were washed away. Several streets were much damaged and the tram lines on the Hillsborough route were blocked by stones and rubbish. Langsett road was like a river and the pressure in the sewer lifted the road and at one point a lifted manhole spouted water to a height of 6 feet. Cellars were flooded there and on the Owlerton Road. Cellars at Upperthorpe were also flooded including Upperthorpe Hotel. Not a drop of water fell in the centre of the town.
19 Aug BR	17th Sheffield Sharrow 0.31 in 5 m Wentworth castle 1.09 in 32 m	Todmorden: Rain and hail caused many of the roads to be covered with water which were greatly damaged by the flow. Several houses in the Burnley valley and other places were flooded and the water ran down from Meadowbottom with great force. Barnsley: Hailstones fell resembling large pieces of ice which lay on the ground for half an hour before melting. The town was flooded with streets like a stream. In two storms 1 inch fell in 1 hour in the first and 1.12 inches in the second. Houses shops and warehouses were flooded especially at the bottom of Dodsworth Road, Market Hill and Sheffield Road. The cellar in the Spotted Leopard Inn was deeply flooded. The cemetery was damaged as it was in Jun 1872. Mills and a brewery were also affected. Kirkburton (SE Huddersfield): Hailstones as large as marbles fell causing much garden damage. The storm was the worst there for 22 years. Meltham/Wilshaw: Many low lying houses were flooded to a depth of several feet. A horse was killed by lightning.
22 Jun 1880 Huddersfield chronicle 26 Jun	Thunderstorms	Rotherham: Main street and the streets near the Masbro Midland station were flooded as was the line near the Holmes Midland station. Cellars kitchens and underground warehouses were flooded due to inadequate drains. [Floods were reported in Derby and Nottingham and elsewhere]
24 Jun 1880 Sheffield Independent 25 Jun	Thunderstorms	
26 Jun 1880 Sheffield Daily telegraph 28 Jun	Thunderstorm	Dronfield: Streets became like rivers and the metalling was carried away or cut in deep grooves. Lower rooms of houses were flooded in some parts of the town and soil was washed out of gardens.
12/13 Jul 1880 Liverpool Mercury 14 Jul	Thunderstorms	Huddersfield: The storm lasted about one hour in the afternoon. The drain from Edgerton to the River in Leeds Road burst near the Hebble beck in Bradford Road. The river near Bradley was swollen and covered the railway line to one foot depth. Hirst's Cotton Mill was flooded and some houses nearby. The River Colne was much

Leeds mercury  
14 Jul

flooded and several mills were inundated. Considerable damage was done to raw materials and much was washed down the river.

Harrogate: Houses in one part of the town were flooded.

Keighley: Many streets were impassable to foot passengers. Water rushed down West Street into High Street and Low Street; near the Mansion House it covered the full width of the road. Large stones were washed along by the current. A portion of the Skipton road was completely submerged.

Sheffield: The storm was particularly severe in the high lying districts of Crookes and Walkley with lightning damage to buildings.

15 Jul 1880  
Sheffield daily  
telegraph 16 Jul

Barnsley: The streets were one stream of water especially in Sheffield road, New Street, Summere Lane and Regent Street where the water found its way into a number of cellars.

Dronfield: the River Drone overflowed its banks and several shops on the Sheffield Chesterfield Road were flooded as well as a number of cottages.

17/18 Jul 1880  
Lancaster Gaz 21  
Jul, Grantham  
Journal 21 Jul  
1934

Widespread thunderstorms

Bradford: The streets were flooded for hours and great damage has been done to goods in warehouses. The Town Hall was flooded to 3 feet.

Heckmondwyke: Storm lasted 2 hours. Damage to crops and loss of hay was reported from the floods.

Barnsley: A cow and a horse were killed by lightning at Kersforth. Floods in Roscommon Road, Shaw Lane and Summer Lne converged on Town End where a lake of considerable depth was formed. The flood poured along Peel street rendering it impassable for its entire length. A large number of houses and shops were flooded and much damage done at Locke Park.

<Normanton>: there was a storm of rain and hail and the streets were flooded to a depth of 4 feet. The <<River Devon>> was flooded and the ford near the church was like a sea and the footbridge was lost to view. The old bridge which had stood for more than half a century was washed away. The <<Winterbeck>> overflowed over the west end of the village and workshops were inundated. All access to The Green was cut off and the water reached the level of the high bridge. This flood is the greatest here since July 1828, its level being shown on a lead plate on church bridge. This flood was 2 feet lower. Much damage has been done at Hickson's Mill at Easthorpe.

26 Jul 1880  
Manchester  
courier 31 Jul  
5 Aug 1880  
Manchester  
courier 7 Aug

No thunder reported in  
Sheffield but elsewhere a  
youth was killed by lightning  
Thunderstorm

Sheffield: Heavy rain continued for several hours from early morning until midday. Hilly streets were like rivers. A sewer burst in St Phillip's road and the road was torn up for some distance and houses flooded.

Dronfield: A flood in the River Drone interrupted work in two factories.

Hawes: The greatest flood for many years occurred. The Holme Head bridge on the Sedbergh to Hawes turnpike road rebuilt only two years ago was entirely swept away and great damage was done to hay crops.

7 Aug 1880  
Lancaster Gaz 11  
Aug  
Sheffield Daily  
Tel 9 Aug

Widespread and persistent  
rain; no reference to thunder

Kettlewell and Buckden: Considerable damage was reported in Craven and Upper Wharfedale areas. The **River Wharfe rose 2 feet almost instantaneously.** Calves sheep and hay were carried away.

Skipton: A house on Raikes Road was flooded.

Dronfield: the River Drone again overflowed and flooded houses in the vicinity of the Horse and Jockey Inn and the Sportsman Inn. This was the fourth flood within a few weeks.

[Floods were reported at Belper, Ilkeston and elsewhere in Derbyshire]/

30 Aug 1880  
Manchester

Thunderstorm

Sheffield: At Wentworth Park; lightning struck and killed six stags and three buffaloes.

Chesterfield: A horse was killed by lightning.

Courier 31 Aug Sheffield independent 31 Aug		[The storm with some flooding was reported in Derbyshire].
14 sep 1880 BR Leeds mercury 15 Sep	Wold Newton 2.95 in 2 h 6 m	Wakefield: the water ran down the streets in streams and low lying parts of the town were inundated. The Calder and Ings beck were swollen. Ossett: Roads were flooded. A house was damaged by lightning.
15/16 Sep 1880 BR Sheffield Daily Tel 17 Sep	Wath upon Dearne 3.00 in 2 h Heavy rain with strong winds – no thunder mentioned.	Sheffield: The rivers Don and Sheaf were greatly flooded, threatening to overflow their banks. Cellars in houses on Blackburn road, Brightside and the lower parts of Hillsborough were flooded. Manchester Road had the appearance of a river. The Rivelin Mill was flooded when the dam overflowed. Rotherham: Land flooding was reported. Parkgate: Flood water reached and extinguished the coke ovens. Ecclesfield: Some houses were flooded to 5 or 6 feet depth particularly in the Isle, St Mary's Lane, Ecclesfield Common and Rag Wheel. Roads and footpaths are torn up and the bridge at Sheffield Lane was endangered by the amount of debris against it.
18 Sep 1880 Manchester Courier 20 Sep Sheffield independent 25 Sep	Thunderstorms	Sheffield: Very serious flooding between Sheffield and Doncaster. The fields are so deep under water that farmers are using boats. At Brightside the cellars were again flooded. Chesterfield: The canal overflowed and in some places people have had to move to their upper storeys. On Astropton Road the causeway was washed out. [Widespread storms and some flooding in Derbyshire and Loncoln].
5 Jul 1881 Manchester Courier 7 Jul Yorkshire Post 7 Jul	Thunderstorms Temperatures reached 84.4F Deaths from sunstroke were reported. London reached 92F.	Todmorden: the rain caused a great flood in the Burnley valley. The Hole Tunnel was blocked by a landslip and the sleepers were washed bare. A bridge was demolished near Portsmouth station which caused the water to be turned on to the turnpike road causing flooding to many houses and businesses. A bobbin works at Cornholme was flooded. Outbuildings of Calder Vale Mill were washed down due to the foundations being undermined. Mills shops and houses were flooded all the way to Todmorden. Cobden was also flooded but not so seriously as in the past. Bradford: the storm lasted from half past nine to nearly midnight. Lightning struck the belfry at Christ church and the bell fell through the roof into the church. Heavy rain did considerable damage to warehouses and houses. Halifax: Lower parts of the town were flooded and several mills inundated. Keighley: Several mills and public buildings were flooded to a depth of 10 or 11 inches. The River Aire rose rapidly and much land from Bingley downstream is under water. Bradford: the streets were flooded especially Market Street and Bridge Street and water entered the cellars of the Town Hall and a few adjoining shops. Ilkley: Some cottages in Chapel Lane were flooded and the cellars of many houses in Brook Street were filled with water to 2 to 4 feet. During the night 2.25 inches fell. Settle: Great damage was done to unhoused hay. The roads were torn up to a depth of half a yard. A waterspout is believed to have fallen in Upper Settle.
1 Aug 1881 Leeds times 6		

Aug		Wath Upon dearne: A woman was killed by lightning.
25 Jun 1883	Thunderstorm	Storm also occurred at Kirkby Stephen and Appleby (See Eden chronology) and also at Cambridge, Warwickshire, Leicester and Clyde
Westmorland Gazette Jun 30		
30 Jun 1883	South Milford 1.71 in 30 m	Allerton-Bywater (nr Castleford): Hailstones the size of marbles smashed windows and kitchens were filled with water and the highway blocked.
BR		Wakefield: A church was struck by lightning and damaged.
Yorkshire Post 2 Jul		York: A horse was killed by lightning
York Herald 2 Jul		Tadcaster: Hailstones the size of marbles covered the streets. The town was flooded in some places especially Bridge Street to a depth of 6 to 10 inches. Shops were flooded.
		Lightning damage was reported at several other locations.
3 Jul 1883	Thunderstorm	Leeds: The proprietor of the Temperance Hotel, Briggate near Leeds was struck by lightning whilst leaning out of his window and killed; two other were injured. A boy was killed at Swillington.
Manchester Times 7 Jul		Barton on Humber: the hailstones or lumps of ice were from the size of walnuts an upwards, from 2 to 2 ½ inches long and weighing from 1 to 2 ½ oz. One piece was 2 ½ inches long 2 inches wide and an inch deep. The
Leeds Mercury 5 Jul		hail storm extended over a mile and a half. Great damage was done to conservatories, greenhouses and private dwellings. The storm came from the SE and lasted 35 to 40 minutes. Birds were found dead in the
Hull Packet 6 Jul		morning. Churches and the Police station were also damaged. In ditches the flowing day it still lay 2 feet thick.
		Grimsby: Large hailstones broke innumerable windows and stopped drains causing flooding of streets to a depth of several feet. Similar occurrences were noted over north Lincolnshire.
		Settle: Hailstones fell in one continuous mass.
		Driffield: there was an extraordinary downpour of rain and three horses were killed by lightning.
15 Jul 1883	Thunderstorm	Barnsley: Seven boys and a girl about 10 years old caught in a storm took shelter in a large culvert on Pontefract Road carrying water from the town into the Dearne. The flood washed them all through the culvert and five were drowned
Manchester Courier 21 Jul		
3 Aug 1883	Thunderstorm	Bradford: The town centre including Market Street was flooded and concrete foundations forced up by the water. A large sewer burst in Manningham and the road was heaved up.
Leeds mercury 4 Aug		Leeds: The storm lasted one hour. In Wellington street cellar kitchens and houses were flooded and also at the bottom of Queen Street, Saville Street and cStle Street, some to a depth of a couple of feet.
4 Jul 1884	Wold Newton 0.98 in 1 h 15 m	Skipton: After a drought of 5 or 6 weeks a thunderstorm with hail hit Skipton and district. Streets were flooded and some shops and mills had to be closed. In some cases the streets were impassable being several feet deep in water. The Aire and other streams were quickly swollen
BR	Temperature reached 86F at Thirsk and 84F at York	
9 Jul 1884	Thunderstorm	Leeds: Rainfall lasted several hours but was particularly heavy for half an hour. Buildings were struck and trees destroyed. Along Wellington Street and especially near the Great Northern Railway Station businesses and houses were flooded.
BR	Sandbeck Pk 2.45 in 2 h 50 m	Rothwell: A man was killed by lightning.
		Ossett: The rain caused the gratings to be filled with ashes and mud. Houses in the area of Giggall Hill were flooded, the sewers not being able to take the flow.
		Thunderstorms were reported widely in Yorkshire but only the above had reference to flooding.
		[Thunderstorms with flooding occurred in Midlands Northwest and Scotland]



9 Aug 1884 BR	Doncaster Hatfield 1.29 in 45 m	
10 Aug 1884 Westmorland Gazette 16 Aug Manchester courier 16 Aug 12 Aug 1884 BR	Widespread thunderstorms in England following record high temperatures – 94.2F at Greenwich (only Jul 1881 higher). Sunstroke fatalities	<p>Easingwold: The storm lasted about an hour. 31 lambs were killed in a field together. Buildings were struck and other animals killed. There was no reference to flooding.</p> <p>Storms were also reported at Settle, Skipton and Pateley Bridge but without reference to flooding.</p> <p>A man was killed by lightning at Little Langton near Northallerton; large hail fell there up to one ounce in weight.</p> <p>Between Malton and Whitby.—At Levisham the storm was most terrific in violence, and large masses of ice in the form of hailstones, fully 1 ¼ to 1 ½ in. in circumference, fell for some time, doing great damage. An hour after the storm a person exhibited in Malton station a bottle of hailstones he had gathered at Levisham, and they were then as large as marbles. The up and down lines of Newton Dale, near Whitby, on the North-Eastern Railway, were completely blocked by the tremendous fall of earth caused by heavy rains and floods; many thousands of tons must have fallen.</p> <p>Driffield: Very large hailstones fell and the streets including Westgate were flooded from side to side.</p> <p>Sheffield: Some houses were flooded up to the range. Hailstones of considerable size did damage to crops as well as breaking glass in greenhouses.</p> <p>Wetherby: the thunderstorm prevailed for two hours and the streets were flooded in less than half an hour.</p> <p>The storm was reported on the Wolds and in Hull without reference to flooding.</p>
21 Sep 1884 York Herald 27 Sep	Thunderstorm	
7 Aug 1885 Sheffield Daily Telegraph 8 Aug	Thunderstorm - localised	<p>Sheffield: The storm lasted 3 hours. Low lying parts of the town were completely flooded. Under the railway bridge at Heeley the water was 3 feet deep. A lake formed on the Upper Chippinghouse road. Abbeydale Road was impassable. River sheaf, don and Porter were in high flood. Hailstones fell with great force near Victoria Railway Station and the water poured over the rails. Buildings were struck and damaged by lightning.</p> <p>Tradesmen in the neighbourhood of Broad Street were badly affected. The water poured down the hills of South Street and Duke Street and accumulated at the end of Broad Street and into cellars and shops. The main sewer in Broad Street burst. The cellars of the Plough Inn were flooded; the doors were burst from their frames. The cellars of the Corn Exchange on Wharf Street were also flooded.</p> <p>Rotherham: several shops were flooded and damage was done in Rotherham Park.</p> <p>Doncaster: Three horses were killed by lightning.</p> <p>Harrogate: A man was struck and severely injured by lightning.</p>
21 Jul 1886 BR	Ingleton Halsteads 0.61 in 9 m (1.29 in 49 m)	
25 Jul 1886 BR Sheffield daily Telegraph 27 Jul Sheffield Independent 27 Jul Huddersfield	<p>Meltham Harewood Lodge 0.40 in 20 m</p> <p>Wakefield Stanley Vic 2.50 in 1 h</p> <p>Denshaw New Yrs Br 2.19 in 1 h 10 m</p>	<p>Ripponden, Barkisland: A storm caused destructive floods and damage in these and other tributaries of the Calder</p> <p>Leeds, Methley Park Very heavy rain (4.10 in.) causing the Calder and Aire to overflow their banks. The storm lasted for an hour and a half. The drains were unable to cope with the volume of water and roads became impassable. The water ran into cellar dwellings and kitchens. In some cases the water rose to a height of 4 feet. Flooding occurred at the junction of Wellington Road and Goldard Road. Several houses were flooded in West Street as were cottages in the vicinity of the Bedford Arms. In Meanwood Road several cellars were flooded up to 3 feet.</p>

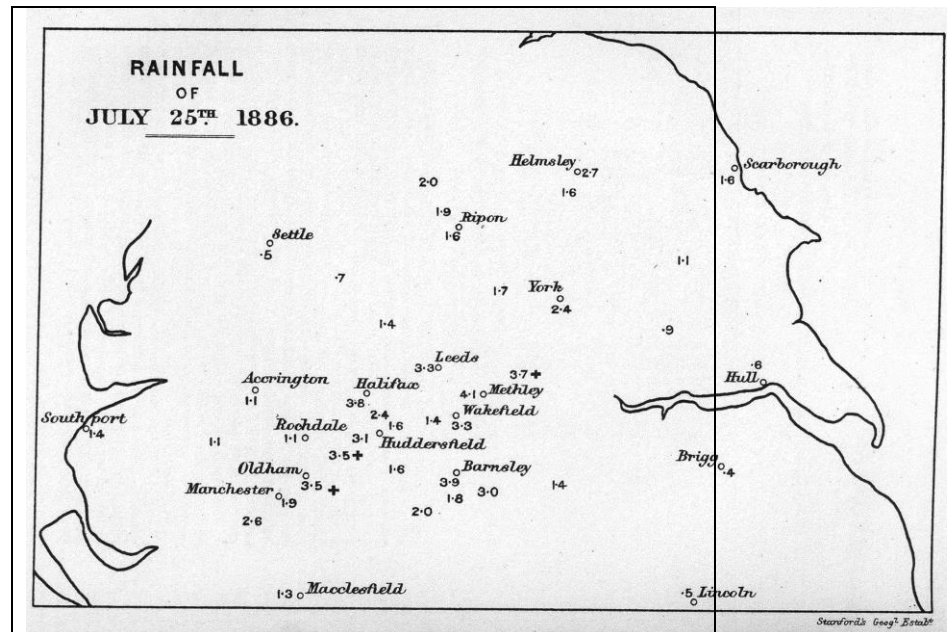
Chronicle 26 Jul

Barnsley: Every street became a running stream and the low lying parts of the town were flooded and all the grates choked by sand and stones. Water poured down New Street and all the streets that lead to it, round mayday Green to Gas Nook it flooded every house from 1 to 3 feet deep. Along Cheapside and Queen Street most of the cellars were flooded and tradesmen suffered considerable damage. Tenements in Hayescroft were flooded and one old man was floated out of bed and stood on a chair all night. Several shops were flooded at Town End which have not been flooded for a long time. The new laid surface at Tune Street was destroyed and washed into Pindar Oaks Street. At Measborough Dyke people had to remove furniture from their houses. Houses were flooded at Hoyle Mill. The Black Bull Inn at Stairfoot was flooded. Such serious flooding in Barnsley has not been known for a great number of years.

Pontefract: Houses were flooded, culverts burst open, and garden produce washed away – also at Kottingley, Ferry bridge and Featherstone.

Wakefield: The water ran down the streets in streams. Cellar dwellings and warehouses in many parts of the town were flooded. The rain continued after the thunderstorm for some time.

Huddersfield: Cellars etc were flooded in the lower part of town. The Hebble beck overflowed its banks near the railway arches to the east of the Bradford Road and in some instances the cellars were flooded to a depth of several feet.



Leeds: Thunderstorm but without reported flooding.

13 Aug 1886  
Leeds mercury

14 Aug  
18 Aug 1887  
Manchester

Thunderstorms following a very prolonged drought from 3 Jun

Rotherham: A man was killed by lightning.  
Chesterfield: A house was struck and seriously damaged.

Times 20 Aug  
Yorkshire Post  
19 aug  
9 Jun 1888  
BR  
Sheffield Evg  
Telegraph 9 Jun  
Sheffield  
Independent 11  
Jun  
Dennis Hood  
(Waterspouts in  
the Yorkshire  
Wolds)

Thunderstorm

Leeds: A woman was injured by lightning but no flooding was reported.

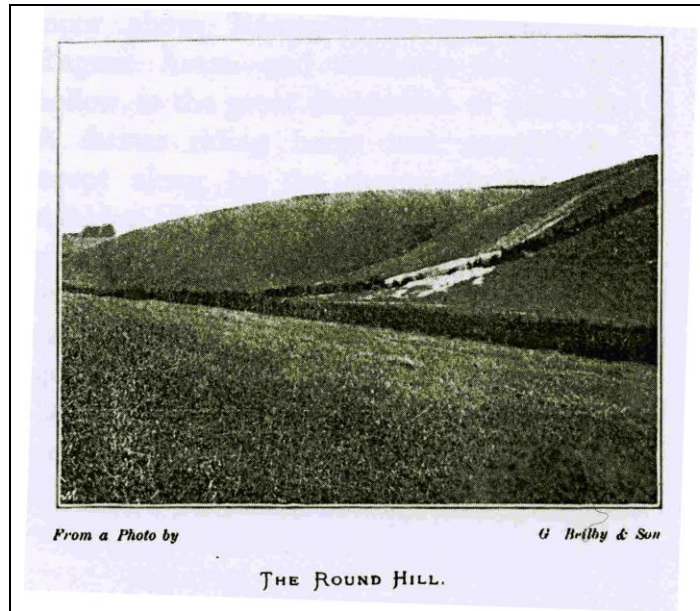
BR notes refer to Waterspouts in East Yorkshire but there are no exceptional rainfalls noted there (or elsewhere for that day). However there is a paper in 1888 Met Magazine for July p84 – not seen.

Workshop: The town experienced a severe but short lived (30 mins) thunderstorm. In less than a quarter of an hour from commencement many streets were flooded including Bridge Street, Eastgate, Victoria Square, new End Road and the cross roads near the Abbey gateway. Scarcely a tradesman in the town escaped damage. In some houses the water was 3 feet deep and extinguished the fires. Most of the cellars were flooded. [A waterspout was seen around the same time at Bilby in north Notts.]

The greatest fall was to the southwest of the town in the Sparken Hills area and between there and Whitwell. The water rushed down a foot in depth carrying loads of rubbish. Low Town suffered most, Boundary Row, Langley Street, Abbey Street, Low town Street, and Cheapside, filling hundreds of houses from one to 3 feet in depth. The Golden Ball floors were a yard deep in water. In Creswell Street every houses was flooded to a great depth.

Langtoft: Though no contemporaneous newspaper reports were found, Hood describes a serious localised flash flood when a waterspout was observed approaching from the sea, which burst west of the village on Round Hill causing 'a perfect deluge of water to tear down the hillside'. It rent the hillside for a length of 150 feet with holes about 7 feet deep and 3 to 6 feet in diameter, scouring out chalk, flint and boulder clay and destroying a fence. The flood now came the Briggate lane in a stream 40 feet wide and three quarters of a mile to the village street immediately flooding houses to a depth of 3 to 4 feet. Doors were burst open and household goods swept out and deposited in the village pond. The vicar tasted the water and found it brackish and assumed it had come from the sea. In addition to the Round Hill, adjacent fields were denuded of soil and crops washed away or smothered in soil from upslope.

Towthorpe: This area was also affected but with a more restricted area causing destruction to a large field of turnips, fences were torn up.



From Hood

13 Jun 1888

Thixendale 0.28 in 10 m

BR

5 Jul 1888

Sheffield daily  
telegraph 6 Jul

21 Jul 1888

Ingleton Halsteads 1.53 in 1 h 15 m

BR

24 Jul 1888

Huddersfield  
Chronicle 25 Jul

2 Aug 1888

Daily Gaz  
Middlesbrough

3 Aug

23/24 May 1889

Four thunderstorms in 30 hours

Sheffield Daily

Tel 25 May

Leeds Times 25

May

Sheffield: A man was struck by lightning at Broad Street and injured. 'The streets in some parts were flooded'. Thunderstorms were reported from various surrounding areas and a boy was killed by lightning at Spalding.

Huddersfield: A thunderstorm was reported and a house and occupants struck by lightning; no flooding was reported. [A man was killed at Newark and flooding was reported at Spalding and Lincoln]

Huddersfield: Flooding of houses occurred in various parts of the town including the Plough Inn Westgate, flooded to a depth of several inches. The storm lasted with much severity for just a quarter of an hour.

Sheffield: Streets were deluged 'to an extent not experienced for a long time'. One man was killed by lightning.

Mexborough, Swinton (between Doncaster and Rotherham): The streets had the appearance of a rushing torrent. Most of the houses were flooded several inches deep and much damage was done to crops trees and property.

Rotherham: Serious damage to property occurred at Whiston. Rain running down the hills swept everything before it. Houses were flooded and gardens ruined and stone walls washed down. The brook overflowed on Moorhouse Road and cottages were flooded and pigs had to be rescued.

Leeds: Houses were struck and people injured by lightning. No flooding was reported.

Bradford: several buildings were struck by lightning.

2 Jun 1889  
Lancaster Gaz. 8  
Jun  
Westmorland  
Gazette 8 Jun  
Manchester  
courier 8 Jun  
BR  
Yorkshire Post 3  
Jun  
Halifax courier 8  
Jun, BR

Widespread thunderstorms with  
large hail.  
Arncliffe 0.50 in 30 m  
Temperatures reached 75F

Wakefield: Drains were inadequate to take the flow and water came out of the grates at Kirkgate and the street was flooded from the bottom of Park Street to the Wakefield flour Mills. Shops and houses were flooded in a very short time. Various houses were struck by lightning.

Sheffield: The storm was most severe in the southeast of the town in the direction of Intake and Gleadless where hail and rain did much damage in gardens, washing young plants from their beds.

Dronfield: Lower areas were submerged to a depth of several inches and many houses had mud to a depth of 6 inches after the storm. Lucas foundry was submerged, putting out the fires. The water came down Snape Hill and crossing the road entered houses to a depth of 3 feet. At Town End at the bottom of Mangham Lane the waster was 3 feet deep.

Much of northern England affected by prolonged thunderstorms said to be the worst for several years.

Sowerby Bridge: At Sowerby Bridge the hailstones weighed 60 to the pound. Nearly every house had more or less glass broken. Numbers of poultry and pigeons were killed. Some hailstones measured from 3 to 4 inches in length and 2 inches in diameter and weighing from one to two ounces. A large number of cottages at the lower end of town were flooded.

In the Ryburn valley four miles south of Halifax the observer gathered a quantity of hailstones which measured 36 to the pound. Individual stones varied from a quarter to three quarters of an ounce and in diameter they varied from 1 ¼ to 1 ¾ inches and from three quarter to one inch thick. The stones were nearly all flat on both sides though some were round like marbles. The centre was opaque but the edges were clear ice. At Thorpe near Triangle 200 sheets of 21 ounce glass were broken in a hothouse and ribbed glass was smashed to atoms. Another report says one piece of ice weighed 4 ½ ozs and 6 together weighed one pound. (nothing similar has been experienced here since 1862 when there was a similar storm). At Ripponden a mile further south hardly any fell whilst at Halifax none were seen although there was a deluge of rain.

BR notes <Halifax>, Thorpe . Terrific Hail storm, lasting about five minutes. The stones were solid ice, and a quantity weighed, averaged 36 to a pound; they measured 1 ¼ in. to 1 ¾ in. in diameter, and 1 in. thick. The larger ones weighed ¾ oz. to 1 oz. each. Ribbed glass 1/6 in. thick, weighing 36 oz. per square foot was shattered, and in many cases the hailstones buried themselves several inches in the ground. Large hail was also reported at Slaidburn and Sedbergh.

Halifax: Two thunderstorms occurred and the water ran down the streets like a river. The hailstorm was most severe to the south of the town. great damage was done to windows at Greetland, Outlane, Stainland, Barkisland (said to be the size of a hens egg)

Keighley: the two sloping highways into town became like rivers in some cases ankle deep. Along North Street between St Anne's Catholic church and the Mechanics institute there was a lake which damaged neighbouring cellars. Many cottages and houses were flooded and various mills were damaged.

No flood or storm information found

24 Jul 1889  
BR

Thixendale 1.40 in 50 m

6 Aug 1889  
BR

Holmfirth Yateholme 0.85 in 40 m

No flood or storm information found

8 August 1889

Thunderstorm  
Hawes Junction (between R Ure and  
Garsdale)

Affected Garsdale in the upper headwaters of the River Lune.

Watkins &

Copy of letter from Yorks Post in Kendal Library (WDS 54/18) with reference to great flood in Garsdale and

Whyte (2007)	Daily 4.16" (c. 4.00 in 3 hours) (no other high totals) No rain fell at Garsdale Hall 4 miles from Hawes Junction.	appealing for subscriptions to relieve distress.
British Rainfall 1889 Yorkshire Post 16 Aug Westmorland gazette Aug 17 Aug 24 and 13 Aug 1949		WG has article about 60 year anniversary of flood. Flooding also occurred in Grisedale where the fences were nearly all lying flat. At Hawes Junction part of the Midland Railway embankment was washed away. In Garsdale the flood carried off bridges, trees and walls, filled cottages with water and mud. County bridges were dismantled; 8 stone bridges and 7 wooden ones washed away.
7 Sep 1889 BR	Holmfirth Yateholme 1.65 in 1 h 15 m	No storm or flood information found.
7 Oct 1889 BR Leeds Mercury 8 Oct	Persistent rain with storm winds Holmfirth Yateholme 1.65" in 75 minutes	The storm caused serious wind damage to property over the north of England
10 Jun 1890 BR	Ilkley 0.90 in 45 m	No storm or flood reports were found
8 Aug 1890 Driffield Times 9 Aug		Driffield: Cellars and street were flooded in many parts of town and in Westgate the houses were flooded.
11 Aug 1890 BR	A second storm at Driffield Driffield 0.89 in 1 h 6 m	Driffield: The streets were flooded in Driffield and Westgate became a miniature river. The water was above the knees of schoolchildren coming from school. Cellars, some used as living apartments were flooded.
30 Sep 1890	Grisedale 2.55" Seathwaite Vicarage 3.19" Monk Coniston Park 3.59"	Catterick: A farm worker was killed by lightning. Heavy rainfall North Lancashire and Lakes. Ribble also overflowed
British Rainfall		
25 Jun 1891 BR	Hebden Br 0.35 in 15 m	No storm or flood reports were found
18 Jul 1891 Leeds Times 25 Jul	Thunderstorm	Leeds: Cellars in low lying parts of the town were soon flooded. A horse was struck by lightning and killed on Hunslet Moor.
24/25 Aug 1891 Leeds Mercury 27 Aug Speight 1892	Persistent rain	The River Ure rose with alarming rapidity and the main road between Middleham and Leyburn became flooded. Strong winds blew down telegraph poles. (Swale also overflowed its banks). The storm was also reported at Richmond, Wetherby, Doncaster, Kirkbymoorside, Thirsk and Keighley. Speight reports that this flood was 'one of the biggest floods of the present century in uplands'
3 Jul 1892 Manchester Courier 5 Jul	Two houses badly damaged by lightning at Kirkheaton near Huddersfield (4 <sup>th</sup> )	Driffield: A waterspout burst over Cowlam in the Yorkshire Wolds, six miles from Driffield. Houses on both banks were flooded and two stone bridges badly damaged. Sheep were drowned and some mills were damaged. BG gives further details. At Driffield the storm lasted about one hour up to 7.30 pm. Approaching

BR  
Leeds Mercury 4  
Jul  
Dennis Hood  
(Waterspouts in  
the Yorkshire  
Wolds)  
Beverley Echo 5  
Jul  
Beverley  
Guardian 9 Jul

Meltham Harewood Lodge 0.28 in 9  
m  
Hebden Br 0.70 in 15 m (Hailstones  
¾ to 1 inches in diameter)  
Thixendale 1.05 in 1 h 30 m  
Wakefield Stanley Grange 0.63 in 50  
m

10.00 pm a farmer rode into town to warn residents of an approaching flood and to clear their houses as the water was rushing down the dale in a mighty volume. The flood arrived soon afterward and spread on all sides; all the houses were flooded to 3 feet or more. Bridges at Bridge Street and New Street were partially demolished. Approaching the town the water passed from the Scarborough to the Kilham road where it met and flooded the first cottages, bursting their doors and carrying off furniture. The flooding extended as far as the Riverhead where the stream enters the Driffield Canal. The Blue Bell was flooded. North of the town where the beck rises, huge holes had been scooped out in a gully 8 feet across and 6 feet deep. The receding flood left a deposit covering growing crops. Holt's brewery storeroom was flooded and neighbouring grounds much damaged.

Langtoft: Damage done in Driffield was a fleabite compared with Langtoft. The waterspout in the vicinity of Sledmere appears to have burst between six and seven o'clock on a Sunday evening. Sowerby's farm at the heart of the village was flooded to a depth of 5 feet; 200 fowls were drowned. A horse and pigs were washed away and 21 beehives.

Barnsley: Streets were flooded. Houses were struck in Honeywell Street and damaged.

Beverley: The storm here had heavy rain and hail but was of short duration. One house was struck by lightning but there were no reports of flooding.

Thunderstorms at Hebden Bridge and in East Yorkshire. Hebden bridge 0.70" in 15 mins as hail. The great storm which caused the flood at Langtoft skirted the Beverley district. A Cloudburst at Langtoft caused floods and great damage to bridges and other property. At Wetwang a river 2 to 3 feet deep and 60 yards wide ran in a dry valley bottom. This storm yielding much rain in a short time caused flooding at many places and drains and sewers were burst at Manchester, Castleford and Leeds.

Further details in Met Magazine Sep 1892 p 122 and Met Mag July 1892 p 82

QJRMS Vol XIX p4

South Milford Rectory Distant T at 4 p.m., a violent storm bursting about 5.30 p.m., with the sound of an express train; violent and destructive hail, much lightning chiefly in the upper region; tropical rainfall in 30 min. 1.35 in. Beverley, E. R. Asylum The great storm which caused the flood at Langtoft skirted this district and could be seen between 3 p.m. and 7 p.m. passing from S.W. to N.E. with much T. — Driffield, Beverley Road Waterspout, flood and very severe TS at Langtoft. Driffield TS with heavy rain, and cloudburst at Langtoft causing floods and great damage to bridges and other property. Wetwang. A river two to three feet deep and 60 yards wide ran in the dry valley bottom from Huggate. Thixendale Terrific TS, in 1 ½ hours from 6 p.m. 1.05 in. fell, washing soil and seed turnips in large quantities from the hills into the dales. Baldersby Large hailstones and heavy rain.

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.

Leeds: The storm was brief but with exceptional severity and briefly accompanied by hail. In a quarter of an hour it flooded the streets. Much damage has been done to houses in Oxford Row, Park Lane, St James's Street, Lower Leighton Place and Great George Street. In many cellar kitchens the water was several feet deep with furniture floating about.

Bradford: several sewers burst



Castleford: The rain with hail caused the whole town to be quickly flooded. Hail fell for over half an hour. The approach to Lock Lane Church was cut off. Scores of houses were flooded and the drains in Bridge Street burst. The whole of the Potteries and Wheldale Lane were flooded. Twelve houses in Whiddops Yard, Bridge Street were flooded half way up their kitchens.

Hebden Bridge: The rain was accompanied by hail. Roads from the hillsides were converted into rivers and some of the roads were washed up to a considerable depth. Water entered a house at Fostermill and at Hollins a large wall was washed into a greenhouse. Houses were flooded in Brunswick Street.

Ilkley: A woman was killed whilst riding a tandem with her husband.

Yeadon: There was a very heavy fall of rain and hailstones and the streets and some houses in the lower part of town were flooded.

Wakefield: The storm was accompanied by very large hailstones and gardens were badly damaged.

