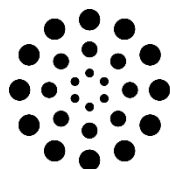




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NRFA PEAK FLOW DATASET VERSION 15

Note on changes from version 14

VERSION: 1.0

STATUS: FINAL

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ABBREVIATIONS

AMAX	Annual Maximum
<i>BFIHOST</i>	Base Flow Index based on the Hydrology of Soil Types
<i>CD</i>	Catchment Descriptor
<i>DRAINDENS</i>	Drainage Density
DfIR	Department for Infrastructure – Rivers Directorate
EA	Environment Agency
<i>FARL</i>	Flood Attenuation due to Reservoirs and Lakes
FEH	Flood Estimation Handbook
FFC	Flood Frequency Curve
<i>FPEXT</i>	Floodplain Extent
IQR	Interquartile Range
mASD	Metres above station datum
NRFA	National River Flow Archive
NRW	Natural Resources Wales
POT	Peaks Over Threshold
<i>QMED</i>	Median Annual Maximum Flow
<i>QMED_CD</i>	Median Annual Maximum Flow estimate from catchment descriptors
<i>SAAR</i> _(YYZZ)	Standard-period Average Annual Rainfall (during the years YY to ZZ)
SEPA	Scottish Environment Protection Agency
<i>URBEXT</i> _(YYYY)	Urban Extent (in the year YYYY)
UKCEH	UK Centre for Ecology & Hydrology
WY	Water Year

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2 INTRODUCTION

Version 15 of the NRFA Peak Flows Dataset contains AMAX and POT data for 949 gauging stations, of which 636 are in England, 181 are in Scotland, 94 are in Wales, and 38 are in Northern Ireland. A total of 558 stations are recommended for use in pooling groups ('Suitable for Pooling'), 366 stations are 'Suitable for *QMED*' only, and 25 stations are 'Suitable for Neither'.

2.1 Content of Version 15

This version 15 release contains the following updates:

- Network changes
- An additional water year of data (updated to the end of the water year ending 30 September 2025) for all active peak flow stations in the UK. In addition, provisional data collected during the current water year (ending 30 September 2026) have been provided for two stations in Wales.
- Full Period of Record Review for a subset of stations in the dataset (79 stations across the UK) and full network tasks
- Modifications to existing time series

The version 15 release note also includes:

- Impact of the data changes (see section 8 for more information)

3 NETWORK CHANGES

A number of changes have been made to the gauging stations for which peak flow data are held on the NRFA since the release of version 14. Key changes are noted in this section.

3.1 Removal of Gauging Stations

One station has been removed from the dataset, listed in Table 1. Daily flows are still held on the NRFA, where indicated, although peak flow data will no longer be available on the website.

Table 1: Stations removed from the dataset in version 15.

Station Number	Station Name	Measuring Authority	Daily flow station	Suitability	Comment
41006	Uck at Isfield	EA-SSD	YES	QMED	Station removed due to uncertainty in flow estimation under drowned conditions.

3.2 Addition of Gauging Stations

24 stations have been added to the dataset in version 15, listed in Table 2.

Table 2: Stations added to the dataset in version 15.

Station Number	Station Name	Measuring Authority	Suitability	Catchment Area (km ²)
13007	North Esk at Logie Mill	SEPA-NE	QMED	747.04
27054	Hodge Beck at Cherry Farm	EA-Y	QMED	37.43
27074	Spenn Beck at Northorpe	EA-Y	QMED	45.82
28051	Soar at Narborough	EA-EM	QMED	205.24
38012	Stevenage Brook at Bragbury Park	EA-HNL	QMED	35.11
38017	Mimram at Whitwell	EA-HNL	POOLING	38.4
38028	Stansted Brook at Gypsy Lane	EA-HNL	QMED	26.37
38029	Quin at Griggs Bridge	EA-HNL	QMED	50.41
39030	Gade at Croxley Green	EA-HNL	POOLING	182.35
39102	Misbourne at Denham Lodge	EA-HNL	QMED	93.24
40042	Medway at Allington	EA-KSL	POOLING	1376.79
43016	Stour at Wimborne (A31)	EA-WX	POOLING	1013.81
43022	Moors River at Hurn Court	EA-WX	POOLING	149.14
43026	Bourne at Salisbury Bourne	EA-WX	QMED	166.23
43027	Allen at All Hallows	EA-WX	QMED	36.16
49007	Camel at Bodmin Dunmere	EA-DC	QMED	138.85
52001	Axe at Wookey	EA-WX	QMED	11.7
53024	Tetbury Avon at Brokenborough	EA-WX	QMED	79.54
54088	Little Avon at Berkeley Kennels	EA-WX	QMED	133.06
54095	Severn at Buildwas	EA-WM	POOLING	3722.67
54098	Cam at Cambridge	EA-WM	QMED	29.54
69026	Irwell at Kearsley	EA-GMMC	POOLING	519.83
92003	Strontian at Ariundle	SEPA-NW	POOLING	25.17
108001	Weisdale Burn at Weisdale Mill	SEPA-NW	POOLING	12.71

3.3 Closure of Gauging Stations

Three stations have been closed in version 15, listed in Table 3. Previously recorded flow data for these stations are still contained in the dataset and shown on the NRFA website, but there will be no further updates in future.

Table 3: Stations closed in version 15.

Station Number	Station Name	Measuring Authority	Daily flow station	Suitability	Comment
39004	Wandle at Beddington Park	EA-KSL	YES	QMED	Station closure date revised from 01/10/2016 to 27/10/2012 because flows from this date onwards are derived from a rating that has not been sufficiently validated by subsequent gaugings.
39089	Gade at Bury Mill	EA-HNL	YES	POOLING	Station closed following channel re-naturalisation works. The river was diverted into the new channel on 14/04/2025, and the station was subsequently replaced by Gadebridge Park (not yet included in the NRFA).
66004	Wheeler at Bodfari	NRW	YES	QMED	Station closed due to ongoing access constraints affecting station operation and maintenance.

3.4 Changes to FEH Indicative Suitabilities

Indicative suitabilities have changed at eight stations, four in Scotland, one in England, and three in Northern Ireland, shown in Table 4. Two stations have been upgraded, whilst seven stations have been downgraded.

Table 4: Stations with changes to indicative suitability in version 15.

Station Number	Station Name	Measuring Authority	V14 Suitability	V15 Suitability	Upgrade (↑) / Downgrade (↓) - Reason
12005	Muick at Invermuick	SEPA-NE	POOLING	QMED	↓ - No gaugings are available above QMED, and confidence in rating extrapolation above bankfull level (approximately 1.6 m) is low.
12006	Gairn at Invergairn	SEPA-NE	POOLING	QMED	↓ - Low confidence in flow estimation above approximately 50 m³/s.
21015	Leader Water at Earlston	SEPA-SE	QMED	POOLING	↑ - Improved floodplain modelling has increased confidence in estimation of larger floods.
41020	Bevern Stream at Clappers Bridge	EA-SSD	POOLING	QMED	↓ - Previous rating structure was subject to considerable uncertainty, with flows potentially overestimated.
77003	Liddel Water at Rowanburnfoot	SEPA-SW	NEITHER	QMED	↑ - High flow rating segments have been recalibrated, resulting in greater confidence in high-flow estimates.
202002	Faughan at Drumahoe	DfIR	QMED	NEITHER	↓ - Rating review required following the 2017 flood; additional high flow gaugings are needed to improve confidence.
203022	Blackwater at Derrymeen Bridge	DfIR	POOLING	QMED	↓ - Significant floodplain flow occurs at higher flows; additional high flow gaugings or modelling are required before the station can be considered Suitable for Pooling.
203025	Callan at Martin's Bridge	DfIR	QMED	NEITHER	↓ - Temporary downgrade pending further assessment of road bridge influences and overtopping effects.

3.5 Component Stations

At several gauging stations, flows are derived from measurements taken at more than one location (for example, low flows may be measured at a weir and high flows measured at a gauged section a short distance

up/downstream). There are several such stations around the UK that the NRFA and/or Measuring Authority treat as a combined station.

No changes have been made to the composition of these gauging stations since version 4.1, although new component stations may have been added to the dataset since version 4.1.

3.6 Gauging Stations Where No POT Data are Presented

No POT data are presented on the NRFA website or given in the dataset for stations listed in ANNEX 1.

Stations are usually listed as 'POT excluded' because the gauged catchment response does not lend itself to POT analysis. Such catchments are usually, but not exclusively, those dominated by baseflow and are therefore concentrated on the large chalk aquifers of southern and eastern England.

Five stations were added to the list in version 15, shown in Table 5 and marked with a * in ANNEX 1.

Table 5: Stations which have been made POT Excluded in version 15.

Station Number	Station Name	Measuring Authority
28051	Soar at Narborough	EA-EM
38017	Mimram at Whitwell	EA-HNL
39030	Gade at Croxley Green	EA-HNL
39102	Misbourne at Denham Lodge	EA-HNL
43027	Allen at All Hallows	EA-WX

3.7 Trends in AMAX Timeseries

Identification and interpretation of trends in observed time series are a necessary foundation for the development of appropriate water policy and management responses to human-induced and climate-driven change.

The trend analysis has been undertaken on the version 15 data following the [Hannaford et al, 2021](#) methodology. There is more information about the trend analysis methodology on the [NRFA Website](#).

Practitioners should **not** change their process because of this alone, but instead should consult any guidance issued by the Measuring Authority for the region they are working in:

- England – Environment Agency: Guidance on non-stationary analysis and the use of trend information is provided in the Flood Estimation Guidelines available on: <https://www.gov.uk/government/publications/flood-estimation-guidelines>
- Wales – Natural Resources Wales: Guidance on non-stationary analysis and the use of trend information is provided in the NRW Guidance 'Estimating design flows and rainfall for flood risk modelling', which was previously published as 'Flood Estimation Technical Guidance Note GN008', and is now available on: <https://naturalresources.wales/flooding/estimating-design-flows-and-rainfall-for-flood-risk-modelling/>
- Scotland – Scottish Environment Protection Agency
- Northern Ireland – Department for Infrastructure – Rivers

Mann-Kendall scores and significance of trends are presented in the WINFAP files as an **indication** of whether a trend is present (or not) in the AMAX timeseries and are calculated on the full period-of-record available for each gauging station, excluding rejected years and/or unrepresentative periods. Stations are eligible for trend analysis where at least 27 valid AMAX values were available and 10% or less of AMAX values were missing during that period.

Table 6 shows a comparison of the number of stations eligible for trend analysis and the change in significant positive and negative trends (5% level) between this version and the previous one, and Figure 1 shows the results of the trend analysis.

Table 6: Comparison of trend tests between version 14 and version 15.

