

Release notes for HiFlows-UK v3.3.2

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Revision History

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Purpose

This document has been prepared as a release note to accompany HiFlows-UK v3.3.2. JBA Consulting accepts no responsibility or liability for any use that is made of this document or the data that it references. JBA prepared the data under commission from the Environment Agency.

Acknowledgements

Many staff from the Environment Agency and Natural Resources Wales contributed to the various updates of HiFlows-UK that culminated in the issue of v3.3.2. Peter Spencer and Glenda Tudor-Ward are especially acknowledged for their significant help and guidance.

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1 Current status of HiFlows-UK (v3.3.2)

V3.3.2 (April 2014) is the first publically released update of HiFlows-UK since 2010 (v3.1.2). V3.3.2 contains AMAX and POT data for 956 active gauging stations, of which 647 are in England, 105 are in Wales, 159 are in Scotland and 45 are in Northern Ireland. A total of 565 stations are currently recommended for use in FEH pooling groups ("OK for Pooling"), the number deemed as suitable for QMED (but not for pooling) is 279, whilst the 112 stations have been classified as being suitable for neither QMED or pooling.

2 Changes since v3.1.2

A significant number of changes have been made to HiFlows-UK since its last issue. The update was carried out in line with the procedures stated in the Environment Agency's Operational Instruction 09_130. Key decisions, such as those involving changes to station metadata, rating curves, suitability flags and inclusion, were made in conjunction with the representatives from each measuring authority.

2.1 Extensions to AMAX and POT records

HiFlows-UK v3.3.2 provides updates AMAX and POT series to the end of September 2012 for England, Wales and Northern Ireland. Note that stations in Scotland (SEPA) were not updated as part of HiFlows-UK v3.3.2, and data for these stations ends in September 2006.

2.2 Changes to stage-discharge ratings

The Environment Agency and National Resources Wales have, in collaboration, assigned significant resources to reviewing the stage-discharge ratings presented in HiFlows-UK and aligning them with WISKI ratings where appropriate. However ratings were not aligned in the following circumstances:

- Where the rating history in WISKI was extremely complex and the existing HiFlows-UK rating provided a practical simplification.
- Where only the low flow part of the rating differed between HiFlows-UK and WISKI.

In some cases the WISKI rating was assumed to be valid over the entire period of data held in HiFlows-UK. In other cases the WISKI rating could not be assumed to be valid over the entire record and replaced the existing rating for only part of the record period.

As a result of the rating alignment programme, historic AMAX and POT data have changed for a significant number of sites, although this may only be for the latter part of the record. The changes are too numerous to report in this note.

2.3 Changes to suitability flags

Suitability flags have been reviewed to reflect updated ratings, but also to ensure greater consistency across the database. In total one or more suitability flags have been changed for approximately 320 sites, of which about 40 were closed sites. The vast majority of these changes related to sites being downgraded from "suitable to pooling" to "suitable for QMED only", although a number of sites are now suitable for pooling as a result of rating improvements. Overall, this release reduces the number of stations classed as suitable for pooling by 5%, and increases the number suitable for QMED by 11%.

2.4 Removal and addition of gauges

Due to high flow data quality concerns, impact of artificial influences or duplication, nine stations were rejected from HiFlows-UK during the update, including Bounstead Bridge (EA Anglian), Saxons Lode (EA Midlands), Old Ship, Grendon Underwood and Luton Hoo (EA South East), Hayne Bridge (EA SW) and Llyn Brenig Outflow, Cwmavon and Capel Dewi (NRW).

A total of 19 new stations were added to HiFlows-UK for the V3.3.2 release; 4 from Natural Resources Wales, 7 from South West Region and 8 from North West Region. Key metadata for these sites are presented in Table 1.

Other changes include a number of new photographs, notably for stations in North East, South West and North West and Wales.