A cloud burst on a hill to the west of Langtoft, occurred on almost the same spot where the waterspout of four years earlier had fallen, gouging out two great fissures in the chalk, and rushing along the valley of Briggate towards the village. Mr Bell, schoolmaster at the time of the flood, described the scene: 'The water forced its way across the Nook and made its way down Back Street. It forced in Mr Woodmansey's front window, and in a moment filled his house. It soon forced the back door out, and then took away a great part of his furniture. A joiner's shop belonging to him was washed clean down, and all his tools and stock of wood carried off.' A modern drainage system means that the village rarely floods these days, but the village green, known locally as 'The Pond' though it was filled in many years ago, shows signs of its former glory whenever there is a heavy rainstorm, and a decent fall of snow, combined with the winds so common to the Wolds, can still cut the village off from the outside world.

Colin Clark(Ref below) uses historic flood data to improve flood estimates for Langtoft in east Yorkshire. There is no gauged record. The catchment area is 9.4 km<sup>2</sup> and the bedrock is chalk. The FEH and ReFH 100 year estimates are ~1.0 cumecs. He has found historic flood records for 1657, 1853, 1888. 1892, 1910 but none within living memory. His estimates based on level data for 1888 are 11.6 to 17.3 for 1888 and 34 to 42 for the 1892 flood. Photographs show cottages destroyed.

He estimates the rarity of the 1888 and 1892 floods by considering joint probability of Rf and SMD. (I think there is a conceptual problem here. 1. He says that storm and flood return period are equal when soils are at field capacity; is this true? 2. He uses the probability of SMD for a particular date rather than for the whole year. Hence his estimates give bigger SMD multipliers for summer floods with positive SMD than for winter storms with 0 SMD. 3. There is no scope for a SMD multiplier of less than 1.0, ie RP less than 1 year.)

He estimates rainfall for 1888 and 1892 by reversing UH and SMD

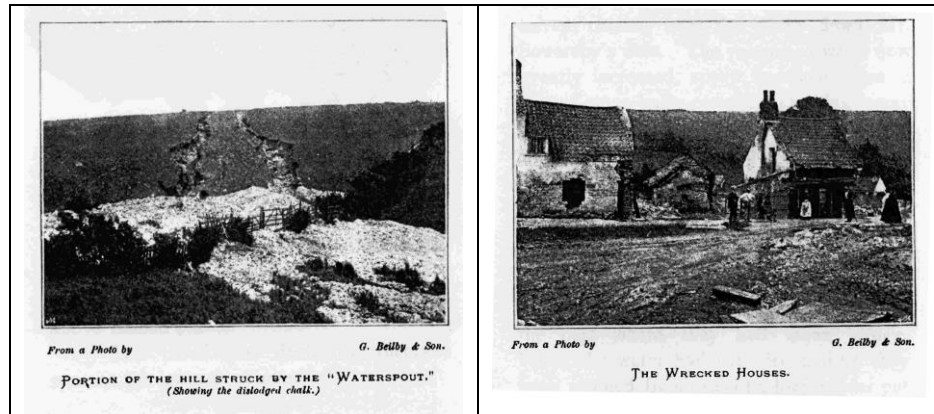
Note below on another Driffield flood in May 1910

#### References

Hood D. (1892 reprinted) Waterspouts on the Yorkshire Wolds, Cataclysm at Langtoft and Driffield, Fawcett, Driffield.

Clark, C. (2007) Flood risk assessment, International Water Power and Dam construction





14 Oct 1892  
BR

Widespread and persistent rain  
without thunder

Drifffield Beverley Road 2.09" highest recorded  
Wetwang 3.00 in 36 hours

Widespread prolonged rainfall over West Riding causing flooding in the Aire Valley. At Kirkstall station the water stood 15 inches above the rails. At Horsforth 6.45" in 3 days.  
Also high totals at Aysgarth and Leyburn (Ure valley) and Richmond 3.60 in 1 day.  
Floods at York on 16th said to be the greatest flood for over 60 years.

23 Jun 1893  
BR

Northallerton 1.85 in 1 h

Dewsbury: The Market Place was flooded

Ingleby Greenhow Vicarage. Downpour of large hail, the effects persisting till winter; many apples were knocked off the trees, and the rest scarred and almost wasted, while the leaves were everywhere riddled.

2 Jul 1893

Wakefield. The Grammar School struck in the afternoon.

BR

Doncaster: TS between 5 and 6 p.m. The Workhouse struck by lightning.

Sheffield Daily

Leeds. TS at 2 p.m., and in evening, three houses struck.

Telegraph 3 Jul

Bradford. Police sergeant struck and much injured while sending a telegram.

Sheffield: A large number of cellars were flooded at Hillsborough while the Don and other streams rose rapidly. Buildings including a church were struck by lightning. At Hillsborough the hail was as large as peas. A farmer was killed by lightning.

3 Jul 1893

Thunderstorm

Lancs Evg Post

Bradford Exchange ½ inch in 1 hour;  
1/3 inch in 15 minutes

4 Jul

Penistone: The rain lasted nearly 2 hours and many houses were flooded.  
Leeds: the storm lasted 2 hours. Many buildings were flooded and large hailstones fell. A pub in North Street was damaged by lightning. Hailstones were as large as marbles. Two people were killed by lightning. Cellars were flooded in Oxford row, Oxford atreet, St James Street, Park Lane, Portland Street and Blundell Street. Water was a couple of feet deep in cellar kitchens and furniture was floating about. In the Potternewton district, houses were flooded at the bottom of Back Brandon-grove where one house was flooded to 4 to 5 feet. Cellar kitchens were also flooded in Ash Grove and streets off Victoria Road Headingley. Cellars were flooded at the White Lion Hotel.

Manchester

Bradford: Oak Lane Manningham the sewer was surcharged and forced the road up' the rain here was heavier than at the Exchange. Mills cellars and houses were flooded. Three houses were struck by lightning. Houses in Otley road and Barkerend Road area were flooded

courier 4 Jul

BR

York Herald 4 Jul

Leeds mercury 4

Jul

Pudsey: Rain with hail occurred for an hour and a half. At Albion Mills and Gibraltar Mills the fires were put out

by the rapidly rising water. At Roker Lane Mills the workers had to leave by the second storey window. The water ran like a river through Lowtown Station and many houses were flooded.

Dewsbury: The Market Place was flooded and many cellars and shops adjoining. Severe hail accumulated in piles when the storm was over.

Pontefract. A farmer killed at Kellingley at night.

Doncaster. Very heavy rain in evening, cellars flooded. Eight sheep killed by lightning.

Bramham, near Wetherby, Yorks. R in a field was 2ft. deep.

Boroughbridge: Some streets were flooded to 18 inches and several houses were flooded.

Tadcaster: The storm continued for one hour, the streets were flooded. Rain was accompanied by hail.

Six sheep killed at Harewood, two bullocks at Tockwith, one cow at Weeton, one at Kirk Deighton, and one at Long Marston. Pony killed near Harrogate.

Richmond: Hailstones some as large as bantam's eggs fell (See Swale Chronology)

York: Two storms occurred during the afternoon. Houses were struck by lightning. No flooding was reported.

Goole: Hailstones were as large as pigeon's eggs falling for 15 minutes. The streets were completely flooded.

Windows were broken in the Jolly Sailors Inn by the hail. Crops were badly damaged.

Thorne: Few houses escaped without broken windows from the hailstorm.

Selby: The heavy hailstorm did great damage to crops and glass.

Snaith (W of Goole): The wind blew in tremendous gusts and hail stones fell as big as large plums without stopping for three quarters of an hour. Hardly a single house escaped breakage of windows.

Hesk and Hensall: Great damage was caused to cottage windows.

Tadcaster: the hail was as large as marbles. The first storm which flooded the streets to a depth of 6 inches lasted more than an hour was followed by more storms lasting half an hour.

Harrogate: The large rain drops were followed by a hailstorm lasting a quarter of an hour with hailstones reaching the size of hen's eggs causing the destruction of thousands of panes of glass. The rain quickly flooded the lower part of the town particularly Low Harrogate near the George Hotel and at the base of Alexandra park. Churches hotels and houses had windows destroyed. Greenhouses were damaged and tomatoes cut to pieces. A cow was struck by lightning and killed and people were stuck and injured. An enormous amount of refuse and sand had to be cleared away after the storm. A later estimate suggests hundreds of thousands of panes broken.

Wetherby: The hail did immense damage to the corn and glass. A valuable horse was struck and killed as well as other animals. No flooding was reported.

<Bramham> (Wetherby): Hail up to pigeon's egg size was heaped 60 cm deep.

Keighley: A severe storm affected the Worth valley. Houses were struck and animals killed in the Haworth and Keighley areas. In Keighley the sewers were soon filled and flooding occurred in the Cavendish Street area

8 Jul 1893  
Lancs evg post  
Hull daily Mail  
10 Jul  
York Herald 10  
Jul

Baldersby 1.33 in 2 h

10 Jul 1893  
Yorkshire post  
11 Jul

5 Aug 1893  
BR

9/10 Aug 1893  
Sheffield Daily  
Tel 11 aug

Beverley Asylum 1.00 in 1 h 15 m

Widespread thunderstorms in  
England but damage from lightning  
rather than floods reported

Sheffield: The storm lasted nearly 3 hours. Buildings were struck by lightning.

Leeds: Some low lying shops on Marsh Lane were flooded and also a shop in duke Street. Where the water was 2 feet deep.

Leeds Times 12

Aug

2 Jul 1894

BR

25 Jul 1894

Lancs Evg Post

26 Jul

BR

15 Aug 1894

BR

26 Jun 1895

Lancs Evg Post

27 Jun

BR

26/27 Jun 1895

Manchester

courier 28 Jun

Yorkshire Evg.

Post 27 Jun

Yorkshire Post

27 Jun

Knaresborough Farnham 0.45 in 15 m

Thunderstorm

Wakefield Stanley Grange 0.37 in 10 m

Tickhill Sandbeck Pk 1.00 in 30 m  
Wakefield Stanley Grange 1.04 in 1 h 45 m

Wath on Dearne 1.33 in 2 h

Beverley Asylum 0.25 in 20 m

Middleton on the Wolds 2.00 in 30 m  
Meltham Harewood Lodge 1.13 in 25 m

Hebden Br 1.00 in 1 h  
Sowerby Br 3.61 in 2 h 30 m  
Halifax Lib 3.04 in 3 h

Middleton on the Wolds 2.00 in 30 m  
Hebden Br 1.00 in 1 hr

Todmorden: At Todmorden and Cornholme the river overflowed and many houses were flooded.

Tickhill reports great damage to roads and growing crops.

One house at Bradford, and several houses in Sheffield were struck. Floods occurred at Bacup, Sowerby Bridge, and Todmorden.

Sheffield: Rain fell for 3 hours and many streets were flooded and rendered impassable; it rushed along with great rapidity sometimes 3 feet deep. Many businesses and houses were flooded. At Walkley and Broomhill the water burst the sewers and forced the roadway up for a distance of 100 yards.

Meltham, Harewood Lodge Very severe TS, with the most torrential rain recorded in 15 years. In 25 minutes, from 4.40 p.m., 1.13 in. fell with hailstones half-an-inch in diameter; at Slaithwaite, 3 miles N.W., they are said to have been large enough to cover a crown piece. At Royd Edge, nearly a mile S.S.W., the fall was barely half as much. Thixendale Heavy TS from 5.30 p.m. to 8 p.m. Ewe and lamb killed by lightning.

Dewsbury: In the Mirfield District a woman went to the basement of a mill to escape the storm but was overcome and drowned by a sudden rush of water. Seven others had narrow escapes. Two houses in the neighbourhood were completely destroyed. The lower portion of the Market Place in Dewsbury was flooded to the depth of 1 foot and some cellars of hotels.

Normanton: Two miners were killed by lightning on the way home.

Leeds, Horsforth: A small girl was killed by lightning.

Bramley/Stanningley: Butler's Foundry was flooded to a depth of several feet. A number of houses at Bramley were flooded.

Halifax: The storm continued for several hours and the streets were quickly under water. Many houses and shops were flooded especially in crown Street and Woolshops where some of the basements of large shops were under 2 to 3 feet of water. Houses at Old bank Bottom suffered most. The road near Baldwin's Mill was like a river and impassable.

Huddersfield: Many cellars were flooded in the centre of town and in low lying areas. At Kirkheaton a sewer burst and several cottages were badly flooded.

Sheffield: Rain fell for 3 hours. Many streets were flooded and rendered impassable with some being three feet deep, houses and businesses were flooded. At Walkley and Broomhill the sewers burst and the roadway was forced up for a distance of 100 yards and adjacent premises were flooded.

Hull: the storm lasted for 5 hours and people were injured by lightning but no flooding was reported.

Bradford: Partial flooding of some low lying streets was reported.

Rotherham: Cellars were flooded.

19 Jul 1895

Meltham Harewood Lodge 0.48 in 26

BR 25 Jul 1895 BR	m Wakefield Stanley Grange 0.35 in 6 m	<p>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).</p> <p>Wakefield, WaltonHall 2.32 in the greatest fall in 20 years. Wakefield, Stanley Grange . Five severe TSS between 8a.m. and 10p.m total 2.15 in of which in 6 minutes ending 8.13 p.m. 0.35 in. fell. Oughtershaiv Hall Exceptional, 3.23 in. in 24 hours. Aysgarth Vicarage Daily rainfall 2.97m., the heaviest fall ever recorded in summer, causing heavy floods on 26th which carried away many acres of hay.</p> <p>Severe flooding on North York Moors (See Rye chronology)</p> <p>River Wharfe: The river overflowed its banks. Three cows were killed by lightning.</p> <p>Bradford: In Barkerend Road and the lower part of town houses and businesses were flooded. Several houses were struck by lightning.</p>
27 Jul 1895 BR	Scarborough 0.76 in 27 m Aysgarth Vicarage 2.97" (highest ever in summer causing heavy floods on 26 (in Ure) which carried away acres of hay. Oughtershaw hall (IX) 3.23" Thunderstorm	<p>Rotherham: the rain fell in torrents and the wind howled and destruction was brought about wholesale in 5 minutes. Property was damaged and large trees uprooted. It occurred over a narrow strip. No flooding was reported.</p> <p>Parkgate: A cyclone struck here also with similar wind damage</p> <p>Chesterfield: Some of the shops on the High Street were flooded and also on Low Pavement.</p> <p>Eckington: Shops were flooded and also at Holbrook and Beighton.</p>
10 Aug 1895 Sheffield Daily Telegraph 12 Aug		<p>Worksop: The combination of rain and hailstones blocked the sewers so that hundreds of houses and business premises were flooded. The houses in Low Town, Abbey Street, Building Ground, Sandy Lane, and Bridge Place had in many places 4 feet deep in their basements. Most of the cellars were filled some to capacity. Watson Road, Bridge Street and Carlton Road and Sparken Hill were like mountain torrents. East Gate and Victoria Square made a large lake. The Golden Ball Hotel basement had four feet deep water as it rushed out of Victoria Square. Cheapside and the lower part of Potter Street and Newcastle Avenue were also deeply flooded. The water running down Blyth and Carlton Roads reached the railway crossing of the M S and L station where the water was a yard deep between the platforms.</p> <p>Thorpe Salvin (nr Worksop): The flood took down walls. The dam at Top Hall burst and a number of pigs and other beasts were washed away and drowned.</p> <p>Carlton in Lindrick, Welbeck, Cresswell, Whitwell: Great damage was done, a policeman injured by lightning, a horse killed,</p> <p>Barnsley: A thunderstorm lasted half an hour and streets were flooded. A reservoir outlet was blocked and the water overflowed into Wilson and Longbottom's Foundry where the water rose 4 feet 6 inches in the boiler house.</p> <p>Leeds: Several houses were destroyed by lightning and a man seriously injured.</p> <p>Harrogate: There was flooding in the lower portions of the town notably in Cheltenham Parade and Lower Harrogate.</p>
4 Jun 1896 BR	Daily rainfall Bradford Hewenden resvr 3.66	<p>Worksop: Another thunderstorm lasted 2 hours and some of the places flooded before were flooded again.</p> <p>Sheffield: A thunderstorm caused lightning damage but no flooding was reported.</p> <p>Wensleydale: The storm was preceded by the fall of large lumps of ice and some at Aysgarth were an inch and a half long. They have done great damage to gardens and fruit trees. No flooding was reported.</p>
8 Jun 1896 BR York Heerald 8 Jun	Leeds Elmete Pk 1.36 in 50 m	

16 Jun 1896 Huddersfield Chronicle 17 Jun		Brighouse: A severe storm was experience in the sowerby Bridge and North Dean districts after a period of very hot sunny weather. Several streets were flooded and the drains were incapable of carrying the flow. A school in Raistrick was struck by lightning. Storms were also reported at Doncaster and Worksop. Cellars in many parts of Doncaster were flooded.
26 Jul 1896 BR	Thixendale 0.33 in 20 m	
12 Sep 1896 Sheffield Evg tel		Worksop: A thunderstorm lasted an hour and a half. Many streets were quite impassable. Cellars in the lower portion of the town were flooded to a great depth.
14 Sep		
28 Jun 1897 Sheffield independent 30 Jun		Sheffield, Walkley: Two houses were struck by lightning. Wakefield: Storm damage by lightning was also experienced. No flooding was reported. Leeds: Half a dozen houses in Beza Street and Red Yard, Hunslet were flooded due to insufficient capacity of the sewers.
Yorkshire Evg Post 29 Jun		
30 Jun 1897 BR	Tickhill 2.60 in 1 h 20 m	Oughtershaw Hall A tremendous thunderstorm occurred on the hill top between Arncliffe and Oughtershaw. The river two miles below Oughtershaw was in full flood, whilst at Oughtershaw itself no rise was visible.
5 Aug 1897 BR	Austwick Crows Nest 0.78 n 45 m Daily totals MalhamTarn 2.90 Arncliffe Vicarage 2.75 Oughtershaw Hall 2.62 Baldersby 0.40 in 20 m	
6 Jun 1898 BR		
21 Jul 1898 BR	Sandbeck Pk 2.29 in 6 h Heavy thunderstorm on 22 <sup>nd</sup> with daily totals up to 3.18 at Doncaster Baldersby 0.90 in 30 m	
29 Jun 1899 BR		
1 Jul 1899 BR	Middleton on the Wolds 0.66 in 20 m	
12 Jul 1899 BR	Widespread severe thunderstorms esp in N Yorks (See Swale) Doncaster Wadworth Hall 0.77 in 30 m	Doncaster, Wadworth Hall Hailstones a quarter-of-an-inch in diameter smashed the vacuum radiation thermometer and did much damage. Goole: A labourer was killed at nearby Sykehouse.
Sheffield Independent 13 Jul	Hull Pearson Pk 1.14 in 40 m	Hull: Many streets were laid under water the most serious being on Charles Street. Driffild: The storm flooded streets, cellars and houses
Yorkshire Post 13 Jul		Wrawby (N Lincoln): Rain flooded the roads and tore up the pavement in places. Horses were killed by lightning.
Hull Daily Mail 13 Jul		Barton (S of the Humber): Scores of houses were flooded many of them to a depth of a foot. At Newport Stores the water was more than a foot deep. Thorne: Three men were struck by lightning and injured. In another incident a man was killed. Hail of a

18 Jul 1899	Thunderstorm
Driffield Times	
22 Jul	
12 Jun 1900	Thunderstorms on successive nights with preceding very hot weather
Manchester times 15 Jun	BR observers note thunderstorms at Meltham, Goldborough Hall, Knaresborough and Baldersby
BR	Thunderstorm
12 Jul 1900	Bradford nearly 1" in 20 minutes
Lancs Evg post	Ilkley: 3.75" in 1 h 15 m
13 Jul	Ardley resvr 2.07" in 1 h 22 m
BR	Leeds Horsforth 2.00" in 1h 30 m
Leeds mercury	Wakefield Stanley 2.17" in 1h 55m
13 Jul	Bolton abbey 2.00" in 2 h
	Bradford Manningham 3.11" in 6 h
	The temperature reached 86F in London.

considerable size fell.

**Rotherham: Hailstones as large as walnuts fell.** In a few minutes the streets were turned into rivulets. Cellars were flooded in the lower part of the town.

Doncaster: Heavy rainfall for half an hour casued flooding of some houses.

Worksop: Rain was accompanied by large hailstones.

Whitwell: **Hail fell as lumps of ice and all the windows facing the storm were broken** and the houses flooded. In some cases the water rushed in the back door and out the front.

Silkstone: One man was killed and another seriously injured.

Hunmanby: The road from Hunmanby station into the town was swept clean and Kilham road was bestrewn with roots and mud. Floods came down in streams from the Fordon and Hunmanby Hills. Several sheep were washed away and drowned. The water in some places was more than 3 feet deep.

Sheffield: the storm lasted for 6 hours through the night. Two people were killed by lightning.

Very high rainfall in the Aire and Wharfe valleys

Ilkley: A huge volume of water flowed down from the moors. A young man was killed by the collapse of a building.

Keighley: Works were stopped due to flooding. Several houses were struck and damaged by lightning. At Damside water lifted up the pavement and water spouted up like a great spring. The flood rushed down into 'Quebec' and flooded cottages before finding its way into North Beck. Cellar dwellings in The Walk and other low lying places were flooded. Basements of the Liberal Club, the police station and some of the houses on Scott Street were invaded.

Bingley: The Britannia Mills in the Dubbs district was flooded. One of the mains burst in Whitley Street and flooded the Whitley Sawmills and the Langdale Mills. At the lower end of town the Brown Cow Inn and several cottages were flooded as well as England's Corn Mill. The river rose to a great height. Engine rooms at Sharp's mill in Chapel Lane were flooded. Cottages were flooded at Crossflatts and filled to a depth of 18 inches with sand. Two footbridges were carried away at Cottingley and at other adjoining villages bridges were carried away and cottages flooded.

Morton: The flood came down the valley below the Sunnydale Reservoir and flooded Wright's Mills and carried away the gable ends of two cottages. It carried away Hebble Bridge thus cutting off connection with the village of Mickethwaite. The water carried boulders and large trees towards Ryshworth Farm which was flooded. Walker's Mill at Castlefields was also flooded.

Bradford: The centre of the city was flooded. From the Midland Station to the Town Hall the streets were covered by 2 feet of water, the sewers and drains being altogether inadequate. Cellars were flooded including Watson' Bros in Market Street

Pudsey: All the low lying parts of the town were flooded. A mill and a warehouse were struck and damaged by lightning. The sluggish stream alon the Tong and Heugh valleys became a raging torrent and a string of lakes were created, some hundreds of yards wide.

Brighouse and Elland: Streets were flooded and buildings damaged by lightning.

Wakefield: The Ings beck overflowed and streets and roads resembled lakes and many houses and businesses not previously affected were flooded.

Shipley: Considerable damage was done to buildings along the Aire and Bradford Beck. The combing shed was flooded at Saltaire Mills. Houses at Lane Bottom were flooded and at Baildon Bridge Cundall's machine works were brought to a standstill.

British rainfall has a cover photo of Ilkley in Back Middleton road, a map of the area of Intense rainfall and a photo of Hollybrook Garden and Chapel Lane and a 7 page description.

#### THE ILKLEY FLOOD OF JULY 12-TH.

BY H. R. MILL, D.Sc., LL.D.

THE very heavy rain which fell in central Yorkshire during a thunder storm on July 12th produced floods in several of the towns in the area affected and wrought devastation in the well-known health resort of Ilkley to an extent that has rarely been exceeded. Ilkley lies on the south side of the river Wharfe, which is about 220 feet above sea level where it passes the town, and the houses extend up the side of the valley on the slopes of Ilkley Moor to a height of 700 feet above the sea. The moor is part of the great stretch of wild upland known as Rombly, or Rombald's, Moor, which separates the valleys of the Wharfe and the Aire and rises along a central ridge 14 miles south of Ilkley to a height of 1323 feet. From this moor four small streams flow northwards through Ilkley, the largest (it is only a mile and a half long) being the Spicey Gill, or Parish Gill Beck, which runs through the middle of the town. The Keighley road coming over the moor from the south-west crosses this stream by a bridge at a point about 700 feet above the sea and runs obliquely down the slope towards the east. Two hundred yards further down stream the Parish Gill Beck is carried in a culvert under Westwood Drive, running east and west at the level of about 570 feet; one hundred yards further down, the stream runs under another east-and-west road, and one hundred yards further under Queen's Drive. The insignificance of the brook in ordinary circumstances is sufficiently indicated by the use of culverts rather than bridges where it is crossed by roads. Between Westwood Drive and the road immediately to the north, Cherry Bank stands on the left bank of the stream, and a rain gauge is placed 100 yards from the beck, at an elevation of 600 feet above sea level and 1 foot 3 inches above the ground. It registered 5.40 in. on July 12th. On the right bank of the stream, opposite Cherry Bank, the grounds of Hollybrook border the beck. A rain gauge is also kept at Eaton Road, 550 yards north of Cherry Bank and on the same side of the beck. This gauge is 360 feet above sea level and 1 foot above the ground, and it registered 4.26 in. on the 12th. A third gauge is kept in Brook Street, rather more than half-a-mile north-east of Cherry Bank, 312 feet above sea level, and although it is 20 feet above ground, it registered 4.01 in. on the day of the storm.

A rainfall exceeding one inch in the twenty-four hours was measured over an area of 1000 square miles in Yorkshire and Derbyshire on July 12th, the western boundary being sharply marked and extending almost due north and south, not far from the meridian of 2° W., from near Arncliffe in the north, passing near Skipton, Halifax, Huddersfield, Glossop and Buxton, to a point west of Derby. The breadth of this storm area averaged about fifteen miles, as it extended to Matlock, Sheffield and Harrogate on the east. A rainfall exceeding two inches was measured over a somewhat irregular area of about 150 square miles, extending from twelve miles south-east of Leeds to five miles north-west of Ilkley. Within this area falls of more than three inches must have occurred over about 60 square miles in a narrow ellipse running from Bradford through Keighley on the

west, but on the east the boundary could not be defined on account of the absence of rain gauges in the immediate vicinity. The central area of heaviest rain was a narrow strip perhaps a mile and a half wide, running for nine miles almost due north from Chellow Dean, three miles west of Bradford, to Ilkley, where more than four inches was recorded at five stations and more than five inches at one, while there is reason to suppose that a cloud-burst took place on Rombald's Moor with a still heavier fall.

The heaviest falls are given below, arranged in order of magnitude, while on the accompanying sketch-map they are shown in their proper positions, though the figures are rather small.

The map shows the chief rivers, towns and railways of the district, the railways being shown by double lines connected together at intervals. The important features are the lines enclosing the areas within which more than 1 inch, 2, 3, or 4 inches of rain fell. Where data are wanting, these lines are broken.

It seems probable, from the way in which the damage at Ilkley occurred, that there was a vast and sudden precipitation of rain over the moor immediately above the town, and that the water ran off the entire breadth of the land as off a roof, the streams not sufficing to carry it away fast enough. The result was that every road was turned into a watercourse, and the torrents which swept through the steep streets of the town could not be stemmed, in some cases even by horses, for several hours after the worst of the rain had passed.

The circumstance that the area of heavy precipitation was a narrow band running from north to south led to the resulting surface water being shared by the Aire and Wharfe, and as both streams were very low at the time, they did not produce serious flooding in the lower parts of their course. Had the rain fallen entirely in the drainage area of one river, the damage must have been much more serious.

The actual rate of fall can be calculated from the measurements of Mr. Worfolk at Brook Street, Ilkley, who recorded 3.75 in. in one hour and a quarter, between 2 p.m. and 3.15p.m. i.e., a rate of 3.00 in. per hour an intensity never before recorded in this country as having been maintained for so long a time.

The appearance of the storm is vividly described by a local working man, who told a correspondent that "the clouds seemed to come down until touching the lamp-posts and then poured out solid water."

The storm appears to have begun in the west about noon, but its full fury was reached on Rombald's Moor between 2 p.m. and 3 p.m.

Mr. A. Wilson, of Eaton Road, Ilkley, sent an early notice of the storm and the destruction wrought by it to the Meteorological Magazine, where it was published in August, 1900 (Vol. 35, p. 97), and he has since supplied additional information and a collection of newspaper cuttings from which the following brief account has been compiled. To Mr. Wilson we owe the striking photograph of a house wrecked by the flood which forms our frontispiece. The water apparently filled up the rooms on the ground floor and the weight of accumulated water burst the corner of the house outwards. Two other photographs taken by the same correspondent are also reproduced. The upper one shows the destruction in Hollybrook Garden, the lower vividly portrays the severity of the storm for although it was taken on the following day a strong stream of water is seen still flowing through the house.

It must be remembered that while only a few points are selected for special notice, the washing of the surface of the ground, the ploughing up of the roads, bursting of culverts, destruction of bridges, and accumulation of silt and boulders in gardens and houses took place all along the slope of the side of the moor, above and in Ilkley, and also to no less an extent on the southern slopes of the moor near Morton. Taking the Parish Gill Beck alone, the first bridge where the Keighley road crosses it, was carried away, and hundreds of tons of



masonry and boulders were scattered over the adjacent roads, some parts of the Keighley road being covered to a depth of four feet by boulders, carried down from the moor, the largest of them measuring 4 ft. x 3 ft. x 3 ft., and weighing several tons. The whole of the valley of Spicey Gill above this point, though barely a mile in length, was completely changed, some parts of the deep narrow ravine were hollowed out, and greatly enlarged, while other parts were blocked up with the accumulated rubbish, and the stream was diverted. This must have been in large measure the direct work of the falling rain, as the gathering ground above the bridge which was destroyed measures less than one square mile. Where Westwood Drive crosses the beck, the water, rushing from the moor above, broke away the walls enclosing the grounds of Hollybrook, and rushing through the garden turned it into a chaos of smashed trees, and ploughed up walks, mixed and covered with boulders carried down from the moor (see the photograph). Most of the culverts through which the stream passes soon became blocked with rubbish, and caused the flood to accumulate until it forced a passage by cutting through the roadway. All along the course of the beck, and of the roads parallel to it, the same desolation was wrought, the ornamental trees lining the roads were either broken across, or their bark, and sometimes even the wood battered off by the stones swept along in the torrent. Lamp-posts were snapped across, and when the storm subsided trenches, many feet deep, were found to have been hollowed in the roadway. The bed of the stream itself was deepened five or six feet in the few hours during which the flood lasted. Where the beck passed under St. James' Road, the blocked culvert diverted the flood waters through a garden, which is described as being entirely washed away, and the next culvert lower down escaped a blockade, but burst up where it passes under Grove Road, and half the road-way fell in. Where the beck enters the central part of Ilkley it runs along the back of the houses in Chapel Lane. The cottages in the lane were flooded, the water pouring straight through the houses from back to front, filling the lower rooms up nearly to the ceilings, and sweeping much of the furniture into the street, leaving behind a mass of mud and filthy debris, which rendered the buildings uninhabitable. A local newspaper thus describes the condition of the cottages :

"To stoop and inspect these interiors is to have an impression of civilised cave-dwellers. It is necessary to stoop, for the mud which has filled the kitchens is banked high outside the vacant squares where windows should be. Then you may see a kitchen dresser or a cupboard lying on the floor, or rather on the mud, for the floor is some feet below, and not many inches above the mud you may observe everything in its place on the mantelpiece as though miraculously surviving an earthquake. In one kitchen you may see by stooping, and then looking up, an eight-day clock still placidly ticking on the wall, whether the hours be serene or not. Outside in the Lane the unlucky householders and their friends were busy during the following days getting as much mud as they could off articles that had been recovered, and may yet be of use, and sightseers, mostly women, were busy also getting as much mud as they could not help on to their dresses, in the endeavour to enter some of the submerged kitchens victims of idle curiosity."

At 4 p.m the swollen beck washing against the wall of Mr. Brogden's coach-building shop in Bolton Bridge Road, on the opposite side from Chapel Lane, caused a sudden collapse of the building, in which Mr. Brogden, junior, having delayed his escape for a moment in order to warn the workmen out of their workshop, was killed by the falling roof. So sudden was the catastrophe that it seemed at first more likely that the house had been struck by lightning, but this appears not to have been the case.

Further down the stream, in Back Myddleton Road, similar damage was done, and our frontispiece shows one

of the results. A local newspaper says :

" Some idea of the enormous quantities of boulders, sand and mud brought down from the moors and deposited in some of the houses may be gathered from the fact that out of Mr. Curwen's house alone, at the bottom of Church Street, no less than thirty tons of rubbish were removed, while seventy-two loads of similar material were carted away from the low-lying side-walk at the front."

Wray's Pleasure Gardens are situated on the flat ground where the Parish Gill Beck enters the Wharfe, and they were for some time entirely under water, the buildings being flooded. Everything was left covered with a layer of black mud from a foot to eighteen inches deep. The immense volume of detritus carried into the Wharfe built out a sandbank along the river front of the gardens, considerably modifying the course of the stream.

It would serve no useful purpose to follow the destruction caused along the other becks, or in the intervening streets. All were affected in the same way, if not always so seriously. Considering the extent of the disaster, it is amazing how little was known of it beyond the immediate neighbourhood. But if the impetuosity of the Yorkshire storm-water caused the damage in an incredibly short time, the sturdy independence of the Yorkshire character met it with the self-reliance and energy which were to be expected. Within a week, measures had been taken for restoring everything, and for reducing the risk of damage in any subsequent storm. The total damage to public property was officially estimated at £11,000; that to private property must have been very much greater, and the local newspapers spoke of £100,000 as no excessive estimate of the damage done in this one small town by the rain of a summer afternoon.

Hull: Following very sultry weather the thunderstorm flooded many streets.

Eckington: Several businesses were flooded. A woman was struck and injured by lightning.

The storm was reported in several other towns and villages including Gainsborough but with lightning effects rather than flooding.

Widespread persistent rain caused some flooding but not a 'flash flood'

16 Jul 1900  
Hull daily Mail  
16 Jul  
20 Jul 1900  
Sheffield Daily  
Tel 23 Jul  
3 Aug 1900  
BR

Middleton on the Wolds 2.44" in 8h

A cyclonic rain of considerable intensity, reinforced in some parts by local thunderstorms, yielded falls greater than any previously recorded occurring at several stations in Yorkshire.

21 Jul 1901  
Lancs Evg Post  
22 Jul

Thunderstorm following a drought of 20 days

Huddersfield: A party of Spiritualists was struck by lightning and 2 men were killed and several others badly injured.

Mansfield: Nearly an inch of rain fell in 24 minutes. Low lying parts of the town were flooded. The pavement was torn up in Church street. Animals were killed by lightning.

Workshop: Houses were flooded and lightning struck and damaged a number of houses

10 Aug 1901  
Manchester  
Courier 12 Aug

Thunderstorm accompanied by hail which blocked drains and caused local flooding.  
At Hull Parks and Met Observatory

Hull: Street gullies were inadequate to carry the water and many basements of houses were flooded. In the Sculcoates district which is the lowest in the city, water rushed into houses. Many tradesmen in other parts of the city had their cellars flooded. Beer cellars were flooded in pubs

Hull Daily Mail 12 Aug Beverley Echo 14 Aug	there was 2.87 inches in one hour	Wetwang: 1000 panes of glass were broken in the village by jagged pieces of ice. Many other neighbouring villages suffered similarly. Driffield: The streets were quickly under water and a good many houses were flooded to a depth of several inches. Thunderstorms were reported at several locations in Yorkshire and the Northeast but without reports of flooding in Yorkshire. Leeds: The storm lasted half an hour and hailstones of unusual size fell. A house was struck by lightning. Scarborough: Persistent thunderstorms caused flooding of basements.
26 Aug 1901 Manchester Courier 27 Aug 24 Sep 1901 BR 11/12 Nov 1901 BR <a href="http://eyeoncalderdale.com/history-of-flooding-in-calderdale">http://eyeoncalderdale.com/history-of-flooding-in-calderdale</a>	Thunderstorm  Wakefield Stanley 0.38" in 8 mins  Not a thunderstorm	  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 12 <sup>th</sup> the heavy rain continued in NW England and extended to Northumberland as well as southern Scotland and south to Derbyshire. (Complete BR rainfall list scanned) Todmorden: suffered immense damage. Todmorden, Fielden Hospital reported 'Heavy rain resulted in one of the worst floods ever known – many parts of the town were covered to several feet. 1.70" on 11th and 2.77" on 12th = 4.47" Walls between Callis Bridge and Hebden Bridge demolished. Footbridge over Calder at Stubbins washed away. Worst flood since 1866 in middle and upper reaches of the valley. No reference was found to heavy rainfall or flooding.
23 Jul 1902 BR 27 Aug 1902 Sheffield Daily Tel 28 Aug	Knaresborough 0.55" in 30 m  Thunderstorm	  Sheffield: First thunderstorm of the year. Half an inch of rain fell in an hour and temperature fell from 66.5F to 54F. Residents in the Rufford Road and Abbeydale road area were flooded including Broadfield Hotel where the water was 5 feet deep in his cellar. The water in the nearby road was 2 feet deep. Flooding also occurred under the railway bridge at Heeley. No reports of heavy rain or flooding were found in newspapers.
11 Jul 1903 BR 8 Sep 1903 Burnley express 12 Sep	Swinton 0.39" in 6 m    	  Todmorden: the river overflowed at several places and the main road was impassable. Hundreds of cellars were flooded. Hebden Bridge and Mythomroyd: the river overflowed and houses were flooded. The sewage works at Eastwood was under water. Callis mill and adjoining houses were flooded.
15 Oct 1903 Manchester courier 17 Oct 12 Jul 1904 BR 24/25 Jul 1904 Lancs Evg Post BR	Very widespread rain with some thunderstorms  Knaresborough 0.75 in 30 m  Thunderstorm after a long drought Huddersfield 3.10" fell between 7 and 10 in the evening	York: wharves, footpaths and gardens along the Ouse and Foss were covered with much flooding of land along the Derwent. The flood reached the Main Street in Old Malton.  Huddersfield: Heavy furniture was floating about in cellars in the H district. People were driven out of their homes Barnsley: A cow was struck and killed.