Version	No. of Stations Included	% of stations with significant positive trends (5% level)	% of stations with significant negative trends (5% level)
14	734	23	3
15	749	23	2

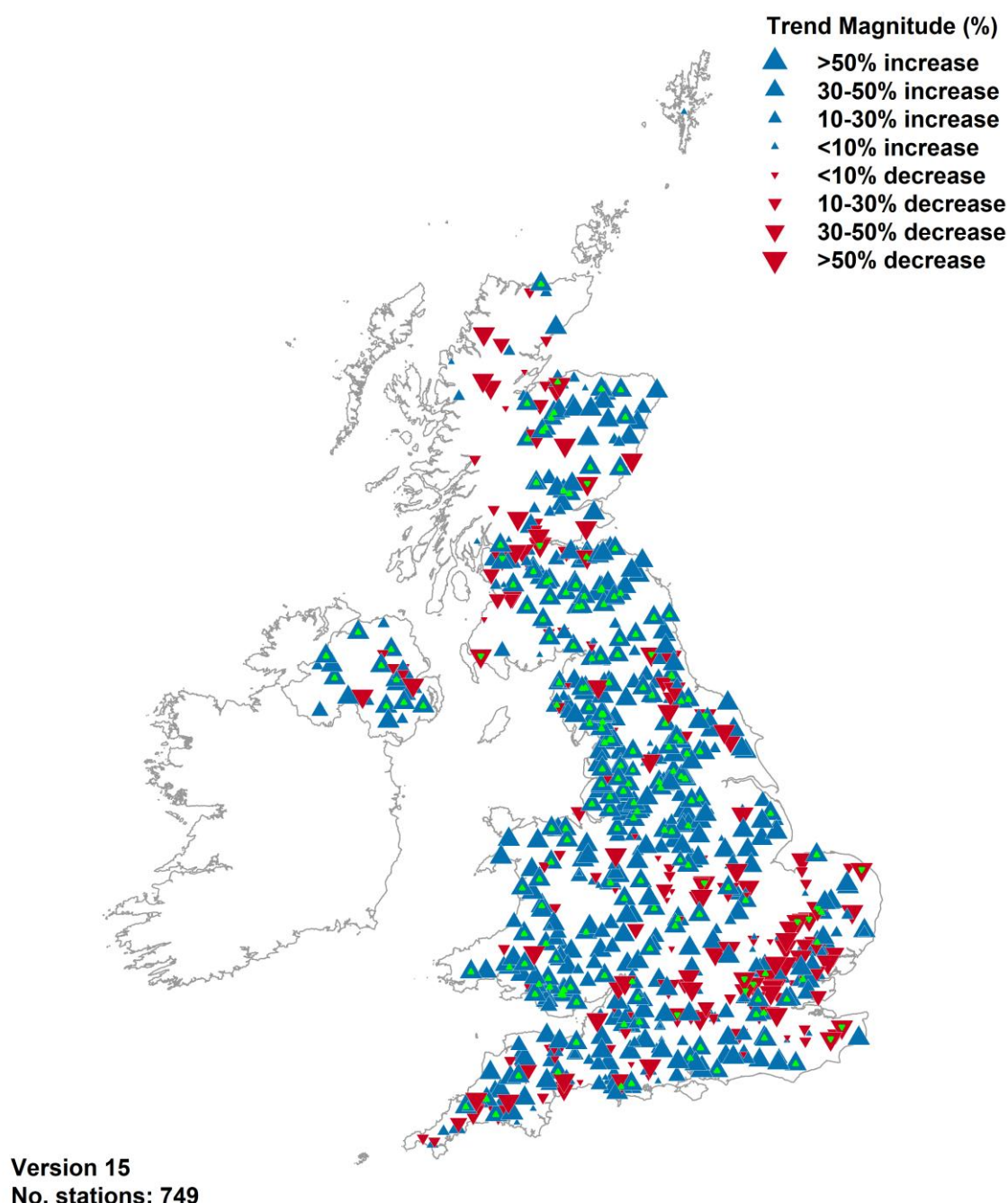


Figure 1 Trend analysis of AMAX for gauging station period of record, excluding rejected years and/or unrepresentative periods. Magnitude is shown according to the key as a percentage change. Green colouration of Triangles denotes a significant trend using the Mann-Kendall test (5%) level, accounting for serial correlation where present. Analysis based on NRFA Peak Flow Dataset version 15 using the standard NRFA trend testing approach (see [Hannaford et al. 2021](#) for further details).

4 ANNUAL UPDATE

As part of the stewardship arrangements for the national Peak Flows Dataset by the UK Centre for Ecology & Hydrology through the National River Flow Archive, a programme of annual updates has been implemented. It is intended that all currently operating NRFA Peak Flow stations are updated each year with the addition of one water year of data.

4.1 Addition of water year 2024/2025 and provisional data for water year 2025/2026

The version 15 files contain AMAX and POT time-series data updated to and including the water day of 30th September 2025 for all currently operational peak flow gauging stations in England, Scotland, Wales, and Northern Ireland.

Provisional data have also been made available for two stations in Wales to capture the high flows generated during episodes of heavy rainfall and storm '[Claudia](#)' (Table 7). While these data remain provisional, they are available for use in flood estimation analyses. The records will be reviewed and confirmed in the next data release cycle.

Table 7: Stations that provided provisional data for water year 2025/2026 within version 15.

Station Number	Station Name	Measuring Authority	Date of WY25/26 AMAX
55029	Monnow at Grosmont	NRW	14/11/2025
60006	Gwili at Glangwili	NRW	04/11/2025

4.2 New AMAX 1 records

New AMAX records (AMAX 1), the highest ranking in the period of record) were set at 24 stations in the water year 2024/2025, listed in Table 8 with the percentage change from the previous AMAX 1.

Table 8: New AMAX 1 records set in water year 2024/2025.

Station Number	Station Name	Measuring Authority	% increase	Date of new AMAX1	Record Length (Years)
18023	Monachyle Burn at Upper Monachyle	SEPA-SE	1.05	24/01/2025	12
28026	Anker at Polesworth	EA-WM	9.35	06/01/2025	56
28082	Soar at Littlethorpe	EA-EM	3.68	06/01/2025	40
28086	Sence at South Wigston	EA-EM	27.94	06/01/2025	38
30005	Witham at Saltersford Total	EA-LN	13.28	06/01/2025	51
46014	Teign at Chudleigh	EA-DC	42.56	24/11/2024	20
49006	Camel at Camelford	EA-DC	1.27	15/04/2025	18
54018	Rea Brook at Hookagate	EA-WM	37.61	17/10/2024	62
54097	Hore at Upper Hore flume	UKCEH	0.28	23/11/2024	39
55018	Frome at Yarkhill	EA-WM	0.48	06/01/2025	56
55029	Monnow at Grosmont	NRW	2.19	24/11/2024	52
57014	Rhymney at Bargoed	NRW	3.16	24/11/2024	23
57017	Rhondda Fawr at Tynnewydd	NRW	9.76	24/11/2024	23
58001	Ogmore at Bridgend	NRW	4.03	24/11/2024	64
58007	Llynfi at Coytrahen	NRW	1.54	24/11/2024	54

Station Number	Station Name	Measuring Authority	% increase	Date of new AMAX1	Record Length (Years)
67005	Ceiriog at Brynkinalt Weir	NRW	4.11	23/11/2024	27
69007	Mersey at Ashton Weir	EA-GMMC	14.4	01/01/2025	66
69020	Medlock at London Road	EA-GMMC	5.5	01/01/2025	55
69027	Tame at Portwood	EA-GMMC	48.85	01/01/2025	81
69028	Mersey at Brinksway	EA-GMMC	15.7	01/01/2025	68
69041	Tame at Broomstairs	EA-GMMC	39.13	01/01/2025	56
69043	Irk at Collyhurst Weir	EA-GMMC	2.88	01/01/2025	28
69045	Bollin at Bollington Mill Total	EA-GMMC	0.2	01/01/2025	24
203043	Oonawater at Shanmoy	DfIR	2.5	23/11/2024	37

5 PERIOD OF RECORD REVIEW

A programme of Period of Record Reviews is undertaken as part of the stewardship arrangements for the national Peak Flows Dataset by the UK Centre for Ecology & Hydrology through the National River Flow Archive. It is intended that a subset of the NRFA Peak Flow stations is subject to a Period of Record Review each year and released in the next scheduled release of files for use in WINFAP. There are often larger full network tasks undertaken too, for example, to look at a piece of metadata for the whole region.

The Period of Record Review is extensive and covers a full review of:

- Flow and stage data (including extension of recent and, where applicable, early records)
- Gaugings and ratings
- Missing data periods
- FEH Suitability
- Metadata (station descriptions, station type, datum history, POT threshold, bankfull stage)
- Unrepresentative data periods and rejected data.

This section lists the stations and periods included in the Period of Record Review published in version 15. Major changes to the use of the data – POT thresholds, unrepresentative periods and rejected data – are detailed in section 6.

5.1 Gauging Stations Included

The Period of Record Review covered 79 stations: 17 in Scotland, 45 in England, 10 in Wales and 7 in Northern Ireland, listed in Table 9.

The version 15 Period of Record Review process also included a number of related activities.

- In England, Scotland and Northern Ireland, a review of bankfull and structure-full levels was undertaken with updates made to 558 stations.
- In Northern Ireland, a review of Peaks-over-Threshold (POT) thresholds was completed and the outcomes were incorporated into the dataset.
- In England, the findings and recommendations from the non-stationarity project (FRS18087) were reviewed and implemented where appropriate; any resulting changes are described in the metadata sections of this document.
- In addition, a review of candidate stations for inclusion in the Peak Flow Dataset was undertaken in England, resulting in the addition of 21 new sites in England in Version 15. New stations are denoted with an * in Table 9.

Table 9: Stations included in the Period of Record Review in version 15.

Station Number	Station Name	Measuring Authority	Start date	End date
12002	Dee at Park	SEPA-NE	1972/1973	2024/2025
12006	Gairn at Invergairn	SEPA-NE	1990/1991	2021/2022
13007*	North Esk at Logie Mill	SEPA-NE	1991/1992	2024/2025
16004	Earn at Forteviot Bridge	SEPA-NE	1972/1973	2024/2025
17003	Bonny Water at Bonnybridge	SEPA-SE	1992/1993	2024/2025
21005	Tweed at Lyne Ford	SEPA-SE	1987/1988	2024/2025
21011	Yarrow Water at Philiphaugh	SEPA-SE	1986/1987	2024/2025
21013	Gala Water at Galashiels	SEPA-SE	1963/1964	2024/2025

Station Number	Station Name	Measuring Authority	Start date	End date
21015	Leader Water at Earlston	SEPA-SE	1966/1967	2024/2025
21016	Eye Water at Eyemouth Mill	SEPA-SE	1985/1986	2023/2024
21024	Jed Water at Jedburgh	SEPA-SE	1971/1972	2024/2025
24007	Brownney at Lanchester	EA-NE	1967/1968	1982/1983
27054*	Hodge Beck at Cherry Farm	EA-Y	1976/1977	2024/2025
27074*	Spen Beck at Northorpe	EA-Y	1981/1982	2024/2025
28043	Derwent at Chatsworth	EA-EM	1975/1976	2024/2025
28051*	Soar at Narborough	EA-EM	1971/1972	1983/1984
28082	Soar at Littlethorpe	EA-EM	1983/1984	2024/2025
29001	Waithe Beck at Brigsley	EA-LN	1965/1966	2024/2025
29002	Great Eau at Claythorpe Mill	EA-LN	1965/1966	2024/2025
30001	Witham at Claypole Mill	EA-LN	1965/1966	2024/2025
30004	Lymn at Partney Mill	EA-LN	1965/1966	2024/2025
31025	Gwash South Arm at Manton	EA-LN	1980/1981	2024/2025
32002	Willow Brook at Fotheringhay	EA-LN	1980/1981	2024/2025
33049	Stanford Water at Buckenham Tofts	EA-EA	1966/1967	1979/1980
38012*	Stevenage Brook at Bragbury Park	EA-HNL	1973/1974	2024/2025
38017*	Mimram at Whitwell	EA-HNL	1969/1970	2024/2025
38028*	Stansted Brook at Gypsy Lane	EA-HNL	1964/1965	2024/2025
38029*	Quin at Griggs Bridge	EA-HNL	1977/1978	2024/2025
39001	Thames at Kingston	EA-T	1986/1987	2024/2025
39004	Wandle at Beddington Park	EA-KSL	1936/1937	2017/2018
39021	Cherwell at Enslow Mill	EA-T	1964/1965	2024/2025
39029	Tilling Bourne at Shalford	EA-T	1967/1968	2024/2025
39030*	Gade at Croxley Green	EA-HNL	1970/1971	2024/2025
39034	Evenlode at Cassington Mill	EA-T	1970/1971	2024/2025
39102*	Misbourne at Denham Lodge	EA-HNL	1983/1984	2024/2025
40042*	Medway at Allington	EA-KSL	2001/2002	2024/2025
41015	Ems at Westbourne	EA-SSD	1980/1981	2024/2025
42005	Wallop Brook at Broughton	EA-SSD	1986/1987	2012/2013
43016*	Stour at Wimborne (A31)	EA-WX	2005/2006	2024/2025
43022*	Moors River at Hurn Court	EA-WX	1991/1992	2024/2025
43026*	Bourne at Salisbury Bourne	EA-WX	2004/2005	2024/2025
43027*	Allen at All Hallows	EA-WX	1991/1992	2024/2025
45013	Tale at Fairmile	EA-DC	1999/2000	2024/2025
47015	Tavy at Ludbrook	EA-DC	1981/1982	2024/2025
48009	St Neot at Craigshill Wood	EA-DC	1971/1972	2024/2025
49007*	Camel at Bodmin Dunmere	EA-DC	2015/2016	2024/2025
50002	Torridge at Torrington	EA-DC	1959/1960	2024/2025
50006	Mole at Woodleigh	EA-DC	1965/1966	2024/2025
50014	Yeo at Collard Bridge	EA-DC	1994/1995	2024/2025
52001*	Axe at Wookey	EA-WX	1993/1994	2024/2025