3 Other issues

3.1 Flood peak series from combined sites

As with previous versions of HiFlows-UK a number of AMAX records present combined data from more than one gauging station. Typically this is the case where one station has closed, only to be replaced by another nearby gauge. These include:

- Adelphi Weir (69002) and Manchester Racecourse (69025). The combined flood peak data are presented in the files 69025.AM and 69025.PT and is deemed as being suitable for Qmed.
- Leckyby (27008) and Crakehill (27071). The flood peak data from Leckyby (closed) is included in the 27071.AM and 27071.PT files for Crakehill, with the combined record being deemed as suitable for pooling.
- Kidderminster Gilt Edge (54906) and Kidderminster Callows Lane (54006). The combined data are presented in 54006.AM and 54006.PT, but the combined record is categorised as being suitable for QMED only.
- Burnside (73003) and Bowson (73016). The data presented for Bowston in 73016.AM and 73016.PT includes peaks from the closed gauge at Burnside. It is considered as being suitable for pooling.
- Ilkley (27027) and Addingham (27043). The combined record is that for Addingham and is delivered in the files 27043.AM and 27043.PT. The data is considered as suitable for pooling.
- Warwick Bridge (76002) was replaced by Great Corby (76810) with period of overlap 1996 to 1998. Download files combine Great Corby and Warwick Bridge - numbered as the current station, Great Corby 76810, which is deemed as being suitable for pooling.
- Old Broom (54907) replaced by Broom (54007) and the combined data presented in 54007.AM and 54007.PT. The combined data is suitable for pooling only.

In each case both sites are shown on the HiFlows-UK website, but catchment descriptor files are presented only for the combined record.

Table 1: Stations added to HiFlows-UK for the v3.3.2 release

Site name	Gauging Authority	Gauging Authority Ref	NRFA Ref*	Gauge Type	Area (km ²)	Suitability
Irwell Vale	EA-NW	690140	69022	VA	100.7	QMED Only
Acton Lane	EA-NW	685517	68021	FL	17.87	QMED and Pooling
Bradshaw Tennis Club	EA-NW	690470	69046	B	36.87	QMED Only
Littleborough	EA-NW	690206	69047	VA	14.8	QMED and Pooling
Uppermill	EA-NW	692418	692418*	MIS	40.6	QMED and Pooling
Hollowforth Hall	EA-NW	720212	72817	VA FV	33.19	QMED Only
Stockdalewat h	EA-NW	765850	76019	MIS	62.99	QMED and Pooling
Croasdale Flume	EA-NW	711008	71003	FL	10.71	QMED and Pooling
Bolingey Cocks Bridge	EA-SW	S23538	23538*	US	16.08	QMED and Pooling
Camelford	EA-SW	25B12	49999*	VA	12.86	QMED and Pooling
Launceston Newport	EA-SW	12N02	47999*	MIS	33.43	QMED and Pooling
Newnham Park	EA-SW	S11512	47998*	VA	15.72	QMED and Pooling
Tamarstone Bridge	EA-SW	s12549	47997*	US	49.07	QMED and Pooling
Tavistock Abbey Bridge	EA-SW	SX47F022	47996*	ADVP	95.63	QMED and Pooling
Trenowth	EA-SW	S19589	48999*	VA	65.07	QMED and Pooling
Bargoed	NRW	57014	57014	FV	63.63	QMED and Pooling
Caban	NRW	55032	55032	FV	183.8	QMED Only
Dolwen	NRW	2118	54080	CC	174.2	QMED and Pooling
Tynewydd	NRW	57809	57809	C	16.64	QMED and Pooling
* A formal NRFA reference number will be assigned to these stations.						

3.2 Stations where no POT data are presented

No POT data are presented in HiFlows-UK for the stations documented in Table 2. These are mainly, but not exclusively, high BFI stations which don't have a well defined series of flood peaks.