Sheffield Daily  
Telegraph 26 Jul

Slaithwaite Inglewood 3.69 in 2 h  
55m (2.36 in 1h)  
Huddersfield Cemy 3.40 in 3 h  
Huddersfield Golcar 4.85 in 5 h  
Hull 1.5 inches in 2 hours

Huddersfield: A heavy local TS took place in the town and environs of Huddersfield and was responsible for a considerable amount of damage both by flooding and by lightning. In all the lower lying parts much flooding of houses resulted and at one mill alone the damage was estimated at £2000. Railway and tramway traffic was in many cases interfered with. The canal, after overflowing during the night, burst its banks near Aspley Place, and caused a serious increase in the flooding. Several fires were reported as the result of lightning and great inconvenience was caused by fusion of tramway and telephone wires. The heavy fall of rain did not extend so far as Marsden Moor, and the somewhat straitened water supply of the town was but little benefited. Hundreds of houses were flooded to a considerable depth and especially at Milnsbridge just outside Huddersfield where sewers burst. Debris covered tram lines and prevented movement. Worshippers in the Wesleyan and Baptist churches were imprisoned until a late hour. Houses were struck by lightning. Tubs and logs were hurled along the streets. A brook which runs under the Assembly Rooms caused the floor to collapse and a pianot fell into the brook.

Huddersfield, Golcar. The only TS of the year and the worst ever-remembered in the district. The storm was very local.

Sheffield: the rain water rushed along Brightside Lane from the Wellington Inn to 30 yards from the tram terminus where the water was 2 to 6 inches deep.

Hull: shops were flooded in Beverley road and Fountain road.  
Two miners sheltering under a tree were struck and killed.

31 Jul 1905  
BR

Thunderstorm  
Goldsborough Hall 0.82 in 1 h 30 m

28 Aug 1905  
BR

Huddersfield Cemy 1.54 in 30 m

No reference found to flooding on this date.

24 May 1906  
Yorkshire Post  
25 May

thunderstorm

Tadcaster: Houses adjoining the bridge in Tadcaster East Side were flooded. Two horses were killed and buildings struck.

17 Jun 1906  
BR

Ilkley Eaton road 0.50 in 4 m

31 Jul 1906  
Manchester  
courier 3 aug  
13 Aug 1906  
Leeds Mercury  
14 Aug and 16  
Aug  
Beverley  
Independent 18  
Aug (BG 1906  
missing)

Thunderstorm

Barnsley, Wombwell: Three miners were killed by lightning whilst sheltering under a tree which was struck.  
Bradford: Lightning damaged houses.

Hull: The downpour of rain and hail caused the streets to be flooded and all the traffic stopped for a time. Some of the hailstones were very large and simply sharp pointed masses of ice. Goole streets were also flooded.

Yorkshire Wolds: The storm laid bare a tract of country about 2 miles wide and a dozen miles long including the village of Kirkburn. Around the village Tibthorpe there was much damage to crops, as if the crops had been threshed. Hailstones fell as large as walnuts and many were as large as Victoria plums. In a few minutes nearly all the windows in the village facing west were broken. One which fell on the roof of a shed was said to be as large as a cricket ball. They remained on the streets until the following afternoon. A six year old child had his head bruised.

Beverley: The streets of Beverley were also flooded. Hailstones as big as 'good sized bullets' and pieces of ice

an inch long came down and great damage was done to glass, trees and crops. The storm did not extend beyond Milescroft.

Todmorden: Many cellars were quickly flooded.

11/12 May 1907  
Burnley express  
15 May  
24 May 1907  
Yorkshire  
Evening Post 24  
May

Thunderstorm

Leeds: The streets were running like shallow rivers. A decade ago a storm such as this would have flooded many of the cellars and warehouses 'but today Leeds is well drained so little or no damage was done'. However rainfall was reported as only 0.58 inch.

Otley and Ilkley: Cellars were flooded and water found its way into kitchens. Road surfaces were damaged and left with a coating of sludge.

2? Jul 1907  
Driffild Times 6  
Jul  
2 Jun 1908  
BR

Thunderstorm with hail as large as marbles

Some of the worst thunderstorms to hit the Wolds in 30 years occurred in the Fimber area. Two fields of turnips at Towthorpe were badly damaged. The rock was laid bare for about 80 acres and the soil rushed into the valley beneath. The soil was stripped up to a depth of 18 inches

Goldsborough Hall Heavy TS between 7 and 8 a.m. For a few moments there was almost total darkness, and nearly half an inch of rain fell in a very short time.

Leyburn In a severe thunderstorm at 8.30 a.m. a pony cart was struck by lightning, and the boy who was in charge, the pony, and a calf which was in the cart were instantaneously killed.

Wensleydale: Several cottages were demolished and three bridges between Askrigg and Aysgarth were washed away. Thousands of acres of land were flooded and Calby Hall and Mappa Hall were flooded. In one house a woman clung to hooks in the ceiling for some time to escape the flood. The railway embankment near Askrigg Station was washed away for 20 yards.

Askrigg: The town was flooded and it was said that every house had its lower rooms under water with furniture floating about. The event was compared with a historic flood at Hardraw Scar near Hawes. At the junction of the roads leading to Muker and Carperby a stone bridge had been carried away. **The first rush was described by onlookers as a wave of muddy water 6 to 7 feet in height.** Gardens were destroyed and trees uprooted and a whole house side swept away, furniture washed out through lower windows

Bainbridge: the village green resembled a lake and the road to Aysgarth much damaged. Aysgarth itself had little rain.

Wharfe: **A boy was drowned by a sudden flood when he and his companions were carried away.**

Skipton: Storm rainfall for 2 hours caused much damage. Eller Beck rising on Embsay Moor overflowed. It carried away two bridges on the Skipton Golf Course and rushed into the Long dam at Skipton Castle Woods where the bank gave way. On the Embsay Beck peak flow was estimated at 5 cumecs/ km<sup>2</sup>. The towing path on the Springs Canal gave way and the main volume of water was diverted into the canal. High Corn Mills were threatened by the flood. Several houses at Millbridge were flooded. The railways between Skipton and Grassington and between Skipton and Ilkley were submerged and traffic suspended. A dyehouse, Skipton Auction Market, a cabinet works, a coal yard etc were flooded. The water inundated Union Square where the water reached breast height. Eller beck smashed through Skipton woods demolishing bridges and carrying away tons of earth from the banks. The Round Dam burst creating a miniature Niagra leaving the walkway above suspended. Eller Beck engulfed Springs canal and running five feet above the normal level of the canal hit the town. Skipton Brewery cellars were floods and casks of beer carried away with the torrent.

4 Jun 1908  
Lancs Evg Post  
4/5 Jun  
Burnley Gaz 6  
Jun  
BR  
Yorkshire Post 5  
Jun, J Meteorol.  
Jan 1980

Thunderstorm  
Storm at Skipton said to be the worst in 42 years (1866)  
Embsay Moor 3.79 in 2 h 20 m  
Burnsall Rectory In about 2.5 hours, 3.70 in. of rain fell.  
Skipton Heavy downpour from 2 to 4 p.m., accompanied by T. About 4 p.m. there was a pause of about 5 minutes, and then a heavy shower for 15 minutes.  
At Skipton the storm was said to be centred over Rylstone Moor.

<Embsay>: Mill workers escaped being swept away with their mill which was totally destroyed and workers made redundant.

Grassington and Burnsall: Many houses were flooded from a storm which lasted half an hour. Pasture Road and Hatrington Lake were practically demolished with the tons of sand and boulders deposited on them. The area below Grassington especially the district about Hebden were greatly affected and Thorpe Fell seems to have been struck by a cloudburst and is scarred with beck courses with much material carried away. Hebden Beck carried away many stretches of roadway. The road between Pateley and Grassington was in one place flooded to a depth of 4 feet. At Burnsall several houses were flooded. Furniture was washed out of Bunker's Hill houses. Walls were thrown down

Ilkley: the Wharfe rose 5 feet in 10 minutes and two anglers who were wading managed with difficulty to reach the bank. Sheep on Ilkley Golf Course were washed away.

Otley: The river rose 7 feet in half an hour. Half a mile upstream from Otley Bridge 5 boys crossed dam stones to bathe. On returning the river suddenly flooded and carried away all the boys (except one who was dragged to safety by a fisherman). Four were dragged out of the river downstream; one was drowned.

BR notes that from 4 p.m. the flood in Embsay Beck rose rapidly, the period of maximum lasting about 10 minutes. By evening the stream had almost returned to its normal size. The rain gauge on Embsay Moor showed a fall of 3.79 in. for the 24 hours, but there is no record of how much of this fell between 2 and 4.20 p.m. It is, however, believed that it all fell in that period. At the reservoir under construction across Embsay Beck there is a discharge tunnel, 6 ft. 3 in. diameter, with rapid fall, through which all the flood passed. Owing to obstruction caused by a small culvert lower down, the tunnel outlet was submerged to a depth of 2 ft. 3 in. above the soffit of the arch. The entrance was also submerged to a depth of nearly 9 feet. By calculation, it is thought that the maximum rate of discharge could not have been less than 72 cubic feet per second from each 100 acres, and it was probably greater.

BR further notes: The effects of the torrents which carried off the great rainfall on Barden Fell, the centre of the area with more than four inches shown on the map, was described by Mr. A. Gilligan to the Yorkshire Geological Society, and he states that the channels cut out in a few hours by this storm were in some cases excavated to a depth of 20 feet in the solid grit, and that the breadth in some cases was 12 feet. The water-level rose 10 feet in Barden Beck, and much damage was done to the waterworks at Barden reservoirs, though the main retaining dams were too solidly constructed to give way. A well-informed journalist writing in the Yorkshire Daily Observer says :— " On one little lateral stream known as Kittlety Syke, where one of the Duke of Devonshire's private roads is carried by a culvert and bridge over the stream, the flood took away the whole as cleanly as one might cut a wedge out of a cheese. In Far Long Gill, another lateral stream flowing down to the reservoir on its south side, where the branch pipe-line already referred to is carried by a bridge over the stream, the flood took away the bridge, but happily did not carry the pipes with it. The jointing of these pipes was so well done that they have stood the strain themselves unsupported without showing any sign of giving way. By far the worst damage, however, has been done at the head of the Lower Barden Reservoir where the water from Barden Beck comes into it. During the height of the storm the debris brought down by the flood rapidly filled up the bottom of the residuum lodge, burst through the embankment, and so forced its way direct into the main reservoir, carrying with it an enormous mass of sand, estimated at something like sixteen thousand cubic yards in volume. The sand has spread out like a huge delta

at the head of the reservoir, and even under favourable circumstances as regards weather it will take at least four months to clear it out."

Another writer, speaking of the Skipton district says :—

"Eller Beck, which traverses the Embsay Moor water-shed and is fed by a large number of moorland streams, soon overflowed its banks. The volume of water increased to an alarming extent, and about four o'clock, after carrying away two bridges on the links of the Skipton golf course, the water rushed into what is known as the Long Dam, in Skipton Castle Woods. The banks soon gave way and the beautiful ravine, which has been admired by thousands of visitors, was reduced to a very sad state. At the Skipton end of the Long Dam is the Round Dam, from which the surplus water passes by means of a clough into a continuation of the Eller Beck Stream. The Round Dam was soon a seething mass of water which rushed over the banks. The banks themselves soon became undermined and gave way with a great thud."

Scarborough: The heavy rain was accompanied by big hailstones.

28 Aug 1908  
Lancs Evg post

Thunderstorm

29 Aug  
20 Sep 1908  
Burnley Gaz 23  
Sep  
Yorkshire Evg  
Post 21 Sep

Thunderstorm

Wharfedale: the river rose quickly and overflowed its banks flooding adjoining fields and the road between Otley and Burley. At Otley a number of low lying cellars were flooded and the sewers were unable to take the flow.

Todmorden: The river Calder overflowed its banks in the Calder valley area and the main road was impassable for a quarter of a mile. The water overflowed at Gandy Bridge and low lying property was quickly flooded. Residents were unprepared for the sudden inrush of water and scores of houses were inundated. A shop in Blind Lane suffered badly.

28 Jun 1909  
Sheffield Evg  
Telegraph 29 Jun

Thunderstorm

Barnsley: The storm lasted nearly 3 hours with large hail as well as rain. The hail created a great noise. Through the centre of the town runs a drain which at one time was an open stream known as Sough Dyke. With the rush of water the drain was surcharged and water came up from the inspection holes several feet into the air. Several streets were flooded and a few low lying houses were flooded. Roofs were damaged and spouts broken by the weight of rain and hail.

Barnboro': The Crown Inn was flooded and a heavy stone wall was thrown down.

Thurnscoe: The road from the village to the Hull and Barnsley station was flooded at one point to a depth of 3 feet. Dozens of cellars were flooded.

16 Aug 1909  
BR  
Hull Daily Mail  
18 Aug  
23 Sep 1909  
Yorkshire  
Evening Post 23  
Sep  
Yorkshire post  
24 Sep

Hull Pearson Park 0.60 in 20 m

Howden (N of Goole): Rain was accompanied by hail as large as filbert nuts. Several streets were impassable.

Halifax: There was a tremendous rush of water down the steep roadways; in Southowram Bank householders had difficulty in keeping water out of their houses. A rush of water down Range Hill caused flooding of some shops at the bottom of the hill.

Brighouse: The drains were incapable of carrying the flow and general flooding was caused but especially in the Raistrick district. Near Brighouse Station water poured down Huddersfield Road and Hooder Lane carrying refuse and flooding cellars of houses and businesses. There were floods between the station platforms. Several buildings were struck and damaged by lightning.

20 May 1910  
BR  
Hull Daily Mail  
20 May  
Yorkshire Daily  
Post 23 May

Malton 0.96 in 25 m  
Pickering 0.75 in 30 m  
Thornton le Dale 1.70 in 1 h (21<sup>st</sup>)

Bradford: A thunderstorm caused street flooding; no property was reported flooded.  
Thornton observer noted a cloudburst up the valley on 20<sup>th</sup> but little rain at his station then heavy rain the following morning.  
Goole: At Balne a cart containing two men was struck by lightning one was killed, the other rendered unconscious, but the horse escaped.  
Huddersfield: In a thunderstorm a golf caddie was struck and killed during the progress of a game on the Fixby Links.

Driffield: The flood of 1892 pales into insignificance in comparison to this event. The storm started at 4 am but after 20 minutes became extreme with rain then hail, then lumps of ice from a pigeons egg to a large walnut in size, tearing down trees and bushes. The hail lay in heaps 12 inches deep. Towards 6 the town was invaded by a devastating torrent. A farmer rode into town at breakneck speed to warn the people of the approaching flood. It was then tearing down Cowlam Dale sweeping all before it. On the experience of 1892, many took heed and fled from their low lying houses. They went pell mell to the north end of the town to watch the approaching avalanche of ice and water. The huge wave entered Driffield through Water Forlorn. In mere seconds the peaceful little streamlet inches deep became as the River Humber. The water rose and swept the streets for hundreds of feet on either side of the stream, right up to Bridge St and Middle Street stopping at the wall of the parish churchyard. In seconds the water rose foot after foot. Hundreds of houses were flooded to a great depth. Trees palisaded bridges and carrying soil which it deposited in homes of rich and poor alike. The waters flowed right up Bridge Street and across middle Street and stopped at the walls of the parish churchyard. 'At the same time three, five, eight and ten feet of water stormed in the hundreds of houses in the line of its havoc'. A child was drowned in a flooded house in Providence Row. Four of the six bridges were washed away and the Cattle market partly destroyed. At the Gas Works the floods extinguished the fires. So rapidly did the water rise that scores of half dressed men women and children were seen on the streets.

York: The culverts became quickly choked with the rush of water and the streets flooded especially in the Huntington Road area where the water reached 5 feet deep and narrow escapes from drowning were reported. At crambe beck between Castle Howard and Huttons Ambo stations water rushing down the hillsides washed the ballast from the line for a distance of several hundred yards and trains were delayed or diverted.

Kraresborough: The storm lasted an hour and a half and the streets ere flooded. Houses were damaged by lightning.

Three other people were killed by lightning in various parts of the country, Staffordshire, Ramsgate and the Midlands.

Leeds: Rain was accompanied by hail. The storm was most severe in Roundhay and Chapeltown. Sewers were inadequate and flooding occurred in low lying places. Some buildings were struck and damaged by lightning. The centre of town escaped the rain. Considerable damage was done to furniture in cellar dwellings and in Markham Avenue the cellars were flooded almost up to the ceilings.

Yorkshire Wolds: Further storms occurred on Saturday worse than on 20<sup>th</sup> and the worst in northeast Yorkshire since the great flood of 1878 (See rye chronology)

Driffield: There is serious damage to scores of cottages and their contents including 20 cottages in Providence Place. Lawns and gardens are covered with thick mud. Brick walls 10 to 12 feet high have been overturned.

21 May 1910  
Yorkshire Post  
23 May

Thunderstorm lasting one hour



8 Jun 1910 Sheffield daily Tel. 9 Jun Yorkshire Evg post 8 Jun	Thunderstorm	<p>Sheffield: The storm was said to be the worst in Sheffield for 17 years. Flooding occurred over a widespread area. The storm hovered over Sheffield for 4 and a half hours but with intense outbursts. Rainfall however was only reported to be <math>\frac{3}{4}</math> inch. Several people were struck and injured by lightning but there were no fatalities. Houses were struck. The flooding was especially severe in the Hunter's Bar and in the row extending citywards from Marden Road into Abbeydale road where the water reached 4 feet deep flooding the shops and beating up against windows. Water also flooded houses in the Endcliffe district. Flooding affected the Hunters Bar area with water rushing down Guest Road, Junction road and Hunter house Road. Along terrace Walk the flood tore up tons of soil which was deposited at the bottom of Junction road where many shops were flooded. Flooding also occurred in Sharrow Vale Road. Flooding of houses occurred on Eastwood road off Eccleshall road. During the day 500 loads of mud were removed from the roads.</p> <p>Crookes and Ranmoor districts were badly affected with a large pool below Western Bank on Northumberland Road. The road was damaged at Crookesmoor Road. Many houses were flooded at the junction of Fulwood and Crooked Road. A sewer burst in Riverdale Road Ranmoor and badly damaged the roadway whilst there was serious flooding in Angus Square off Summerfield street.</p> <p>Barnoldswick: Houses in Walmsgate were flooded to a depth of several feet. The Primitive Methodist school was flooded and a layer of mud left on the floor. Damage was done to goods in shops in Albert Road and weavers were unable to continue work at Butts Mill.</p> <p>Barnsley: Many cellars and houses were flooded.</p> <p>Doncaster and Chesterfield: The storm was reported without reference to flooding.</p>
9 Jun 1910 Yorkshire post 10 Jun	Renewed thunderstorms	<p>Bradford: Streets in the lower parts of the town were flooded but no houses were reported inundated.</p> <p>Batley: Houses in the lower part of town were flooded as well as basements of mills. Bradford Road for some time resembled a river. Houses were struck by lightning.</p> <p>Heckmondwyke: Hailstones as large as marbles fell. A stream of water sometimes more than a foot deep rushed down High Street mostly coming from Common Road. Water entered houses on one side and flowed out the other; a haystack was carried into the middle of the road. The flow then continued to Market Place and also down Oldfield Lane. The basements of shops in Market Street were flooded to a depth of several feet. Two or three factories which had been considered free from flooding were affected.</p> <p>Dewsbury: The Market Square was quickly flooded. A manhole was forced up and the water reached a height of 4 feet. Almost every cellar in Market Place was flooded including pubs and the Scarborough Hotel where the water was 9 feet deep in the cellars. It was 6 feet deep in the royal Hotel. At least two tons of road metal were deposited in front of the Town Hall. Many tradesmen on the line of the beck which divides Batley and Dewsbury and all the cellars were flooded.</p> <p>Clackheaton: A number of houses were inundated.</p> <p>Littletown: In Carr Street old people had to be carried from their cottages including those near the Globe Inn where people were reached from bedroom windows. Much damage was done to the Lion Stores.</p> <p>Lothersdale A cloud-burst caused the Earby Beck to overflow, and houses were flooded to a depth of nearly 4 feet</p>
12 Jun 1910 BR		
22 Jun 1910 BR Sheffield	Shipley West Point 0.75 in 30 m	<p>Otley: Hailstones were as large as marbles and battered fruit and vegetables. The West Chevin Road was covered and houses in the neighbourhood were flooded to a depth of 2 feet. The setts in Bridge Street were torn up by the water getting underneath them and houses in Hamilton terrace were also flooded.</p>

Evening  
Telegraph 23 Jun  
Yorkshire post  
23 Jun

13 May 1911  
BR  
Haxby Moorlands 3.25 in 2 h

17 Jun 1911  
BR  
Pickering 1.03 in 30 m

20 Aug 1911  
BR  
Malton the Leat House 1.61 in 30 m  
Malton Broughton Rise 1.51 in 31 m

1911  
Sheffield daily  
Tel 11 Oct  
9/10 Jun 1912  
Hull Daily Mail  
13 Jun  
Leeds mercury  
11 Jun  
Beverley  
Guardian 15 Jun  
Thunderstorms said to be purely  
local

Knaresborough: Hailstones were as large as marbles. **Another report says as large as walnuts and glass in conservatories was broken.**

Leeds: During the thunderstorm with hail the glass roof above the refreshment room in the new station was smashed.

Hull: Houses in lower areas were flooded

Meltham, Harewood Lodge TS from 1.30 to 4.30 p.m. A horse was killed and a man injured at Ford Inn.

Early A storm of great violence took place at night. A fall of 1.61 in. was recorded, and this, as far as could be ascertained, took place in 2 or 3 hours time, between the hours of 10p.m. and 1 a.m. Damage to the extent of £1,000 was done to property and to the roads.

Haxby, Moorlands TS, with 3.25 in 2 hours.

West Witton TS, with and 0.42 in. after 10 p.m.

Malton, The Leat House Very severe storm in afternoon. The T and L were not in any way extraordinary, but in 30 minutes the gauge showed 1.61 in. The actual fall was much larger than that as during the whole time, or nearly so, enormous quantities of hail fell, a great deal of which would naturally never get into the gauge. Fifteen hours after, although the night had been quite warm, considerable quantities of hail, collected in hollows, remained still unmelted. The hail was of the size of ordinary Barcelona nuts.

Malton A remarkable storm, with T and L, commenced about 5.45 p.m. 1.51 in., from about 6.14 to 6.45 p.m. Up to 9 a.m. on the 21st 0.41 in. more fell, making a total for the 24 hours 1.92 in.

An exceptionally dry summer with hot temperatures was reported. 'The hot wave set in at the beginning of July and kept up its crest until the middle of September. Every month except February had below average rainfall and so far there is a deficit of 7 inches compared to the average.

Beverley: Whilst heavy rain occurred in Beverley, the floods were mainly in rural areas. The road from Driffield was flooded and at Beswick beyond Bryan's Mill water was several feet deep. Lockington was flooded, the broad street resembling a lake; cellars and some houses were flooded. A house was struck and damaged by lightning in North Cave. The beck to the west of North Cave overflowed and came across the Market Wreighton road and Newport Road and made them impassable. Carrots and earth were washed out of a field on to the Market Wreighton road and a landslip occurred on the rail line between drewton and North Cave. Newbald (W of Beverley): In the village the storm with heavy rain and hail was said to be the worst in a generation. The flow from the hills became a roaring torrent along the road before it reached the village. On the lower side of the Green the bridgeways failed to admit the rush and the stream overflowed the full width of Low Street. The principal damage was to crops on the hillside and the soil was washed from the top to the bottom of the fields. A field of turnips was washed out of the ground. The roads over the hills became a mass of loose stones and low levels were covered by sand and gravel.

Hull: Streets were flooded.

Halifax: The storm was said to be not equalled in the last 16 years with a heavy fall of rain and hail. The cellars of many shops and businesses in the centre of town were flooded as well as mills and workshops in the lower part of the town. The storm lasted half an hour and 1.09 inches rain was registered.

Dewsbury, Batley Birstall: Bradford Road in these three towns was flooded from side to side over extensive

23 Jun 1912  
Leeds mercury  
24 Jun  
11/12 Jul 1912  
BR  
Hull Daily Mail  
12 Jun  
Yorkshire post  
13 Jul

West Witton 0.35 in 10 m  
Large hailstones fell in some parts of the West Riding. The storm followed the hottest day of the year. 87F in London, 83F in Leeds.

24 Jul 1912  
Hull daily Mail  
25 Jul  
Driffeld times  
27 Jul  
Hull times and  
Beverley  
guardian 27 Jul  
and (reported in  
McClure and  
Grundy (2008)

Hull - Very little thunder with the rain.  
At Beverley an estimated 2 inches of rain fell in 2 hours with hail and thunder.  
Beverley New Walk 1.86 ins in 1.5 hrs  
Hull Br 1 mile E of Beverley only 0.15 ins  
E Riding Asylum 1.5 mls W of Beverley 2.5 ins

lengths. At Dewsbury Market Place shops especially those with cellars were flooded. Fields adjoining the becks were flooded and manholes were lifted out of their sockets. The hailstones were of abnormal size. The floor of the rag works at Batley was lifted up by the flood and sacks were floating about; the mill was shut down. There was also flooding of property in Ravensthorpe.

Scunthorpe: A man was killed by lightning.

York: In a few cases the drains proved unequal to the task of drainage and one or two houses were slightly flooded.

Selby: Streets were flooded and water and mud had to be bailed out.

Huddersfield: An eight year old girl was killed by lightning

Sheffield: A girl working in a field was struck and killed.

Leeds: Water found its way into basements of some large shops. The hailstones were as big as cherry stones.

Kirkgate Market was flooded. The Burley district suffered from flooding owing to the sudden rise of Old Beck; the normal tiricle was converted in a few minutes to a swirling pool and rising into 18 cottages which were flooded to a depth of a foot.

Morley: Several businesses and houses were flooded in the lower part of town.

There was widespread damage by lightning all over Yorkshire and lengthy descriptions but nothing on flooding.

Barton on Humber: From the Caistor and Borrow Road and Love Lane the roar of water like a cataract and flooded White Cross Street a foot deep and on to Beck Hill and Burgate through some houses. It flooded houses in Bank Street. Brigg and Ferriby Roads were like roaring torrents. Houses were invaded in Pasture Road. Houlton's Farm on Brigg Road was flooded. At Beaumancote the water rose 18 inches. Hillside villages also suffered severely.

Beverley and district: Scarcely a street in Beverley escaped inundation and in many places it was 2 or 3 feet deep. Well Lane and Butcher Row were worst affected with the water rushing into shops and houses. Lairgate, Norwood and other side streets were equally flooded but affecting only a few houses there. Several cellars were flooded in the Market Place. Nearby villages of Skidby, Willerby, Anlaby, Cottingham and Hessle also suffered with many streets and houses flooded.

Skidby: Rabbits were drowned, fields flooded and turnips washed along the road and Eppleworth crossroads at the bottom of Castle Hill was a 'roaring torrent'.

Cottingham: 'the water rushed into low lying parts of the village, swamped scores of houses, flooded gardens and yards and rendered several streets impassable'. Houses near Coverdale lane, ie, Caukeel Lane were marooned due to deep water and residents took refuge upstairs. Mill Beck was a rushing mighty torrent. In the hollow of King Street the water was 4 or 5 feet deep; Maria's terrace was flooded. At George Street the water was also 4 feet deep. Furniture floated down the middle of South Street whilst at the eastern end of Northgate towards Lindern Avenue a knee-deep lake built up. Westfield house (now The Fair Maid) had its grounds badly affected; at one place the water was 7 feet deep. At the junction of Eppleworth road and West end Road a stream 7 or 8 yards wide and 2 feet deep poured across the road.

Beverley (BG): Saturday Market Place was soon flooded over its entire surface up to 1 foot deep. The most serious floods were at the junction of Butcher Row, Toll Gavel and Walkergate. The southern end of Lairgate resembled a river. Also affected were Well Lane, Minstermoorgate, Highgate and Willow Grove. Much of the

water flooding the town came down from Westwood causing the floods in Willow Grove. The old river bed in the valley of Newbald Road was filled with a surging torrent flowing into Willow Grove where some houses were flooded a foot deep. In Lairgate water backed up the drains plus water from the higher ground in Keldgate. Water was held back by a wall opposite Tiger Inn to a depth of 4 feet but this burst out into the inn flooding up to the firegrate. An old peoples home at Maison Dieu next to the nurseries, only one storey high had water up to the knees and similarly for other houses in the street. In Well Place the water did not subside for an hour after other locations and had been 2 feet deep. One woman remarked: 'I have been married for 18 years and had 11 bairns but never had ought like this in my life before'. She thought the water came from Walker Beck which ran beneath the back yards. The Rifle Range was flooded to a foot in depth. At the junction of Toll Gavel, Walgergate and Butcher Row the water was 18 inches deep and children played in the water (Photo in pub?). Cellars in practically every inn in town were flooded some to 6 or 7 feet and similarly the cellars of the London Joint Stock Bank in the Market Place

Leeds: A beck which runs under Round Street Bowling overflowed forcing the pavement up and the water then flowing down towards the railway. The river at Calverley Bridge was much swollen and many acres of land were covered. Several houses at Wood Nook, Stanningley and Beck Bottom Farsley were flooded. The rainfall at Guiseley, Yeadon and Rawdon was said to be the heaviest for over 20 years; becks and drains overflowed and some houses were flooded to a depth of a yard. The roads were ploughed up to a depth of more than a foot. In one house in the lower part of Guiseley the water reached almost to the level of the bedroom floor. The main road at Henshaw and near Nunroyd Mills was impassable for some time. A landslip occurred on the railway at Yeadon.

Otley: Houses were also flooded and the road from Newall was completely covered with rushing water. Spen Valley: Much damage has been done. Near Pyenot Hall Clackheaton the beck overflowed and flooded The Terrace. Dewsbury Road was like a river. Near Thorntonville people had to take to their bedrooms. The Spen Beck assumed the appearance of a mountain torrent and water got into the mills.

Littletown: Cellars of shops and houses were flooded. The Green was covered to a depth of several inches.

Sheffield: The River Don was in flood and a boy fell in and was drowned.

Leeds: Rain converted streets into miniature rivers. Leeds Beck became a raging torrent and overflowed at Crown Point. At the bridge over the beck in East Street water rushed through a gateway and flooded three cottages to a depth of several feet so that furniture was floating about. The beck attained a height of 9 to 10 feet above its ordinary level.

Doncaster: A very localised downpour deposited 155 mm in 14 hours. Practically every house in Doncaster – certainly every one with a basement- was flooded. Very long continued thunderstorms with rain which exceeded the capacity of the drains and many houses were flooded. A draper's shop in St Sepulchre had 3 feet of water. Hundreds of cellars were flooded.

Wensleydale and Swaledale: Railways were flooded and traffic delayed.

Goole: Lightning struck the tower of Goole Catholic church which was damaged.

Sheffield: Many of the streets were flooded and houses struck by lightning. Spring Street was flooded and the basements of some houses were swamped. The rainfall was very patchy with some areas flooded and other completely dry. In Brightside Lyons Road was like a river and hailstones as big as marbles fell.

A terrible thunderstorm burst on Red Shaw Hill near Newby Head 2 ½ miles from Gearstones and flooded the

4 Aug 1912  
BR

Rawdon 1.00 in 20 m

17 Jun 1913  
Manchester  
courier 18 Jun

Thunderstorm  
Huddersfield Cemy 0.20 in 3 m

17 Sep 1913  
Philip Eden 2008  
Sheffield Evg  
telegraph 18 Sep  
18/19 Jun 1914  
Burnley express  
20 Jun  
BR

Thunderstorm  
Deaths from heat stroke were also  
reported

20/21 Jun 1914  
Yorkshire Post  
22 Jun

1 Jul 1914  
Liverpool Echo 2  
Jul  
BR  
Yorkshire Post 2  
Jul  
Hull daily Mail 2  
Jul  
Halifax courier 4  
Jul

Thunderstorm  
Haworth Lower Laithe Resvr 0.63 in  
15 m (1.00 in 45 m)  
Halifax Dean Clough Mills 1.81 in 1 h  
15 m  
Harewood House 1.95 in 4 h  
Very high temperatures 88F in  
London – deaths from heat in York  
and Hull (78F)

24 Aug 1914  
Driffield Times  
29 Aug  
29/30 Jun 1915

Thunderstorm  
  
Sheffield Millhouses 0.95 in 30 m

Dent Valley (Upper Ure) 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 thick with the stuff. A few tons of stones were removed by the torrent

Hull: It was the hottest day of the year with temperature at 80F. Large hailstones fell

Selby: A large fall of hail lying to a depth of 6 inches.

Driffield: The rain flooded the streets while the beck which runs through the town was converted to a rushing stream.

Bradford: The position of the city makes it particularly liable to floods; on three sides there are hills and on the fourth there is an opening leading to the river Aire. The Bradford Beck flows from Thornton Moor and flows through a tunnel under the city. This was insufficient to carry the flow and this was the main cause of the flood. The tunnel gave way at three points, Charles Street, Leeds road and Market Street. Near the Labour Exchange the water burst out in two huge geysers. The greatest damage was done in Charles Street where huge flagstones weighing more than half a ton each were carried out of position of a 50 yard reach. The streets in the neighbourhood were converted into rivers. Nearly every basement within an area of a quarter of a mile square was flooded and with such rapidity that people had to rush to avoid drowning. A three storey building was struck by lightning and destroyed in the ensuing fire. Market Street, Charles, street, Brook Street and Forster Square and adjoining thoroughfares were flooded. It covered the whole square opposite the Midland Station and a long way over towards the Post Office. Drainage was also blocked at the end of Bridge Street and at the end of Leeds Road near the Town Hall where there were miniature geysers. Surface water from Wakefield Road came down in huge volumes. Buildings were struck by lightning and destroyed by fire.

York: Streets were flooded in some cases to a foot depth

Harrogate: A four hour storm caused a landslide of a rail embankment fortunately without accident.

Pontefract: A farmer was killed by lightning.

Leeds: Many parts of the city were flooded. Houses in low lying parts were flooded. The stream which flows through the Marsh Lane area and joins up with the Lady Beck was flooded and it was in this area where many houses were flooded.

Barnsley: Particularly in the Town end area the rain caused floods

Huddersfield: Rainfall of 0.85 inch was recorded causing cellars in low lying parts of the town to be flooded. Buildings were struck and damaged.

Halifax: Streets were flooded in the bottom portion of the town and businesses suffered severely. Houses were struck by lightning. The rain was accompanied by large hailstones.