Station Number	Station Name	Measuring Authority	Start date	End date
53024*	Tetbury Avon at Brokenborough	EA-WX	1977/1978	2024/2025
54025	Dulas at Rhos-y-pentref	NRW	1969/1970	2024/2025
54088*	Little Avon at Berkeley Kennels	EA-WX	1979/1980	2024/2025
54095*	Severn at Buildwas	EA-WM	1985/1986	2024/2025
54098*	Cam at Cambridge	EA-WM	1991/1992	2024/2025
55029	Monnow at Grosmont	NRW	2008/2009	2024/2025
57006	Rhondda at Trehafod	NRW	1983/1984	2024/2025
57015	Taff at Merthyr Tydfil	NRW	1978/1979	2024/2025
58001	Ogmore at Bridgend	NRW	1981/1982	2024/2025
58005	Ogmore at Brynmenyn	NRW	1981/1982	2024/2025
58007	Llynfi at Coytrahen	NRW	1981/1982	2024/2025
66005	Clwyd at Ruthin Weir	NRW	1973/1974	2024/2025
66006	Elwy at Pont-y-Gwyddel	NRW	1972/1973	2024/2025
66011	Conwy at Cwmlanerch	NRW	1969/1970	2024/2025
69026*	Irwell at Kearsley	EA-GMMC	2002/2003	2024/2025
74006	Calder at Calder Hall	EA-CL	1973/1974	2024/2025
77003	Liddel Water at Rowanburnfoot	SEPA-SW	1974/1975	2024/2025
83004	Lugar Water at Langholm	SEPA-SW	1971/1972	2024/2025
84026	Allander Water at Milngavie	SEPA-SW	1972/1973	2024/2025
92003*	Strontian at Ariundle	SEPA-NW	2009/2010	2024/2025
93001	Carron at New Kelso	SEPA-NW	2010/2011	2024/2025
108001*	Weisdale Burn at Weisdale Mill	SEPA-NW	2002/2003	2024/2025
201005	Camowen at Camowen Terrace	DfIR	1971/1972	2024/2025
201008	Derg at Castlederg	DfIR	1975/1976	2024/2025
201010	Mourne at Drumnabuoy House	DfIR	1982/1983	2024/2025
202002	Faughan at Drumahoe	DfIR	1976/1977	2024/2025
203022	Blackwater at Derrymeen Bridge	DfIR	1979/1980	2024/2025
203025	Callan at Martin's Bridge	DfIR	1971/1972	2024/2025
203028	Agivey at Whitehill	DfIR	1972/1973	2024/2025

6 MODIFICATIONS TO EXISTING TIME SERIES

6.1 POT Independence

For stations in England operated by the Environment Agency and in Wales operated by Natural Resources Wales, the rules for independence between POT events have been clarified such that the minimum discharge in the trough between the two peaks must be less than two-thirds of the discharge of **both peaks** (FEH guidelines state the first peak, but this requires subsequent manual re-processing to remove spurious peaks). Previous Environment Agency data updates by the NRFA and under the HiFlows-UK initiative may also have utilised the 'both peaks rule'.

These rules apply at all Environment Agency and Natural Resources Wales-operated stations to POT events for water years **2014/2015** onwards. Additionally, for the stations listed in the [linked Workbook](#), due to changes to stage-discharge relationships or other re-processing, the new independence rules apply from the date shown to the end of the period of record. Users should therefore be aware that at these stations, the independence criteria used to generate the POT series updates **may** vary throughout the flow record. No changes have been made to the independence extraction criteria for POT data in Scotland or Northern Ireland.

6.2 POT Thresholds

The POT Threshold has changed at 14 stations, shown in Table 10. POT Thresholds are assessed and should be set to produce around 3-5 POTs per year. Where this number is lower or higher, the threshold is changed. The national position is that changes to the POT Thresholds are only implemented where it is possible to do so for the whole period of record. This means that thresholds are not changed where there are pre-digital data that cannot be reprocessed (most notably, to implement a threshold reduction) or reasonably rejected.

Table 10: Stations with changes to POT Thresholds in version 15.

Station Number	Station Name	Measuring Authority	V14 POT Threshold (m/s ³)	V15 POT Threshold (m/s ³)
21005	Tweed at Lyne Ford	SEPA-SE	62.918	72
21024	Jed Water at Jedburgh	SEPA-SE	37.31	33.5
28022	Trent at North Muskham	EA-EM	270.463	242
28043	Derwent at Chatsworth	EA-EM	49.414	40.1
28082	Soar at Littlethorpe	EA-EM	10.602	8.85
28085	Derwent at St Mary's Bridge	EA-EM	105.667	69.256
39004	Wandle at Beddington Park	EA-KSL	2.109	2.8
48009	St Neot at Craigshill Wood	EA-DC	4.8	2.6
63002	Rheidol at Llanbadarn Fawr	NRW	60.882	40
201008	Derg at Castlederg	DfIR	131.43	130.15
201010	Mourne at Drumnabuoy House	DfIR	397.9	399.87
203022	Blackwater at Derrymeen Bridge	DfIR	39.224	41.946
203025	Callan at Martin's Bridge	DfIR	27.627	28.494
203028	Agivey at Whitehill	DfIR	39.966	39.592

6.3 Minor Changes to AMAX and POT Records

Major changes to time series can be made through the Period of Record Review (see section 5) or through rating changes submitted as part of the Annual Update process (see section 6.4).

Other minor changes to individual events can be made outside of these processes. Four stations had edits to the historical time series in version 15, listed in Table 11.

Table 11: Stations with minor changes to time series in version 15.

Station Number	Station Name	Measuring Authority	Details of change
19007	Esk at Musselburgh	SEPA-SE	Increase of rounding to 3dp, and minor correction to flow values in WY78/79, WY81/82 and WY82/83
28027	Erewash at Sandiacre	EA-EM	Spikes removed from data correcting erroneous AMAX. WY93/94 AMAX reduced from 52.0 cumecs to 25.694 cumecs. WY98/99 AMAX reduced from 32.755 cumecs to 28.82.
44013	Piddle at Little Puddle	EA-WX	Removal of erroneous 0 cumec AMAX on 01/01/1992 at the start of the record.
56002	Ebbw at Rhiwderin	NRW	Correction to flows between 01/09/1975 to 01/01/1982 due to incorrect sign in rating intercept previously applied.

6.4 Changes to Stage-Discharge Ratings and Reprocessed Data

Stage-discharge ratings have changed at 25 stations as part of the routine Annual Update of the dataset. The period of reprocessed flow data is listed in Table 12, all stations have been reprocessed to the end of the record (water year 2024/2025). For stations included in the Period of Record Review (see Table 9), ratings have been reviewed and data re-processed as required.

Table 12: Stations with changes to stage-discharge ratings (in addition to those that have been changed through the Period of Record Review) and re-processed data in version 15.

Station Number	Station Name	Measuring Authority	Start date of re-processed data
27034	Ure at Kilgram Bridge	EA-Y	Full period of record
27035	Aire at Kildwick Bridge	EA-Y	Full period of record
27040	Doe Lea at Staveley	EA-Y	Full period of record
27053	Nidd at Birstwith	EA-Y	01/01/1971
27086	Skell at Ripon Alma Weir	EA-Y	Full period of record
27098	Calder at Dewsbury	EA-Y	Full period of record
28002	Blithe at Hamstall Ridware	EA-WM	01/01/1960
28031	Manifold at Ilam	EA-WM	Full period of record
28046	Dove at Izaak Walton	EA-WM	Full period of record
33027	Rhee at Wimpole	EA-EA	Full period of record
40021	Hexden Channel at Hopemill	EA-KSL	Full period of record
45001	Exe at Thorverton	EA-DC	Full period of record
46014	Teign at Chudleigh	EA-DC	Full period of record
49006	Camel at Camelford	EA-DC	Full period of record

Station Number	Station Name	Measuring Authority	Start date of re-processed data
54028	Vyrnwy at Llanymynech	NRW	01/01/2000
55021	Lugg at Butts Bridge	EA-WM	Full period of record
57008	Rhymney at Llanedeyrn	NRW	Full period of record
60016	Tywi at Manorafon	NRW	01/10/2010
61002	Eastern Cleddau at Canaston Bridge	NRW	01/01/1982
63001	Ystwyth at Pont Llolwyn	NRW	01/10/1982
63002	Rheidol at Llanbadarn Fawr	NRW	01/01/1982
64002	Dysynni at Pont-y-Garth	NRW	01/10/1999
66001	Clwyd at Pont-y-Cambwll	NRW	08/02/2000
75005	Derwent at Portinscale	EA-CL	01/10/1976
81002	Cree at Newton Steward	SEPA-SW	20/06/2018

6.5 Unrepresentative Data Periods

Some periods of data are unsuitable for use in WINFAP because they are unrepresentative of the hydrological behaviour of the catchment. These are shown on the NRFA website by pink shading on the AMAX and POT graphs (e.g. <https://nrfa.ceh.ac.uk/data/station/peakflow/48011>). The unrepresentative periods occur in two main situations:

1. Where there is a clear change in the catchment during the period of record. The most common example is where a large reservoir has been built, which therefore caused a change in the FARL (Flood Attenuation by Reservoirs and Lakes) value.
2. Where data quality has changed significantly during the period of record. The indicative suitability has been based on the better data, provided the length of the record is reasonable. In these cases, the years of poorer quality have been rejected.

New unrepresentative periods have been added at 11 stations (Table 13) with no edits made. The end dates for ongoing unrepresentative periods at a further 15 were extended to the end of water year 2024/2025.

Table 13: Unrepresentative periods added in version 15.