Table 2. Stations for which .PT files are not provided

Site name	Gauging Authority	Gauging Authority Ref
Foston Beck@Foston Mill	North East	26003
Snakeholme Lock @ West Beck	North East	26009
Snakeholme Lock @ Driffield Canal	North East	26010
Gypsy Race @ Kirby Grindalythe	North East	26802
Water Forlornes @ Driffield	North East	26803
Costa Beck @ Gatehouses	North East	27038
Brompton Beck @ Snainton Ings	North East	27073
Rase @ Rase Bishopbridge	Anglian	29005
Witham @ Saltersford	Anglian	30005
Slea @ Leasingham Mill	Anglian	30006
Heighington Beck @ Heighington	Anglian	30013
Cringle Brook @ Stock Rochford	Anglian	30015
Welland @ Tallington Total	Anglian	31004
Great Ouse @ Thornborough	Anglian	33005
Nar @ Marham	Anglian	33007
Kym @ Meagre Farm	Anglian	33012
Heacham @ Heacham	Anglian	33032
Stanford Water @ Buckenham Tofts	Anglian	33049
Swaffham Lode @ Swaffham Bulbeck	Anglian	33052
Babingley @ Castle Rising	Anglian	33054
Burn @ Burnham	Anglian	34012
Mimram @ Welwyn	South East	38011
Colne @ Denham	South East	39010
Cherwell @ Enslow	South East	39021
Winterbourne @ Bagnor	South East	39033
Evenlode @ Cassington	South East	39034
Kenet @ Marlborough	South East	39037
Gade @ Hemel Hempstead (Bury Mill)	South East	39089
Quaggy @ Hither Green (Manor Ho Gardens)	South East	39095
Dour @ Crabble Mill	South East	40033
Ems @ Westbourne	South East	41015
Lavant @ Graylingwell	South East	41023
Wallop Brook @ Broughton	South East	42005
Meon @ Misingford	South East	42006
Alre @ Drove Total	South East	42007
Cheriton Stream @ Swards Bridge	South East	42008
Candover Stream @ Borough Bridge	South East	42009
Itchen-Total Flow @ Allbrook + Highbridge	South East	42010
Anton @ Fullerton Total	South East	42012
Hermitage Stream @ Havant	South East	42017
Avon @ East Mills Total	South West	43003
Bourne@Laverstock	South West	43004

Site name	Gauging Authority	Gauging Authority Ref
Avon @ Amesbury	South West	43005
Wylfe @ South Newton	South West	43008
Allen @ Loverley Mill	South West	43010
Wylfe @ Norton Bavant	South West	43012
Allen @ Walford Mill	South West	43018
Piddle @ Baggs Mill	South West	44002
Frome @ Dorchester Combined	South West	44004
Sydling Water @ Sydling St Nicholas	South West	44006
South Winterborne @ Winterbourne Steepleton	South West	44008
Wey @ Broadway	South West	44009
Piddle @ Little Puddle	South West	44809
Piddle @ Briantspuddle	South West	44810
Frome @ Ebley Mill	Midlands	54027
Iago @ Iago Flume	NRW	55035
Dee @ Chester Weir	NRW	67020
Croasdale Beck @ Croasdale Flume	North West	71003
Leven @ Linnbrane	SEPA	85001
Woodburn Control	Rivers Agency (NI)	205999
Annalong @ Recorder 1895	Rivers Agency (NI)	206006

3.3 Stations that the NRFA treats a combined site

There are a number of sites on HiFlows-UK that the NRFA and/or measuring authority treats as a combined site. The high flow data may be derived from only one component of the combined data set and as such the source for the POT and AM data on WISKI may not be the combined record. These sites include: 30005 (Witham), 31002 (Glen), 31004 (Welland), 32007 (St Andrews), 33037 (Newport Pagnell), 34006 (Needham Mill).

Offices at

Coleshill

Doncaster

Edinburgh

Haywards Heath

Limerick

Newcastle upon Tyne

Newport

Saltaire

Skipton

Tadcaster

Thirsk

Wallingford

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