Holmfirth and Holme Valley: Water came down the steep slopes and grates were quickly blocked; manhole covers were forced up. There was damage to a railway embankment at Low Moor.

Withernsea: Drains were inadequate and Queen Street had the appearance of a river. Between Hull Road and the Wesleyan Church the water extended across the road and flooded the houses.

Doncaster: Hailstones almost as big as cherries fell.

Driffield: After a period of fine weather a thunderstorm caused flooding of streets and cellars and some manhole lids were burst off and sprouted up some feet in height.

Rotherham: Rivers ran through the centre of the borough and accumulated to 3 feet at the bottom of

BR Sheffield Independent 1 Jul		Bridgegate flooding shops and filling cellars with mud. College street suffered from the storm. Behind the Three Tuns Inn in Wellgate cottages were flooded and filled with stones sand and mud. Flagstones were washed up on the pavement in Masboro Street. St Ann's council Schools were flooded. Ripon: A soldier was killed by lightning. York: A man was killed by lightning. Hull: Half an inch of rain fell in 10 minutes at Pearson Park.
10 Aug 1915 Hull daily Mail 11 aug	thunderstorm	
20 May 1916 Sheffield Independent 22 May	Thunderstorm	Rotherham: Even inclined roads were like a torrent; floods accumulated on the level and flooded cellars and houses. Five trams were struck by lightning and stopped. Water accumulated at the bottom of Kimberworth Road near Coronation Bridge and ran into cottages there. At the Red Bull Inn on Holmes Lane water poured in one door and out another.
24 Jun 1916 Yorkshire evening Post 24 Jun	Thunderstorm	Leeds: The storm was accompanied by large hailstones for almost half an hour. The cellars of some low lying houses were flooded.
7 Jul 1916 BR	Bridlington 0.99 in 15 m Persistent rain in E Scotland over the two days Not sure if thunderstorms	
16 Aug 1916 Burnley news 19 Aug	Thunderstorm	Todmorden: the River Calder rose with abnormal rapidity and overflowed at Roebuck Inn. The water was a foot deep in Portsmouth Railway Station and nearby the Cooperative store was inundated to 1 foot depth. Houses in Jubilee Terrace and all along the valley were also flooded. Several mills were flooded. Some of the flagged pavement of Cornhole Vicarage was torn up. Walls were washed down and fell into the river.
18 Aug 1916 BR	Meltham Harewood Lodge 0.83 in 39 m	
29 May 1917 BR	Hebden Bridge Falling Royd 0.97 in 35 m	
17 Jun 1917 BR	York 0.95 in 30 m	
20 Jun 1917 BR	Sheffield 0.72 in 15 m	
26 Jun 1917 BR	Sheffield Millhouses 0.35 in 9 m	
12 Aug 1917 Hull daily Mail 14 Aug	Thunderstorm	Hotham (12 miles W of Hull): Some cottages were completely flooded and much damage done to the corn fields and fruit trees. Farmyards have been flooded and fields of turnips covered with water
14 Aug 1917 Yorkshire Evening post 14 Aug		Wetherby: It was the heaviest thunderstorm for many years. The road at North End and on the York Road were flooded. Many cellars in St James street and in Miclethwaite were flooded as were cottages in the centre of town. Leeds: The storm was reported but with few details. The storm was accompanied by large hailstones. A man

17 May 1918 BR	Elvington The Glenne 0.45 in 9 m	was killed by lightning.
21 May 1918 BR	Meltham Harewood lodge 0.35 in 10.5 m	Widely scattered, but, for the most part, very local, thunderstorms occurred during these two days. Those of the 21st, which were more notable for electrical manifestations than for heavy rain, took place principally in the north Midlands.
Huddersfield Daily Examiner 22 May		Huddersfield: Severe flooding was reported in the Birkby area. Several buildings were struck and damaged by lightning.
20 Jul 1918 Rochdale Observer 24 Jul BR	Thunderstorm Haworth Lower Laithe Resvr 1.96 in 1 h Bradford Horton 2.06 in 2 h 30 m	Walsden: The storm appears to have been worst in this area towards Summit. On the Calderbrook side of Summit houses on Slack Road were flooded and stone walls were destroyed and a deep gulley was made in the road. At the junction of Temple Road and Todmorden Road a great pile of stones (200 tons) covered the tram track. The main road was flooded for hundreds of yards and practically every cellar, many houses and pubs and a bakehouse were flooded. Debris was deposited at Durn. Cottages were flooded at Church Street opposite New Mill. The railway on the Todmorden side of Summit was like a huge lake and all traffic on the line was stopped for several hours.
		The points at which the rain reached the most remarkable intensity were near Worksop, Bradford and Pateley Bridge. At Worksop, 1.79 in. of rain fell between 6.20 and 7.30 p.m. (G.M.T.), and at Woodsetts Grange, about 4 miles north-west the total recorded during the day reached 3.30 in. In the Bradford district and westward to near Todmorden and Keighley, the storm appears to have been of very exceptional violence, lasting about an hour. Extensive damage was done to the railway track near Walsden and to the roads in the district. Severe thunderstorms affected Worksop, Bradford and Pateley Bridge. To the west of Bradford toward Todmorden and Keighley the storm was of exceptional violence lasting 1 hour. Extensive damage was caused to the railway track near Walsden and to roads in the district.
10 May 1919 BR		Thunderstorms were widespread in both Westmoreland and West Riding of Yorkshire. In Bradford lightning caused several fires of properties. The River Aire 'carried six feet of flood water'
Westmoreland gazette 17 May		
29 May 1920 Lancs Evg post 31 May BR	Thunderstorm Very intense rainfall and flooding in Lancashire and Louth in Lincolnshire	To the east lay another irregular 1in. patch stretching from Northallerton to Sheffield and including 2in. falls at Birstwith, near Harrogate, and in the district between Barnsley and Rotherham.
Sheffield independent 31 May		Sheffield: Streams of water three feet wide were soon rushing down each side of Fargate. In Brightside and Attercliffe roads were completely covered. Cellars were flooded in lower districts. Rotherham: Many low lying streets were flooded and whole areas were under water to a depth of 6 to 7 feet. In the Holmes district the flood invaded the houses; doors were forced off their hinges and furniture came floating down the street. Near Coronation Bridge it was like a lake with utensils floating. A pub at the end of Holmes Lane had a piano turned over in the flood. 'The flood came and receded three times'. Flooding of houses also occurred in Union Street and Kimberworth Road. The Tivoli Picture Palace in Masborough had its cellars flooded. Templeborough: It also suffered flooding to 5 feet deep on the road and 2 horses were drowned in a field. Barnsley: The flood was the worst for several years; (others the worst for half a century). The main problems

13 Jun 1920 BR	Hutton Magna Vic 0.57 in 20 m
18 Jun 1920 BR	Felixkirk Mt St John 0.39 in 8 m York Museum Gdns 0.55 in 10 m (0.79 in 20 m)
2 Jul 1920 Hull daily Mail 3 Jul	
1 Sep 1921 Yorkshire post 2 Sep	
21 May 1922 BR Philip Eden Great British Weather Disasters 2008 Yorkshire Post 23 May 4 Aug 1922 Yorkshire Post 5 Aug	Thunderstorms reported in Lancs and more widely. Daily totals West Witton (Ivy House) 2-66 Leyburn (Bolton Hall) . 2-55 East Harlsey (Harlsey Hall) 2.11 21 May was the warmest since 1895 with 90F at Market Rasen.
6/7 Aug 1922 Yorkshire post 8 Aug	Prolonged rainfall but with some thunder – various 9 or 11 hours affecting Yorkshire Nottingham Leicester

were in the Park Grove, Race Common and the Town End areas and in the latter a lake seven feet deep was formed. Water caused damage in cellars of business premises and water flowed into the pit of the Princess Picture Palace. Drains burst elsewhere in town.

Doncaster: The rain continued for nearly an hour and many businesses and houses had their cellars flooded.

Bradford: It was not long until the centre of the city resembled a lake flooding the basements of adjoining properties. The problem was mainly in the vicinity of the Bradford Beck which did much damage in previous floods. However, the beck has since been uncovered by the removal of property between Market street and Leeds Road. After about an hour the stream overflowed flooding the surrounding area and all the cellars were flooded. Restaurants were flooded a foot deep. Central warehouses in Gordon street had goods submerged to a depth of 3 or 4 feet. The water ran down the Great Northern embankment in a torrent flooding the cellars of adjacent mills. Street traffic came to a standstill and some trams were damaged by lightning. Lightning caused fires in two chapels and two houses. At Shipley the Bradford beck rose at 1 foot a minute and a loom makers was flooded in every department; it covered the looms to a depth of 4 feet.

Otley: The weekly market was abandoned. The worst flooding was at West Chevin where water and mud rushed down from the hillside. Houses at Clifton Villas were flooded, rising up to 4 feet in the kitchens. The river Wharfe rose rapidly in a short time.

Driffield: Very heavy rain occurred for a quarter of an hour. The streets were running with water and one restaurant had water in its basement. The town's beck rose quickly but did not overflow.

There were storms also at Scarborough, Bridlington and Selby but no flooding was reported.

Thunderstorm with damaging hail occurred in Wensleydale.

Kettlewell: Sheep were killed by walls falling on them and also by **hailstones which were variously described as being as big as marbles, walnuts or bouncing like tennis balls.** Buckden at the head of the dale suffered greatly from the heavy rain and hail. Low lying lands were quickly submerged. Barns were struck and damaged.

Hull: Hail of exceptional size fell for ten minutes. Afternoon temperature had been 82F.

Kirk Hammerton (W of York): Hailstones did much damage to glass in greenhouses and fruit trees in flower.

Masham (R Ure): **Hailstones were an inch thick and broke greenhouse glass.** The Market Square looked like a large lake fringed with snow. Some cottages were flooded.

Castleford: The roads were under water to a considerable depth and the cellars of many premises were flooded.

Pontefract: The new drainage system was quite inadequate for the flow and manhole covers were lifted off in the Wakefield Road district and water poured into the grounds of The Priory and into the cellars of the Robin Hood Inn and adjoining cottages to a depth of 6 feet. Knottingley Road district overflowed with water. The Combeck Stream overflowed and the road was flooded to the depth of one foot.

Sheffield: A large number of houses in the industrial part of the town were flooded. The River Sheaf overflowed carrying with it many tons of timber and railway sleepers which were hurled against Heeley Railway Bridge. From Street bridge around Vickers Works, along Brightside Lane as far as Brightside Midland



	Leeds 1.85 ins in 9 hours	station a distance of a mile and a half the road was like a river from 1 to 5 feet deep. Bridge Inn was flooded and neighbouring houses. Houses were flooded in Shoreham Street from the River Sheaf and the River Porter. At Heeley the River Sheaf overflowed the bridge. At Attercliffe and Darnall districts hundreds of houses were flooded and caravans were submerged on the Darnall fairground. At Woodseats several houses were flooded. Spen and Colne Valleys: The Spen rose with remarkable rapidity, overflowed and into a number of cottages. 'It is ten years since there have been such floods in the Spen Valley'. Littleton was especially affected. At Huddersfield, Moldgreen, the River Colne rose. A sewer burst on Wakefield road and Smithy Lane causing the flooding of 3 shops and 3 houses. Mythomroyd: Some houses were flooded. Otley: the main road was flooded to a depth of 3 feet. Withernsea: It was the most severe storm (lasting 2 hours) since may 1910. Queen Street resembled a large lake. A house was struck and damaged by lightning. The storm was also reported at Hull, Driffield, Leeds and Bridlington but without reference to flooding. Leeds: Minor damage from temporary flooding was reported. Hanging Heaton Parish Church was struck and damaged. Holmfirth: A man was killed by lightning Morley: low lying parts of the town were flooded and traffic through The Bottoms was interrupted. Grindleton: Two horses and sheep were killed by lightning. Driffield: Streets were flooded for a time Hull: Many cellars and warehouses were flooded. Several houses were struck by lightning.
5 May 1923 Yorkshire Post 7 May	Thunderstorm	
7 Jul 1923 Yorkshire Post 9 Jul	Thunderstorms Widespread high temperatures up to 90F	
9/10 Jul 1923 Yorkshire Post 11 Jul	Thunderstorm	
12 Jul 1923 Yorkshire Evg. Post 13 Jul	Thunderstorm Temperatures in London reached 90F	Pontefract: The Wakefield Road area suffered from flooding and the Robin Hood inn cellars were under water to a depth of 6 feet. Several houses were struck by lightning. Sheffield: Several houses were struck by lightning and a man injured. Doncaster: The streets were flooded to a depth of 6 inches. Floods were reported in the low lying districts of Brightside and Attercliffe. Roads were flooded at Washford Bridge and Staniforth Road. There was a great flood in Wensleydale, with the river Ure starting from a high level after two recent floods.
12/13 Nov 1923 BR Westmoreland Gazette 17 Nov Burnley Express 17 Nov	Not a thunderstorm – 41 hours continuous rainfall. The rainfall was accompanied by high winds. Daily rainfall divided between 12 and 13 <sup>th</sup> Ingleton (Kingsdale Head) 3.52 3.30 Slaidburn (Thorneyholme) 3.00 * Slaidburn (Dunsop Houses) 2.75 * Slaidburn (Brennand) 3.30 * Slaidburn (Whitendale) 2.78 * Holmbridge (Yateholme Reservoir) 1.50 2.70 Walsden (Ramsden Reservoir) 1.85 2.83 Oughtershaw Hall 3.56 1.29	Todmorden: The River Calder overflowed its banks at Gandy Bridge where it passes beneath the main Burnley Road, and flowed down the main road which became impassable. (The Cobden area on the Lancashire side was hardly affected). The bridge at the end of Wellington Road could not cope and blocks of asphalt were forced bodily into the air. Cellars and basements were flooded and a few shops. The railway tunnel at Walsden station was flooded and flooded the Railway Hotel and several other premises.

13 Aug 1924 BR	Meltham Harewood lodge 1.09 in 30 m	Castleford: Many low lying parts of the town were quickly flooded. Aire Street which runs along the river for 300 yards was completely submerged and water was a foot deep outside the majestic Picture House. Bridge Street was also flooded for half its length.
20 Aug 1924 Burnley express 23 Aug Hull Daily Mail 22 Aug	Thunderstorm	Todmorden: The river Calder rose to 6 feet at Gandy Bridge but the flood water subsided before any damage was done. Above Walsden Station the main Rochdale road was flooded to a depth of 2 feet. The main Rochdale Road was flooded to a depth of 2 feet.
25 May 1925 Yorkshire Post 26 May	Batley 1.06 ins in 1 hr Thunderstorms with hailstones had occurred on 17 <sup>th</sup> and 19 <sup>th</sup> with damage from hail and lightning mainly in Lincolnshire and Yorkshire Wolds, but no flooding reported. there were deaths from heatstroke.	Batley: Rain and hail for over one hour. Houses shops factories and mills were flooded. Bardford Road for 3 hours was like fast flowing river at least 12 inches deep and in some places much more. Mill hands had to wade through deep water to get home after the mills were closed. Hailstones were larger than marbles and several pedestrians had cut faces. Batley beck overflowed at every possible point and water was hurled a few feet in the air from sewer grates. A cinema on Bradford road had water up to auditorium seats. A brick wall was thrown down. Morley: Firemen reached a trapped woman in a cottage where the water reached the shoulders of the firemen. Morley tunnel was obstructed by debris and the signalman's cabin was flooded. The Goods Station was inundated to a depth of 4 feet. Scores of houses with basement rooms were flooded to a depth of several feet. In three cottages at Morley Hole at the bottom of Victoria Stree the water reached 7 feet 6 inches deep. Water burst suddenly into kitchens. At the bottom of Asquith Avenue at the Dartmouth Arms a wall of water rushed down the cellar which was completely filled; there was f lood of 6 inches in the bar. Victoria road Council Schools were flooded to 4 feet. The stokeholes of Barker's woollen mills were inundated and the fires were extinguished. Also flooded were Gelder road and Dewsbury Road. The centre of largely Dewsbury escaped the storm but a few cellars were flooded in the vicinity of the Market Place. New Inn had water in its cellars – and similarly the Scarborough Hotel. A beck overflowed in the Batley Carr area and many houses and cottages were flooded. Staincliffe and Dewsbury Moor had a storm of very large hailstones and cellars were flooded and much damage done. The Poor Law Institution suffered badly. Dewsbury: It was market day and the low side of the market place became a lake and goods were washed away; water poured into adjoining shops.
22 Jul 1925 Yorkshire Evg. Post 23 Jul 26 Jul 1925 BR Yorkshire Post 27 Jul 23 Aug 1925 Driffield times 29 Aug 8 Jun 1926 Yorkshire Evg. Post 8 Jun	Thirsk 0.35 in 10 m	A two month drought was broken by thunderstorms in various places including Leeds and Ilkley but no flooding reported.  Driffield: Houses in various parts of the town were flooded and water ran down the streets like a stream. Some houses were struck by lightning. Some cellars in Exchange Street were flooded to 3 feet. Storms affected the Wolds on 22 <sup>nd</sup> and 23 <sup>rd</sup> and damaged crops. Birstall (nr Batley): Half an hour of heavy rain was followed by hailstones, as big as marbles, which lay 2 inches deep on roads. Many low lying houses were penetrated and dirt was washed in. Leeds: A thunderstorm was reported with some street flooding. Wath: The thunderstorm lasted over an hour, the drains were blocked and in some streets the water rose a

19 Jul 1926 Sheffield Independent 20 Jul		considerable height. The Old Cross keys, the Post Office and many allotment gardens were flooded with produce ruined by the rush of water. Sheffield: Streets were flooded in some places. Half an inch of rain fell in 15 minutes and an inch in an hour. The water was very high under the railway bridge at Heeley and also at Upwell street. The water covered a large area at the bottom of Brookhouse Hill, Fulwood. The cellars of some houses in Russell Street were flooded. Several buildings were struck by lightning and the telephone service was disrupted.
6 Aug 1926 BR	Ampleforth College 0.52 in 12 m	No reports of rain or flooding were found in newspapers.
4 May 1927 Yorkshire post 5 May	Thunderstorm after the hottest day of the year so far – 75F in Leeds	Wharfedale: The storm lasted 2 hours. A great quantity of sand was brought down from the slopes of the Chevin. Several cellars and warehouses were flooded.
5 Jul 1927 Yorkshire Evg, Post 5 Jul	Thunderstorm	Leeds: More than 1 inch in 3 hours. The beck near Marsh Lane overflowed and cellars of houses adjoining were flooded. Household goods could be seen floating in Barker’s Yard.
21 Jul 1927 BR	Greenfield chew Resvr 2.05 in 60 m	Pudsey: Buildings were struck and damaged Widespread thunderstorms in N England and Scotland.
9 Aug 1927 Hull Daily Mail 10 Aug Yorkshire Post 9 Aug	Leeds: 1.5 inches in 7 hours	Leeds: Streets were turned into miniature lakes. Buildings were struck and damaged by lightning and animals killed. Pateley Bridge: Torrents carried away large quantities of timber, which piled up at a bridge and carried it away. A second bridge below the confluence of the Laver and Skell was also swept away. The streams around Pateley Bridge were said to be at their highest level for 40 years. Askrigg (Wensleydale): Great quantities of stone and rubble were swept from the hillside into the town. Crops were washed away and thousands of acres of meadowland were covered. Blubberhouses: a landslide occurred blocking the road. Thorner: several cottages were flooded to a depth of 4 or 5 inches. Boston Spa: Half Moon cottages were flooded to nearly a foot. Gibson’s Flour mill was flooded. On the Wharfe the road from Harewood Bridge to the Pool and Arthington Road were impassable with water 3 feet deep Otley: many houses were flooded; the water found a new course down Farnley Land and brought down heaps of soil and stones. Harrogate: Ponds at the Valley gardens overflowed and cellars of shops and houses were flooded 6 feet deep. Cellars and the basement of the George Hotel and houses on St Mary’s Walk were flooded to several feet. On the Crimpe Beck at Burnt Bridge water got into houses and gardens. At Pannal the water flooded shops and cottages to a depth of several feet and water reached nearly to the arch of the bridge. Hull: The sewers in Chapman Street were inadequate and water rose in sinks of 17 houses in Sunny Bank The Ouse at York rose 6 feet in 12 hours and at Selby it rose 11 feet in 24 hours. The Nidd was in high flood. Leeds: In the Meanwood Valley the water forced up manholes in Marsh Lane and water flowed into neighbouring cellars.
13/14 Aug 1927 BR Yorkshire Post 15 Aug	Ampleforth College 1.18 in 60 m	Pontefract: The sewers proved inadequate for the flow. Wakefield Road was flooded and cars were chassis high. The Cellars of Robin Hood Inn were flooded to a depth of 6 feet and adjacent houses and shops also suffered. Manhole covers were lifted in Knottingley Road Garrowby Hill, E Yorks: Watercourses were made over the fields in all directions and on the slopes of hills.

Sheffield  
Independent 16  
Aug

7 Jun 1928  
Yorkshire Post 8  
Ju n

20 Aug 1928  
Philip Eden  
Great British  
Weather  
Disasters 2008

1 Sep 1928  
BR  
East Ayton Derwent House 0.88 in 45  
m

6 Aug 1929  
Yorkshire Post 7  
Aug  
After a drought the rains were seen  
as beneficial in filling reservoirs.

25 Apr 1930  
BR  
Yorkshire Post  
26 April  
Ilkley Ben Rhydding 1.85 in 30 m

Streams were unable to cope and on one stream an 18 inch brick sluice wall burst open. Much damage was done to crops and roots were washed bare.

Eckington: Houses were flooded to a depth of more than a foot. Large pieces of paving were torn up and washed away in the streets. Three houses were flooded in a cul de sac off Market Street. Houses in Duke Yard and market Street were also flooded.

Sowerby Bridge: Part of the Wharf and Regulator Mill collapsed due to flooding. Many houses were flooded in the poorer part of town. A child in a pram was swept into the street through a window.

Halifax: 2 ¼ inches rain was recorded and the road on Lod lee Bank was torn up and many houses were flooded with water and mud.

Knaresborough: Two horses were killed by lightning.

A storm hit Teesdale and North Yorkshire with 109 mm at Barningham Park. The **Tees rose 7 feet in 2 hours and came down in a heavy roll four feet deep.**

The Wharfe was also in high flood but the rain was welcomed by farmers.

Stamford Bridge: the storm was widespread but of short duration but affected mainly the north west side of the Wolds. The storm lasted 20 minutes and the roads on the hillsides were converted to streams. Turnips were washed to their bare roots.

Mossman found that only 1.2 per cent, of the heavy rains in short periods during the 46 years, 1868 to 1913, occurred in April.(BR 1913, p 49). The following measurements were originally supplied by Mr. Terence More, of Ben Rhydding, and further details are given in The Meteorological Magazine 1930, pages 110-112.

"At Ilkley (Spence's Garden), about 2 miles further west, 1.08 in. was recorded as falling in 25 minutes, while it is estimated that 1.84 in. of rain fell at Ben Rhydding in 30 minutes. At Ben Rhydding, thunder was first heard at 15h. 25m. and rain began at 15h. 30m., changing to hail at about 15h. 40m., which lasted for 5 minutes or a little longer."

A photograph taken by Mr. A. Anning, Ben Rhydding, is reproduced as the frontispiece. This shows the main road from Ilkley to Otley, at Escroft, about 1 ½ miles below Ben Rhydding. The photograph is taken looking towards Rumbald's Moor. There is hail on the wooded hillside in the background, but none on the footpath. The River Wharfe, visible through the railings on the right, is no higher than the ordinary winter level.

Ilkley: The storm swept between Addington and Menston but Ilkley to Burley was in the most severe part of the storm and water was over 2 feet deep on the road. At Wheatley Lane, Ben Rhydding the road became a rushing torrent manholes and the road surface were lifted up; a farmhouse at the bottom was flooded. Many cellars in Ilkley were flooded and a house in East parade was badly flooded. A main burst in Valley Drive.

Basements of houses in Sunset View and other places in Ilkley were flooded; three houses in Bridge Lane had water in the house up to 3 feet depth. Houses were struck by lightning.

Shipley: Several cellars in the Redburn district on Bradford Road were flooded by the overflowing of a beck. Several houses in the Moorhead district were affected.

17 Jun 1930 Sheffield independent 18 Jun	Thunderstorms especially in the south	Saltaire: Gullies overflowed and several houses in Gordon Terrace and Hirst Wood were flooded. Drifffield: A horse was killed by lightning. Doncaster: Rain fell all night but culminated in a torrential downpour causing some streets to be flooded. Water was inches deep on Windsor Road and Imperial Crescent. Houses were struck by lightning.
14 Jul 1930 BR	Felixkirk Mt St John 1.27 in 48 m	
20-23 Jul 1930 Philip Eden Great British Weather Disasters 2008 Yorkshire Evg post 23 Jul	Leeds Lawnswood 1.62 ins Said to be over 60 hours of continuous rain.	Severe flooding over North York moors (See Rye etc chronology). The river Derwent has risen over its banks. Elsewhere rivers were rising but no flooding was reported except in northeast Yorkshire. Alleerton Bywater: The Aire overflowed and flooded Bland's Cottages Mexborough: the River Dearne overflowed and flooded some houses.
27 Aug 1930 BR	Middleham Cotescue 1.75 in 45 m	
29 Aug 1930 Lancs Evg Post 30 Aug Hull Daily Mail 29 Aug Yorkshire Post 30 aug	Thunderstorms after a heatwave in which 46 deaths were reported 94F reported in London Hail in some places as big as pigeon's eggs Leyburn Spennithorne 2.05 in 75 m	A two hour storm swept Wensleydale. The streets of Middleham and Leyburn were like rivers. It was supposed a cloudburst occurred on Penhill and hardly a house in Middleham escaped flooding. Racehorse stables were flooded and horses had to be moved. Large hailstones fell with the rain. Northallerton: the Black Bull Hotel was struck by lightning and set alight. Catterick: A soldier was killed by lightning and several others were struck and injured. At Leyburn (Spennithorne), Mr. F. M. Curtis, 'measured many spherical hailstones of $\frac{3}{4}$ inch diameter and noted one coralline stone which was rather too big to put into the rain measure and contained as much water when melted as a fall of .04 inch of rain in a five-inch rain-gauge.' Hull: 29 <sup>th</sup> was the hottest day for many years (86F). Severe flooding occurred the following day. Water gathered on low lying roads including Holderness Road Goole: There was torrential rain with large hailstones lasting nearly 3 hours Wensleydale: The streets of Milldeham and Leyburn were like rivers. It is supposed a cloudburst occurred at Penhill. Hardly a house in Middleham escaped flooding. Racehorse stables were flooded and horses had to be moved to other quarters. Wakefield: The rain was accompanied by hailstones as large as walnuts. Drains were unable to cope with grates being blocked by hailstones. In York Place the water rose to 3 feet and entered cellars. Several houses were struck by lightning. Rotherham: many houses were flooded in Victoria Street. Windows were broken by hail at Thrucroft. No flooding was reported in Yorkshire in newspapers.
26 May 1931 BR	Rawmarsh 0.44 in 15 m	
1 Jun 1931 BR Yorkshire post 2 Jun	Rishworth Ringstone resvr 1.11 in 60 m Leeds Lawnswood 0.90 in 1.5 hrs	Malham: A cloudburst occurred at Hanlith near Malham and the roadway was torn up for a distance of 250 yards. Drains burst and cellars of nearby houses were flooded. At Kirkby Malham the parapets of the bridge were washed away. Halifax: The drains were inadequate and there was flooding at the junction of Waterhouse Street and Crown

Street.

Castleford: The water came down in such volume from the higher part of town that the drains in bridge street were unable to carry the flow and there was much flooding. Manhole covers were forced up and the road surface was lifted; a wall collapsed in Saville Road.

Sowerby Bridge: Streets were flooded.

Leeds: the storm included rain and hail and there was flooding in many parts of the city. Houses and a church were struck by lightning. Lawnwood Cemetry was flooded. Roads flooded included Abbey Road Kirkstall, Meanwood Road and Mills Street in the marsh Lane area where shops and houses were flooded. Gardens around Cross Gates were submerged.

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

Leeds: The storm was most severe in the Moortown area . Several houses were struck by lightning and there was widespread flooding.

Stamford Bridge: The main street was flooded a foot deep. In some houses the water went in the back and out the front. Manhole covers on the main street were blown off and the water rushed out in fountains.

Doncaster: The hailstones were as big as camphor balls! And they were of such a consistency that they choked the gratings. There was therefore considerable flooding in low lying areas and the Fire brigade was called to pump water from cellars.

Dewsbury: In the Market Place water gushed up through manholes and cellars were flooded.

Sheffield: Extensive flooding occurred in Upwell Street Grimethorpe causing delays in the tram service. Floods occurred under the Darnall Viaduct, Worksop road. Rustlings Road Ecclesall turned into a stream with dozens of cellars flooded all along the the road. In the 3 hour storm it was estimated that between half and onch of rain occurred. Several houses were struck by lightning.

14 Jun 1931  
BR  
Yorkshire Post  
15 Jun  
Sheffield  
independent 15  
Jun

Westow Vic 1.16 in 30 m with Hail  
Tockwith School 1.03 in 60 m

17 Jun 1931  
BR

Felixkirk 0.27 in 6 m

19 Jun 1931  
BR  
Hull Daily Mail  
19/20 Jun

Holme on spalding Moor 1.18 in 60  
m

Hull: There was a good deal of flooding on the outskirts of the city. Roads in the neighbourhood of Kirkella were flooded and hailstones were heaped high on the road. Hailstones the size of marbles fell on Hessle Road and In English Street the hail lay 4 inches deep after a fall lasting only 10 minutes. At Willerby, 4 houses in Well Lane were flooded to a depth of 6 inches with furniture floating – from water surging down the hill (recalling a similar flood in 1912).

Pocklington: At the village of Nunburnholme the village street was transformed into a river and water entered some houses. Children leaving school had to be transported in a farm cart. The garage on the green was flooded. The beck which runs to Burnby, Bileby and Hayton flooded the road to Burnby to a depth of 2 feet.

The accompanying hailstones were as large as walnuts.

East Keswick (SW of Wetherby): Water swept down the village near knee high and flooded houses in the terrace of Brooklands. The water broke through the surface of the raod from a drain throwing up lumps of macadam. A wall was washed down near the Vicarage. The Leeds to Wetherby Road at bardsey was submerged to more than a foot from water streaming from East Rigton.

Micklefield: Rain and melting hailstones caused flooding of the Great North Road to a depth of 3 feet 6 inches on either side of the railway bridge at Micklefield Station.

Malham: Water poured down the village street; cottages were flooded, some to 18 inches deep. The water was foot deep in front of the Victoria Hotel. The village of Hanlith was affected but not as bad as a fortnight ago. Delays were caused to rail and road traffic.

Leeds: A house was struck by lightning. The storm lasted an hour and a half. Some becks overflowed but the results were not so serious as the previous month.

Sheffield Sheffield Cathedral was struck but not damaged.

Otley and Wharfedale: The storm lasted 2 hours. The roads leading from the Chevin became rushing torrents carrying sand and stones. For a mile the road was strewn with stones and boulders. In Otley, Bondgate, an underground beck overflowed and submerged its entire length. On the north side of Otley Bridge manhole covers were forced up and the macadam surface was torn up. Weston Lane was flooded as were some of the council houses.

Ripon: Two houses were struck by lightning

Horncastle: A house was struck by lightning. Trees were uprooted nad roads blocked.

Driffield : 0.75 inches fell in 20 minutes. Streets were flooded to nearly a foot in depth. The parish church was struck by lightning.

Hedon: St Augustine's gate and Church Lane were flooded and water backed up the drains into houses. **Pieces of ice some nearly as big as walnuts fell.**

Hull: Within a few minutes gutters were flooded and low lying streets were flooded. Over an inch of rain fell in 3 hours.

(Streets and houses were flooded at Middlesbrough)

Sheffield: Upwell Street was flooded for 3 hours and stone setts on roadways were uprooted. In Penistone road a family had to be rescued as water came in both through the roof and the doors and was 2 feet deep. Traffic was stopped in Upwell street for 3 hours by floods.

Hull: Some shops had 2 feet of water. Hedon road was flooded to a depth of 4 feet. In King Edward Street waitresses were marooned on tables when a cafe was flooded. Houses in Pryme Street were flooded and tram traffic was stopped on Hedon road and Chanterlands Avenue. Water was nearly a foot deet in shops in Jameson Street.

Withernsea: All the surrounding districts were flooded and at Hollyn Corner there was 2 feet of water on the road. Drains overflowed and houses in Bannister Street and South Cliff road had water in them. Warehouses and cellars were also flooded especially at Railway Cottages near the station.

Laceby: Many houses were flooded to the extent of extinguishing fires.

Stamford bridge: Extensive damage was done by lightning and a man was injured.

Thorne: The River don overflowed and houses at Waterside were flooded as were those at Hatfield Road.

There was lightning damage to the telephone system.

Bishop wilton (East Riding): Hailstones as large as marbles fell.

Northallerton: The beck which flows through the main street overflowed near the workhouse. There was some flooding of the roadway between Northallerton and Brompton.

[Pinxton: S of Chesterfield: Houses were flooded to more than 3 feet deep from the River Erewash}

6 Jul 1931  
BR  
Yorkshire Post 7  
Jul

Holmfirth Thongsbridge 1.00 in 60 m  
Felixkirk 0.41 in 12 m

12 Jul 1931  
BR  
Yorkshire post  
13 Jul  
Hull daily Mail  
13 Jul

Tockwith School 0.90 in 30 m

25 Jul 1931  
BR  
5 Aug 1931  
Lancs Evg Post 6  
Aug  
Yorkshire post 6  
Aug  
Hull Daily Mail 5  
Aug

Barnsley Jordan Hill 1.50 in 90 m

Thunderstorm (widespread through  
England)

15 Aug 1931  
Sheffield  
Independent 17  
Aug  
Yorkshire Post  
17 Aug

19 Aug 1931  
BR  
Yorkshire Post  
20 Aug 1931

Burnsall Rectory 1.07 in 60 m  
Catterick Aero 0.39 in 10 m

On August 19th, 1.07 inches was recorded between 16h. and 17h. at Burnsall Rectory, near Grassington, and caused extensive flooding in the district.  
Nidderdale Pateley Bridge: Upstream from Pateley bridge there is the debris of broken bridges, uprooted trees and broken poultry houses floating on Gouthwaite reservoir. The reservoir held up the water and protected Pateley bridge. At Ramsgill at the head of the reservoir the water must have been 12 to 15 feet high as it came sweeping down the valley. The bridge over the Nidd is plastered with mud and fields are laid flat on either side. A wood and iron bridge leading to an old lead mine has disappeared. Lofthouses escaped because How Stean beck joins the Nidd just below the town and it was down the How Stean beck that the waters came. Stud Fold Bridge has its parapet and iron rails swept away and a 50 length of wall was washed away in a few minutes. Stud Fold Farm was flooded. Further up How Stean beck the water rose 20 to 30 feet in a place where the channel is wide and further upstream where the gorge narrows, the water must have reached 60 or 70 feet. All the mosses and ferns have been swept away. Boulders weighing 5 or 6 tons have been washed away. A wooden bridge in the gorge which stands 30 feet above the water has disappeared. At the gorge itself the storm lasted only an hour but it was supposed a cloudburst had occurred further upstream.  
Torrential downpours led to flooding on Derwent and Esk (See Rye and N Yorks chronology). There was also some flooding in Leeds.