Station Number	Station Name	Measuring Authority	Start Date	End Date	Comments
21005	Tweed at Lyne Ford	SEPA-SE	01-OCT-1960 09:00:00	01-OCT-1986 08:45:00	AMAX data prior to the digital record are excluded. Some AMAX stage values fall below the standard high-flow segment, and without a fully digitised stage and gauging record, AMAX flow values for the non-digital period are unreliable.
21011	Yarrow Water at Philiphaugh	SEPA-SE	01-OCT-1961 09:00:00	01-OCT-1986 08:45:00	AMAX data prior to the digital record are excluded. Some AMAX stage values fall below the standard high-flow segment, and without a fully digitised stage and gauging record, AMAX flow values for the non-digital period are unreliable.
21036	Whiteadder Water at Abbey St Bathans	SEPA-SE	01-OCT-2001 09:00:00	01-OCT-2006 08:45:00	Rejected due to low confidence in level data.

Station Number	Station Name	Measuring Authority	Start Date	End Date	Comments
32008	Nene/Kislingbury at Dodford	EA-LN	01-OCT-1945 09:00:00	01-OCT-1970 08:45:00	Uncertainty in high flows regarding the two different structures.
38028	Stansted Brook at Gypsy Lane	EA-HNL	06-NOV-1964 09:00:00	01-OCT-1977 08:45:00	Flows pre-1977 are derived from a thin plate weir and show a clear discontinuity with post-1977 flows derived from a flat-V weir. The pre-1977 period is considered unrepresentative.
39011	Wey at Tilford	EA-T	01-OCT-1954 09:00:00	01-OCT-1973 08:45:00	Uncertainty in high flows regarding the two different structures.
39034	Evenlode at Cassington Mill	EA-T	01-JAN-1971 09:00:00	01-OCT-1986 08:45:00	Flows pre-1986 do not have overspill or bypassing included, therefore are not continuous with modern records.
40004	Rother at Udiam	EA-KSL	01-OCT-2012 09:00:00	01-OCT-2024 08:45:00	A 2024 review identified systematic errors in ultrasonic-derived high flows above 1.35 mASD (~12 m ³ /s). AMAX and POT data above this threshold are therefore considered unrepresentative pending reprocessing. Water years 2011/2012 and 2024/2025 checked and so data are included.
65006	Seiont at Peblic Mill	NRW	01-OCT-1975 09:00:00	01-OCT-1984 08:45:00	Records from before the pumped storage scheme was operational in 1984 are excluded as they are not consistent with the more recent record.
84026	Allander Water at Milngavie	SEPA-SW	01-OCT-1973 09:00:00	01-OCT-2007 08:45:00	Rating QHigh_1973.2 was developed for 1973-2007, but limited gaugings result in low confidence in the flood calibration.
93001	Carron at New Kelso	SEPA-NW	01-OCT-1978 09:00:00	01-OCT-2010 08:45:00	The flood calibration pre 2010 is under review and data before this date are excluded until the review is complete.

6.6 Rejected Data

AMAX and POT data that are unsuitable for use in flood estimation are marked as rejected in the dataset and not included in flood estimation calculations. These are shown by red bars (for AMAX) and red background (for POTs) on the interactive plots, and red crosses on the static plots, on the NRFA website AMAX and POT graphs, respectively (e.g. <https://nrfa.ceh.ac.uk/data/station/peakflow/19006>). All data falling within unrepresentative periods (see section 6.5) are rejected.

In addition, where periods of missing data are likely to have included the true AMAX, any AMAX recorded during that water year is likely rejected, following an assessment of the timing and magnitude of the submitted event and the 'true' event. If there is little difference or a significant event, despite the 'true' AMAX being missed, the events can remain unrejected to aid flood estimation. Where the true AMAX is recorded, the event is not rejected.

AMAX rejections have been added at 13 stations (Table 14) and removed at one station (Table 15).

Table 14: AMAX data now classed as rejected in version 15.

Station Number	Station Name	Measuring Authority	Rejected water years(s)
24007	Browney at Lanchester	EA-NE	1977
27054	Hodge Beck at Cherry Farm	EA-Y	2004
27074	Spen Beck at Northorpe	EA-Y	1981
28043	Derwent at Chatsworth	EA-EM	1975
39001	Thames at Kingston	EA-T	1987
39035	Churn at Cerney Wick	EA-T	2000, 2006, 2007, 2013, 2015, 2019, 2020
39089	Gade at Bury Mill	EA-HNL	1969
39102	Misbourne at Denham Lodge	EA-HNL	1983, 1984, 1985, 1986
40042	Medway at Allington	EA-KSL	2001, 2008
50002	Torridge at Torrington	EA-DC	1959, 1960
50014	Yeo at Collard Bridge	EA-DC	1994
54098	Cam at Cambridge	EA-WM	1991
70002	Douglas at Wanes Blades Bridge	EA-CL	2017

Table 15: AMAX data no longer classed as rejected in version 15.

Station Number	Station Name	Measuring Authority	Water year(s) reinstated
39001	Thames at Kingston	EA-T	1984

6.7 Datum Changes

A short table is provided on the NRFA website, at the bottom of the station information page (e.g. <https://nrfa.ceh.ac.uk/data/station/info/201002>), for each station, which details the datum and control history over the period of record, with dates of applicability. The datum history has been updated at 45 stations listed in ANNEX 2.

7 FEH CATCHMENT DESCRIPTORS

7.1 Changes to Existing Catchment Descriptors

Occasionally, there are changes made to FEH catchment descriptors at stations following the uncovering of errors in the existing descriptors or other updates. In version 15, catchment descriptors at one station have been changed shown in Table 16.

Table 16: Changes to catchment descriptors at individual stations in version 15.

Station Number	Station Name	Measuring Authority	Reason
66006	Elwy at Pont-y-Gwyddel	NRW	Corrections to station easting and northing coordinates resulted in small changes to several FEH descriptors, with all differences being less than 1%.

8 IMPACT OF DATA CHANGES

8.1 Impact on FEH methods

As part of the NRFA and FEH's quality control procedures, the new data submitted within each data release cycle are assessed in terms of impact they make on key flood estimation statistics – *QMED*, 30-year and 100-year return period flows, using single-site analysis, donor transfer and pooling group methods. Substantial changes to these statistics can occur due to:

- Extension or shortening of flow records
- Extremely high or low flows in one water year
- Rating changes causing reprocessed flows
- Introduction and removal of stations flagged as 'Suitable for Pooling' as well as record length changes leading to changes to pooling groups.

Any stations with a greater than 10% change, in either direction, of any of the key flood estimation statistics are listed below in sections 8.3 and 8.4. Mean changes in key statistics are accompanied by values of IQR, the difference between the 25th and 75th percentiles of the given statistic.

Additionally, *AREA*, *SAAR*₆₁₉₀, *BFIHOST*_{19_SCALED}, *FARL*₂₀₁₅, *FPEXT*, *URBEXT*₂₀₀₀ were checked for changes between version 14 and version 15. With the exception of those stations shown in Table 16, no stations were found to have changes in any of these descriptors.

8.2 Changes in Record Length and Pooling Group Size

Due to changes in record length and the introduction and removal of stations flagged as 'Suitable for Pooling', the average number of stations in pooling groups (using FEH 2025 Statistical Method for v14 and v15) has changed from 17.17 to 16.92 (mean difference -0.24). The median record length change is +1 year (range of -24 to +20) as shown in Figure 2 and Figure 3 and reasons for changes in record length at 26 sites are given in Table 17.

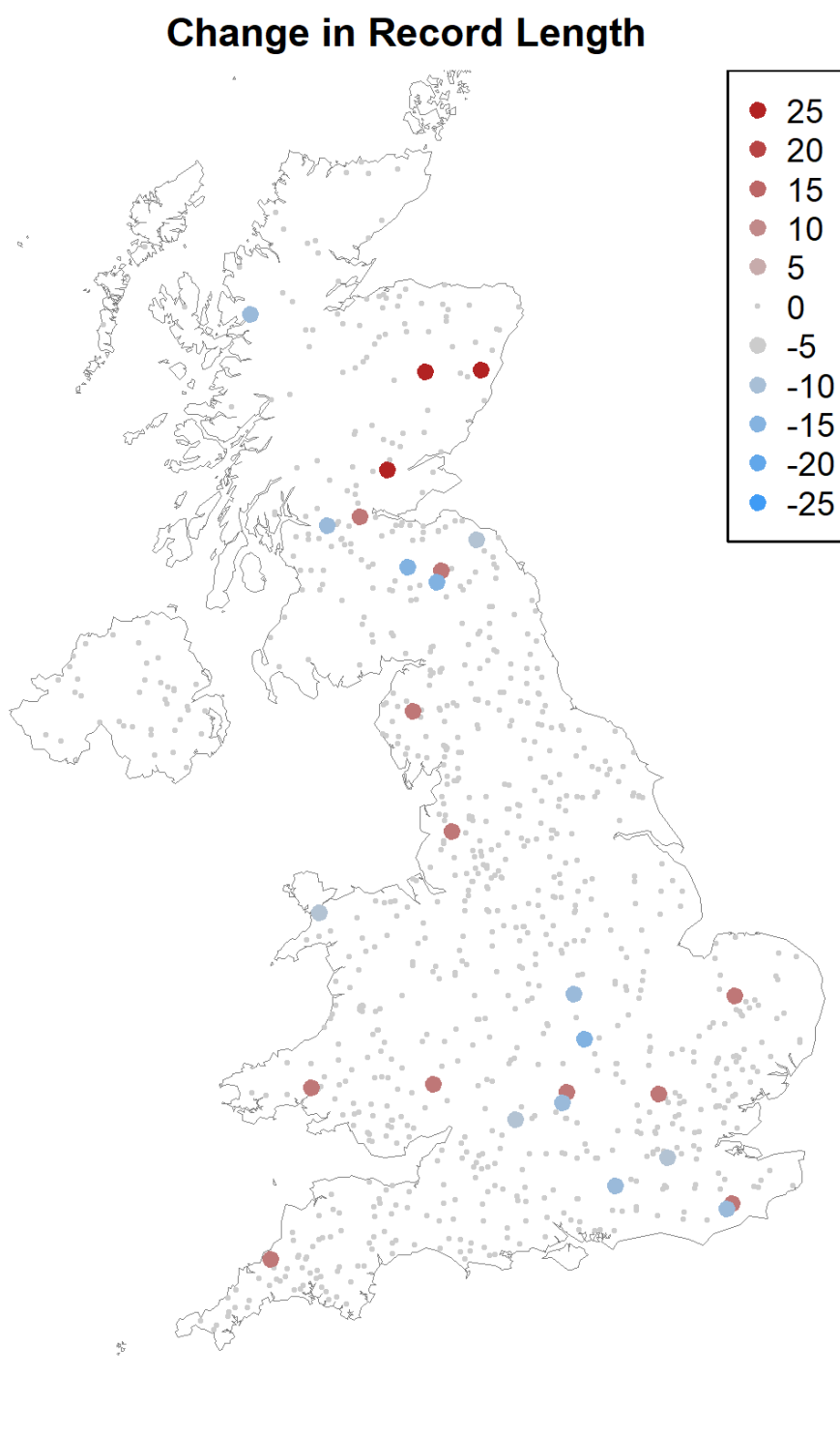


Figure 2 Changes in record length (years) between the stations in both version 14 and version 15. Sites without an unusual change of record length are shown in small dots.

