

Natural Resources Wales

- The monthly rainfall total for Wales during March was 139% of the Long Term Average (LTA, 1961-90). South East, South West and North Wales received 154%, 150% and 114% of the LTA, respectively.
- At the end of March, soil moisture deficit (SMD) values across Wales were from 0 to 1.6 mm. Soil in all 23 squares was slightly wetter than the LTA for March.
- For river flows in Wales, 10 out of 29 indicator sites (which had flow data available) were classed as *Normal* and 13 were classed as *Above normal*. 5 were *Notably high* and the remaining site was *Exceptionally high* for March.
- The overall cumulative reservoir storage across the indicator sites was greater than 90% at the end of March except Usk which was 89% full. All reservoirs were within normal operating ranges.

Rainfall*

The monthly rainfall total for Wales was 139% of the LTA for March. The percentage of rainfall recorded in catchments compared with the LTA across Wales was between 87% (Ogwen) and 196% (Lower Wye). The rainfall total for Wales was 15.1mm more than the March LTA. For South East, South West and North Wales the rainfall totals were 154%, 150% and 114% of LTA, respectively.

Rainfall Map

[National](#)

Rainfall Charts

[National & Areas](#)

[South East Wales](#)

[North Wales](#)

[South West Wales](#)

* using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright)

Soil Moisture Deficit/Recharge

The 23 MORECS squares had SMD values from 0 to 1.6 mm and they were slightly wetter than the LTA for March.

SMD Map

[National](#)

SMD Charts

[Compare to LTA](#)

All data are provisional and may be subject to revision.

The views expressed in this document are not necessarily those of the Natural Resources Wales. Its officers, servants or agents accept no liability for any loss or damage arising from the interpretation or use the information, or reliance upon views contained herein.

River Flows

River flows were between *Normal* and *Exceptionally high* for all the indicator sites across Wales. 10 out of 29 indicator sites (which had flow data available) were classed as *Normal* and 13 were classed as *Above normal*. 5 were *Notably high* and the remaining site was *Exceptionally high* for March.

South East: Flows in the area ranged from 127% (River Yscir at Pont ar Yscir) to 197% (River Lugg at Butts Bridge) of the March LTA values.

South West: The river flows within this area ranged from 91% (River Ystwyth at Pont Llolwyn) to 152% (River Loughor at Tir-y-Dail) of the March LTA values.

North: Flows in the area ranged from 74% (River Conwy at Cwmlanerch) to 156% (River Clwyd at Pont y Cambwll) of the March LTA values.

River Flow Map [National](#)
River Flow Table [% of LTA and compare to previous year](#)
River Flow Charts [South East Wales](#) [North Wales](#) [South West Wales](#)

Groundwater Levels

Groundwater levels for March at indicator sites (10 data available sites) were classed between *Exceptionally low* (Eastwick) to *Notably high* (Pant-y-Lladron and Fernbank). 3 sites were classed as *Below normal* (Llanfair DC, Hollybush and Handley) and 4 sites were classed as *Normal* (Greenfield Garage, Pont y Cambwll, Dodleston Obs and Broxton Obs).

Groundwater Map [National](#)
Groundwater Charts [South East Wales](#) [North Wales](#) [South West Wales](#)

Reservoir Storage

At the end of March most of the indicator reservoirs (17 out of 18) were greater than 90% full and the remaining reservoir Usk was 89% full. All reservoirs were in normal operation.

Reservoir Charts [South East](#) [North](#) [South West Wales](#)
 [Wales](#) [Wales](#)

All data on Water Situation Reports are provisional, based on spot readings, and are subject to revision.