4 Sep 1931  
BR  
Eden (2008)

Holmfirth Thongsbridge 1.35 in 90 m  
Daily totals in excess of 2.50 were recorded over much of South Yorkshire and locally (at Greenfield) reached 4.23 and over 5.00 in N Yorks (See Rye and N Yorks)  
Persistent rain with a few rumbles of thunder

21/22 May 1932  
Hull Daily Mail  
23 May

Stamford Bridge: The water rose 4 feet in 2 hours on the Derwent and all property in the Main Street was flooded to a depth of 1 foot.  
Elvington: Scores of farms were cut off.  
Scrayingham and Buttercrambe: Village streets were submerged to 2 feet.  
Pocklington: the main street was badly submerged and scores of families were unable to leave their homes and some confined to upper rooms. Boats were used in the Market Place. A bridge a mile from the village gave way.  
Nunburnholme and Burnby: Streets were flooded to 4 feet.  
Sutton on Derwent: Residents had to leave their flooded homes.  
Bubwith: The main street of the village was flooded several feet deep with water in every house up to the fire grate.  
Wilberfoss: The Foss beck rose rapidly and flooded the village street, the worst flood there for 60 years.  
Askern (N of Doncaster): Water poured into farm buildings at Went bridge with horses and cattle being drowned.  
Hull: Chanterlands Avenue was flooded again and also at Plantation Avenue and around Springhead.  
Thorne: Hundreds of tenants in the colliery village of Moorends had water surrounding their houses but only a few were flooded as the houses are raised more than 2 feet above the ground. Houses were badly flooded in brickyard Lane.  
Carcroft: Eighty houses had more than 3 feet of water in them. Pigs and poultry were drowned.  
Doncaster: Three inches of rain fell in about 15 hours. The river Don overflowed at Conisborough. The reservoir at Worsborough burst and water spread out for four miles below in some places to a depth of 6 feet..



4 Jun 1932

<https://www.buzzfeed.com/matthewtucker/extraordinary-vintage-photos-of-uk-flooding>

Wressle: Brind church was surrounded.



A man travels on an improvised raft during floods in Arksey, Yorkshire.

11 Jul 1932

Burnley Express

16 Jul

Lancs Evg post

12 Jul

BR

Yorkshire Post

12 Jul

Thunderstorm most severe and widespread in east south of England and Midlands. Two killed by lightning in Bradford and Derbyshire.

Normanton Haw hill Pk 0.89 in 30 m  
Pickering Hungate Hall 1.50 in 60 m  
Felixkirk Mt St John 0.75 in 30 m

More than 3 inches was recorded over small areas near Barnoldswick. As much as 5.33 inches at Barnoldswick (Rainhall Road), 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 1.00 h. 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 of

A man was killed by lightning at Bradford and an audience at Dewsbury were injured when lightning struck the building.

Leeds: At Butts Mill the water was so high that the tallest man could not wade through it. Water invaded most of the mills and damaged hundreds of warps. **Windows were broken by hailstones an inch in diameter.** Shops in the lower part of the town were flooded from the overflow of the Butts beck. Some people had to escape by swimming. Sheep cattle and pigs were drowned; walls were knocked over and some local bridges carried away.

Dewsbury: there was flooding at the market Place and at Aldhams Road.

Batley: there were floods in the yard of the Fleece Hotel In Stocks lane. At the Regent picture house in Bradford Road the water reached the first 4 or 5 rows.

Heckmondwyke: the River Spen overflowed and Union road became impassable. Mills were flooded.

Cleckheaton: Houses were flooded in Rawfolds and Little Town.

Castleford: Hail as well as rain fell and Carlton Street ran like a river and in the lower lying Bridge Street and Aire Street the water rose quickly to 2 feet depth overflowing into most of the shos on either side of the street. In Station Road the water collected in the subway to a depth of 4 feet under the railway. Cellars were flooded all over the town.

Doncaster: A boy was drowned in the River Don.

	Tadcaster, and at Knaresborough, Thirsk and Pickering, while more than 3 inches fell at Felixkirk near Thirsk.	
12 Aug 1932 BR	Thunderstorms brought the heatwave to an end.	The storms were mainly in the south of England with large hailstones.
21 May 1933 Yorkshire Post		Wharfedale: The worst flooding occurred at the top of Pool Bank where a waterfall at the side of the road rose with great rapidity and the water was 5 to 6 inches on the road.
22 May		Otley: A council housing estate was affected, roads were flooded and some houses. Farnley Lane was impassable.
23 May 1933 Yorkshire post		Bridlington: There was a heavy fall of large hailstones. More than half an inch of rain fell in less than an hour. A number of houses were flooded including in Brooklands Road. Nursery plants were ruined.
24 May		Filey: The area experienced fog, heavy rain and hailstones.
7 Jul 1933 Yorkshire post	Thunderstorms followed a heat wave in which 28 were reported killed by sunstroke	Doncaster: A boy was killed by lightning.
		Leeds, Sheffield, Bradford, Otley: Thunderstorms were reported with lightning damage to houses but no flooding was reported.
19 Jul 1933 BR	Bedale The Hermitage 1.46 in 90 m	No reports of heavy rain or flooding were found in newspapers.
20 Sep 1933 Yorkshire evg post	Thunderstorms after a drought from July	Barnoldswick: Water several inches deep poured down the Manchester Road and water penetrated into Wellhouse, Crownest and Bankfield Mills
20 Sep		Elsewhere some rain was welcomed after the drought but no flooding was reported.
9 Jun 1934 Sheffield independent		Barnsley: Houses were flooded in various parts of the town especially in smithies and Stairfoot.
9 Jun		Sheffield: The water rushed along the streets like rivers {but no flooding of property was reported}.
9 Jun		Selby: Houses were flooded due to the blocking of drains. Houses in Flaxby Road were flooded to over 18 inches. Two elderly women were marooned on top of a kitchen table.
Yorkshire Post 9 Jun		
13 Jul 1934 BR	Thunderstorms after a drought of 15 days and high temperatures	Leeds: Many streets were flooded and more rain fell in half an hour than in the previous month.
Sheffield Independent 13 Jul	Felixkirk Mt St John 1.22 in 50 m	Sheffield: In the area from Eccleshall across Ringinglow to Fulwood streets were turned into rushing rivers, gardens into lakes and tar macadam from the roadway was forced up. Water was knee deep in places. There was a heavy hailstorm at Fulwood.
Yorkshire Post 13 Jul	Helmsley 2.64	Rotherham: A church was struck by lightning but no rain fell.
		Halifax: Many basements were flooded to several inches. Glass houses suffered from huge hailstones. At Elland there was flooding and one bank had difficulty in preventing the water reaching the strong room. The River Calder rose rapidly.
18 Jul 1934 BR	Castleton 2.15 in 60 m	
31 Jul 1934 Hull daily Mail	Amounts of rain quoted in the newspaper were generally much less than 1 inch.	Filey: the thunderstorm was said to be the worst for 40 years. The strongroom of the Yorkshire Penny Bank was flooded. Campers were washed out between Filey and Scarborough. Between Muston and Staxton water from the hillsides brought tons of mud down on the road
31 Jul		

Beverley Guardian 4/11 Aug 1 Sep 1934 Hull Daily Mail 3 Sep Beverley Guardian 8 Sep	Thunderstorm	Driffield: four horses were killed by lightning. Beverley: BG has no reference to rain or floods
23 April 1935 Sheffield independent 24 Apr 18 Jul 1935 BR	Thunder also occurred on 21 <sup>st</sup> especially in Wharfedale and roads were flooded. The River Wharfe rose several feet.	Beverley: A thunderstorm for more than half an hour with large hailstones as big as walnuts covered the streets to a depth of 2 inches. Houses and shops were flooded. Workshops and factory cellars were half flooded. BG says the hail fell for 20 minutes and lay on the street ½ inch deep. The drains were unable to cope and pools spread along many roads. In the Market Place boxes were floating about and stallholders climbed on their stalls. Some houses in low lying areas were flooded.
8 Aug 1935 Yorkshire Post 9 Aug	A storm followed two months of dry weather and especially over the previous 2 weeks when temperatures over 80F were experienced. Rain was generally welcomed.	Mirfield: The railway station was cut off by the flooded Station Road. Several houses in Calder Road were flooded; others were struck by lightning. The storm lasted 5 hours with continuous thunder and lightning. Dewsbury: Cellars in the vicinity of the market place were flooded to a depth of several feet. Huddersfield: A Division 1 match had to be postponed because of a flooded pitch. No reference to flooding or heavy rain was found
17 Aug 1935 Yorkshire Post 19 aug 18 Aug 1935 Hull Daily Mail 19 Aug	Thunderstorm lasting over half an hour.	Rotherham: the storm flooded streets and lifte manhole covers. Sheffield: Lightning caused damage to buildings. No flooding was reported.
26/27 Aug 1935 Yorkshire Post 28 Aug 1 Sep 1935 BR	Catterick 0.20 in 6 m	Dewsbury: Rainfall of 1.65 inches in 2 hours. Damage to roads was reported but no reference to flooding was found.
24 Sep 1935 Lancs Evg post 25 Sep <a href="http://eyeoncalderdale.com/history-of-flooding-in-calderdale">http://eyeoncalderdale.com/history-of-flooding-in-calderdale</a>	Thunderstorms	Rudston, Lissett (East Riding): In a very localised storm the village streets were turned into rushing rivers. Within 5 minutes people were ankle deep in water.  Sheffield: In a 45 minute storm, streets became impassable and the cellars of several hundred houses were flooded.  Filey: Streets were like rivers and manholes in the centre of the promenade burst open. Shops in the main street were flooded and basements all over the town were flooded including those on The Crescent where there was 6 inches in the basements. Much mud was washed down from The Ravine. Todmorden: The Victoria Road area was flooded again for the second time in 3 days and cellars of some houses were flooded to a depth of 5 feet. Flooding in Todmorden at Burnley Road, Hudson Street (Cornholme), Garden Street, Wellington Road and Vale Street. Major Clough overflowed down Victoria Road.

5 Jan 1936	Rydal (High Close)	2.6
BR	Grasmere (Huntingstile)	2.69
	New Dungeon Ghyll Hotel	4
	Kentmere Head Reservoir	2.67

3 Jun 1936  
Yorkshire post 4  
Jun  
Hull Daily Mail 4  
Jun

Flooding occurred in the north of England including the Mersey, Irk, Irwell and Conway. No reference in BR to the south Lakes (and no rainfall totals for S Lancs).

Cottingham: There was a continuous fall of hailstones for an hour and a half. 'The streets were more than ankle deep in the ice and spouts and gulleys were choked so that when rain succeeded the hail it could not get away and flooding ensued' With the lack of wind the storm remained stationary for a long period. Houses were struck by lightning. Within fifteen minutes the main street was knee deep in water. Water forced its way into every house in the village. The hailstones were as big as beans. 'Drains were choked by hail and held the rainwater in the streets.'

Little Weighton: the storm was the worst in living memory. A torrent flowed through the village from 3 directions, Skidby Hill, Walkington Road and White Gap choking the drains and flooding the lower end of the village to a depth of a foot in less than half an hour. Farmyards were several feet deep and farmers had difficulty in rescuing pigs.

21 Jun 1936	The storm was the climax of 5 days of heatwave.
BR	Ganton 2.00 in 70 m

Hull Daily Mail  
22 Jun

Hunmanby: cottages were flooded and a horse was killed. The water rushed on to the road carrying mud and portions of hedges. Many roads were flooded at Hunmanby, Speeton and Muston.

2 Jul 1936	Thunderstorm Half an inch of rain fell in one hour
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Hull Daily Mail 2  
Jul

Scarborough, Filey and Bridlington: A thunderstorm occurred but no flooding was reported. A house was struck by lightning at Filey.

Hull: Gardens were flooded and the gutters could not cope with the flow especially in Newlands. No houses were reported flooded

15 Jul 1936	Thundeerstoms
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Yorkshire post  
16 Jul

Holderness: Hundreds of acres between Winchlesea and Winestead are flooded along the railway line and cattle and sheep are marooned.

Filey, Scarborough: Thunderstorms also occurred but with flooding only noted of tennis courts.

15 Aug 1936	Pickering Hungate Hall 0.70 in 20 m
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BR  
15 Sep 1936  
Yorkshire Post

Leeds and Wetherby: thunderstorms occurred without reports of flooding.

See Rye and Swale chronologies.

Driffeld: A man was injured by lightning and several houses struck. The rain caused damage to crops left in stooks. Cellars were flooded in Exchange Street.

15 Sep  
Driffeld Times

Tibthorpe: Hailstones as large as marbles covered fields and roads and numerous kitchends were floored with mud and water. The main road was impassable. The pond overflowed and poured down Bainton Road.

19 Sep.

Wenselydale, Hawes: A two hour thunderstorm caused the streets of Hawes to run like miniature streams

14 Jun 1937	Only a little thunder occurred.
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Driffeld: The rainstorm casued streets to run like rivers, drains were unable to cope and blocks of houses were flooded. In Westgate a bus garage was flooded to 2 and a half feet. In the vicinity of the Red Lion Hotel and water swept into ground floors and cellars nearby. The storm was very local.

Hull Daily Mail  
15 Jun

Acklam: Rain fell heavily for 2 hours, water rushed down hillside roads and soil was washed down to the hedges.

16 Jul 1937	Temperature reached 78F on 15 <sup>th</sup> in Hull but fell 9 degrees in an hour and a half.
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BR  
Hull Daily Mail

BR notes that a heavy thunderstorm broke over Leeds .about 17h and lasted until 18h. 30m. Vivid lightning occurred and for more than an hour the rain was intense. Moderately heavy rain continued throughout the evening. A large part of Selby in Yorkshire, where violent storms also occurred, had its electricity supplies cut off.

12 Aug 1937 BR	Oughtershaw Hall 2.21 in 2 h	Miss G. J. Wood reports from Oughtershaw Hall:—"At 14h. 50m. there was a sudden downpour of rain with thunder and lightning and hail like pieces of ice. The Wharfe became a torrent, trees and wooden bridges being swept away. In rather less than 2 hours 2.21 inches of rain had fallen."
17 Sep 1937 Hull Daily Mail	Thunderstorm Hull 0.89 ins in 12 hours	Hull: Chanterlands Avenue was flooded from the torrential rain and a brief hailstorm.
18 Sep Yorkshire Post		Sheffield: Streets in low lying areas were quickly flooded. Bear the central ambulance station in Corporation Road water was 18 inches deep. Traffic was held up in Upwell Street. Factories and workshops were inundated.
18 Sep 1 Jul 1938 Yorshire Post 2 Jul	Leeds Lawnswood 1.1 ins in 3 h	Leeds: there was flooding on Marsh Lane and East Street; three manhole covers were forced up; cellars there were flooded 'It is seven years since the last serious flooding there'. A man was struck and injured by lightning. Bradford: Buildings were struck by lightning but no flooding was reported.
6 Jul 1938 Hull Daily Mail 6 Jul		Sheffield: Roads were flooded and drivers had to be rescued from their vehicles by means of a ladder. Roads were flooded to a depth of several feet and the rainfall in 90 minutes was more than in the whole of April. Water was 5 feet deep under the railway bridge in Worksop road.
5 Aug 1938 Lancs Evg Post 5 Aug Yorkshire Evg post 5 Aug	Thunderstorm Leeds 0.75 inch in an hour	Hull: there has been a thunderstorm a day for the last 6 days – but with only a total rainfall of 1.11 inches. Welton: The village was covered with hailstones about 3 inches deep and gardens were damaged. One house was struck by lightning and damaged.
		Flamborough: Two houses in Buckton were struck by lightning. More than ¾ inch rain fell within an hour. Wombwell: The parish church was struck and damaged.
		Leeds: Houses in Marsh Lane, East Street and Garden Street had cellars flooded to a depth of 3 feet when the Timble Beck rose quickly in a few minutes. Manhole covers in Marsh Lane were forced up.
		Collingham: Roads were flooded and a house near the church was flooded.
		Huddersfield: In the Turnbridge district, cellars were flooded. Setts in the main streets were raised several inches. The engine room of Dawason's Mill was flooded.
6 Aug 1938 BR	Wakefield Clarence Park 1.00 in 30 m	Sheffield: Part of the steep bank on Rivelin Bank road was washed away and the Valley road was flooded to a depth of 18 inches. Holme Lane was also flooded and a low wall was washed down. Six houses were flooded in Amy Street Crookes. Road damage was reported in Fulwood road, Eccleshall Road and Broomgrove Road.
		Rotherham: the main road to Doncaster and Dalton was flooded. In Wombwell several streets were knee deep in water.
		Pontefract: several roads were flooded and the Robin Hood Inn cellars were flooded to the ceiling and nearly 2 feet on the ground floor rooms.
8 Aug 1938 Yorkshire Post 9 Aug	Thunderstorm	Keighley: the train line between Keighley and Oxenhope was damaged, ballast washed away and stones and debris washed on to the line by heavy rain. Some of the houses in the neighbourhood were flooded at Damems.
		Halifax: the storm caused serious floodin at Holmfield Mills, Lower Brear, Shibden and Causeway Foot.
		Bradford: The fourth thunderstorm in as many days caused lightning damage to houses but no flooding was reported.
		[About 50 houses were flooded at Settle]

12 Aug 1938 Lancs Evg Post 12 Aug The Times 13 Aug Sheffield Independent 13 Aug	Widespread thunderstorms Events affected the East Yorkshire Wolds in the afternoon (walnut to golf ball size hail with drifted hail up to 4 ft deep and many broken windows),	Middleham: Two racehorses were killed by lightning. Leeds: Houses and a mill chimney were struck by lightning and a man seriously injured. At Headingley large hailstones fell and gardens were flooded. Sheffield: A thunderstorm lasted two hours and flooded streets in the centre of town some to a depth of 3 feet. Tramway traffic was stopped in the Brightside area through Upwell street. Part of Saville Street Brightside was like a river and flowed into the basement o Ward's works. At Attercliffe floods on the Worksop Road water was several feet deep and houses were flooded on Worthing Road. The Public assistance Offices and the abattoir were flooded. Within 15 minutes of the rain starting Spring Street, Russell Street and Bower Street off shalesmoor were flooded 3 feet deep; inhabitants were trapped in their homes. At Atkinson's on The Moor the basement was flooded and 50 assistants formed a bucket chain. Thorne: Houses and businesses were flooded to a depth of several feet. Cattle were killed and poultry drowned. In Plantation road houses and gardens were flooded as well as in Horsefair Green. Businesses were also flooded in the centre of town. <b>Hailstones up to an inch long fell but in the absence of wind no window breakage was reported.</b> In Orchard street 30 houses were flooded to over a foot. Doncaster: The town itself escaped but at nearby Cantley 1.32 inches fell in half an hour and gardens and lanes were flooded Brampton: Hailstones as large as marbles fell for a quarter of an hour and rain continued for to hours. Driffield: <b>At Foston nearby large hailstones broke windows and few houses remained intact.</b> The streets were severely flooded. Crops suffered severely here as elsewhere. Marske Hall was flooded and water was nearly up to the first floor. Todmorden: Several landslides occurred and many houses were flooded. There was also flooding at Walsden station.
16 Jul 1939 BR Sheffield Daily Telegraph 17 Jul	Holme on Spalding Moor 2.21 in 60 m Rotherham Broom Lane 1.44 in 90 m	Thunderstorms occurred almost daily from the 14th to 21st at Rotherham, that of the 16th being most remarkable. Wharfedale: Burley in Wharfedale : A cloudburst occurred on the moors above the village and culverts leading from the moors burst their parapets; the village streets were turned into rivers and 200 houses were flooded. In three of the village pubs barrels were floating in the cellars. There was a landslide near the local railway station. Sheffield: Roads were turned into rivers. Many houses were struck by lightning. Darnall: It was the worst flooding for 8 years. Water raced down from High Hazels Park into Catcliffe Road and covered the road to the depth of a foot. Most of the houses on the road had their cellars flooded and some had the ground floors flooded.
17 Jul 1939 BR	Catterick Aero 0.98 in 48 m Dewsbury Municipal Off 1.60 in 55 m Heckmondwike The Bottoms 1.33 in 90 m	BR reports that At Dewsbury 1.60 inch fell between 14h. 15m. and 15h. 10m. At Heckmondwike, six miles to the west of Dewsbury, 1.33 inch, out of a total for the day of 2.09 inches, fell between 13h. 30m. and 15h. Mr. T. Gough reports that there was thunder and lightning with heavy rain and hail, that further down the valley to the east drains were choked and manhole covers forced up but that the flow of the rivers Spen and Calder remained normal.
19 Jul 1939 Sheffield Daily Telegraph 20 Jul		Scunthorpe: Several parts of the town were flooded especially the lower High Street. Five houses were struck by lightning and seriously damaged. Sheffield: Abbeydale Road South was flooded to a depth of 2 feet and at Little London Bridge there was more

20 Jul 1939 BR Leeds Mercury 21 Jul Halifax courier 22 Jul	Thirsk South Villa 2.46 in 90 m Hail 3 inches deep was on the road between Tadcaster and York	<p>than 3 feet. Houses were flooded in Bocking Lane.</p> <p>BR reports that at 17h. a violent thunderstorm broke over Thirsk and district. The lightning was vivid and the rain exceptionally heavy; the drive at South Villa being flooded to a depth of several inches. The storm lasted until 18h. 30m. when a fall of 2.46 inches was measured. As a result of the downpour, a neighbouring stream burst its banks and the roads nearby were flooded, holding up the traffic for some time. The storm appeared to follow a course from S.E. over Kilburn, Bagby and Thirsk, and then on to Ripon and Harrogate. Additional falls for the day were 3.27 inches at Thirsk W.W. ; 3.21 inches at the National School and 2.49 inches at Thirsk Hall. Only three miles from Thirsk there was very little rain.</p> <p>Dewsbury: The centre of Dewsbury resembled an inland sea. Shopkeepers were marooned and many houses were flooded. Manhole covers were flung up. The thunderstorm lasted an hour and a half. Crackenedge Lane was converted to a river a foot deep which poured into the Market Place and along Longcauseway to the bus station. In a quarter of an hour the water was 3 feet deep in some parts of the Market Place and all the shops on the bus station side were flooded. Rishford Street and Railway Street were also under water. Water was 2 feet 6 inches deep on Dewsbury Rugby League Ground. The most severe flooding was in the Thornton Lees district where water poured down from Thornhill into Parker Road and the Lees Holm districts; many houses were flooded.</p> <p>Sowerby Bridge: Cellars were flooded in Bolton Brow and Industrial Road. Several houses were struck by lightning.</p> <p>Halifax: Flooding was reported in Pellon Lane and Range Bank. Water rushed down Kings Cross, Gibbet street and Pellon Lane to a considerable depth. The daily rainfall was 1.22 inches. Buildings were struck and damaged by lightning.</p>
5 Aug 1939 Hull daily Mail 7 aug	Hull 1.00 inches in 2 hrs	<p>Hull: Flooding occurred throughout the city. The Fire brigade pumped out 3 cinemas (Royalty, Ritz and Astoria in East Hull), 3 hospitals, 8 pubs, 10 shops and a church. In Hedron road subway 4 people were rescued from a car in 6 feet of water. Several cinemas in the centre of town were also flooded. The cellar of the national Provincial Bank in King Edward Street was flooded. The Fire brigade had to rush to points far apart, to the Holderness High Road, Hessle high road, Jameson Street and Askew Avenue. There was serious flooding under the Boothferry Road and Chanterlands Avenue bridges.</p> <p>Withersea: Road were flooded to a depth of several feet at the southern end.</p>
21 Aug 1939 BR Yorkshire post 22 Aug 2 Sep 1939 Eden (2008)	Leyburn Spennithorne 0.83 in 35 m	<p>BR reports that at Leyburn the storm was very local and commenced at 9h. and 0.83 inch fell in 35 minutes, the roads being flooded for a time in many places.</p> <p>Halifax: the roadway near Stump Cross inn was flooded and traffic was held up. Buildings were struck and badly damaged.</p> <p>Thunderstorm with 103 mm rain at Conisborough.</p>
10 Jul 1940 BR Eden (2008) 17 Jul 1940 BR Eden (2008)	Scarborough 1.59 in 65 m Osgodby 106 mm in 3 hours	<p>Heavy rainfall was also reported in Loncolnshire</p> <p>There are no BR entries for heavy rainfall in short periods but many of the daily rainfalls on this date for the Vale of York and the North York Moors (and lower Tees) exceeded 2.5 inches and some in the North York Moors reached 3.5 inches. Floods hit the Cleveland coast with 90 mm at Redcar.</p>

1 Oct 1941  
Longfield 1998  
Yorkshire Water  
Authority. 1980

5 Aug 1943  
BR

13 Sep 1943  
BR

14 Sep 1943  
BR

15 Apr 1944  
Yorks Post &  
Leeds Intell

29 May 1944  
BR  
The Times 14  
May 2008  
Daily Mail 9 Jun  
1944  
Eden 2008,  
Birmingham  
daily Post 9 Jun  
1944

30 Jun 1944  
BR

29 Aug 1945  
BR

Adel Lawnswood cemy 1.01 in 45 m  
Burton Leonard 1.21 in 60 m  
Rotherham Ramsden Road 0.96 in 29  
m  
Bolton Abbey 0.95 in 30 m

Burbage 0.44 in 5 m  
There was a UK May temperature  
record of 92F  
Glossop Swineshaw 114 mm

Harrogate Harlow Moor 0.78 in 9 m  
Scorton 0.81 in 30 m

Todmorden (Gorpley Reservoir) 2-81  
Halifax W.W. (Widdop Res.) 3-07

River Don: Highest recorded discharge through Doncaster (Section 24 Survey YWA)

Sowerby Bridge: Thunderstorm rainfall was widespread in Yorkshire especially at Sowerby bridge. Rainfall continued for 4 hours and lightning for 3 hours. Rainfall 1.50 to 1.75 inches. Two people of Norland were washed away and drowned, one into a culvert. Many houses were flooded in the Norland district. Hillside streams overflowed and ploughd fields had their soil and seed washed away. Ruts four to five feet deep were torn in roads and tons of soil and stones were washed onto the railway and into the valley.

Halifax: There was 2.37 inches in 3 hours and streets were flooded.

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.

The Times refers to 'The Forgotten Storm' because of wartime censorship. The thunderstorm broke at Holmfirth when people were returning from Whitsun processions. A raging torrent tore up 17 mills and factories, 61 shops and 109 houses leaving dozens of families homeless and three people dead.

DM reports 6 inches of rain in 2 hours affecting Holmfirth, Meltham and Glossop with four people drowned and industries, homes road and railways affected. In an hour 200 people found themselves homeless.

150 to 175 mm was estimated to have fallen above Holmfirth and much damage was caused in Holmfirth.

Hailstones 3 cm across were reported.

BDP notes <Holmfirth>: Three people were swept away and drowned. Two bridges were destroyed, two banks, a local grocery store, and a milliner's shop collapsed on the main street; mills and workshops were partly wrecked and houses in low lying parts of the town were flooded. The floodwater travelling at great speed washed bales of wool out of warehouses and coping stones from bridges and walls were carried for 4 miles. In a matter of minutes the river rose by 4 or 5 feet. Between Holmbridge at the head of the valley and Holmfirth the river diverted its course and passed through a mill yard where it washed away sheds containing £10,000 worth of rabbit skins. Nearing Holmfirth the flood smashed in a mill weaving shed. The total damage is estimated at between £500,000 and £1 million.

Flooding occurred in low lying parts of Harrogate in the storm of the 30th. The observer estimated a rate of 10 in. an hour when the storm was at its height.

Heavy storms were reported in the West Riding of Yorkshire. (At Boston (Lincs) during the morning of the 29th, 3.20 in. of rain fell in 2 hours 35 minutes in a severe thunderstorm)



20 May 1946 BR	Leathly (Lindley Wood, S.) 3-00 Masham Moor (Low Houses) 4-03	BR reports that the third week of May was characterised by widespread thunderstorms and appreciable damage to growing crops was reported in many parts of the country. Mr. L. Atkinson in reporting a severe storm at Rotherham on May 20 wrote : "About 1630h lightning and thunder were almost simultaneous, the thunder being of the crackling type. <b>Hail stones about J inch diameter fell with heavy rain.</b> On higher ground (350-450 feet) to the northeast and east, the hail was perhaps the most notable feature of the storm. It fell heavily in two forms; one form that of marbles about half-inch in diameter and the other that of flat tablets about an inch square 1/8 inch thick and perfectly white in colour. This was about 1 to 2 in. deep at the end of the storm and at Kiveton Park, some 6 miles to the southeast, it was 3 in. deep. The whole of the fall, 1.19 in. of rain, occurred between 1605h. and 1815h. Damage was done to electric transport installations, chimneys and wireless aerials."
23 Jun 1946 BR Hull Daily Mail 24 Jun	Farndale Vic 1.28 in 15 m Temperature reached 80F in Hull and 82F in Leeds	Wetwang: This was the centre of the storm with rain and <b>hailstones big enough to 'cover a shilling piece'</b> . Rainwater poured down fields carrying roots and soil and the Bridlington to York road at Fimber and Sledmere was coated with mud 6 to 8 inches deep. Middleton on the Wolds: the main street became a flowing stream and water flowed into brick cottages lower down. The storm did not reach the coast towns and not a drop fell in East Hull. Doncaster: The cellars in 12 houses in Lowther Road were flooded. Imperial Crescent and Windsor Road were flooded to a depth of 1 foot. Driffield: Heavy rain was experienced but the drains were able to cope with the flood water. Crops suffered in some parts of the East Riding
13 Jul 1946 BR Driffield Times 20 Jul 26 Jul 1946 BR Yorkshire Post 27 Jul	East Harlsey Harlsey Hall 1.10 in 30 m  Daily rainfalls Greenfield (Lower Chew) 3-37 Greenfield (Sew. Disp. Wks.) 2-95 Greenfield (Yeoman Hey) 3-14 Marsden (Deerhill Res.)2-80 Slaithwaite (Deanhead Res.)2-97	BR notes that in the West Riding of Yorkshire and also in the Manchester area flooding and damage were exceptionally severe. Bradford: Sandoz Chemical Company works were flooded in Canal Road during heavy rain which continued for 5 hours. The water was four feet deep in the dyestuffs storeroom. Collinsons on Tyrell Street was flooded to a depth of over a foot. A Leathercloth manufacturers at Rook Street Dudley Hill was flooded to a depth of 18 inches. Leeds: the worst flooding was on East Street due to the overflowing of the Meanwood beck; cellars and premises along the street were flooded in some cases to more than 2 feet. Water remained up to the ceiling in some cellars and the Waterloo Hotel was unable to open. In Meanswood and Alwoodley water gushed up from manholes. (It was noted by a representative from the City Council that the culverting of the Meanwood Beck had been held up by the war). Halifax: More than an inch and a half of rain fell in 3 hours. Buildings were struck by lightning. Dewsbury: Flooding occurred in several places including Albion Road, Batley Carr where residents were briefly confined to their upper rooms. Flooding in Todmorden at Burnley Road, Victoria Road and Wellington Road. Parts of Todmorden were under 4 feet of water. Walsden flooded at Winterbutlee Tunnel and the railway station, where water was level with the
20 Sep 1946 <a href="http://eyeoncal">http://eyeoncal</a>	Torrential rain during the night persisted into the afternoon but no thunder was reported.	

platform.

Serious flooding in Brighouse, affecting low-lying areas next to the Calder and in the area around Clifton Beck. Land between Elland and Brighouse was flooded. Flooding at Copley affected 150 houses and Sterne Mill. Industrial premises at Sowerby Bridge were flooded.

<Hebden Bridge>: Flooding in Hebden Bridge from the River Calder and Hebden Water. Main streets were flooded 4 feet deep and factories and schools were closed. Shopkeepers worked frantically to save goods in lower rooms.

<Halifax>: Thomas Hoyle, worsted spinners, Copley Mills on the banks of the Calder were flooded and work at the mills stopped. In Wheatley Valley Halifax the River Hebble overflowed at Lee Bridge. Two houses in Wood Lane were flooded. The carpet works of John Crossley and Sons had shed flooded. Copley village was isolated by flood water. More than 100 houses had their cellars flooded and water rose more than a foot deep in living rooms.

<Huddersfield>: work workers were sent home from the ICI plant after the River Colne burst its banks and flood part of the plant. A man was drowned in the River <<Holme>> when trying to rescue chickens.

<Dewsbury>: Lowlying parts in the centre of the town were flooded and worst at Longcauseway and Rishworth Street by the Central Bus Station.

<Mirfield>: Steandard Lane which runs along the River Calder was flooded.

<Sawley>: Two feet of water flooded the Grindleton Road and there was 12 inches of water at Smithies Bridge on the Sawley Clapham road.

<Burley>: Water poured down the main street and the Otley to Ilkley Road between Otley and Burley was under 2 feet of water

<Leeds>: Residents in East Street had to take to their upper rooms when water poured into the roadway from the River <<Aire>>. Water rose rapidly and entered houses, shops and factories. Fearn's Island off East Street was partially submerged. Dyson's foundry was flooded from a neighbouring beck for the first time in 50 years with water reaching 4 feet deep in parts. The cellars and ground floor rooms of the Waterloo Inn were flooded. Branch Road Lower Wortley was flooded.

<Keighley>: Floods affected houses and factories and public services.

<Haworth>: The road at the foot of Mill Hey was 4 feet deep marooning the occupants of the Royal Oak Hotel and the conservative club. Slingsby's factory adjoining the river worth in Woodhouse road had water surging through the factory and carrying away a gable end wall.

The number of properties flooded in the 1946 event (Brighouse to Todmorden) was reported as 905. The 1946 event was estimated to have a return period of 100 years at Brighouse and Mytholmroyd, and 33 years at Todmorden.

<Mytholmroyd>: 354 properties in Mytholmroyd were affected, some flooded to 5 or 6 feet deep. Burnley Road was closed for 11 hours. The centre of the town was 4 feet deep in water and roads were impassable even for buses. A mill boiler house collapsed into the River <<Calder>>. Two wooden shops one occupied by a

butcher and the other a cafe were swept down the river with their contents.

<Sowerby Bridge>: A portion of the cotton mill was swept away.

<Castleford>: The peak stage was within a few inches of that recorded in 1866 and a couple of feet below the flood of 1775. Shop premises were flooded to a depth of 18 to 24 inches in Aire Street and flooding of streets, shops, garages, houses, and a school occurred in the Lock Lane area.

<Bradford>: The city centre was flooded. A 'wall of water' knee deep swept into town Hall Square and the area became like a lake. A Bradford builder estimated the damage as approaching £1 million. The floods subsided during the after noon and the city was clear by 3.30 pm. The floods spread from Broadway along Charles Street into the Forster Square end of the Market Street. Cowlings Wine lodge in Market Street was flooded and beer wines and spirits destroyed. The cellars of the Town Hall were flooded and the corridors in the first basement were flooded to a depth of 6 inches. Torrents poured through the windows On the NelsonStreet side. People attending a conference at the Town Hall had to wade through 2 feet of water to get there. The central area following the line of the Bradford Beck was completely flooded. The beck overflowed where it was exposed above ground and where it was underground the water forced its way up through drains. Water ran along Broadway and Thornton road as far as the junction with Listerhills Road and Grattan road, Tyrrel Street and the bottom of Sunbridge Road and the Swan Arcade in Market Street. The worst flooding was in Thornton Road and the side streets running off it; the water rushed down like a river in spate and poured out of low windows. A tributary swirled out of Aldermanbury and into Tyrrel Street .

<Esholt> (near <Shipley>): A man was drowned in the<<Aire>> when his boat capsized during efforts to save people cut off.

<<River Nidd>> burst its banks in the Harrogate Pateley Bridge area and in some places completely altered its course. <<Killingham Beck>> burst its banks and many cars were held up with water up to their bonnets.

<Markington>: The main road through the village had two feet of water on it.

<Harrogate>: Many gardens were flooded and also large tracts of The Stray particularly opposite the Prince of Wales Hotel.

<Otley>: The Wharfe overflowed and cut the town in two.

28 May 1947

BR

Leeds Chapel Allerton 1.19 in 1 h 30 m

30 May 1947

BR

Bradford Waverley Tce 1.50 in 2 h  
Temperature in Lees fell from 82F to 70F

Yorkshire

Evening post 30

May

<http://eyeoncalderdale.com/history-of-flooding-in-calderdale>

In the north of England and locally in the west during a hot spell at the end of May, mostly on the 30th. Mills, power-stations and houses in Leeds, Bradford and that at Temple Sowerby in Westmorland on other towns were damaged by quickly rising flood-waters, while transport services and the electricity supply were dislocated by the striking of cables by lightning. Mr. J. C. Crossley of Waverley Terrace, Bradford reports that the fall of 1.50 in. in 2 hours on May 30 was followed within an hour by another of 0.80 in. in 40 minutes, which though more intense than the first is not conventionally " noteworthy" fall. Hailstones up to an inch in diameter fell during the first storm.