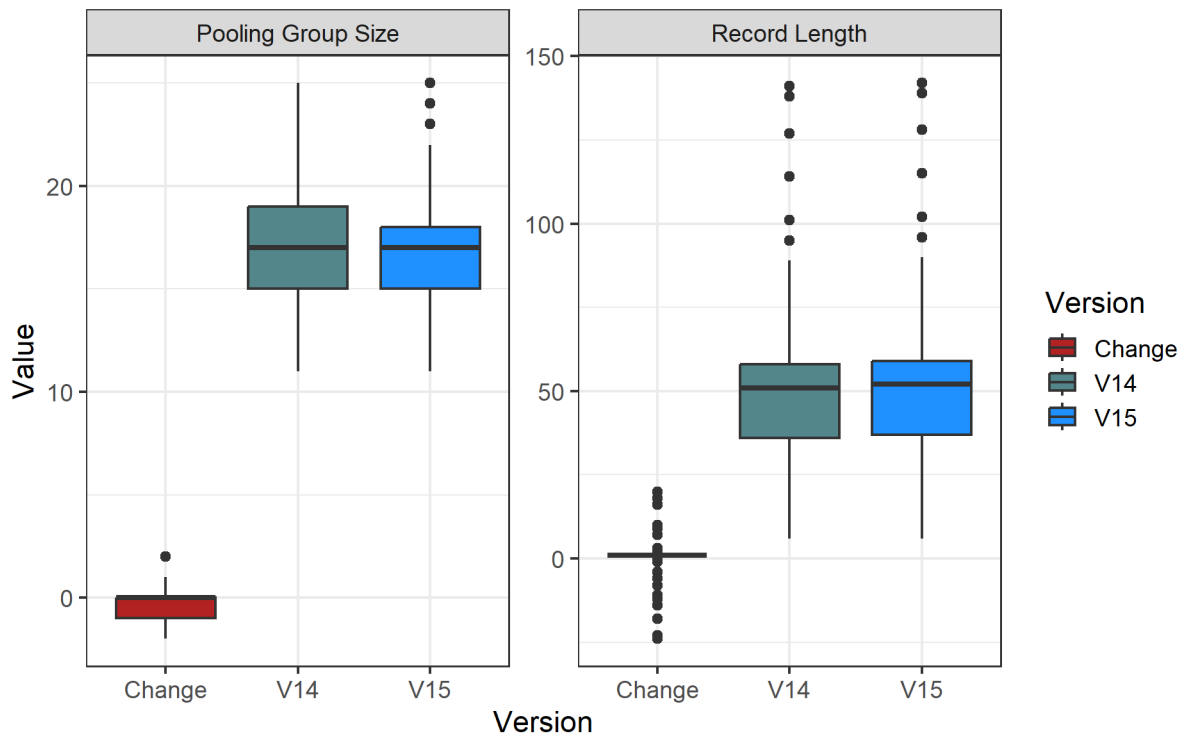


Figure 3 Changes in record length and Pooling Group size between version 14 and version 15. Boxes show inter-quartile range, the difference between the 25th and 75th percentiles of the given statistic.

Table 17: Reasons for changes in record length between version 14 and version 15.

Station Number	Station Name	Measuring Authority	Change (Years)	Reason
12002	Dee at Park	SEPA-NE	20	Record was previously frozen in water year 2005/2006. Following rating review, now updated to present.
12006	Gairn at Invergairn	SEPA-NE	16	Record was previously frozen in water year 2005/2006. Following rating review, now updated to water year 2021/2022.
16004	Earn at Forteviot Bridge	SEPA-NE	18	Record was previously frozen in water year 2006/2007. Following rating review, now updated to present.
17003	Bonny Water at Bonnybridge	SEPA-SE	2	Added new AMAX at beginning of record (water year 1991/1992 and the annual update year (water year 2024/2025).
21005	Tweed at Lyne Ford	SEPA-SE	-24	Added an unrepresentative period (see Table 13).
21011	Yarrow Water at Philiphaugh	SEPA-SE	-23	Added an unrepresentative period (see Table 13).
21013	Gala Water at Galashiels	SEPA-SE	10	Record was previously frozen in water year 2014/2015. Following rating review, now updated to present.
21036	Whiteadder Water at Abbey St Bathans	SEPA-SE	-4	Added an unrepresentative period (see Table 13).

Station Number	Station Name	Measuring Authority	Change (Years)	Reason
28082	Soar at Littlethorpe	EA-EM	-11	Station previously merged with Narborough (28051). The two stations have been reinstated as separate stations because the catchment area at Narborough is approximately 12% larger and they are not suitable to be combined in a single record. Narborough record removed from Littlethorpe record.
32008	Nene/Kislingbury at Dodford	EA-LN	-23	Added an unrepresentative period (see Table 13).
33049	Stanford Water at Buckenham Tofts	EA-EA	7	More data found in NRFA archive and added to record of this historical station.
38011	Mimram at Fulling Mill	EA-HNL	2	Not updated in previous release so added water year 2023/2024 and water year 2024/2025.
39004	Wandle at Beddington Park	EA-KSL	-4	Station closure date revised to 27/10/2012 because flows from this date onwards are derived from a rating that has not been sufficiently validated by subsequent gaugings.
39011	Wey at Tilford	EA-T	-18	Added an unrepresentative period (see Table 13).
39021	Cherwell at Enslow Mill	EA-T	3	Infilling of previously missing low AMAX values throughout record.
39034	Evenlode at Cassington Mill	EA-T	-14	Added an unrepresentative period (see Table 13).
39035	Churn at Cerney Wick	EA-T	-6	New rejected years added (see Table 14).
40004	Rother at Udiam	EA-KSL	-11	Added an unrepresentative period (see Table 13).
40021	Hexden Channel at Hopemill	EA-KSL	2	Added previously omitted AMAX in water year 1986/1987 and the annual update year (water year 2024/2025).
49006	Camel at Camelford	EA-DC	2	Not updated in previous release so added water year 2023/2024 and water year 2024/2025.
55029	Monnow at Grosmont	NRW	2	Added annual update water year 2024/2025 plus provisional water year 2025/2026 (see section 4.1).
60006	Gwili at Glangwili	NRW	2	Added annual update water year 2024/2025 plus provisional water year 2025/2026 (see section 4.1).
65006	Seiont at Peblic Mill	NRW	-8	Added an unrepresentative period (see Table 13).
71014	Darwen at Blue Bridge	EA-CL	2	Not updated in previous release so added water year 2023/2024 and water year 2024/2025.
75005	Derwent at Portinscale	EA-CL	9	New rating following storm 'Desmond' allowing for reprocessed data to be added since water year 2015/2016 to present.
84026	Allander Water at Milngavie	SEPA-SW	-14	Added an unrepresentative period (see Table 13).
93001	Carron at New Kelso	SEPA-NW	-12	Added an unrepresentative period (see Table 13).

8.3 Impacts on Single-Site Flood Estimates

Differences between version 14 and version 15 have resulted in greater than 10% changes in one or more single-site flood estimation statistics at 47 stations, listed in Table 18 and mapped in Figure 4.

Table 18: Changes in gauged single-site *QMED*, 30- and 100-year return periods resulting from differences between version 14 and version 15. The asterisk indicates changes greater than 10%, positive or negative.

Station Number	Station Name	Measuring Authority	QMED	% change in:		Comment
30-yr	100-yr					
7012	Lossie at Ballachraggan	SEPA-NW	12*	5	0	Short record of 11 years.
12002	Dee at Park	SEPA-NE	0	15*	21*	Addition of 20 years of data to record.
12006	Gairn at Invergairn	SEPA-NE	-1	9	15*	Addition of 16 years of data to record.
14002	Dighty Water at Balmossie Mill	SEPA-NE	-13*	-10*	-10*	New WY24/25 AMAX second lowest in record of 18 years.
17003	Bonny Water at Bonnybridge	SEPA-SE	-7	39*	83*	Increase in AMAX due to rating change.
21005	Tweed at Lyne Ford	SEPA-SE	12*	26*	31*	Increase in AMAX due to rating change.
21011	Yarrow Water at Philiphaugh	SEPA-SE	-9	-28*	-33*	Decrease in AMAX due to rating change.
21013	Gala Water at Galashiels	SEPA-SE	-2	-12*	-17*	Decrease in AMAX due to rating change and addition of 10 years of data to the record.
21015	Leader Water at Earlston	SEPA-SE	0	8	13*	Increase in AMAX due to rating change.
21016	Eye Water at Eyemouth Mill	SEPA-SE	-7	-17*	-20*	Decrease in AMAX due to rating change.
21024	Jed Water at Jedburgh	SEPA-SE	0	12*	20*	Increase in AMAX due to rating change.
21035	Till at Heaton Mill	EA-NE	-11*	-9	-8	New WY24/25 AMAX is eighth lowest in record of 24 years.
21036	Whiteadder Water at Abbey St Bathans	SEPA-SE	11*	5	1	New WY24/25 AMAX is third lowest in record of 24 years.
24007	Brownay at Lanchester	EA-NE	10*	7	4	Low AMAX rejected.
27035	Aire at Kildwick Bridge	EA-Y	5	-12*	-22*	Decrease in AMAX due to rating change.
28046	Dove at Izaak Walton	EA-WM	3	-18*	-27*	Decrease in AMAX due to rating change.
28082	Soar at Littlethorpe	EA-EM	9	94*	156*	Removal of the Narborough record and increases in flows that appeared to be previously truncated.

Station Number	Station Name	Measuring Authority	QMED	% change in:		Comment
				30-yr	100-yr	
29002	Great Eau at Claythorpe Mill	EA-LN	4	12*	16*	Increase in AMAX that appeared to be previously truncated.
30005	Witham at Saltersford Total	EA-LN	2	15*	22*	New WY24/25 AMAX is AMAX1.
32004	Ise Brook at Harrowden	EA-LN	1	7	11*	New WY24/25 AMAX is AMAX2.
32008	Nene/Kislingbury at Dodford	EA-LN	1	-30*	-39*	Another truncated AMAX added in WY24/25 (station is NEITHER until it can be corrected).
33027	Rhee at Wimpole	EA-EA	-6	-26*	-33*	Decrease in AMAX due to rating change.
33049	Stanford Water at Buckenham Tofts	EA-EA	-11*	-74*	-84*	Reduction of two AMAX values where station was incorrectly added in feet, rather than metres. Addition of 7 years to the record.
39011	Wey at Tilford	EA-T	-4	-23*	-30*	New unrepresentative period added.
39021	Cherwell at Enslow Mill	EA-T	11*	15*	7	Increase in AMAX due to rating change.
39034	Evenlode at Cassington Mill	EA-T	12*	30*	33*	New unrepresentative period added.
39041	Lambourn at Shaw Ultrasonic	EA-T	6	-6	-17*	Short record of 12 years.
40021	Hexden Channel at Hopemill	EA-KSL	-16*	-19*	-20*	Decrease in AMAX due to rating change.
46014	Teign at Chudleigh	EA-DC	2	20*	30*	New WY24/25 AMAX is AMAX1.
49006	Camel at Camelford	EA-DC	-15*	-25*	-28*	Decrease in AMAX due to rating change.
54018	Rea Brook at Hookagate	EA-WM	0	13*	21*	New WY24/25 AMAX is AMAX1.
54028	Vyrnwy at Llanymynech	NRW	-4	-15*	-22*	Decrease in AMAX due to rating change.
55029	Monnow at Grosmont	NRW	1	11*	16*	New WY24/25 AMAX is AMAX2 and provisional WY25/26 AMAX is AMAX1.
57014	Rhymney at Bargoed	NRW	3	18*	28*	New WY24/25 AMAX is AMAX1.
57017	Rhondda Fawr at Tynewydd	NRW	0	7	11*	New WY24/25 AMAX is AMAX1.
60006	Gwili at Glangwili	NRW	2	13*	19*	Provisional WY25/26 AMAX is AMAX1.
64002	Dysynni at Pont-y-Garth	NRW	14*	-2	-9	New WY24/25 AMAX is AMAX2, and rating changes in earlier record.