<Skipton>: Torrential rain with hailstones half an inch in diameter fell at Eastburnon the Keighley to Kendal Road where the road was 4 feet under water. Eastburn House Farm was flooded.

Disastrous flooding in <Brighouse>, entirely from <<Clifton Beck>>. Considered more serious than Sept. 1946. River Calder was contained, however there was flooding in <Mytholmroyd> due to the blockage of culverts on tributaries.

14 Jul 1947 BR Yorkshire Post 15 Jul	Leeds Chapel Allerton 0.77 in 35 m	<Leeds>: <b>Hailstones as large as mothballs fell</b> . Part of Leeds Woman's hospital was flooded. Houses and shops in all parts of Leeds were affected with the exception of East Street (which is normally the first to be affected). Four houses in South Leeds were struck by lightning. Houses in Wrangthorn Avenue, Hyde park were flooded 2 feet deep. Old buildings in the Meanwood Road district were again flooded; cellars in the Spa Buildings were inundated. Cellars of 70 houses and shops in the Brudenell Road area were flooded to 4 feet and furniture was floating in some houses. Evanston Row, Kirkstall Road had houses filled with water and dirt where 30 cellars were filled. (Wakefield, Dewsbury, Tadcaster missed the storm entirely).
16 Jul 1947 BR Yorkshire post 17 Jul	Leeds Chapel Allerton 1.22 in 94 m Hessle Westfield Rise 1.40 in 2 h Sheffield Rivelin WW 0.90 in 10 m	Leeds: three separate storms occurred within 18 hours. In the first storm the temperature dropped 10F and 0.55 inches fell in 25 minutes. The corner from the East Street to the Calls was under water two times. A church spire was struck and damaged. Houses in Brudenell Road were flooded. Harrogate: Rain was accompanied by hailstones. Water was nearly a foot deep at the entrance to Valley Gardens. Large patches of The Stray and several roads were also flooded. Wakefield: Part of Wood Street was awash. Buildings were struck and damaged by lightning. Barnsley: Peel Street was like a river in spate with water 1 foot deep. Cellars were flooded and one factory had to stop work. Hull: Willerby road and Alnaby Road were under water but parts of Hull had little or no rain. At Alnaby Wilston Street and Wofreton Road were flooded when the drains were surcharged. At Alnaby the water was a foot deep under the railway bridgenear The Square.
11 Nov 1947 BR Westmoreland Gazette	Coniston (Holywath) 3.4 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 and over Wales. There was serious flooding in Wensleydale and other parts of Yorkshire and Lancashire. High rainfall in Dent and Sedbergh. Roads in Garsdale were also impassable to pedestrians. Whitby: 1.19 inches fell in three hours. [Storms were mainly reported in London and the Southeast].
14 Jun 1948 The Times 15 Jun	Thunderstorm	
31 Jul 1948 BR	Leeming 1.30 in 35 m (1.45 in 65 m)	Considerable damage was caused by lightning and heavy rain at Richmond, where, according to the Yorkshire Post, the storm was the worst for 55 years. There was heavy hail in places; <b>at Leeming the hailstones were said to be nearly as big as golf balls.</b>
14 Jul 1949 Hull Daily Mail 14 Jul Beverley Guardian 16 Jul, Yorkshire Post and Leeds Intelligencer 14 Jul	Severe thunderstorms followed a weeks old drought	<Beverley>: The Fire brigade (whose job it was to provide water to drought stricken areas in the last few weeks) were called to pump out water from hotels and other premises. BG notes that during the thunderstorm, the worst for many years, the Corporation dredger lying near the end of The Beck sank. In some of the low-lying parts of the town houses were flooded and householders had to remove carpets and furniture from the ground floor. <Bingley>: Basements of buildings were flooded. <Mytholmroyd>: Torrential rain flooded the Mytholmroyd to Luddenden Foot road to a depth of 12 inches. <Bradford>: A Bullens report suggests flooding in valley Road, Broadway and Aldermanbury.

25 Jul 1949  
BR  
22 Aug 1949  
BR  
Yorkshire Post  
23 Aug

Tickhill Dadsley Road 1.24 in 30 m

BR reports that bridges were swept away in Wensleydale and much damage was caused at Carlton and Melmerby in Coverdale where most of the houses were flooded to a depth of two to four feet. After a day with temperatures in the 80s storms broke out in many parts of Yorkshire.

<Wensleydale>: A cloudburst on Penhill caused flooding in <Carlton> and <Melmerby> and <West Burton>. Two bridges in West Burton were swept away. Walls from Melmerby Moor were flung aside and the waters entered the west end of Carlton down a moor road bringing large boulders which were strewn about in the village. In the Forrester's Arms Carlton the water was 3 feet deep and similarly the Topham Arms in Melmerby. The proprietor of the Cover Bridge Inn said he had never seen the <<Cover>> so high. In Gammersgill Coverdale hundreds of tons of boulders, some as big as wheelbarrows were hurled down Feensop Beck into the River Cover. Feensop Beck has disappeared, its bed choked to the top.

<Sheffield>: Houses were flooded in Basford Street and traffic was held up in Coleridge Road. Bradford: Cellars and basements were flooded and several buildings were struck by lightning. Huddersfield: Two houses were flooded in Market Street Paddock and Crow Lane Terrace in Milnsbridge. BR reports that severe thunderstorms were also reported from Bradford, Pudsey, Wombwell and Mexborough. Hull: The floods were said to be the worst for 30 years. Flooding included, warehouses, factories, banks and shops. One and a half inches of rain fell in less than 1 hour and results included damage to roads, theatre dressing rooms and a bar flooded, traffic diversion and holdups. Low tide saved the city from drastic flooding. Queen's gardens was a lake and Wilberforce stood on an island plinth. A shop at the corner of Nicholson Street and Exchange Street was badly flooded; the building was struck by lightning. Boothferry Road Bridge was flooded to 3 feet. Flooding also occurred at Cleveland Street and Hedon road. Many roads at Stoneferry were also flooded. The Fire Brigade received more than 70 calls to pump water out of basements mainly in the central area. Fountain Road Almshouses were flooded and pensioners affected. Beverley: Recently we had thunderstorms 'such as only those who live amid the hills ever hear or see' Acres of corn have been laid. There was no reference to flooding. Bridlington: one girl (15) was killed by lightning when a bathing hut in which 7 people were sheltering was struck. At the inquest the Coroner noted that: 'only the second case of anyone killed by lightning in the East Riding in the last 25 years'.

7 Aug 1950  
BR  
Hull Daily Mail 8  
Aug  
Beverley  
Guardian 12/19  
Aug  
Driffield Times  
12 Aug

Hessle Sandford 0.96 in 20 m  
Leeds Weetwood STW 1.97 in 95 m  
Leeds Farnley Hall 1.55 in 102 m

20 Aug 1950  
BR  
23 Aug 1950  
The Times 25  
Aug  
Driffield Times  
26 Aug  
6-8 Sep 1950  
<http://eyeoncalderdale.com/history-of-flooding->

Slaidburn Langden Brook 0.80 in 30 m

AA reported that a bridge had been washed away between Bentham and Clapham. There was also flooding in the East Riding affecting crops. DT notes disappointing weather for the harvest with heavy thunderstorms for the past fortnight.

Flooding was from Walsden water and a contributory cause was the breaching of a 'flood wall' on Rochdale Road opposite Waterside Mill. Flooding of roads and some properties at Callis Bridge and Mytholmroyd. Summer floods in Ripponden.

in-calderdale  
5 May 1951  
BR

26 May 1951  
BR

Daily rainfall  
Silpho Moor 2.64  
Sleights (The Hall) 2-74

8 Jul 1951  
BR

Scarborough 0.53 in 8 m

22 Jul 1951  
Yorkshire Post  
23 Jul

6 Aug 1951  
BR

East Riding had daily rainfalls  
generally around 2.50 inches  
No reports of thunderstorms.

18 May 1952  
BR

Skipton Town Hall 1.00 in 20 m  
Leeds maximum temperature 89F

Yorkshire Post  
19 May

1 Jul 1952  
BR

Rotherham Ramsden Rd 1.46 in 46 m  
Rotherham Herringthorpe 1.42 in 75 m  
Rotherham Broom Lane 1.14 in 75 m  
Finningley 0.75 in 15 m  
Chesterfield 1.18 in 30 m  
Burbage 1.08 in 30 m  
Langsett resvr 0.85 in 36 m  
Rotherham Aldwarke 1.20 in 38 m

Manchester  
Guardian 2 Jul

1 Aug 1952  
Manchester  
Guardian 2 Aug

Thunderstorms  
(the Southeast was still enjoying th  
drought)

25 May 1953  
Yorkshire Post  
26 May

Leeds The temperature fell from 87F  
at 4 pm to 66 F at 5 pm.  
Thunderstorms occurred from N of  
Scotland to Yorkshire

26 Jun 1953  
BR

Halifax Gorples Reservoir 2.12 in 2 h  
Malham Tarn 92 mm

The Times 27  
Jun

Stormy periods alternated with drier spells during May. The heaviest falls of the first wet period occurred on the 4th-5th and there was flooding in Yorkshire, especially in the West Riding, when 2.15 inches of rain was measured at Bradford on the 4th and 2.30 inches at West Houses (Nidderdale) on the 5th. Cricket and other outdoor activities were abandoned, and both road and rail traffic were affected.

At Whitby 1.75 inches fell in the 12 hours ending at 9 a.m. on the 27th and considerably greater falls were reported from other parts of the North Riding. Flooding occurred in the valleys of the Esk and the Ure and the Whitby Gazette of June 1 reported that " **Newholm Beck . . . rose at an amazing rate, and reached the highest level since 1931.**"

Leeds: A boy was killed by lightning. A few cellars were flooded.

[Three other deaths from lightning were reported around the country but little reference was made to flooding]

Houses and low-lying fields were flooded in many areas and there was much damage to crops in Yorkshire.

Skipton: It was said to have the worst storm for 40 years. Six houses were damaged by flood water, sections of two roads subsided, one the Keithley to Kendal road. The storm lasted three quarter of an hour.

Hawes: the Bainbridge to Hawes road was flooded to a depth of eight inches.

Mr. H. V. Radcliffe (Rotherham) reported that a chimney stack and wireless aerial were struck by lightning in the vicinity of his station, and that the total for the day amounted to 2.14 in. Mr. J. Hurst, Manager of the Chesterfield Sewage Works, reported that the storm which gave 1.25 in. in 75 minutes approached from the west and was accompanied by intense lightning and heavy rain. A second storm approached from the south-west at 21h.

Chesterfield Borough Police Station was flooded

Sheffield Fire service dealt with 24 fires mostly caused by lightning and 32 cases of flooded basements and cellars. Trams were held up by floods and manhole covers were displaced.

The main effects were from loss of electricity due to lightning strikes.

Bridlington – more than an inch of rain fell and some roads were flooded.

Leeds: A brief but torrential rainstorm occurred, causing power failure to some houses.

East Riding: an area of more than 100 square miles was without electricity for several hours.

Castleford: Roads in the centre of town were flooded to 3 feet.

Leeds: Several houses were struck and damaged by lightning, electricity supplies were widely affected but no floodin was reported.

Sheffield: Floods were caused in the southern suburbs but there was no rain in the centre of the city but the temperature dropped rapidly from 77F to 69F.

Bradford: James Street and Pinch Beck and a group of houses in Alderscholes Lane were badly flooded. Water shot three feet high from a manhole at the top of James Street and water and rubble swept down into

Yorkshire post  
27 Jun

12 Jul 1953  
BR  
Driffield Times  
17 Jul

12 May 1954  
BR  
Yorkshire Post  
13 May

28 May 1954  
BR  
7 Aug 1954  
BR

20 Aug 1954  
BR

21 Aug 1954  
BR  
The Times 23  
Aug  
<http://eyeoncalderdale.com/history-of-flooding-in-calderdale>

<https://notalotofpeopleknowthat.wordpress.com>

Leyburn spennithorne 0.76 in 15 m  
Tunstall Craggs Lane Fm 1.00 in 1 h

Ilkley Spences Gdns 2.29 in 2 h  
Sheffield Revelin 1.70 in 1 h (1.00 in 20 m  
Temperature at Leeds reached 83F

Hessle Sandford 0.73 in 17 m  
Anlaby Beverley Rd 1.20 in 45 m

Rotherham Aldwarke STW 1.16 in 48 m  
Sheffield Redmires Resvr 0.93 in 50 m  
Sheffield Revelin 1.00 in 1 h  
Sheffield Redmires Resvr 1.27 in 85 m

Thornton Road.

Hebden Bridge: Nearly 3 inches rain fell in 3 hours. The factory of Colden Manufacturing Jack bridge was flooded to a depth of 18 inches and some roads were washed away.

Grassington, Burnsall and Thorpe: Heavy rain poured in a torrent down the hillsides.

DT notes that 'Recent heavy rains have caused distress to East Riding farming circles; acres of corn have been knocked down by heavy rain.

The Manchester Evening News reported a landslide which blocked the Snake Pass between Manchester and Sheffield. At Rivelin water poured over the four foot parapet of a bridge into a stream below. The Borough Engineer and Surveyor at Ilkley reported minor damage but said that the steep slope of the hills prevented flooding to any extent.

Ilkley: Heavy rain forced up manhole covers and gardens and basements were flooded. Worst affected was Low Hall, Myddleton where the adjacent beck overflowed and flooded the rear courtyard to a depth of several feet. Manholes at the bottom of Dean Street and the top of Cemetery Road were dislodged.

Thunderstorms associated with troughs of low pressure moving across the country in a southerly airstream, were widespread on the 28th when the "noteworthy" falls occurred at Hessle and Anlaby, in East Yorkshire. Storms were severe in the Midlands and Yorkshire on the 7th. There were several reports of the death of livestock. It was reported by the Sunday Sun that "the road near Whitby was strewn with hailstones and slush to a depth of six or eight inches. **Some of the hailstones were as big as golf balls**".

Much flood damage was reported, especially from Yorkshire, though in many cases the floods were the cumulative effect of heavy rainfall from the beginning of August followed by exceptionally heavy storms on the 20th to 22<sup>nd</sup>.

In the Derwent valley large areas of land were under water and the Derwent was 10 feet 3 inches above its normal level. At Stamford bridge 20 caravans, a hotel (the New Inn where the water was 1 foot deep) and a bungalow were flooded. The main road from Butercombe to Driffield was flooded to a depth of 2 to 3 feet. Heavy rain caused Pennine rivers to overflow especially the Calder between Rochdale and Halifax. At Pateley Bridge about 100 tons of flood debris was removed from the streets and firemen spent the day pumping water from cellars.. Flooding in Mytholmroyd from River Calder and Cragg Brook. Burnley Road flooded to 3 feet deep with adjacent houses also flooded.

Minor flooding around Brighouse, but not in the town centre. More serious flooding at Clifton Beck. Land between Elland and Brighouse flooded. Serious flooding at Hebden Bridge and Mytholmroyd. No flooding at Todmorden but damage caused in Walsden. Winterbutlee Tunnel flooded to a depth of 2 feet.

Almost eight years after the disastrous flood of 1946 -Mytholmroyd suffered once again. The rapidity with which the level of the river rose did not give householders and shopkeepers time to remove things from their



Lancs Evg Post  
21 Aug

downstairs rooms. The river rose 6ft in only two hours before it overflowed into the road and about two feet in the last fifteen minutes! The siren was sounded just before eight o'clock on that Saturday morning giving the first warning that flooding was imminent. The water in the Dusty Miller rose to 3 1/2 ft. in the bar; this was 2ft. below the 1946 level.

Traffic came to a standstill in the village but a coach travelling from Barnsley with forty people on board heading for a holiday to Blackpool became stranded opposite to the entrance of Midgley Road, when it tried to get through the floodwater. This was due to the stalling of the coach's engine. Police and firemen joined local men by wading into the water at waist high level to get the passengers and their belongings to safety – apparently many of the passengers' suitcases contained their hard-earned holiday money!

The first rescue attempts however were made by the driver and one of the passengers who changed into bathing trunks in the bus. They carried five people to safety including a twelve months old baby. The firemen then attached a rope to the coach, which was used as a guide rope as they and the police earned both men and women shoulder high from the bus to the bottom of Midgley Road.

Residents of Mytholmroyd threw open their homes to give shelter to the passengers and the schoolroom at Mount Zion Methodist Church was opened where the stranded holidaymakers were provided with hot drinks and cakes which people had brought in from the neighbourhood. Before leaving to return home, the people from Barnsley, in gratitude for the help given to them, had a collection, which they then gave to the Church funds.

Another incident, which occurred during the 1954 floods, was that of a car driver approaching Mytholmroyd from Hebden Bridge who was on his way to Halifax. He was stopped and was both asked and advised not to attempt to drive through the water. He ignored the warning and proceeded forward -but not for long! The car engine stalled in the middle of the floodwater so he decided to get out and walk to safety. He took off his shoes and socks, gingerly tested the depth outside the car door where he found that the water was only up to his knees, so he got out. He started to walk back to safety but after about ten yards he suddenly disappeared below the flood level. He was rescued with the help of villagers and a boat hook! Obviously, he was soaked through but was full of apologies and laughing at his sudden method of "bathing". It turned out that he had stepped out on to a wall at the side of the car and when the wall ended so did his bid for dryness!

On the other side of the village, water overflowed once again from the Elphin Brook into New Road near to The Shoulder of Mutton – it was 10ft. above its normal level and the cellars in the public house were flooded where barrels of beer could be seen floating about in the water

Thornber Brothers again suffered badly as they still had large buildings at Elphaborough in August 1954 housing pedigree stock but unfortunately a few hundred of these were lost by drowning. A bus load of holidaymakers on their way by bus from Barnsley to Blackpool were trapped in the centre of Mythomroyd. Rescuers waded waist deep to rescue them.



The rain ceased shortly after 11.30 a.m., the water receded as quickly as it had risen and the main road through Mytholmroyd was passable again by lunchtime but leaving another trail of destruction as it last did in 1946.

Landslides at Sowerby Bridge halted rail traffic .

East Riding: A thunderstorm in the Derwent valley stretched from the Wolds to a few miles northeast of York and flooded fields and roads. Haymaking was washed out in some places whilst neighbouring areas were quite dry.

In the West Riding the 6.09 inches in 105 minutes at Bradford W.W. (Hewenden Reservoir) is the greatest amount recorded within 2 hours in the British Isles. The violent thunderstorm, accompanied by torrential rain, in the Keighley district of the West Riding overwhelmed an area bounded by the villages of Oakworth, Cullingworth, Denholme Gate and Oxenhope. A report from Mr. J. S. Lattin, Surveyor to the Bingley Urban District Council, suggests that the storm reached peak intensity on the hills between Flappit and Denholme, that is, to the north of the Stubden Reservoir and west of the Hewenden Reservoir. Storm water from the hills washed down into the Manywells and Ellar Carr Becks in Cullingworth, bursting culverts and inundating bridges, and, adding to the water coming down the three roads converging at Cullingworth Gate, caused a flow of water the full width of the road, a foot to 18 inches deep. Most of the houses adjoining the road were flooded and a long length of a roadside wall washed down. Long lengths of channel were washed out and road and footpaths damaged. Many other roads and bridges in the area were damaged and at the New Bridge, a mile from Cullingworth, on the main Keighley-Halifax road, a grass verge and part of the wall for a distance of 20 feet collapsed into the stream below.

Keighley News and The Yorkshire Observer reported a violent thunderstorm which struck the area bounded by the villages of Cullingworth, Oxenhope and Oakworth. According to the Keighley News the storm was 'at its height' between 17.45 and 18.30. The worst flooding was in Cullingworth, through which Manywell's Beck flows, draining 2.05 km<sup>2</sup> of moorland. Just upstream of Cullingworth Gate the stream is conveyed under a mill yard in a culvert. This was so overloaded that the culvert burst, and the arch of a road bridge just downstream was also unable to accommodate the flow. Flood water was rushing down the three roads (from the west, south-west and east) that converge on Cullingworth Gate, resulting in extensive flooding and damage to properties and roads (Fig. 5). There are accounts of minor flooding in surrounding villages — Oakworth, Haworth, Oxenhope and Leeming, but only in the last was there evidence of something exceptional. Here residents 'saw the hillside break into streams' and tried to build barriers to prevent their homes from being flooded

DT notes that Driffield and the Wolds escaped the worst blast of the storms that caused damage all over the country but farmers on high ground have suffered especially on the southern slopes from Staxtpon to Rudston. Some villages have had torrential rainfall; others hardly any.

Halifax: Three houses were struck and damaged by lightning. Two cows and a horse were killed by lightning.

East Riding: The road between Muston and Hunmanby (near Filey) was flooded to a depth of 1 foot when

13 Jul 1955 The Times 14 Jul	Temperatures above 80F in many places
11 Jun 1956 BR, Meteorological Magazine Jul 1992 (Collinge, Thielen and McIlveen Extreme rainfall at Hewenden Reservoir)	<p>Bradford Stubden Resvr 2.45 in 75 m Bradford Hewenden Resvr 6.09 in 105 m The 11th of June 1956 was a day noted for the development of severe and widespread thunderstorms in Britain, with damage reported from places as far apart as the Isle of Wight, Wales and Inverness-shire.</p> <p>The rainfall amount in 2 hours was initially rejected by the FSR based on the studies of storm efficiencies. However, Collinge et al support the original measurement given the damage and a reappraisal of the met conditions.</p> <p>The rain started at 6.45 pm (the gauge was empty after a fine day). The rain ceased at 8.30 pm and the gauge was read at 9.00 pm when 6.09 ins was measured. A further 0.41 ins fell during the early hours of 12<sup>th</sup>.</p>
27 Jul 1956 BR Driffield Times 3 Aug Lancs Evg Post 28 Jul 5 Aug 1956	Pickering Porters Headland 0.99 in 1 h

The Times 6 Aug  
Drifffield Times  
10 Aug  
30 Jun 1957  
BR

Tockwith Sch 1.59 in 90 m

1 Jul 1957  
Lancs Evg post 1  
Jul

3 Jul 1957  
BR

A severe storm swept over Britain,  
spreading north from France  
Langsett Resvr 0.81 in 30 m

Lancs Evg Post 3  
Jul

12 Jul 1957  
BR

16 Jul 1957  
BR

Pontefract Kings Sch 2.00 in 2 h

6 Aug 1957  
BR

Eden (2008)  
Lancs Evg Post 6  
Aug

22 Jun 1958  
BR

Litton Manor cottage 2.07 in 2 h

2/3 Jul 1958  
BR

Hull Springhead 1.01 in 45 m  
Sheffield 48 hour total of 2.78 inches

Lancs evg Post 1  
Jul

water poured off fields. At Stamford bridge the main street was flooded to 9 inches.  
DT makes no reference to new rainfall or flooding.

Temporary flooding was reported from many parts of Yorkshire, including Wetherby, Mexborough, Hull and along the Great North Road near Leeming Bar, but the only exceptional fall reported was one reaching the "noteworthy" category at Tockwith School in the West Riding.

Darfield, S Yorks: A woman was killed when electrocuted in a flooded room.

At Otley, Yorkshire, the River Wharfe rose 4 ft. in a few minutes as the result of a very heavy thunderstorm further upstream, and a number of anglers had narrow escapes.

Further heavy falls and floods were reported on the 6th from Warwickshire, West Riding, Nottinghamshire and Lincolnshire, where, at Scunthorpe, sections of the Redbourne steelworks were brought to a standstill by flooding from Bottesford Beck which submerged a pumphouse to a depth of 15 ft. Over 1000 homes were flooded.

Pannal: Lightning caused a golf tournament to be abandoned.

Roads were flooded and some river bridges were damaged (but no specific locations were mentioned in LEP. Few houses at Litton, West Riding, escaped damage by flood water during a "remarkable" fall on the 22<sup>nd</sup> accompanied at times by heavy hail. Writing of the storm Mr. G. S. Sweeting stated that "huge boulders weighing one cwt. or more swirled down the becks and piled up along the banks. Smaller boulders and rock fragments spread over into adjoining fields for 50 yards, in places forming delta-like fans".

One of the most badly affected areas was Sheffield where flooding was reported as the worst since the city's great flood in 1864 when the Dale Dyke reservoir burst its banks. Rain commenced during the early afternoon of the 1st and continued until noon the next day with only a break of little over an hour during the morning of the 2nd. Rain was heavy at times and some of the heaviest rain occurred over the <Totley> and <Burbage Moors> where, around midnight on the 1st-2nd more than 1 inch fell in less than 30 minutes. Fed by this heavy rain the River <<Sheaf>> burst its banks in a number of places, and there was flooding in the <Millhouses>, <Abbeydale>, <Heeley> and <Low-field> areas. Further into the city where the Sheaf joins the Don, thousands of houses were flooded, bridges destroyed and the Midland Railway Station put out of action for several hours by flood-water and debris. Flood-waters subsided during the late morning, but with a further period of nearly 20 hours slight rain the Sheaf once again overflowed its broken banks and there was further flooding on a much reduced scale. Livestock were drowned and there was widespread damage to houses and business premises by flooding over a wide area of Derbyshire, particularly in the north, where the rainfall pattern followed that of the West Riding— more than 2 inches in many places on the 1st with heavy thunderstorms

late in the day. The most seriously affected areas were the village of <Hathersage>, <Poolsbrook> and the <Sheepbridge> and <Whittington> areas of <Chesterfield>.

The Sheaf was reported to have risen 8 feet above its normal level flooding houses and cracking walls under water pressure. Sheffield Midland Station was closed being flooded 4 feet between the platforms. Rainfall was 1.87 ins in 24 hours. Heavy rain in June had saturated the ground. Some houses near the River Sheaf were flooded to a depth of 5 feet.

West Riding: flooding here occurred later than in Sheffield. Catcliffe in the West Riding was under 8 feet of water and 30 families were marooned. Rivers overflowed; the R <<Ryton>> at Worksop, <<Maun>> at Ollerton and <<Rother>> at Killmarsh. The <<Don>> also caused flooding at <Sprotbrough> near Doncaster. The centre of <Worksop> was flooded to a depth of 4 feet. <Woodhouse Mill> near Sheffield was flooded from the River <<Rother>>

21 Jul 1958  
BR Rotherham Broom Lane 1.25 in 70 m

In eastern England the rain was heavy and accompanied by thunder; a "noteworthy" fall was recorded at Rotherham, where torrential rain gave rise to widespread, but not serious, flooding for the second time within a few weeks.

20 Aug 1958  
BR

Storms on the 20th affected eastern and northern England. In Yorkshire, heavy rain was accompanied by thunder and three people were killed by lightning. High winds accompanied the storms. At Bradshaw, near Halifax, Yorkshire a whirlwind lifted a haystack, and at another farm, five poultry huts were carried over a farmhouse roof.

22 Aug 1958  
BR Wincobank STW 1.00 in 20 m  
Sheffield Norton Lees 0.92 in 47 m  
The Times 23 Aug Harrogate Bilton STW 2.50 in 70 m

Storms were widespread in the West Riding. Miners temporarily abandoned the workings of a drift mine at Elsecar, near Barnsley, as flood water poured in from adjacent fields following torrential rain. Roofs and chimneystacks on a number of houses were damaged during a violent thunderstorm at Leeds, and at Harrogate, where a "very rare" fall was recorded during the early evening, rapid flooding occurred in low lying areas with some minor subsidence of roads.

24 Aug 1958  
BR Skirlough 0.77 in 30 m

12 May 1959  
BR Hawes Jct Moorland Cott 2.68 in 105 m

In Yorkshire, there was flooding in the Apperset and Hawes areas and at Snaizeholme and Whiddale.

5 Jun 1959  
BR

At Barnsley a house was damaged by lightning; roads in the neighbourhood and at Leeds and Otley were flooded to depths of over 2 ft. A whirlwind ripped off tiles and uprooted trees at Helmsley in the North Riding of Yorkshire.

5 Jul 1960  
BR Withernsea 1.10 in 1 h

Serious floods occurred in central Lancashire and West Yorkshire; 129 mm fell at Haredon Valley

Eden (2008)  
5 Jul 1962  
BR Bradford Lister Pk 1.20 in 1 h

26 Aug 1962  
<http://eyeoncalderdale.com/history-of-flooding-in-calderdale>

Burnley Road in Mytholmroyd flooded to kerb level, plus some cellars in houses.

1 Jul 1963 BR	Worsborough Hall 0.90 in 15 m (and also further 0.91 in 15 m)	
2 Jul 1963 BR	Craggs Lane Fm 2.49 in 1h 30 m	
18 Jul 1964 Eden (2008)		The moors around Pateley bridge were 15 cm deep in hailstones
21 Jul 1964 BR	Worsbrough Dale 30.5 in 2 h	
13 Jul 1965 Eden (2008)		Thunderstorms caused flooding in Lancashire.
22 Jul 1965 BR Eden (2008)	Warter 45.2 in 60 m	Thunderstorms caused flooding in Lancashire.
15 Jun 1966 BR	Finningley 19.6 in 18 m Ings Lane PS 32.0 in 20 m Thorpe Hesley 25.4 in 30 m Coxwold 28.4 in 30 m	
17 Jun 1966 BR		
21 Aug 1966 BR Archer MSc diss 1971	Halifax Stannary 25.4 in 52 m	<<Aire>><<Calder>>: This summer storm of short duration produced a sharply peaked flood wave on both rivers and an undisturbed recession curve (and a much shorter time to peak of a derived Unit Hydrograph) than another more prolonged storm in October 1967).
2 Jun 1967 BR	Bradford Bowling Cemy 24.1 in 54 m	
24 Jun 1967 CBHE		Mossdale> (near Hawes): Potholers can be especially at risk, as on 24 June 1967, when five drowned in Yorkshire. The water that fell in a heavy thunderstorm after a spell of dry weather ran off rapidly into underground streams and caverns at Mossdale. The rise in water levels below ground was too rapid for the potholers to scramble to safety.
14 Jul 1967 Lancs Evg Post 14 Jul	Thunderstorms especially in Lancs	Harrogate: Torrential rain hit the Great Yorkshire Show just as exhibitors were removing machinery and livestock etc. After 3 hours the ground was flooded to a depth of 12 inches.
9 Aug 1967 BR	Severe flooding in North Lancashire on 8 <sup>th</sup> (Wray) and 9 <sup>th</sup> . Leconfield 19.4 in 24 m Withernwick 25.0 in 13 m Norton Lees 36.6 in 46 m	Otley: At Leathley nearby an angler was struck by lightning and killed whilst fishing in the River Wharfe. <Bowland>: Hundreds of sheep and cattle are thought to have drowned. <Earby>: East Lancashire road which connects Yorkshire with Lancashire was blocked by flooding.
10 Aug 1967 BR Driffield Times 10 Aug 14 Aug 1967 Driffield Times 18 Aug		Driffield area: A thunderstorm struck Driffield and caused damage in several villages with the main sufferers at Sledmere Friadaythorpe and Wetwang. Hundreds of houses were without electricity and water surged along roads notably at Garton on the Wolds on the Driffield to York road where the road was flooded to 1 foot for 100 yards. The water did not penetrate any homes at Driffield. No rain fell at Langtoft. Driffield: Cloudburst strikes and Driffield awash. Seven minutes of storm fury unequalled in living memory struck Driffield just aft 6.00 pm. It caused widespread flooding of homes and many roads. Carpets were soaked and furniture damaged. Houses with doors facing west caught the full force of the gale and hailstones cracked

19 Sep 1967  
BR  
17 Oct 1967  
BR  
<https://notalotofpeopleknowthat.wordpress.com/2015/12/30/calder-valley-flooding-history/>

Hutton Cranswick 38.1 in 1 h 15 m

Skipton Town Hall 25.4 in 54 m

menacingly on glass frames. Water reached a high level at Riverhead, the Beck overflowed and a wall collapsed at the Cattle Market. Flooding threatened buildings at the East Riding General hospital.

On the 17th October 1967 people in the village were awakened at 1.30 a.m. to the wailing sound of the siren with its rising and falling tones warning everyone of an impending flood.

The River Calder on this occasion did not overflow which was probably due to the flood alleviation work which had been carried out earlier in the year and which is covered in a later paragraph. There had been a very heavy storm and it was the vast amount of water sweeping off the moors so rapidly that it did not allow the drains to cope with this influx of water. Also, a blocked culvert above Midgley Road did not help the situation. The water gushed down the hill flooding the houses at East & West Parade to a depth of 2ft. before continuing downhill, affecting other properties on its way and finally waterlogging the centre of Mytholmroyd once again. Fortunately, not many houses at East and West Parade were occupied at the time and these two rows of houses were demolished shortly afterwards and replaced with flats now known as Orchard Walk.

Mytholmroyd was once again cut off and the playing fields at White House -Holme, used by Burnley Road School took on the appearance of a lake. According to newspaper reports, the following day, pupils at the school under the supervision of their teacher Mr Ian Hellowell, took a boat on to the Holme and by mathematical calculations worked out that there was over 6,000 tons of water on the playing fields. An unusual and interesting lesson no doubt!

#### Hawksclough

Water flooded through the cottages at Calder Brook, behind Walkleys Clogs – known as Maude's Clog Soles at that time – and one of the residents, a 72 years old lady who was bedridden had to be rescued by fire service and ambulance personnel as her bed was downstairs in the living room with water rising around it. At nearby Holme End Dyeworks, damage was caused to 15,000 yards of cloth.

#### Wood Top Dam Burst its Banks

During this storm in 1967 the dam at Wood Top above Hebden Bridge burst its banks. Wood Top dam, 100 yards long, 50 yards wide and 15 feet deep in places had not been used for many years apart from by the local angling club. Previously it had been used to supply water to Wood Top Dyeworks, which had now ceased production.

Very early in the morning on the 17th October 1967 this dam practically emptied its volume of water, making its way towards and through the nearby 17th Century farmhouse belonging to its elderly owner Mr. Eric Greenwood, demolishing a wall in the house and continuing to rush through the adjacent barn creating more havoc. The loss of this water from the dam however did not affect the River Calder as the water and rubble

28 Jun 1968 BR Lancs Evg Post 1 Jul	Penkridge 21.3 in 15 m LEP has reference to 'rainbow rain' over the weekend possibly from Sahara dust with redy yellow and white particles in msany areas of Britain accompanied by muggy weather.
1 Jul 1968 BR Eden (2008) Lancs Evg post 2 Jul, J Meteorol. Jan 1980	Severe hailstorms occurred from Devon to northeast England in a Spanish Plume incident. Huddersfield Oakes 24.6 in 10 m (13.00 to 13.10) Skipton Town Hall 31.2 in 30 m DR 2.34"
2 Jul 1968 BR Archer MSc dissertation 1971	Bradford Bowling Cemy 25.4 in 8 m Huddersfield Oakes 32.5 in 10 m (09.15) with conical hail 1 ¼ to 1 ½ inches diameter) Leeming 34.1 in 13 m Halifax Stannary 26.7 in 16 m Pudsey STW 34.3 in 45 m Pateley Br 27.5 in 10 m Craggs Lane Fm 72.4 in 1 h 20 m
12 Sep 1968 BR 20 Sep 1968 Eden (2008) 14 Jun 1969 The Observer 15 Jun 29 Jun 1971 Col 10 Aug 1971 Driffield Times	Temperature reached 77F in London      Bridlington 73.6 (compared to 71.8 on 25 Jun 2007).

was carried downhill to its resting place in between Crow Nest and the railway embankment.

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. Sheffield: 21 children were taken to hospital with burns etc after a lighning strike at Birley Secondary School playing fields.  
<Huddersfield>: The main Manchester road was blocked with floods 18 inches deep at Longroyd Bridge. At Cooper's Bridge floods more than 2 feet deep blocked the main Leeds road. Many roofs and ceilings had been damaged and windows blow in.  
<Bradford>: Floodwaters swirled through city streets marooning shoppers and several people were rescued from flooded pedestrian subways.  
Bulldozers were used to clear hail 20 cm deep from streets in Yorkshire. At least 5 people were killed by lightning (not necessarily in Yorkshire).  
<Yeadon> (near Leeds): Hailstones were piled 45 cm deep  
<Skipton>: The downpour began at 6.30 am and there were hailstones as big as marbles. Worst hit areas were the bottom of Shortbank Road, Raikes Road and Mill Bridge. A torrent of water rushed down Raikes tearing up flagstones and the roadway and the cottages near the royal Oak Hotel were flooded to a depth of 4 feet.  
Winds W moderate to strong; depression, orographic thundery; complex depression over the U.K. deepening in the north of England.  
The storms of 1<sup>st</sup> and 2<sup>nd</sup> produced a double peaked hydrograph. Attempts at computing a Unit hydrograph for this storm failed because of the complexity of the storm)

On the 2nd; 35.7mm of rain fell in 8.5 minutes at Leeming, north Yorkshire in a different report.

Winds variable light; depression, frontal, thundery; minor depression east of Yorkshire with front almost stationary over area. Yorkshire and south-west Scotland.  
Flooding occurred in mid and east Lancashire and West and South Yorkshire. Great Heys had 117 mm and yateholme 115 mm.  
Barnsley: A monsoon like storm struck and water a foot deep rushed through the streets. A house was damaged by lightning. The M1 between Tankesley and Dodsworth was flooded 3 feet deep.

Northallerton: structural damage from lightning. No reference to flooding.

27 Jun 2007		
14 Aug 1971	Thunderstorm	Leconfield: Floodwater engulfed a home at Kensholme, Old Road to a depth of 5 inches. It was said to be the worst affected home in the East Riding; water rose up through the foundations. Another area affected was at Bygot Shooting School, near Cherry Burton. Roads were flooded notably the Beverly to Market Wreighton road at Bishop Burton where the water was 1 foot deep.
Beverly		
Guardian 20 Aug		
18 Oct 1971		Severe flooding affected parts of West Yorkshire mainly around Huddersfield. Redbrook reservoir received 103 mm.
Eden (2008)		
15 Jul 1973	Daily rainfall	Rainfall occurred over a 42-44 hour period. Sheffield was badly hit.
COL	Sheffield > 3.50 inches	At Sheffield a daily total of 119 mm occurred on the 15th, with as much as 137 mm being recorded in the foothills of the Pennines to the NW of the city. The M1 was flooded (not an uncommon occurrence), many roads in the city centre were blocked and the railway station had water up to platform height rendering it unusable. The rain on this day was part of a larger-scale event that covered the whole of South Yorkshire, the lower Trent valley and north Lincolnshire. ('Weather'/Sep08/RMetS)
<a href="http://booty.org.uk/booty.weather/climate/1950_1974.htm">http://booty.org.uk/booty.weather/climate/1950_1974.htm</a>	Weston Park 4.69 inches Rivelin 137 mm 26 raingauges recorded more than 100 mm Over the 2 day period rain fell in 42 to 44 hours. Not a thunderstorm	
29 Jul 1973		Bradford: Hailstones ¼ inch diameter during a rainfall of 0.67 in 5 minutes
COL		
8 Aug 1974	Sheffield 24.9 mm in 29 m	COL reports consequent serious flooding in Sheffield.
COL		
13 May 1975	Sheffield 50 mm fell in part of the city	Sheffield: COL reports flooding (unspecified)
COL		
17 Jul 1975		Sheffield: 'Storms hit Sheffield again with widespread flooding'
COL		Flooding upstream of centre of Todmorden at Coronation Terrace caused by a mudslide. Affected were Burnley Road between Portsmouth and Mons Mill (50 houses affected) and the moorland road to Hebden Bridge and Bacup.
<a href="http://eyeoncalderdale.com/history-of-flooding-in-calderdale">http://eyeoncalderdale.com/history-of-flooding-in-calderdale</a>		
2 Oct 1975	Pickering: 25 mm in 50 m	
COL		
13 Jun 1979	Thunderstorm but places just a few miles away escaped.	Widespread thunderstorms occurred in northern and eastern areas. Severe flooding followed a heavy storm at Skipton after heavy rain fell on surrounding hills.
COL, J Meteorol.	J. Met. Says the floods were the worst in living memory but lists previous events in 1968 and 1908	<Skipton>: During a two hour cloudburst <<Wilderness beck>> became a raging torrent in minutes. Skipton became impassable and the town centre was under several feet of water. Cars were swept along like matchsticks, walls were ripped away and homes, shops and offices were deluged. The cost is likely to run into hundreds of thousands of pounds. An 89 year old woman was drowned in her home, 19 Brookside, alongside Wilderness Beck. Many people mainly senior citizens had to be evacuated. Wilderness beck which runs between Shortbank road and Otley Road and parallel with Newmarket Street towards the bus station became a raging torrent after 1.30 pm. A boat was used to ferry people from their flooded homes in Petyt Grove where the water was up to the armpits. One resident said that the downstairs was flooded in 5 minutes. Many shops in Keighley road and Swadfor Street were flooded. Skipton Post office closed its door but the sorting office was flooded between 1 and 2 feet. About 40 cars belonging to Peter Clarke Autos Otley road were damaged when
Jan 1980	Skipton 34.2 mm in 2 h.	
(Craven Herald and Pioneer and Telegraph and Argus)	Embsay Moor resvr DR 66.2 mm and 63.7 fell in 4 hours and 54.8 mm in 53 m (Gargrave STw had only 4.0 mm and Elslack Resvr only 0.7 mm)	

swept away. At one point there were 4 cars stacked on top of each other. Flood damage was also caused in Regent Drive 'Without warning a wall of water cascaded into our garden'.

<Embsay>: The fire brigade were first called there and found the Main Street under a foot of water and 3 feet of water rushing down the road from <Eastby>. Part of the Eastby Road had been washed away.

<Thorlby>: The brigade were called to the Ghyll Cottage where 2 children were trapped by 4 or 5 feet of water.

<Gargrave>: The brigade rescued sheep and cattle and then went to the assistance of a family of 4 marooned in a car at <Hetton>. The firemen were confronted with water 100 yards wide and 5 feet deep and the car marooned in the middle. The river <<Aire>> burst its banks and flooded fields and a lot of sheep were drowned.

Skipton: 96 mm fell in 5 hours

COL has no flood descriptions for Yorkshire or Lancashire.

Long lasting floods in Yorkshire and north Derbyshire. Over 2 days 114 mm fell at Brockholes above Sheffield and 103 mm at Weston Park.

The River Calder burst its banks at Brearley. Flooding from Cragg Brook, White Lee Clough and surface water drains in Mytholmroyd. Burnley Road was flooded and the bridge over Cragg Brook was washed away.

Cottages at Scar Bottom and Elphaborough Close were flooded to a depth of 2 to 3 feet.

Jarvis refers to a storm on 25 Jun which became centred on Moss Moor 15 km to the west of Huddersfield, near the Lancashire border. The storm caused a bog burst in which about 6 hectares of ground, relatively low lying but otherwise no different from the rest of the moor became so saturated that the strength of the peat failed and it flowed away downhill despite only a slight gradient. A moon like landscape remains with deep fissures where blocks of peat were torn away although still held together by the cotton grass and heather vegetation contrasts strongly with the uneroded nature of the rest of the moor. The event might have passed unnoticed except for the fact that the semi-fluid peat closed the west-bound carriageway of the trans-Pennine motorway (M62) for many hours. The roadside culverts had not been designed to deal with this rare occurrence so close to the motorway.

On the 27th June 1982 a local man was saved from drowning when a flash flood caused the Elphin Brook to burst its banks. The rush of water down the Cragg Valley brought rubble and trees with it. At Scarbottom, two local men who lived nearby tried to free the debris from the stone bridge across the Elphin fearing that it would damage the electricity and gas pipes which hung across the side of it. Suddenly the parapet could stand the pressure of water no longer and it collapsed, throwing one of the men into the water whilst the other man managed to jump clear. The man in the water managed to grasp the gas pipe and grimly hang on but as the water rose up to and around his neck he had difficulty keeping his face clear of the severely swollen brook. Local man Stephen Preece, who was the leading fireman at the time, came to his aid by tying a rope around his own waist and edged his way across the gas main to make a successful rescue. The following year, Mr. Preece along with three other local people was awarded the Royal Humane Society Bravery award

When the stone bridge in question collapsed, it left five privately owned cottages as well as Scarbottom Mill, which was owned by Redman Bros, isolated. The following day, Mr Richard Redman and a team of willing helpers worked solidly for about eight hours to build a temporary bridge to enable access to the cottages and

6 Jun 1982

Eden (2008)

22/25 Jun 1982

COL

Eden (2008)

<http://eyeoncalderdale.com/history-of-flooding-in-calderdale>

Jarvis (1980s?)

Daily

Sheffield 65.6

Sheffield Dore 56.7

Cottingham 65.2

Hull 57.2

It was a very thundery month but often with little rainfall.

Jarvis notes four stations 1 and 2 km from the site of erosion: 62.2 mm at 385 m, 66.0 at 346 m 44.7 at 445 m and 23.8 at 307 m

27 Jun 1982

<https://notalotofpeopleknowthat.wordpress.com/2015/12/30/calder-valley-flooding-history/>

Date uncertain (See above)



18 May 1983 COL	Finningley 55.9 in 2 h
31 May 1983 Guardian 2 Jun	Thunderstorms
31 Jul 1983 COL	Todmorden 45.9 (following an exceptionally hot month)
3 Aug 1984 COL	Cottingham (Humberside) 66.6 mm in 1 h 45 m Hull daily 58.7 (but Th)
<a href="http://eyeoncalderdale.com/history-of-flooding-in-calderdale">http://eyeoncalderdale.com/history-of-flooding-in-calderdale</a> Hull Daily Mail	
3 Sep 1984 COL	Bridlington 57.7 (daily) Other daily totals over 25 mm – no mention of thunder
25 Aug 1986 COL	Ex-Hurricane Charley Todmorden daily 96.1 Carlton in Coverdale 89.0 Many stations had over 30mm and often intense for short periods
21 Aug 1987 COL	Widespread thunderstorms Carlton in Coverdale 36.8 (daily)
19 May 1989 The Times 20 May Eden (2008) <a href="http://eyeoncalderdale.com/history-of-flooding-in-calderdale">http://eyeoncalderdale.com/history-of-flooding-in-calderdale</a>	Thunderstorm with more than a hour of intense rainfall after the hottest May for 25 years. Walshaw Dean Lodge 193 mm in 2 hours

the mill.

Some areas in S Yorkshire had 1.5 inches in the day. Rail services between Barnsley and Wakefield were cancelled due to flooding of the line. Roads were badly affected especially around Rotherham and Doncaster.

Thunderstorms caused severe flooding of Cornholme, Portsmouth and Lydgate. 190 properties were affected including domestic properties, shops, offices, public houses, industrial premises and council properties. Burnley Road was closed to traffic for 12 days.

HDM noted that thunderstorms brought widespread flooding with West Hull, Anlaby, Hessle and Cottingham the worst affected with water 2 or 3 feet deep in some places. Manhole covers were lifted and holes appeared in a number of roads. In King Street 4 shops and the Duke of Cumberland pub were flooded. Photos show that George Street was also flooded

Severe flooding was reported from Swaledale mainly from the Arkle Beck which joins the Swale at Reeth close to a caravan site where much damage was caused.

Some flooding of roads and houses was also reported at Carlton in Coverdale.

Thunderstorms affected much of SE and E England from 21 to 23 Aug with local flash flooding.

Halifax: In Ovenden Road on the outskirts of Halifax a house was swept down a hillside and into a brook. Cars were trapped with water up to their roofs in the centre of Halifax.

Huddersfield: many roads were blocked.

The cloudburst sent raging waters rushing down from the moors bursting a peat bog and spewing out peat, pouring black water into the River Calder, ripping up trees and small bridges, tearing open sewers and washing away cars and inundating houses. [MO was initially sceptical of the figure].

Rainfall of 193.2 mm has been reported for a station in Calderdale on 19 May with discussion of the reliability of the estimate in Collinge et al (1990), Acreman (1989) and Nicholls, Acreman and Pike (1990).

Collinge V.K. et al (1990) Radar observations on the Halifax storm 19 May 1989. Weather 45(10) 354-365

Acreman. M. (1989) Extreme rainfall in Calderdale, 19 May 1989, Weather, 44(11) 438-446

Nicholls, J.M., Acreman, M. And Pike, W.S. (1990) Correspondence in Weather 45 (4), 156-158

Eden notes that the flood was destructive in Hebden Bridge, Mithomroyd, Sowerby Bridge and the outskirts of Halifax.

Severe localised flash flooding across the Calder Valley, and on secondary rivers such as Hebden Water, caused flooding damage to gardens, outhouses, culverts and a mill complex, and a number of houses were flooded to a depth of a metre (over three feet) in Luddenden (from Luddenden Brook). Hebble Brook flooded to a depth of 2 metres (over 6 feet) above bank level causing erosion damage. There was damage to sewers and

properties in Halifax and damage to bridge supports and retaining walls along Red Beck. 193mm (7 ½ inches) of rainfall was recorded in two hours at Walshaw Dean reservoir but the validity of this reading is disputed.  
York: Ten students at York were treated for shock after lightning struck their hall of residence.  
[Storms and flood deaths occurred in the northwest]

24 May 1989  
The Times 25  
May

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.

25 May 1989  
COL  
Met Office  
pamphlet

Thunderstorm The weather during the afternoon was hot and oppressive across West Yorkshire. Localised thunderstorms broke out in the Halifax area of West Yorkshire produced some intense falls of rain during the afternoon and evening. In a 2-hour period from 1500 BST to 1700 BST over 193 mm of rain fell in the Walshaw Dean Reservoir area of West Yorkshire making this one of the most intense rainfall events ever recorded in the United Kingdom.

Castleford: roads and gardens locally flooded.  
Halifax: a flash flood affected Halifax (in part caused by the hilly terrain of the area).

Walshaw dean 193.2  
Northowram 82.6  
Watersheddles Resvr 48.4  
Ogden Resvr 34.6  
Laneshaw resver 31.0  
Lower Laithe resvr 28.4  
Castleford 20 mm in 15 m

30 Jun 1990  
COL

Thunderstorm  
Carlton in Coverdale 6 mm rain in 15 m with large hail and a local whirlwind which felled some trees.

Carlton in Coverdale observer reported thunderstorm at his site with 6.1mm but a few miles to the east 37.1 mm causing localised flooding.

18 Aug 1990  
COL

Severe local thunderstorms in North and West Yorkshire

24 Aug 1990  
COL

3 Jun 1991  
COL

Castleford Shower of soft hail. Size up to 1 cm rough in shape and nearly liquid centre. Several other stations reported sleet.

Doncaster: Residents of villages around Doncaster were advised to stay indoors as water levels rose after thunderstorms. A lightning strike set a roof alight at Intake.  
North Cave: Lightning struck a farmhouse.

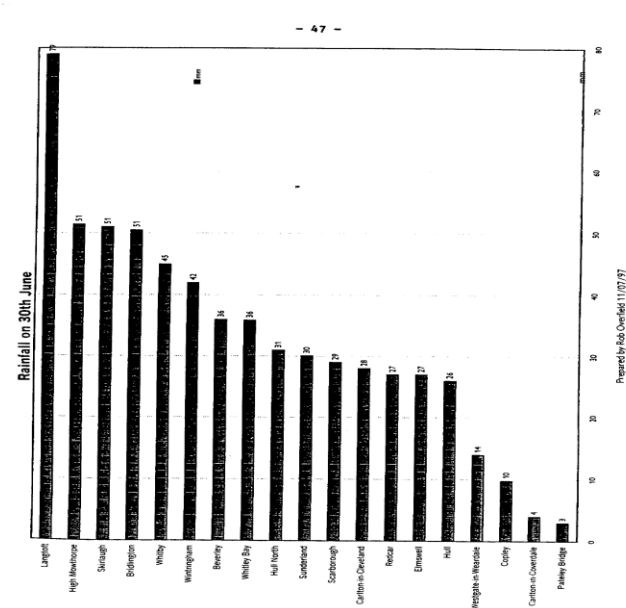
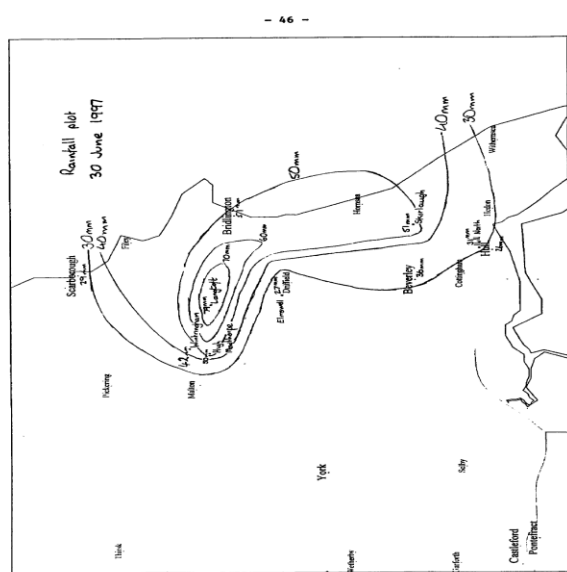
26 Sep 1991  
The Times 27  
Sep  
Hull D mail 26  
Sep

Most of Humberside escaped the appalling weather that struck other areas nearby

11 Jun 1993

Chesterfield, Inkersall: Downpour caused widespread local flooding with a reported 4.5 inch per hour intensity

COL		at the peak. Rainfall at the station was 38 mm most of which fell within 25 to 30 m. There was widespread flash flooding in the South and Wales during the first 10 days of June (notably Llandudno).
19 Jul 1993 COL	Castleford 41.8 mm in 1 h 35 m most of it occurring between 10.00 and 10.30. Rain was local mostly within 2 km of station; Leeds had only 12 mm	Castleford: In a thunderstorm and downpour gardens were soon flooded and soil washed into the street. After 15 minutes the street was under 10 cm of water. After 30 minutes the water was deeper and drains were backing up onto the street. Garages were flooded but rarely houses.
12/14 Sep 1993 COL	Persistent rain Carlton in Coverdale: 13 <sup>th</sup> 61.4 mm and 14 <sup>th</sup> 29.0. Generally a very wet even record month's rainfall	Flooding occurred in Coverdale and Wensleydale with roads and properties flooded.
24 Jul 1994 COL	Thunderstorms Sheffield, Wisewood: 22.9 mm Langtoft: 3 hour storm	
30 Jul 1994 COL	Pateley Bridge 35 mm in Th	
3 Aug 1994 COL		Humberside Eastrington: A man was killed by lightning whilst playing football.
7 Jun 1996 COL	Thunderstorms reported at Beverley Humberside and Langtoft Whitby Sandsend: 28.2 mm	
23 Jul 1996 COL	Chesterfield 30-35mm in storm	Chesterfield; Thunderstorm with hail (small grape size) caused flooding with water half way up cars at one location. Thunderstorms reported at various places in E Riding etc but no flood information.
6 Aug 1996 COL		Sheffield: <b>Thunderstorm with hail, golf ball sized, which reached a depth of 6 inches.</b> Centres of Worksop and Sheffield were flooded.
28 aug 1996 COL	Sheffield: Weston Park: 36.1 mm in 90 m	Sheffield: Hunters bar closed; restaurants flooded; roads flooded to 4 feet on south side of Sheffield.
17 May 1997 COL Driffield Times 21 May		Wetwang and Fimber: Thunderstorms with lightning damage. At Fimber the storm washed potatoes out of the fields and closed the A 166 road. Driffield: Lightning and marble sized hailstones hit villages in what was described as the biggest freak storm for 70 years. Mud hailstones and potatoes washed out of a field forced a road closure of the A 166 (Wetwang to Fridaythorpe) road at Fimber. 'The river which formed went out through one corner of the field and down towards a wood continuing for about a mile and a quarter'. <b>The hailstones smashed skylights and roof tiles at Towthorpe farm.</b> The storm only lasted 20 minutes. It was thought the storm covered a four or five mile radius.
30 Jun 1997 COL Driffield Times 2 Jul	Persistent rain for 22 h Langtoft 79 mm, the wettest day for 30 years which was part of the wettest June since 1982	Heavy rain but no thunder. Figure from COL Jul 1997 DT has no reference to flooding



13 Aug 1997 Sheffield Wisewood Th 28.5 in 25 m  
COL

31 Aug 1997 Castleford 35.2 in 90 m  
COL

13 Jul 1997 Whitby Th 15 mm in 30 m  
COL

Should this be 1998?

2/3 Jun 1998 Whitby 51.2 spread over 2 days  
COL

27 Jul 1998 Beverley 16.4 in 45 m  
COL

18 Aug 1998 The Times 20 Aug 1998

6 Jun 1999 COL

Driffeld Times 9

Jun

Hull D Mail 6/8

Jun

Castleford: Roads flooded

Leeds: houses were damaged by lightning and there was some local flooding

Whitby: Manhole covers lifted and cellars flooded in the lower part of town.

Whitby: Some local floods

Ilkley, Wharfe: A honeymoon couple were drowned in the river Wharfe at Bolton Abbey. It was assumed one fell in and the other followed to help but both were drowned during a flash flood.

Thunderstorm with hail at Scalby between Whitby and Scarborough where manhole covers up and roads awash. Paths and roofs were white with hail. No precipitation at Whitby. DT has no reference to rain or flooding.

Hull DM 6 Jun refers to lightning strikes and buildings damaged at Elloughton and Fyrston Housing estate. Hull (HDM 8 Jun). Floods swept through large parts of the city and especially East Hull where roads were impassable and some properties were flooded to a depth of 8 feet. Plimsoll Ship Inn was flooded. Heavy rain coincided with high tide along the River Hull. Also flooded was the RSPCA Depot in Clough Road and Kings

1 Aug 1999  
COL  
4 Jun 2000  
COL  
<http://eyeoncalderdale.com/history-of-flooding-in-calderdale>  
Lancs County  
Publications 5  
Jun

Thunderstorm  
Leeds temperature >30C  
Persistent rain  
Carlton in coverdale 72.8  
East Sclafton 77.5

Town Reprographics on Leeds Road where the owner reported it had not flooded like this since he occupied the site in 1946. Kinloss Primary School in Bransholme and small businesses around Holderness road were also flooded.

Leeds: One house was struck by lightning.

Widespread flooding in Yorkshire and Durham with flooding in Bishop Auckland and Todmorden.

The Ure was 800 m wide below Middleham and both Cover and Ure burst their banks. Many sheep were washed down and drowned and 2 farms near Coverbridge lost 350 sheep. The Mercury Road Bridge at Richmond on the Swale collapsed.

Hebden Bridge suffered widespread flooding with properties and businesses on virtually all of the streets in the area being underwater. The following roads/streets (among others) were affected: Stubbing Holme Road, Market Street, Old Gate, Bridge Gate, Holme Street, New Road, Hope Street and Albert Street. Calder Holmes Park was also flooded. Several industrial units in Mytholmroyd flooded.

Brearley and Luddenden Foot - reports of property flooding, some from surface water. Playing fields in the areas flooded. Industrial units at Luddenden Foot and the business park at Longbottom Bridge were also affected.

LCP Notes: MILLIONS of pounds worth of damage was caused after heavy rain and floods forced people from their homes and businesses in Todmorden.

Todmorden: Some areas waist high in water and more than 500 people evacuated from their homes. Cars were swept away, walls demolished and houses and workshops ruined as the River Calder burst its banks after a Saturday night of torrential rain. Walls of water swept into all three valleys in the town, closing roads and forcing householders to flee their homes shortly after midnight. Todmorden high schools and the town hall became emergency reception centres for residents stricken by the deluge. Council workers and the emergency services offered help to householders -- many of whom saw their homes six feet deep in muddy water, with furniture and fridges floating around like debris in a sea disaster. Residents said the deluge was even worse even than the 1982 flash floods which wreaked havoc mainly in the Burnley Road area. On Burnley Road, homes and pubs were flooded and Todmorden Cricket Club's entire pitch resembled a large boating pool. Jack's House pub, wrecked by the flooding, displayed a notice saying it would be closed until further notice. Every house in the Halifax Road area was hit by flooding, with the road still closed until late yesterday as householders mopped up and fire teams pumped water from cellars and used power hoses to sweep mud from the streets. River water smashed through a retaining wall in Industrial Street, sweeping into homes just feet away -- their second severe dose of flooding in four years. Resident Philip Clark, a 42-year-old foundryman, saw the rear of his Vauxhall Cavalier thrown up in the air to rest on top of his five-feet-high back wall. Floodwater demolished a 20ft high industrial unit wall behind the Esso garage in Halifax Road, leaving a gaping hole in the building. Cars were floating in four feet of water on the car park at Warman International where furnaces were damaged and heavy engineering machinery wrecked, with damage running into hundreds of thousands of pounds, said managing director Paul White. He said the near 300 staff at the works would be meeting today to implement a plan of action and promised there would be no lay-offs, but added it could be months before the factory returned to normal production. Elderly residents in ground floor flats in Halifax Road, moved upstairs to their neighbours' homes to escape the rising waters. Der Street Garage owner Steven

Howarth was counting the cost of six lost cars and extensive mud and water damage to all his workshop machinery.

27 Jul 2000 COL	Thunderstorm Beverley 11.8 mm in 40 m Hull 5.9 mm in 4 m	
21 Aug 2000 COL Hull daily Mail 21 Aug 22 Aug 2000 Hull Daily Mail 22/23 Aug	Thunderstorms Hull had 14.4 mm in 24 hrs and 13.4 in 6 hrs (hardly enough to cause flooding?)  Thunderstorm	A tornado/waterspout was observed off the Humber estuary. Some flooding occurred in the Hull area. York: Lightning damage to the rail station. Hull: Pubs and some commercial premises in East Hill were flooded. The Sportsman's Inn on Hedon Road had 6 feet of water in its cellar. The Anchor Inn and the Plimsoll Ship Inn were similarly affected Hull: A 2 hour storm brought blizzards of hailstones the size of gobstoppers; drifting snow and a mini tornado towards the Humber. In Hedon 100 homes and gardens were flooded and some places had 5 inches of 'snow'. Children were sailing up Inman's Road in dinghies. Hedon Pumping station proved inadequate and an emergency pump suffered a power failure. In some places 8 inches of hail backed up against the side of shops. HSBC bank in Market Place closed after flooding and the neighbouring Nutmeg cafe. The storm also affected Preston, Paull and Hornsea. Withernsea: Flooding occurred in Barmester Street (said to be the 6 <sup>th</sup> time in 25 years with the last previous on 28 Sep 1999). The problem was said to be inadequate sewers and pumping station in Olive Street. Leeds: three houses damaged by lightning in the Beeston area
20 Sep 2000 COL 17 May 2001 COL	Chapel Allerton (n of Leeds) 33.1  Thunderstorms Middleton Daily 29.1 10-15 diameter hail Carlton in Coverdale Lightning damage to comms.	
15 Jun 2001 COL	Thunderstorm Leeming 51.0 in 3 h (Tot 58 mm) East Scafton 36.0 of which ½ fell in 2 h storm Carlton in Coverdale 34.0 (most within 1 h)	On 14 <sup>th</sup> 2 planes were struck by lightning approaching Leeds
3 Jul 2001 COL 7 Aug 2001 COL 19 Aug 2001 COL 2 May 2002 COL	Wilshaw (S of Huddersfield) 69.2 in 1 h  Thunderstorm Langtoft 27.5 Auckley (nr Doncaster) 27.0 Local thunderstorm  Wilshaw Hail up to 4-4.5 cm diameter was observed. Observer notes most over one inch and rivalled golfballs in size.	Scarborough: Local flooding reported  Goathland: heavy flooding in the village
14 Jun 2002 COL 12 Jul 2002	Pateley Br 21.4 mm in 2 h (14.4 in 1 h)	Whitby reported a short thunderstorm with heavy rain at 1840GMT, the first thunder and lightning were observed at 1900 and the last at 1910 when the rain ceased. [Heavy rain in Lancs] At Whitby there were two afternoon thunderstorms, a moderate one lasting from 1540 to 1630GMT and the

COL		other a heavy thunderstorm lasting from 1823 to 1930GMT. Both gave moderate rainfall.
20 Jul 2002	Penistone 50.9 (daily)	
COL		
30 Jul 2002	Chapel Allerton 29 mm in 40 m	At Sheffield (Burncross) a thunderstorm gave rainfall rates between 1700 and 1800h of 33 to 74mm per hour.
COL	East Scafton 50.5	Chapel Allerton: Flooding occurred in the Kirkstall area of Leeds as well as Headingley where the cricket ground was flooded. Much lightning but no serious damage reported – the worst thunderstorm for 20 years in the area.
	Pateley Br 25.3	
	68.0 Sheffield, Burncross	
	64.0 Sheffield, Wisewood	
	43.0 Carlton-in-Coverdale	
	113 Penistone	
1 / 2 Aug 2002	Not thunderstorms	Whitby (West Cliff): Most outstanding feature was the rain which fell overnight 1st/2nd August. A total of 78.8mm for 24 hours ending 0900GMT on 2nd, which made it my wettest 24-hour period in 25-year records. So after the 1st rain was already 136% of normal for the whole month. The rain began on afternoon of 1st and gradually became heavier after about 1600GMT. It seemed to come in heavy pulses for half an hour or so then ease off for a while. The worst was between 0400GMT and 0800GMT on 2nd when the bulk of the rain fell. The River Esk was left in spate with some flooding on roads and the Middlesbrough-Whitby railway line was closed for a day due to flooding in the Danby area. I don't think the flooding was as bad as November 2000 because the land soaked up some of the rain due to dry weather beforehand.
COL	121.5 East Scafton	East Scafton: 1st - Rainfall 121.5mm in 24 hours. Rain through the morning and then torrential from 1330h until next morning. Culverts were blocked by rubble from becks, roads were like rivers, tarmac lifted. Three local bridges over the River Ure were impassable. Roadside walls were down again between Ure and Cover at Coverbridge. Flooding in
	114.6 Fylingdales*	houses and fields where never before. Pressure remained above 1015mb during this period.
	102.4 Carlton-in-Coverdale	Carlton-in-Coverdale: The tremendous rainfall which mostly fell during the early hours of the 2nd totalled 102.4mm and was the highest I have ever recorded for any month. Several houses in the village were flooded when Melbecks stream burst its banks and flowed down the only road in Carlton.
	91.2 Leeming*	Pateley Bridge 2: 1st: rainfall 52.0mm: the wettest day (0900-0900GMT) here since before 1988.
	78.8 Whitby, West Cliff	The storms were heaviest across parts of Yorkshire.
	72.5 Whitby	Carlton-in-Coverdale: There was a shortlived but severe thunderstorm in the morning. The temperature fell from 24.0C to 19.0C in a few minutes, while the rainfall totalled 7.1mm. There were strong gusts of wind, and in nearby Jervaulx Abbey grounds it was possible to see a distinct area of broken branches and some large boughs ripped from trees. The area involved was about 100 years wide and about half a mile long. There was much heavier rain to the E of this site.
	69.4 Loftus*	MEN reports that torrential storms hit the Yorkshire coast.
	66.2 Topcliffe*	Filey: 250 people were rescued from their homes as water reached the level of window sills.
	61.5 Dishforth*	Scarborough: Two adults and a baby were rescued from a car after flash flooding. Cayton near Scarborough was under 3 and a half feet of water and the only way to enter the village was by boat. Several houses in the village were flooded.
	56.1 Pickering	Whitby (West Cliff): 6th - thunderstorm early in afternoon produced 15.4mm rain in 50 minutes, including 7.9mm between 1230GMT and 1240GMT.
	52.0 Pateley Bridge 2	Carlton-in-Coverdale: 9th - Torrential rain early afternoon; rain rate of 159mm/h at one time.
10 Aug 2003	Thunderstorms	
COL	HDM noted very high temperatures but the only storms noted out to sea with strong winds.	
Hull Daily Mail		
11 Aug		
Manchester Evg		
News 12 Aug		
6 Sep 2003		
COL		
9 Aug 2004	Carlton in coverdale 69.1	

COL N Yorks Publs 10 Aug	Pateley Br 79.7 Acomb 56 mm	<p>Pateley Bridge 2 the daily total was the highest oneday total in my records. 36.8mm fell in the hour ending 1335GMT on the 9th.</p> <p>York: Torrential rain and storms swept the region. Roadside drains across York overflowed and water seeped through ceilings and basements. Emergency crews with pumping equipment were called to about 50 properties including hotspot areas of Union Terrace, Portland Street, Shipton Road, Leeman Road, Burton Stone Lane, Wigginton Road, Lawrence Street, Station Rise and Dringhouses. The only evacuation was from a nursing home on Wigginton Road. Residents in Water Lane, Clifton, waded through flood water as motorists were forced to push their cars. The basement flooded at the Rose and Crown pub, Lawrence Street, as did some homes in Union Terrace and Portland Street, and Haxby Library was closed today due when water caused problems with the electricity supply.</p>
3 May 2005 COL	Todmorden: Hail was 7-10 cm deep 3 km W of the station	<p>The storms produced some locally heavy rain, with Leeds reporting over 41mm of rain in less than two hours and marble-sized hail; the centre of Leeds was flooded for a while as were the local motorways. The storm was localised and rainfall varied considerably; only 4mm at West Park, north Leeds while at Chapel Allerton 15.6mm fell in just over an hour.</p> <p>A thunderstorm in Doncaster produced a lightning strike to a property, causing extensive damage in the house.</p>
8 May 2005 COL	Cottingham: Large hail 8 mm diameter Beverley 10 cm hail	
19 Jun 2005 COL Driffield Times 22 Jun Hull Daily Mail 20 Jun Archer (2020), Wass et al (2008)	<p>Helmsley storm</p> <p>Much of England and Wales had a very hot day, with 33.1C in London making it the hottest June day there since 1976,</p> <p>Hawaby 59.8mm in 60 m out of a 3 h total of 69.4</p> <p>Whitby 3mm!</p> <p>Doncaster: 18.8mm of 2155GMT and 2215, (8.9mm in 5 m) giving a five minute average intensity of 106.8mm/h. (Tot 32.3)</p>	<p>Heavy rain was more widespread, with localised flooding, especially in parts of Yorkshire. Here, 59.8mm of rain fell in 60 minutes at Hawaby, out of a three-hour fall of 69.4mm. Villages were cut off, roads washed away and nine people were reported missing at one point. Two RAF helicopters were scrambled to rescue the missing people when they were tracked down in the market town of Helmsley, which was worst hit. Drivers were forced to abandon their cars and climb trees to escape rising waters after the River Rye burst its banks. The main scene of carnage was at a motorcycle rally where some people were rescued from trees, three were clinging to logs and four were stranded on a bridge (rescued by helicopter).</p> <p>DT shows a photo of road flooding in Wetwang and lightning strikes at Driffield and Nafferton.</p> <p>Doncaster: A storm produced This caused flooding of the entire width of the carriageway at the road junction near this station due to drains backing up through intense run-off down the hill.</p> <p>Beverley: Lightning strikes caused electricity failure due to a direct hit to a sub-station.</p> <p>Spalding on the Moor: A care home was flooded.</p> <p>Analysis for the River Rye in North Yorkshire in England provides a detailed example with respect to reduced lag time in floods arising from intense rainfall. The River Rye drains the plateau moorlands of the Cleveland Hills in North Yorkshire and has a catchment area of 132 km<sup>2</sup>. A catastrophic flood in June 2005 was extreme both in its peak discharge (400 m<sup>3</sup>s<sup>-1</sup> - 11 times QMED the median annual flood) and in rate of rise in level (an increase in water level of 1.43m over 15 minutes). The lag time was only one third of the average for other floods. (Wass et al., 2008).</p>
12 Jul 2005 COL	Pateley Bridge: 10th and 11th - the max temperatures, 29.0C and 28.3C, were the highest in July since 29.3C was recorded on 29.7.1995.	