Station Number	Station Name	Measuring Authority	QMED	% change in:		Comment
				30-yr	100-yr	
67005	Ceiriog at Brynkinalt Weir	NRW	0	7	10*	New WY24/25 AMAX is AMAX1.
69005	Glaze Brook at Little Woollen Hall	EA-GMMC	0	8	11*	New WY24/25 AMAX is AMAX2.
69008	Dean at Stanneylands	EA-GMMC	3	12*	17*	New WY24/25 AMAX is AMAX2.
69027	Tame at Portwood	EA-GMMC	1	8	13*	New WY24/25 AMAX is AMAX1.
69041	Tame at Broomstairs	EA-GMMC	0	12*	19*	New WY24/25 AMAX is AMAX1.
74006	Calder at Calder Hall	EA-CL	-1	-22*	-32*	Decrease in AMAX due to rating change.
75005	Derwent at Portinscale	EA-CL	-1	-5	-11*	Addition of nine years of data to record.
77003	Liddel Water at Rowanburnfoot	SEPA-SW	-3	-7	-10*	Decrease in AMAX due to rating change.
84026	Allander Water at Milngavie	SEPA-SW	-32*	-8	4	Decrease in AMAX due to rating change and addition of 19 years of data to the record, plus the addition of an unrepresentative period.
93001	Carron at New Kelso	SEPA-NW	-13*	-31*	-37*	Addition of 16 years of data to record and the addition of an unrepresentative period.

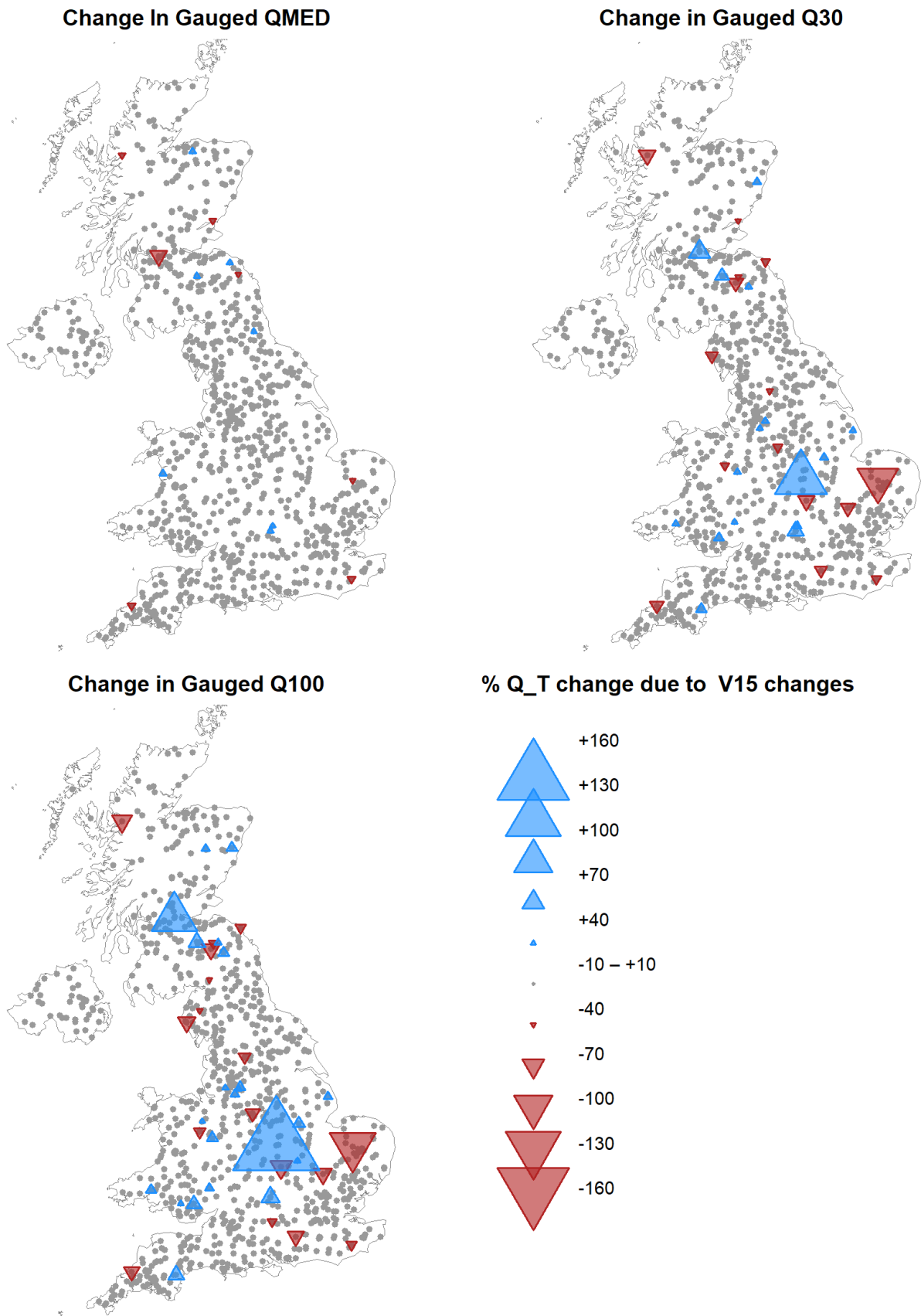


Figure 4 Changes in at-site *QMED*, 30-, and 100-year return period flows due to differences between version 14 and version 15. Changes range from –73% at station 33049 to +157% at station 28082.

8.4 Impacts on Donor Adjusted *QMED* Estimates

27 stations showed a change in donor-adjusted *QMED* of greater than 10%, due to the addition of data at the donor, listed in Most donor-adjusted *QMED* changes exceeding 10% are associated with the addition of new stations to the Peak Flow Dataset. Several of these stations, particularly in Hydrometric Areas 38 and 39, have small catchment areas (<40 km²) and high baseflow indices ($BFIHOST_{19_SCALED} > 0.7$). These characteristics result in relatively low *QMED* estimates from the catchment descriptor equation, increasing the influence of these stations within the donor-adjustment procedure. Consequently, nearby stations with similar catchment characteristics may experience notable changes in donor-adjusted *QMED* estimates.

Table 19 and mapped in Figure 5.

Most donor-adjusted *QMED* changes exceeding 10% are associated with the addition of new stations to the Peak Flow Dataset. Several of these stations, particularly in Hydrometric Areas 38 and 39, have small catchment areas (<40 km²) and high baseflow indices ($BFIHOST_{19_SCALED} > 0.7$). These characteristics result in relatively low *QMED* estimates from the catchment descriptor equation, increasing the influence of these stations within the donor-adjustment procedure. Consequently, nearby stations with similar catchment characteristics may experience notable changes in donor-adjusted *QMED* estimates.

Table 19: Changes in donor-adjusted estimates of *QMED* resulting from differences between version 14 and version 15. The asterisk indicates changes greater than 10%, positive or negative.

Station Number	Station Name	Measuring Authority	% Change in Donor <i>QMED</i>	Comment
27010	Hodge Beck at Bransdale Weir	EA-Y	-14*	Due to the addition of a nearby station and rejected AMAX – <i>QMED</i> is reduced.
33015	Ouzel at Willen	EA-EA	-12*	Due to the addition of nearby stations with similar CDs and data quality.
33021	Rhee at Burnt Mill	EA-EA	-10*	Due to the addition of nearby stations with similar CDs and data quality.
33022	Ivel at Blunham	EA-EA	-27*	Due to the addition of nearby stations with similar CDs and data quality.
33027	Rhee at Wimpole	EA-EA	-17*	Due to the addition of nearby stations with similar CDs and data quality.
33028	Flit at Shefford	EA-EA	-22*	Due to the addition of nearby stations with similar CDs and data quality.
33030	Clipstone Brook at Clipstone	EA-EA	-24*	Due to the addition of nearby stations with similar CDs and data quality.
33031	Broughton Brook at Broughton	EA-EA	-13*	Due to the addition of nearby stations with similar CDs and data quality.
33058	Ouzel at Bletchley	EA-EA	-13*	Due to the addition of nearby stations with similar CDs and data quality.
38001	Lee at Feildes Weir	EA-HNL	-17*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
38003	Mimram at Panshanger Park	EA-HNL	-39*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
38004	Rib at Wadesmill	EA-HNL	-12*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.

Station Number	Station Name	Measuring Authority	% Change in Donor QMED	Comment
38011	Mimram at Fulling Mill	EA-HNL	-48*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
38018	Upper Lee at Water Hall	EA-HNL	-35*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
38020	Cobbins Brook at Sewardstone Road	EA-HNL	-10*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
38021	Turkey Brook at Albany Park	EA-HNL	-18*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
38022	Pymmes Brook at Edmonton Silver Street	EA-HNL	-13*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
39010	Colne at Denham	EA-HNL	-21*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
39014	Ver at Hansteads	EA-HNL	-27*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
39049	Silk Stream at Colindeep Lane	EA-HNL	-14*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
39088	Chess at Rickmansworth	EA-HNL	-11*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
39089	Gade at Bury Mill	EA-HNL	-22*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
39093	Brent at Monks Park	EA-HNL	-13*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
39096	Wealdstone Brook at Wembley	EA-HNL	-13*	Due to the addition of new stations nearby which have high baseflow and relatively small catchment areas.
43007	Stour at Throop	EA-WX	15*	Due to the addition of nearby stations with similar CDs and data quality.
43010	Allen at Loverley Farm	EA-WX	11*	Due to the addition of nearby stations with similar CDs and data quality.
49003	De Lank at De Lank	EA-DC	-10*	Due to the addition of nearby stations with similar CDs and data quality.