25 Aug 2005 COL	12th 30.4mm 26.7 in 1 h)	Scarborough: Heavy showers with hail with lightning observed which halted the local cricket match. Whitby had thunder at 1100h during a moderate shower and at 1520h during a torrential downpour with large hailstones. Hail was still observed lying at 2200.
31 Aug 2005 COL	Carlton-in-Coverdale: short-lived thunderstorm at 1700h.with19.1mm at a maximum rate of 76mm/h.	Scarborough reported an intense storm during the evening with lightning flashing once a second on average It was reported by regional news that at one stage 98,000 homes had lost electricity supply in West North Yorkshire. Roads in and around Leeds were flooded.
21/22 May 2006 McClure and Grundy (2008)	Probably not a thunderstorm.	Cottingham: After 2 days of heavy rain flooding occurred in Canada Drive and the junction of Eppleworth Road and West end Road
2 Jul 2006 COL <a href="http://eyeoncalderdale.com/history-of-flooding-in-calderdale">http://eyeoncalderdale.com/history-of-flooding-in-calderdale</a>	Todmorden 30.2 mm in 3 h 31.0 Sheffield, Burncross	As the storms moved NE from Lancashire there was flooding to parts of Yorkshire. Near Todmorden a rainfall of 80.0mm was obtained 2km to the west towards the town centre; rain accompanied by hail resulted in localised flooding. Todmorden town centre was flooded with reports of cars floating down the streets in the centre of town.  The playing fields, Victoria Road, Water Street and industrial units off Hall Street in Sowerby Bridge were affected by flooding.Reports highlight that properties on Eagle Street flooded when the river overtopped its banks due to heavy rainfall. Many roads in and around Todmorden were closed, with approximately 20 properties flooded in cellars (kitchens) on Industrial Street, Commercial Street and Sackville Street. 30 properties on Halifax Road, 12 properties including the Public House on Burnley Road, and 20 –30 properties on Rochdale Road opposite Morrison's Supermarket all flooded from surface water run-off. St Joseph's School on Wellington Road was also reported to have flooded. Properties in Walsden were flooded when a culvert under the railway line at Rochdale Road became blocked and Walsden Water surcharged onto the railway line. Also, 3 properties on Rochdale Road at the junction with Strines Street flooded from Ramsden Clough. Michael Wilkinson, 46, licensee of Jack's House pub in Todmorden, said: "We were under three feet of water and everything is ruined - the kitchen, cellar, pub, toilets and all my stock. At St Andrew's Church, Undercliffe, Bradford, the tower was damaged when it was struck by lightning and several homes were also hit. The roof of a house in Iverson Dive, Cookridge, Leeds, was blown apart at 8.30pm by a bolt of lightning, causing a fire and the collapse of ceilings. Doncaster: thunderstorms on the17th/18th giving a 33.5mm total for the 17th, the 18th registering 28.4mm. The early morning storm on this latter date flooded the road here. Castleford: 17th - 28.7mm of rain led to local flooding. Chapel Allerton: On the 21st an early morning thunderstorm and further heavy downpours in the afternoon made this the wettest day for two years. On the 23rd A severe thunderstorm affected the Wakefield-Leeds area, but this gave only light/moderate rain at Chapel Allerton Hull North: 23rd – Heavy rainstorm about 20km W of Hull led to water about 30cm deep on the slip road off the A63 to South Cave. A nearby road up a steep hill to the Wolds had a lot of earth washed on the tarmac by 1915GMT,.
17 Aug 2006 COL	Thunderstorm Doncaster 33.5 daily Castleford 28.7	
21 Aug 2006 COL		
23 Aug 2006 COL		

2 Sep 2006 COL	Not a thunderstorm Pateley Br 51.1 mm daily	Pateley Bridge This was the wettest day in September since my records began 1983 and the wettest of any day since 9.8.2004. The rain was particularly heavy during the middle part of the day and 17.5mm fell during the hour ending 1345GMT. A weather station at 260m on the hillside to the south of Pateley Bridge recorded 76mm on the same day.
14 Sep 2006 COL	Doncaster 13mm in 5 m (17.0 mm in 15 m	There were reports of tornadoes from Leeds and Harrogate during the afternoon, with some damage reported. Lightning strikes hit signals at Leeds station and caused rail travel disruption. In North Yorkshire, fire and rescue crews were called to Harrogate, Summerbridge, Selby, Northallerton and Reeth - all in a two hour period - to deal with flooded premises. In Harehills, Leeds, a roof was blown off a house in a tornado - the whole roof travelled 50m; one man was taken to hospital after he was hit by a falling tree. There was an unofficial report of a gust to 98mph less than a kilometre from the location of the lifted roof. West Yorkshire Fire Service had the largest number of calls ever received by a fire service over a 30 minute period in 20 years. At Leeds Grammar school there was torrential rain and a tornado that took tiles off the junior school roof and wet the inside of the sports hall. Doncaster: The road outside the met station flooded over the kerb and into gardens and a street approximately 400 metres away was flooded above the bottom of car doors, all caused by severe runoff from roads at higher level nearby Chapel Allerton: the observer reports that in the Leeds area. Heavy, squally rain produced some flooding as around 10mm of rain fell in as many minutes. Parts of E Leeds, however, were affected by a tornado, A number of homes were severely damaged and many trees were uprooted in the East End park area. The Met Office reported that in NE England showers turned heavy at times and hail and thunder was reported- but thunder was not mentioned at the observing stations.
13 May 2007 COL	Not a thunderstorm 43.2 Hull 40.6 Doncaster, Town Moor 40.2 Cottingham 2 40.0 Cottingham 40.0 Hull North 35.0 Sheffield, Burncross 33.0 Pateley Bridge 2 31.8 carlton in coverdale	
15 Jun 2007 COL Driffield Times 20 Jun Hull Daily Mail 16 Jun Yorks Evg Post 15 Jun	Persistent rain – thunder not reported. 30.3 Carlton-in-Coverdale 28.4 Whitby 28.2 Doncaster, Cantley 26.4 Whitby, West Cliff 71.0 Bingley	In South Yorkshire flooding caused scores of homes to be evacuated, roads and schools to be closed and rail services to be cancelled. Police received more than 200 calls from Sheffield, Rotherham and Barnsley caused by heavy rain. Northern Rail said flooding near Elsecar was affecting the line between Meadowhall and Barnsley. Police said the River Dove had burst its banks at Station Road in Worsborough, and they were expecting similar problems with the River Don. The road leading up junction 35 of the M1 in Chapeltown, in Sheffield, was also flooded. Driffield: Exam students were forced to evacuate when floodwater reached their desks with 2 inches of water in the north hall. DT only reported one other property flooded at Beeford. Withernsea: 15 people were evacuated from bungalows in a sheltered housing scheme. Anlaby: Police stopped traffic in Tranby Lane as the flow along the road washed blue recycling bins along.

Houses were flooded.

Hessle: Gardens and some houses were flooded.

Hull: HDM shows photo of flooding at Westcott Primary School in Westcott Street, East Hull.

Wakefield: Flood waters also caused traffic chaos in Leeds and Wakefield and train lines were flooded. In Wakefield particularly affected were Denby Dale Road, Westgate, Dewsbury Road and Aberford Road. Police closed off Hostingley Lane and Blacker Lane in Wakefield due to floods. Torrential rain flooded parts of Allerton Bywater and Castleford, was flooded by more than four feet of water.

Showers were thundery in the afternoon and early evening from East Anglia to Yorkshire. Yorkshire experienced some flash flooding as the storms moved N.

16 Jun 2007  
COL

A shallow low centre remained slow-moving over N England and a front pushed steadily N during the day  
Hull recorded 256.3 mm for June-four times the average.  
At Askham Bryan it was the wettest month ever recorded, 213mm of rain fell - three times the average amount for June. On June 14 57mm of rain fell.

18/19 Jun 2007  
Yorks Counties  
Publ 19/20 Jun

Thunderstorm

Wharfedale: Streets, particularly those where water gushed down from the moor at Ilkley, were turned into fast running streams - for the second time in a matter of days. Rivers of rainwater gushed down Wells Road and Cowpasture Road in Ilkley and Burley-in-Wharfedale's Station Road, dragging stones and other debris into the roads. The heavy rain also severely disrupted trains and buses, with both the Harrogate Line through Horsforth and the Wharfedale Line suffering many cancelled train services. The downpour also caused a major landslide on the A59 road connecting Skipton and Harrogate, closing it over the weekend. Ilkley's Leeds Road and Ashlands Road have suffered serious flooding in previous heavy rainstorms, when Backstone Beck, a stream which flows from the moor through residential parts of Ilkley to the River Wharfe, overflowed. Businesses on Ashlands Road industrial estate were once again left counting the cost of flood damage to their units.

Leeds: A house was struck by lightning and set alight. Rail services were disrupted.

In South Yorkshire, the problems were restricted to an area around Swinton and Rawmarsh in Rotherham, extending to Elsecar in Barnsley.

York: Following a ferocious squall of rain and hail yesterday lunchtime, Windsor Drive, in Wigginton, York, briefly resembled a river rather than a suburban road, with cars driving along creating bow waves. In nearby Haxby, gardens were flooded and at least one resident had to bale out their drive after a pumping station was apparently unable to cope with the volume of rain that fell.

Hundreds of people left their homes in three villages in South Yorkshire amid fears that the Ulley reservoir dam near

Rotherham might burst when cracks appeared after torrential rain. The M1 motorway was closed between junctions 32 and 36 because it would be flooded if the dam burst. About 900 people stayed in emergency shelters in Sheffield after being left stranded by the flooding; council leaders said there had been "significant damage" to the city, and that the cost of the damage would run into "millions". A teenager was swept to his death in a swollen river in Sheffield, while an RAF helicopter rescued people from the roof of a factory in Brightside Lane. A 68-year-old man also died as he was washed away as he got out of his car in the Wicker

24/25 Jun 2007  
COL  
Mc Clure and  
Grundy (2008)  
Driffield Times  
27 Jun/4 Jul  
Beverley  
Guardian 29 Jun

Persistent frontal rainfall with low slow-moving across Cent S and SE England  
Daily totals on 24<sup>th</sup>  
57.5 Hull North  
54.1 Cottingham  
48.2 Gringley-on-the-Hill  
47.5 Doncaster, Town Moor  
45.0 Sheffield, Burncross

Daily totals on 25<sup>th</sup>:

77.7 Cottingham 2  
74.0 Hull North  
62.0 Sheffield, Burncross  
60.8 Cottingham  
60.0 East Ardsley  
58.0 Doncaster, Cantley  
55.0 Auckley, Doncaster  
44.8 Castleford  
39.9 Doncaster, Town Moor  
39.0 Gringley-on-the-Hill  
36.6 Pickering  
35.8 Ripley

area, while another man died after becoming trapped in a storm drain in Hull.

Cottingham: This was one of many towns that suffered serious flooding on this date which followed heavy rainfall 10 days earlier and the wettest 12 day summer period on record. More properties were flooded than in 1912 because new houses had been built in Eppleworth Road/Castle park area, West End Road, Creyke Close, Victorias's Way and Endyke Lane. Earlier open channels had been culverted, but now surcharged. So much water was pouring down from the slopes of the Yorkshire Wolds that the A 184 became impassable. The village was also affected by groundwater flooding with spring water breaking out in Westfield Road and elsewhere. Water bubbled up from street gullies to flood streets. The dyke on Willerby Low Road overflowed into the Canada Drive area. The dykes on Eppleworth Road and Lindern Avenue flooded over into adjacent properties. Broadlane Beck, Mill Beck and Creyke Beck overflowed and inundated homes in Crescent Street, George Street, King Street, Broad Lane Close, Canongate, Creyke Close, Station Road, Victoria's Way, Dunswell Road, Wanlass Drive and North Moor Lane. Most of the problem was from water backing up from culverts and sewers which had insufficient capacity. Some of the worst flooding occurred in the east-west spine of the village which follows the line of a small normally-dry valley from Rowley through Raywell and Eppleworth broadening at the west end of Cottingham. It became a powerful river. Broadlane Beck is now mostly culverted with a dip in George Street and King Street where people were rescued by dinghy. 400 homes were flooded in Cottingham. McClure and Grundy have further text and comprehensive photographs of the event.

Hull: One man was killed when stuck in a drain when trying to clean a gutter – as water rose. Widespread flooding including Preston Road, East Hull, Boothferry Road West Hull, most roads in The Avenues, Ella Street, Chanterlands Avenue (6 feet deep), Kingswood (3-4 feet deep)

Hessle: In Churchfield one couple spent time on a table top with 3 feet of water.

Anlaby: Manor road and Caley Road were flooded with some houses flooded to 6 feet deep.

Skirlough: In Vicarage Lane there was 3 feet of water at the Cold Temp Refrigeration service.

Market Wreighton: Southgate, Cliff road, High Street and Finkle Street were all flooded.

Cherry Burton and Bishop Burton: Roads were closed.

Brough: Water was running along Brantingham Road and was knee high in Church Street.

Withernsea: Homes and Streets were flooded in some cases for the third time in a fortnight.

Wansford: The beck overflowed making the road impassable. Residents were evacuated to Nafferton School. Residents said they had never seen anything like it in 34 years there.

Nafferton: Coopergate had several floods to property over the previous week with water a foot deep. 'A dozen people have been flooded to a greater or lesser extent'.

Driffield: The Chase was flooded with water from the Driffield School field with water reaching 3 inches deep. A resident noted 'I thought that this was something that happened in places like York near the river, not here where we're not near a river'. Many roads in the area were flooded and impassable. The school examination hall was flooded again.

Beverley: Part of Beverley, Westwood became a great lake and streets were turned into rivers. A number of homes were flooded in Westwood in Willow Grove and Woodhall Way (and also Pasture Terrace and Manor Road), from water coming off the land. BG notes that Walker beck flows under the town and the culvert comes out a Becksde,

Lockington: DT shows fphotos of streets and houses flooded. Other photos show flooding at Hutton, Bainton

and Kilnwick.

Other villages were badly hit including Leconfield (Old Road, North Bar and Sigston Road), Cherry Burton and Hutton Cranswick.

DT reports that more than 2000 houses were affected by water and storm damage in the East Riding. Large farming losses occurred as flooding persisted. EA was blamed because it had not cleared drainage systems Sheffield: Winched through the air and away from ever-rising flood waters, many workers at Jessops Riverside industrial estate have never seen a Monday like it. "I thought the water would come up a bit but nothing like it did." The huge clear-up is under way in the Brightside area with the ruined furniture, paperwork and contents of offices strewn across the car park.

Flash flooding was reported in Filey in North Yorkshire during the afternoon. North Yorkshire Fire and Rescue Service received about 60 calls from residents and businesses relating to flooding. Houses were flooded after rain left 3ft of water in homes following a cloudburst at 1245GMT. At Kirby Misperton in North Yorkshire a funnel cloud was seen.

Whitby: The wettest day (31st) was due entirely to a thunderstorm which occurred on 1 August between 0130h and 0200h.

Pateley Br: the rainfall (25.7mm) was the highest in July since 28.7.2005.

Ripley: Torrential rain in afternoon and evening followed by severe thunderstorm in night.

Carlton-in-Coverdale: The rain caused minor flooding in Carlton. At Wensley the River Ure burst it's banks and flooded the main road.

During the afternoon there was a cloudburst over the North Sheffield area during 1600-1700h. At the peak rain was falling at a rate of 158mm/h.

Sheffield: Very heavy showers affected the Sheffield area into the evening. Floods were due to the city's drainage system becoming inundated rather than the River Don breaking its banks as it did two years ago. The floods left schools closed, roads blocked and people needing to be rescued. A sudden torrential downpour, accompanied by thunder and lightning, hit the city around 4pm today sending a deluge of rainwater and even hailstones onto unsuspecting office workers, shoppers and motorists. The intensity of the rain, and the suddenness of its arrival, brought back unwelcome memories of the Great Sheffield Flood of 2007. Flooding knocked out all signals at Sheffield Station. No trains were arriving or leaving - until further notice, said Sheffield City Council at 7.20pm. Norfolk Park Road is flooded up to five feet deep and at least two cars are submerged in the water. One train from Manchester has been turned back at Hazel Grove station. The fire service said hotspots for flooding were the city centre, Norfolk Park, and Arbourthorne. Sheffield Council's Street Force service has been dispatched to clear gullies with a machine pump, especially water under bridges. Office workers waded knee-deep along Matilda Street, Shoreham Street, and Granville Road to try to retrieve their cars at 5pm. Near Granville Square roundabout the road surface began lifting due to flooding. Part of Penistone Road, Middlewood Road near Leppings Lane in Hillsborough are all flooded. Summerfield Street off Ecclesall Road was flooded completely. Part of Penistone Road, Middlewood Road near Leppings Lane in Hillsborough, and the roads around Olive Grove bus depot all flooded. Chesterfield Road is closed under the railway bridge in Heeley due to deep floodwater impassible by traffic. Bus Services are diverted in Heeley,

18 Jul 2007  
COL

31 Jul/ 1 Aug  
2008  
COL

5 Sep 2008  
COL  
Cottingham 38.0  
Whitby West cliff 40.1  
Carlton in Coverdale 67.8  
Pateley Br 54.8

7 Sep 2008  
COL  
Sheffield 38 mm in 1 h

10 Jun 2009  
COL  
Sheffield Star 10  
Thunderstorms  
At Sheffield (Norwood) 48.6mm of  
rain fell in the 24 hours beginning  
0500GMT.

Jun  
Yorkshire Post  
11 Jun

Woodseats and Arbourthorne. Park Square roundabout in the city centre is flooded and Broad Lane and Millsands are both badly affected. Supertram has been particularly badly hit, with trams unable to drive through deep floodwater on Netherthorpe Road underpass, West Street, and Fitzalan Square stops. Rivers of water are flooding down the tramtracks. At Ponds Forge leisure centre the lower ground floor gym was evacuated and customers were warned they may not be able to retrieve their cars from the underground car park. Central Library is closed until further notice due to floods affecting the electrics. The toilets are flooded. Norfolk Park Special School and Heritage Park School will be closed tomorrow.

Dronfield: In Dronfield firefighters led six people to safety from an industrial estate on Callywhite Lane after they were cut off by waters 8ft deep. Officers broke through bushes and trees to create an escape route via higher ground after being called by police.

There was also flash flooding in parts of North Derbyshire, areas affected included Crich, Ashover and Chesterfield and the county's fire service said they were inundated with calls. At Sheffield (Norwood) 48.6mm of rain fell in the 24 hours beginning 0500GMT.

A house in Sheffield was badly damaged after being struck by lightning during a storm. Lightning strikes caused disruption to trains in West Yorkshire in the afternoon, with services on some routes delayed by nearly an hour.

Doncaster: Some road surface flooding was reported.

Todmorden: Approximately 10mm of rain fell in one hour from 1730GMT.

Carlton-in-Coverdale: Localised very heavy shower late afternoon with 14mm falling in an hour. The maximum rain rate during this period was 64mm per hour.

Pateley Bridge 2: The rainfall, 66.8mm, was the highest in July since records began in 1983 and the highest on any day since 79.7mm fell on 9.8.2004. (The previous wettest July day was 30.7.1994 with 35.0mm.) 41.5mm fell during 1315-1530GMT, of which approximately 35mm fell during the period 1355- 1430. 17.8mm fell between 1700GMT and 2000GMT.

A report from Ripley (N of Harrogate) describes frequent thunder and lightning overhead for 45 minutes towards dusk, with torrential hail for 20 minutes resulting in a layer about 5 cm deep, and still present in heaps next morning. The hail sent the grass temperature down to -2C.

More than 700 properties were flooded in Goole last August 3 and Yorkshire Water is now undertaking a £275,000 survey of the town's drainage system.

York: The emergency services were called to Yarbrough Way, Badger Hill, and Church Road, Osbaldwick, following heavy rain at just before 5pm.

Flaxton: Torrential downpours caused flash flooding in two villages near York. Five homes and a kitchen manufacturing business were inundated at Flaxton yesterday afternoon. Handmade Kitchens' premises near the railway level crossing in Flaxton, were flooded to a depth of about two feet after a nearby beck burst its banks. Proprietor Richard Patterson said about £100,000 worth of machinery was affected by flooding. A

15 Jun 2009  
COL

22 Jun 2009  
COL  
Doncaster 10.9 mm in 20 m (5.8 in 5 m)

31 Aug 2009  
COL

21 May 2010  
COL

20 Jul 2010  
COL

7 Jul 2011  
COL  
Ripley 15 mm in 20 m. This storm was remarkably localised. There was no precipitation at all 4 miles to the north and 4 miles to the south. Hail at Flaxton

3 Aug 2011  
Yorkshire post 6  
Jul 2012

8/9 Jun 2012  
York Press 9/10  
Jun  
Thunderstorm for more than 1 hour

22 Jun 2012  
<http://eyeoncalderdale.com/history-of-flooding-in-calderdale>  
Yorkshire Post  
22 Jun/Jun 23

Flaxton resident said the flood waters rose to within inches of the floorboards at his home in Main Street. Another six properties were flooded in Sandy Lane, Stockton-on-the-Forest. Huge traffic jams also built up on the A64 between York and Malton because of flooding.

Major flooding across the Upper Valley down to Brighouse. River Calder and River Hebble overflowed causing major damage. This flood event was the largest fluvial event (fluvial flooding happens when rivers burst their banks because of sustained or intense rainfall) on record across the Upper Calder Valley, and the third largest across the lower reaches of the River Calder. Rainfall raised river levels all along the River Calder and filled all available storage. From midday onwards, steady rainfall continued to fall. More than a month's rainfall fell in the 24 hours of the 22nd of June. The rivers rose to unprecedented levels causing the worst flooding since 2000. Over 900 properties and businesses were affected by the resulting flooding when Walsden Water, the River Calder, various tributary rivers and the Rochdale Canal burst their banks. Hebden Bridge recorded its highest ever river level (3.311 metres) and Mytholmroyd saw levels over 4.9 metres. Countless homes and businesses were under water in the centre of Mytholmroyd. Some properties flooded to a depth of over a metre.

Leeds: Storm water flooded a school last night. Firefighters were called to pump out classrooms at St Nicholas's primary school in Oakwood Lane at Oakwood, east of the city. A storm drain burst and rainwater flooded down a hill into the school playground and into the school.

Rescue Service said crews were sent to 14 different locations, many involving flooded properties. He said areas affected were around Harrogate, Knaresborough and Boroughbridge in the west of the county and Bedale and Leeming Bar in the north. Firefighters in the Yorkshire Dales had to rescue a number of people from cars due to flash flooding. Two women were rescued from a car trapped in floodwater at Carleton, near Skipton, others at Hawes and Bainbridge.

As well as the flooded premises, there was structural damage to road surfaces, culverts and bridges, plus major disruption to traffic and local people, including the railway line, stranding many people in transit.

Carlton-in-Coverdale: The band of torrential rain, which so badly affected the Newcastle area, was fairly narrow here but in the space of about 20 minutes 13.2 mm rain fell, with a maximum rate of 240 mm/h. Visibility was much reduced.

Train services between Scotland and England have been axed in the wake of yesterday's freak deluges that saw rail lines blocked by flood water, landslips and fallen trees. Flooding was reported in the Northeast and in the Midlands but nothing was found for Yorkshire.

Goole: A building had to be evacuated after lightning set fire to the roof; there was also flooding in the town. More than dozen homes in Goole were flooded following an intense downpour yesterday afternoon, as were several properties in Crowle in north Lincolnshire. Humberside Fire and Rescue said crews had helped pump out several homes, including that of a 72-year-old in a basement flat in Hook Road. Homes were also affected in Millennium Way, which has been hit around five times in the last eight years, as well as Marshfield Road, Hook Road, Westbourne Grove and Attlee Drive.

Pateley Bridge: 7th - 19.3 mm of rain fell in one hour (1635-1735 GMT). The village of Summerbridge, 7 km from this site, suffered severe flash flooding for the second time in two months.

The towns and villages most affected were Walsden, Todmorden, Eastwood, Hebden Bridge (including major flooding at Callis, Woodland Villas and Charlestown), Mytholmroyd and Brearley/Luddendenfoot. There was

28 Jun 2012  
COL  
Yorkshire Post  
29 Jun

5 Jul 2012      Thunderstorm  
COL  
Yorkshire post 6  
Jul

7 Jul 2012  
COL  
9 Jul 2012  
<http://eyeoncalderdale.com/history-of-flooding-in-calderdale>

derdale.com/history-of-flooding-in-calderdale

4 Aug 2012  
Yorkshire Post 5  
Aug

7 Aug 2012  
COL Sandhutton (Ne of York) 28 mm in 1 h

15 Aug 2012  
COL Pateley Br 16.7 mm in 1 h

25 Aug 2012  
<http://eyeoncalderdale.com/history-of-flooding-in-calderdale>  
Hull daily Mail  
27 Aug Thunderstorms  
East Park shows 37.6mm of rainfall fell in Hull on Saturday. But the most significant figure from that day is that 31.4mm fell between 3pm and 4pm. "

24 Sep 2012  
COL

also flooding in other parts of the Borough, such as in Sowerby Bridge, Elland and Brighouse. Flash floods in Hebden Bridge, Eastwood & Mytholmroyd. Three weather systems hit the area on the 9th July, causing torrential rain to fall on already heavily saturated ground, and resulting in major flooding incidents across the Upper Valley, with over 43mm of rainfall. This caused surface water flooding but did not result in high river levels. Again, saturated ground caused water to run off the hillsides. Nutclough dam overtopped and there was extensive flooding in Keighley Road. Rubble and silt from the hillsides blocked drains and culverts. Around 100 homes and businesses suffered, some for a second time.

Hebden Bridge in Calderdale, West Yorkshire, was hit by flash floods on Monday with the authorities warning locals to stay indoors. Parts of the town were also left impassable by car and the local library was evacuated following a sudden downpour that brought nearly a month's worth of rain, more than 40mm, in three hours. North Yorkshire Fire Service said they were first called to a flooded property at Little Ouseburn, near Boroughbridge at about 6.30pm and a house in Grewelthorpe, near Ripon, which had 2ft of water in the kitchen.

A spokesman said crews were then called to properties flooded on the main street in nearby Kirkby Malzeard and a restaurant in Harrogate. At 8.50pm a crew from Masham came to the aid of a driver whose car had got stuck in flood water on Thorpe Road, in the village.

Again, flash flooding affected the Jumble Hole area from Blackshawhead to Callis Bridge, causing additional flooding to properties across the Upper Valley. Substantial quantities of silt and rubble were deposited in Burnley Road and surrounded nearby terraced properties. The drainage system on Burnley Road was unable to cope and the Fire Service spent several hours pumping water into the river.

Parts of East Yorkshire were hit by more than half a month's rain in just an hour. Thunder storms and rain caused chaos on Saturday, flooding roads and homes in Hull and parts of the East Riding. In Hull, Jst4Fun in Sutton Park Industrial Estate saw 43 adults and 35 children led to safety after water came up to the door of the building. Crews also helped remove surface water in Calvert Lane, Garrick Close, Corona Drive, Kendal Way, Foster Street, Bisley Grove and Hawkshead Green.

In Hedon, St Augustine's Gate was flooded, affecting shops and businesses in the town. In St Augustine's, the water was lapping the doorways. It must have been between 6in and 9in in places.

Carlton-in-Coverdale: With 109.0 mm this was the wettest September day on record as well as being the wettest single day in all months. The previous wettest was 102.4 mm in August 2002. The rain started at 9 pm on the 23rd and finally ceased at 2.30 am on the 26th, with a total rainfall of 147.7 mm. Between 4 pm and 8 pm on the 24th

and from just before midnight on the 24th until 9.30 am on the 25th it was frequently falling at the rate of 10 mm per hour or more. There was minor flooding in the village including the pub!

Pateley Bridge 2: The rainfall of 67.4 mm was the highest in September since records began in 1983 and the most on any day since 09.08.2004. 108.0 mm of rain fell in 56 hours from the evening of the 23rd to the early hours of the 26th.



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. Cloudburst for ¾ hour

Nothing of detail in station notes.

29 Jul 2013  
<http://eyeoncalderdale.com/history-of-flooding-in-calderdale>  
Lancashire  
Telegraph 31 Jul  
Yorkshire Evg  
post 30 Jul

Large storm clouds brought heavy rainfall to the Upper Valley which was affected from a number of sources. The communities worst affected were those immediately adjacent to Walsden Water and the River Calder, impacting on Walsden, Todmorden and Hebden Bridge. Two watercourses located above Kershaw Road Walsden were unable to cope with the level of flow and suffered severe erosion, overloading and blocking the drainage system. Excess surface water from the damaged culverts spilled onto the railway line at Walsden Station, flooding properties along Rochdale Road. Birks Clough overtopped, and this water combined with excess rain run-off from surrounding hills then flooded properties along and adjacent to Burnley Road. Walsden was hit by up to 18in (46cm) of water last night after extremely heavy rain. The flood caused "sheer devastation", according to residents, as it poured from a culvert and down a side street, ripping huge chunks out of the road surface and destroying the road. Water was still pouring down the street and through at least one house today and around 20 homes are thought to have been flooded. Within 15 minutes this road was completely flooded to the depth of my wellington boots. One resident was swept around 50ft (15m) by the torrent. He was carried downhill and ended up on the railway tracks at end of his street.

Todmorden: The town was left under a foot and a half of water after flash floods ripped up roads. Homes were damaged when water gushed through Todmorden on Monday. A bridge collapsed at the bottom of Bacup Road and all roads in and out of Todmorden were closed. EA noted: "Short bursts of intense rainfall caused the River Spodden to rise quickly. We have reports that around 20 properties and four commercial premises flooded as a result of the downpour". Todmorden town councillor Josef Rez said the problems had been caused by overflowing drains rather than rising river levels.

Castleford: Torrential rain at 2212 GMT. The rain lasted about 10 minutes and the local road flooded water onto the drive. This is first time this has ever happened in 39 years of being here. 24 mm of rain was recorded but there must have been quite a bit blown out of the gauge by the strong wind that came with the squall.

Sheffield: A thunder storm led to a number of homes and roads flooding in Sheffield.

Homes flooded on Smalldale Road and Youldale Drive in Frecheville, Hessey Street at Normanton Springs, High Street in Mosborough and Richmond Park Road, Richmond, on Thursday night.

23 Aug 2013  
COL

2 May 2014  
Star Sheffield 2  
May

9 Jun 2014  
COL  
Castleford 10 mm in 10 m

8 Jul 2014  
COL  
Pateley Br 27.8 in 2 h (Tot 42.8)

8 Aug 2014  
COL  
Pateley Br 27.5 mm in 1 h

Lightning struck and damaged houses at Scotton (near Catterick). Near Leeds, 77mm fell at Allerton Bywater and 64mm at Bramham. A house was damaged by lightning at Castleford.

10 Aug 2014	Thunderstorms and strong winds from ex-hurricane Bertha
COL	Lecoonfield 44.8
Hull Daily Mail	Cottingham 40.3
11 Aug	Hull N 38.4
	Hornsea 37.5
	Whitby west cliff 35.0
1 Jul 2015	
COL	
23 Aug 2015	
COL	
6 Oct 2015	Thundeerstorm
Bradford	
Teleraph 6 Oct	
29 Jul 2016	
COL	
6 Jul 2017	
COL	
27 Jul 2018	
COL,	
York Press 30 Jul	
30 Jul 2019	
COL,	
BBC News,	
Richmondshire	
Today 10 Sep	

Castleford: a day with many thundery spells between 1430 and 2045 GMT. Very heavy rain around 1700 GMT with a maximum rain rate fall of 33 mm/h recorded at 1715 GMT and a daily total of 59.9 mm. Some recordings were lost during this period of heavy rain. There was quite severe flooding in the town, with cars covered up to the roof under the railway bridge as the road has a dip there. Flooding also affected local shops in the town and some had to be pumped out by the fire brigade.

Sandhutton: Two very wet days on the 8th and 10th (with a combined total of 44.5mm of rain) sandwiched a mainly sunny day on the 9th. Both wet days led to problems with flooding.

A tornado that ripped through east Hull streets. Heavy rain caused flooding, which was most prevalent in the west of the city and Anlaby. Jackie Pearson, 71, was forced to evacuate when her home in North Street, Anlaby, flooded said: "The water came through into my bathroom and kitchen and almost reached my lounge. My home flooded in 2007. Springhead Avenue in west Hull was also hit badly by flooding.

Carlton-in-Coverdale: the maximum temperature of 29.9C was the warmest July day since 2006 when the temperature reached 31.1C. There was a severe thunderstorm and large hail at 2030 GMT. Local buildings and cars suffered considerable damage.

Pateley Bridge 2: 1st - with a maximum temperature of 30.8C it was the 5th warmest day since records began in August 1983, exceeded only by two days in July 2006 and two days in August 1990. A severe hailstorm at 2300 GMT, with hailstones up to 40 mm in diameter, caused significant local damage to windows, skylights and cars [Information

from our local museum and from Jonathan Webb of TORRO indicate that a similar storm occurred here on 2 July 1968]. The hailstorm episode lasted less than 20 minutes. My measured "rainfall" was only 8.5 mm but it is possible that some of the hailstones bounced out of the rain gauge. The hailstorm covered a relatively small area in the upper part of Nidderdale (and some other local upper dales seem also to have been affected). Local damage was considerable - especially windows, skylights, plastic roofs and cars. I heard also that some sheep had been injured.

Pateley Bridge 2: 12.0 mm of rain fell in 1 hour during an evening storm (this represented 14% of the month's rainfall total).

Bradford: There was several inches of water on a short section of Hall Ings next to The Broadway shopping centre development and a community centre was damaged as water poured in.

<Linton on Ouse>: A heavy, thundery shower drifted eastwards over North Yorkshire in the evening; 41 mm fell in a little over two hours at Linton-on-Ouse.

<Easingwold><Harrogate>: Large hail was reported,

<York>: It suffered flooding - and was hit by hailstones of up to 6 cm in diameter. York Press has 35 pictures of hail the size of golf balls, epic lightning storms and Biblical downpours.

[Large hailstones also fell over parts of north Norfolk].

<Ripon> and <Masham>: Locally severe with large hail (2-3cm) across occurred around Ripon and Masham) and torrential rain.

<Malham>: The county was pounded by hailstones the size of "pickled onions" as a summer storm swept through and Malham Tarn in the Yorkshire Dales had 3.2in (82.2mm) of rain in 24 hours, the majority in the space of four hours. The waterfall at Malham cove became a waterfall once again for the first time in living

26 Jun 2020 BBC  
News

memory.

<Leeds><Sheffield>: Hailstones fall on Leeds and Sheffield

The hailstones shown in an image were about the same size as a £2 coin but irregular and jagged.

The "large" hailstones in the images appeared to be between 3 and 4 cm in size, a Met office meteorologist said.

A yellow weather warning for thunderstorms and rain is in place for much of the UK until 09:00 on Saturday.

The thunderstorms follow on from the heatwave on Thursday, when temperatures reached 33.4C (92.1F) at Heathrow Airport in west London. Temperatures on Friday reached a maximum of 31.2C (88.16F), recorded at Kew Gardens in west London, the Met Office said. It warned up to 20mm of rain could fall in an hour in areas covered by the yellow warning, but said the storms were expected to clear towards the north east on Friday evening.

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### **Rivers Aire and Calder JBA and EA reports**

#### **Newspaper Archives**

A review of newspaper reports concerning flooding in the Aire valley as far back as 1840 was obtained from the Agency. The review mainly concentrated on floods in the Upper Aire from the 1930's to the present day. An attempt has been made to identify events that caused flooding to property. However, this has not been easy as the articles do not often refer to particular properties or flood risk areas. The review does show that flooding of the Aire valley between Keighley and Skipton is a regular occurrence.

The events which seem to stand out as the worst floods are 1946, 1866 and 1840. Most data is available for the 1946 event and indeed much of this information is used by the Agency for planning purposes. During 1866, several people lost their lives along the Aire valley, including a group who were swept into the river at Leeds when a wooden jetty collapsed. Also during 1866, the railway viaduct at Apperley Bridge was swept away. Several of the flood events in the Cononley area are referred to the flood stone in "Arthur Boothman's field" which marks the peak level of the 1840 event. However, no further information has been found concerning this event.

Environment Agency – North East Region River Aire Flood Warning Improvements Stage 1:  
Initial Review Report JBA

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