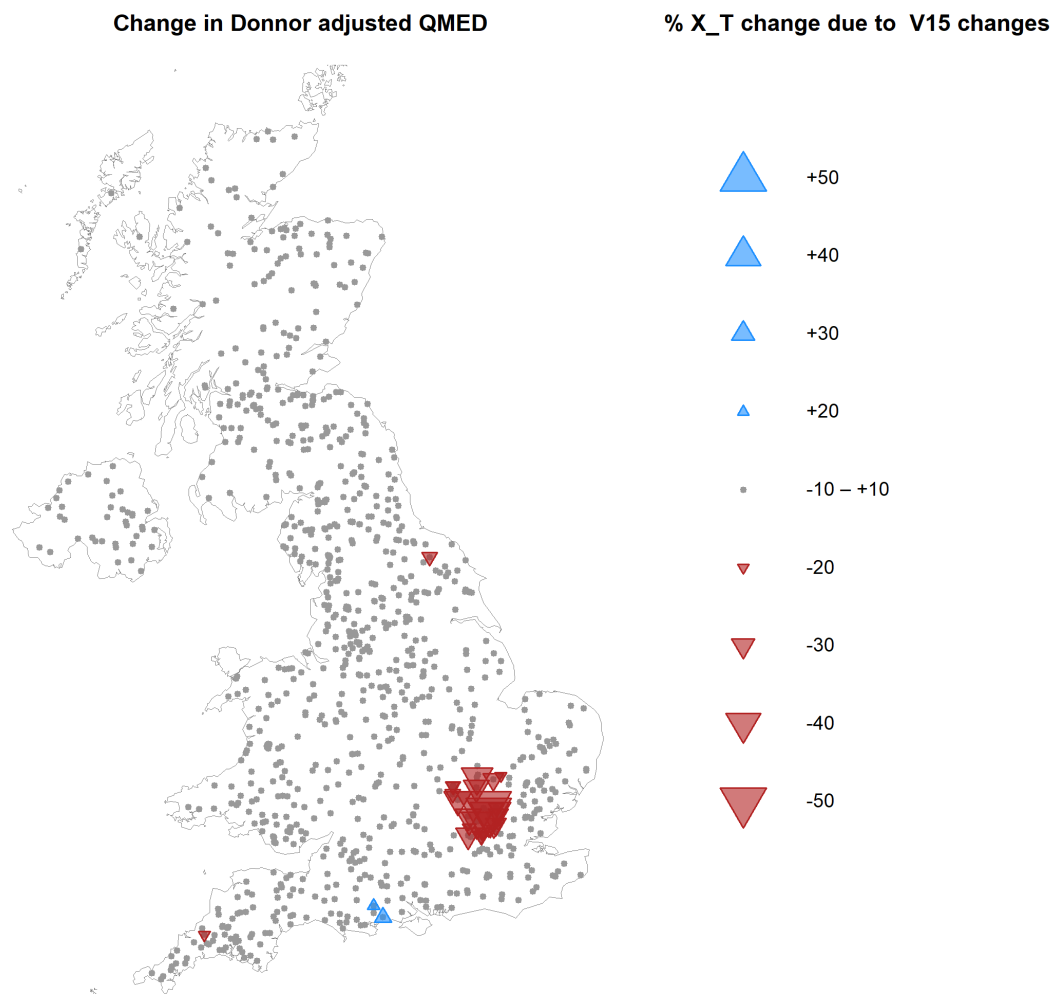


Figure 5 Changes in donor-adjusted estimates of *QMED* resulting from differences between version 14 and version 15.

8.5 Impacts on Pooled Flood Estimates

Differences between version 14 and version 15 have resulted in greater than 10% changes in one or more pooled flood estimation statistics at 19 stations, listed in Table 20 and mapped in Figure 6.

Table 20: Changes in pooled estimates of 5-, 30- and 100-year return periods resulting from differences between version 14 and version 15. The asterisk indicates changes greater than 10%, positive or negative.

Station Number	Station Name	Measuring Authority	% change in:			Comment
			5-year	30-yr	100-yr	
7012	Lossie at Ballachraggan	SEPA-NW	12*	13*	13*	New AMAX4 in WY24/25.
14002	Dighty Water at Balmossie Mill	SEPA-NE	-13*	-13*	-13*	Second lowest AMAX in record added in WY24/25.
20003	Tyne at Spilmersford	SEPA-SE	-10*	-11*	-11*	Big change in QMED.
21005	Tweed at Lyne Ford	SEPA-SE	13*	14*	15*	Big change in QMED and large record length change. Suitability change from QMED to pooling.

Station Number	Station Name	Measuring Authority	% change in:			Comment
			5-year	30-yr	100-yr	
21011	Yarrow Water at Philiphaugh	SEPA-SE	-11*	-13*	-15*	Big change in QMED and large record length change.
21016	Eye Water at Eyemouth Mill	SEPA-SE	-8	-10	-11*	Decrease in AMAX due to rating change.
21035	Till at Heaton Mill	EA-NE	-11*	-11*	-11*	Change in QMED due to New WY24/25 AMAX is eighth lowest in record of 24 years.
21036	Whiteadder Water at Abbey St Bathans	SEPA-SE	11*	11*	11*	Changes in QMED due to new AMAX being the third lowest in the record of 24 years.
24007	Browney at Lanchester	EA-NE	11*	11*	12*	Low AMAX rejected.
28082	Soar at Littlethorpe	EA-EM	12*	19*	25*	New AMAX4 in WY24/25 and large record length change.
33027	Rhee at Wimpole	EA-EA	-8	-11*	-13*	Change in pooling group.
33049	Stanford Water at Buckenham Tofts	EA-EA	-13*	-15*	-16*	Reduction of two AMAX values where station was incorrectly added in feet, rather than meters.
39021	Cherwell at Enslow Mill	EA-T	12*	12*	10*	New AMAX4 in WY24/25 and large record length change.
39034	Evenlode at Cassington Mill	EA-T	13*	12*	11*	Big change in QMED and large record length change.
40021	Hexden Channel at Hopemill	EA-KSL	-15*	-15*	-15*	Change in QMED due to rating curve – AMAX decrease
49006	Camel at Camelford	EA-DC	-17*	-19*	-21*	Change in QMED due to rating curve – AMAX decrease
64002	Dysynni at Pont-y-Garth	NRW	13*	12*	12*	New second AMAX is recorded - change in QMED.
84026	Allander Water at Milngavie	SEPA-SW	-31*	-31*	-30*	Big change in QMED and large record length change.
93001	Carron at New Kelso	SEPA-NW	-13*	-14*	-15*	AMAX rejected and large record length change.

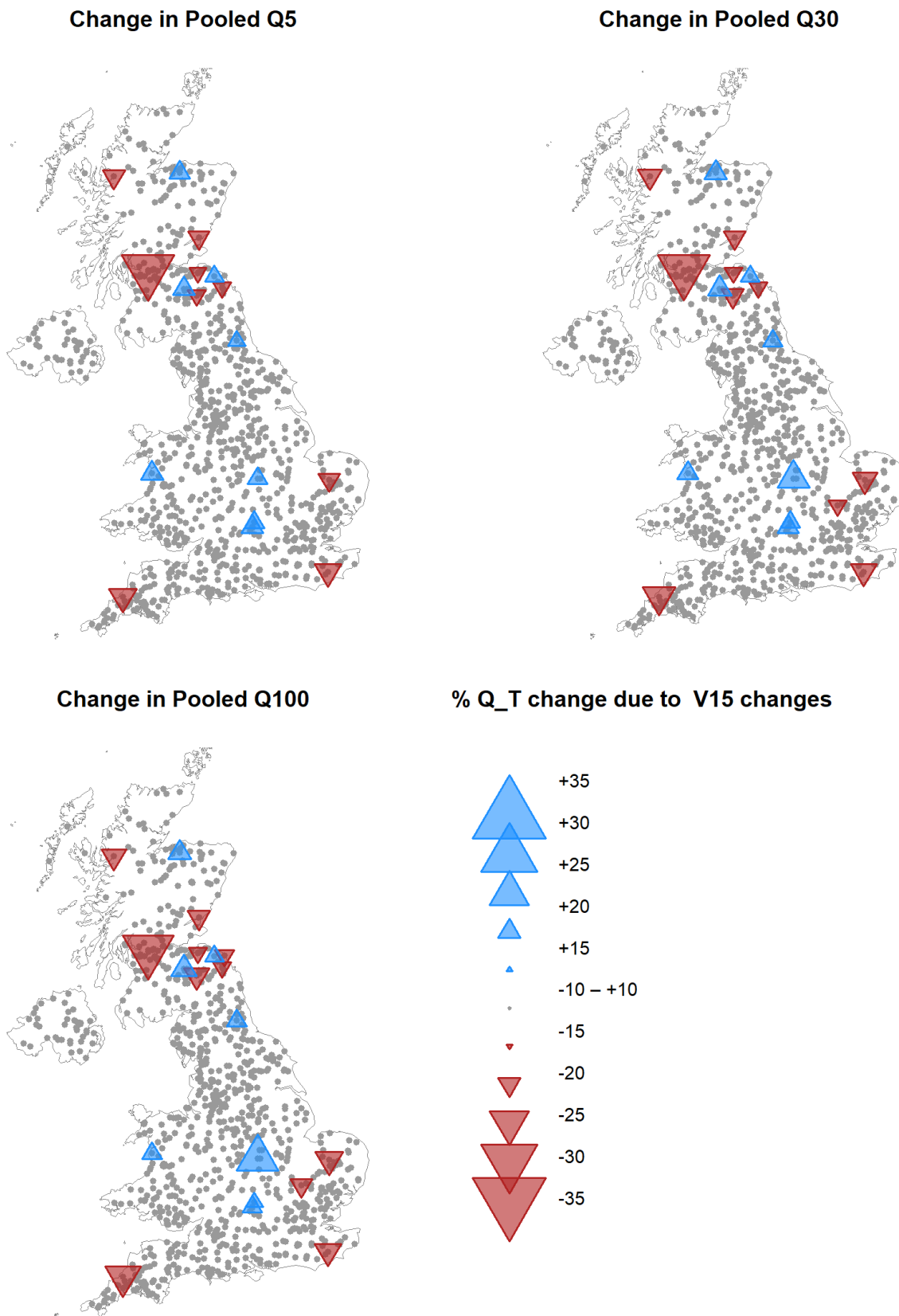
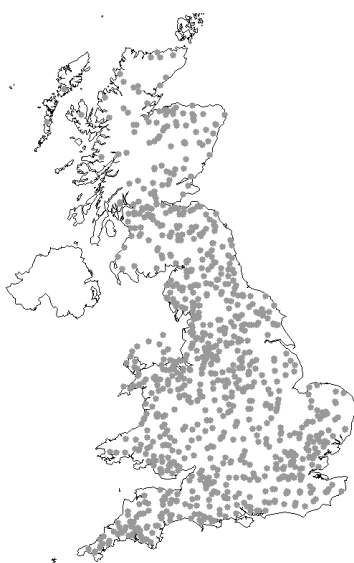


Figure 6 Changes in Pooled 5-, 30-, and 100-year return period flows due to differences between version 14 and version 15.

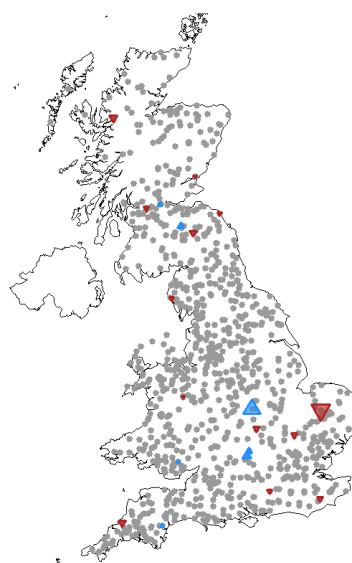
8.6 Impacts on Flood Estimates at Ungauged Locations

For a selection of 1,500 ungauged points on the GB gridded datasets (chosen to be representative of “All Catchments”), differences between version 14 and version 15 have been mapped in Figure 7, with changes of more than 5% highlighted. For this dataset, it should be noted that most of the catchments are very small (less than 25 km²) and so all share quite similar pooling groups. The most common pooled stations experienced small changes in values this year, so the resultant pooled estimates exhibit very small changes. Note that this ungauged dataset is representative of the GB river network, not the NRFA station network, and so the big differences between Figure 6 and Figure 7 are not surprising, as few of the smallest catchments are gauged.

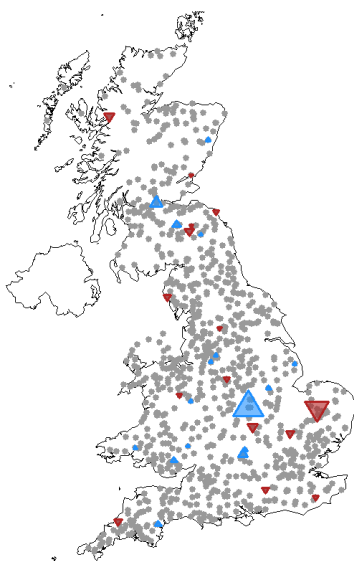
Change in QMED_CD



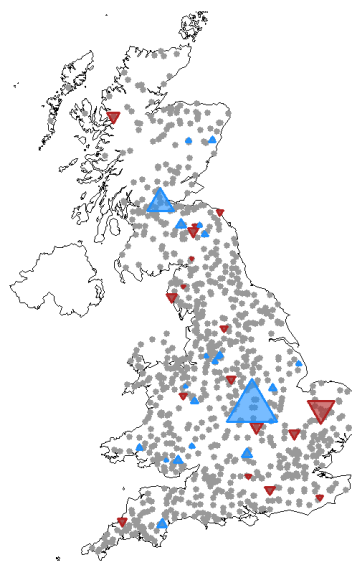
Change in Pooled Q10



Change in Pooled Q30

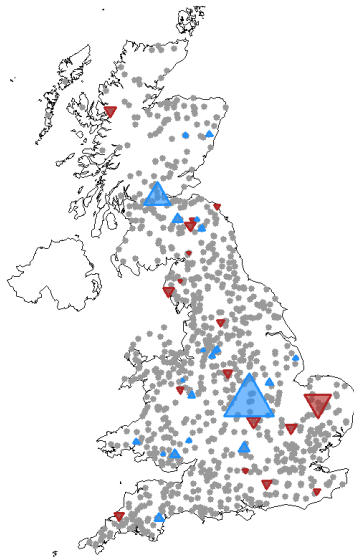


Change in Pooled Q100



Continues overleaf

Change in Pooled Q200



% Q_T change due to updates in V15

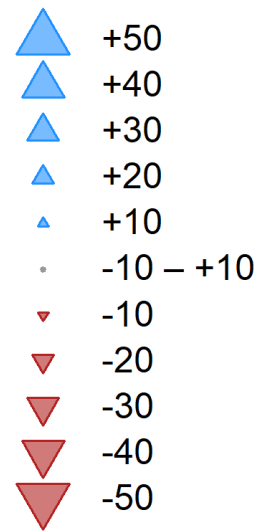


Figure 7 Changes in *QMED_CD*, Pooled 10-, 30-, 100- and 200-year return period flows due to differences between version 14 and version 15 at ungauged locations.

ANNEX 1 GAUGING STATIONS THAT HAVE POT DATA EXCLUDED

No POT data are presented on the NRFA website or given in the dataset for stations listed in ANNEX 1. Five stations were added to the list in version 15, marked with a *. For more information see section 3.6.

Station Number	Station Name	Measuring Authority
23002	Derwent at Eddys Bridge	EA-NE
26003	Foston Beck at Foston Mill	EA-Y
26009	West Beck at Snakeholme Lock	EA-Y
26010	Driffield Canal at Snakeholme Lock	EA-Y
26013	Driffield Trout Stream at Driffield	EA-Y
26014	Water Forlornes at Driffield	EA-Y
26015	Driffield Canal at Wansford Bridge	EA-Y
26016	Gypsey Race at Kirby Grindalythe	EA-Y
26017	Ings Beck at South Newbald	EA-Y
27073	Brompton Beck at Snainton Ings	EA-Y
28027	Erewash at Sandiacre	EA-EM
28033	Dove at Hollinsclough	EA-WM
28051*	Soar at Narborough	EA-EM
28060	Dover Beck at Lowdham	EA-EM
30005	Witham at Saltersford Total	EA-LN
30006	Slea at Leasingham Mill	EA-LN
30013	Heighington Beck at Heighington	EA-LN
31004	Welland at Tallington Total	EA-LN
33005	Bedford Ouse at Thornborough Mill	EA-EA
33007	Nar at Marham	EA-EA
33012	Kym at Meagre Farm	EA-EA
33032	Heacham at Heacham	EA-EA
33049	Stanford Water at Buckenham Tofts	EA-EA
33050	Snail at Fordham	EA-EA
33051	Cam at Chesterford	EA-EA
33052	Swaffham Lode at Swaffham Bulbeck	EA-EA
33054	Babingley at Castle Rising	EA-EA
34007	Dove at Oakley Park	EA-EA
34008	Ant at Honing Lock	EA-EA
34012	Burn at Burnham Overy	EA-EA
35003	Alde at Farnham	EA-EA
35004	Ore at Beversham	EA-EA
35010	Gipping at Bramford	EA-EA
36002	Glem at Glemsford	EA-EA
36003	Box at Polstead	EA-EA
36004	Chad Brook at Long Melford	EA-EA
36006	Stour at Langham	EA-EA
36007	Belchamp Brook at Bardfield Bridge	EA-EA

Station Number	Station Name	Measuring Authority
36008	Stour at Westmill	EA-EA
36009	Brett at Cockfield	EA-EA
36010	Bumpstead Brook at Broad Green	EA-EA
36011	Stour Brook at Sturmer	EA-EA
36012	Stour at Kedington	EA-EA
36015	Stour at Lamarsh	EA-EA
37003	Ter at Crabbs Bridge	EA-EA
37005	Colne at Lexden	EA-EA
37007	Wid at Writtle	EA-EA
37008	Chelmer at Springfield	EA-EA
37009	Brain at Guithavon Valley	EA-EA
37010	Blackwater at Appleford Bridge	EA-EA
37011	Chelmer at Churchend	EA-EA
37012	Colne at Poolstreet	EA-EA
37013	Sandon Brook at Sandon Bridge	EA-EA
37016	Pant at Copford Hall	EA-EA
37017	Blackwater at Stisted	EA-EA
37031	Crouch at Wickford	EA-EA
37033	Eastwood Brook at Eastwood	EA-EA
38011	Mimram at Fulling Mill	EA-HNL
38017*	Mimram at Whitwell	EA-HNL
39010	Colne at Denham	EA-HNL
39020	Coln at Bibury	EA-T
39021	Cherwell at Enslow Mill	EA-T
39027	Pang at Pangbourne	EA-T
39030*	Gade at Croxley Green	EA-HNL
39033	Winterbourne Stream at Bagnor	EA-T
39034	Evenlode at Cassington Mill	EA-T
39037	Kenet at Marlborough	EA-T
39041	Lambourn at Shaw Ultrasonic	EA-T
39049	Silk Stream at Colindeep Lane	EA-HNL
39088	Chess at Rickmansworth	EA-HNL
39089	Gade at Bury Mill	EA-HNL
39102*	Misbourne at Denham Lodge	EA-HNL
40033	Dour at Crabble Mill	EA-KSL
41015	Ems at Westbourne	EA-SSD
41023	Lavant at Graylingwell	EA-SSD
42005	Wallop Brook at Broughton	EA-SSD
42006	Meon at Mislingford	EA-SSD
42007	Alre at Drove Lane Alresford	EA-SSD
42008	Cheriton Stream at Swards Bridge	EA-SSD
42009	Candover Stream at Borough Bridge	EA-SSD

Station Number	Station Name	Measuring Authority
42010	Itchen at Highbridge & Allbrook Total	EA-SSD
42012	Anton at Fullerton	EA-SSD
42017	Hermitage Stream at Havant	EA-SSD
43003	Avon at East Mills Total	EA-WX
43004	Bourne at Laverstock	EA-WX
43005	Avon at Amesbury	EA-WX
43008	Wylfe at South Newton	EA-WX
43010	Allen at Loverley Farm	EA-WX
43012	Wylfe at Norton Bavant	EA-WX
43018	Allen at Walford Mill	EA-WX
43027*	Allen at All Hallows	EA-WX
43028	Chitterne Brook at Codford	EA-WX
43029	Wylfe at Brixton Deverill	EA-WX
44002	Piddle at Baggs Mill	EA-WX
44004	Frome at Dorchester Total	EA-WX
44006	Sydling Water at Sydling St Nicholas	EA-WX
44008	South Winterbourne at Winterbourne Steepleton	EA-WX
44009	Wey at Broadwey	EA-WX
44013	Piddle at Little Puddle	EA-WX
44014	Piddle at Briantspuddle	EA-WX
54022	Severn at Plynlimon flume	UKCEH
54027	Frome at Ebley Mill	EA-WM
54090	Tanllwyth at Tanllwyth Flume	UKCEH
54091	Severn at Hafren Flume	UKCEH
54092	Hore at Hore Flume	UKCEH
54097	Hore at Upper Hore flume	UKCEH
55008	Wye at Cefn Brwyn	UKCEH
55033	Wye at Gwy flume	UKCEH
55034	Cyff at Cyff flume	UKCEH
55035	Iago at Iago flume	UKCEH
64010	Mawddach at Tyddyn Gwladys	NRW
68007	Wincham Brook at Lostock Gralam	EA-GMMC
68010	Fender at Ford Lane	EA-GMMC
69045	Bollin at Bollington Mill Total	EA-GMMC
71003	Croasdale Beck at Croasdale Flume	EA-CL
73003	Kent at Burneside	EA-CL
84013	Clyde at Daldowie	SEPA-SW
85001	Leven at Linnbrane	SEPA-NE
205034	Woodburn at Control	DfIR
206006	Annalong at Recorder	BCDWC

ANNEX 2 GAUGING STATIONS WITH CHANGES TO DATUM HISTORY

The datum history has been updated at the 45 stations listed below. For more information see section 6.7.

Station Number	Station Name	Measuring Authority
13007	North Esk at Logie Mill	SEPA-NE
19006	Water of Leith at Murrayfield	SEPA-SE
21013	Gala Water at Galashiels	SEPA-SE
21015	Leader Water at Earlston	SEPA-SE
27054	Hodge Beck at Cherrytree Farm	EA-Y
27074	Spen Beck at Northorpe	EA-Y
28026	Anker at Polesworth	EA-WM
28051	Soar at Narborough	EA-EM
28061	Churnet at Basford Bridge	EA-WM
28072	Greet at Southwell	EA-EM
29004	Ancholme at Bishopbridge	EA-LN
38012	Stevenage Brook at Bragbury Park	EA-HNL
38017	Mimram at Whitwell	EA-HNL
38028	Stansted Brook at Gypsy Lane	EA-HNL
38029	Quin at Griggs Bridge	EA-HNL
39030	Gade at Croxley Green	EA-HNL
40042	Medway at Allington	EA-KSL
54003	Vyrnwy at Vyrnwy Reservoir	NRW
54007	Arrow at Broom	EA-WM
54025	Dulas at Rhos-y-pentref	NRW
54081	Clywedog at Bryntail	NRW
54095	Severn at Buildwas	EA-WM
54098	Cam at Cambridge	EA-WM
55028	Frome at Bishops Frome	EA-WM
57006	Rhondda at Trehafod	NRW
57007	Taff at Fiddlers Elbow	NRW
57015	Taff at Merthyr Tydfil	NRW
58002	Neath at Resolven	NRW
58004	Afan at Cwmafan	NRW
58006	Mellte at Pontneddfechan	NRW
58007	Llynfi at Coytrahen	NRW
58010	Hepste at Esgair Carnau	NRW
58011	Thaw at Gigman Bridge	NRW
59002	Loughor at Tir-y-dail	NRW
63001	Ystwyth at Pont Llolwyn	NRW
66005	Clwyd at Ruthin Weir	NRW
66006	Elwy at Pont-y-Gwyddel	NRW
66011	Conwy at Cwmlanerch	NRW
67001	Dee at Bala	NRW
69002	Irwell at Adelphi Weir	EA-GMMC

Station Number	Station Name	Measuring Authority
69026	Irwell at Kearsley	EA-GMMC
83004	Lugar Water at Langholm	SEPA-SW
92003	Strontian at Ariundle	SEPA-NW
93001	Carron at New Kelso	SEPA-NW
108001	Weisdale Burn at Weisdale Mill	SEPA-NW