Author: Zhong Zhang Telephone: 03000 654521

Natural Resources Wales

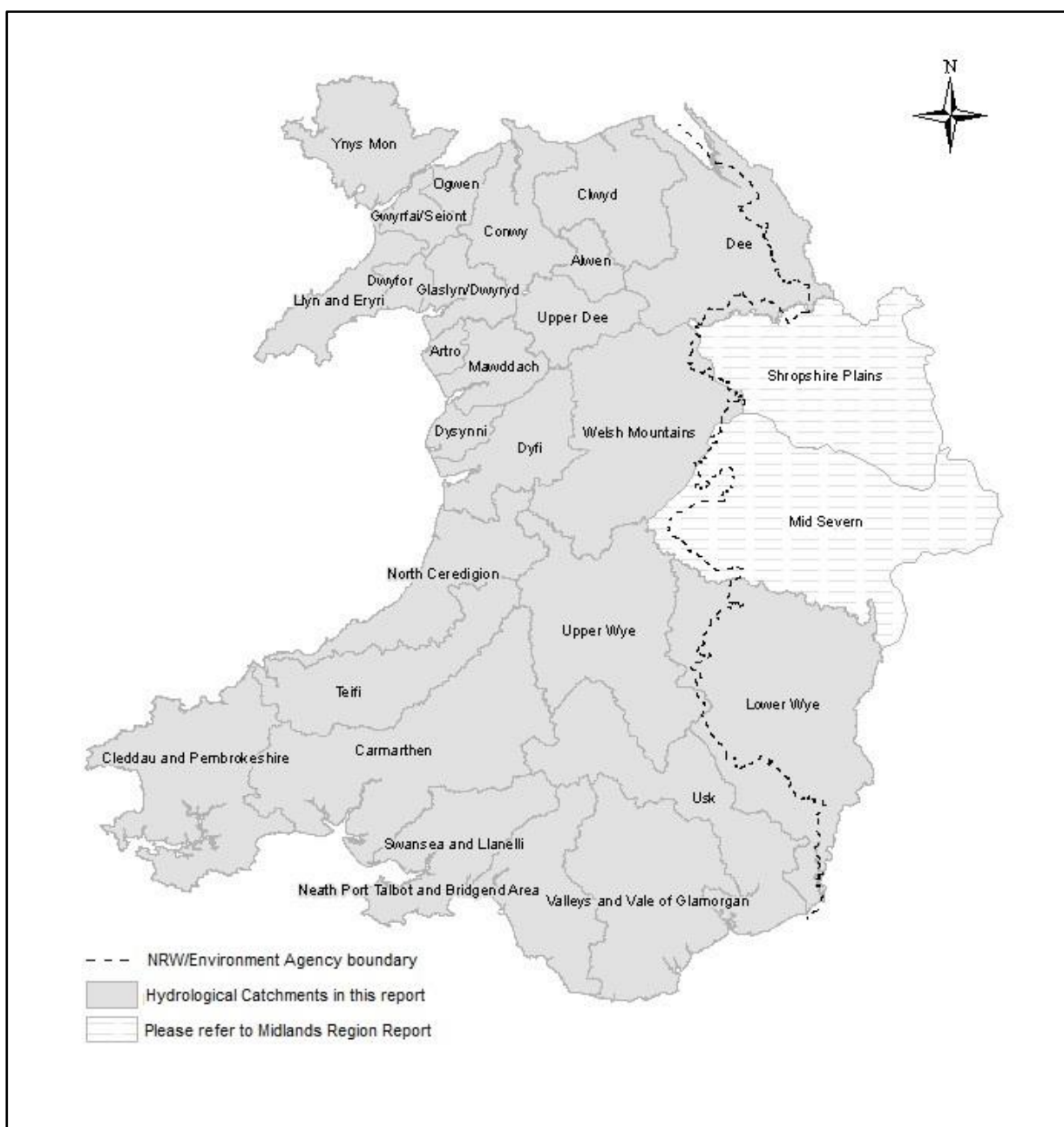


Figure 1: The Natural Resources Wales Water Situation Report features sites in the catchments shown. Parts of the Shropshire Plains and Mid Severn catchments are within Wales. For full information on these catchments, please see the Environment Agency Midlands Water Situation Report.

For areas adjoining Natural Resources Wales, please see the reports for Environment Agency Midlands and North West England:

[Environment Agency - Midlands, England Water Situation Report](#)
[Environment Agency - North West, England Water Situation Report](#)

All data are provisional and may be subject to revision.

The views expressed in this document are not necessarily those of the Natural Resources Wales. Its officers, servants or agents accept no liability for any loss or damage arising from the interpretation or use the information, or reliance upon views contained herein.

Rainfall

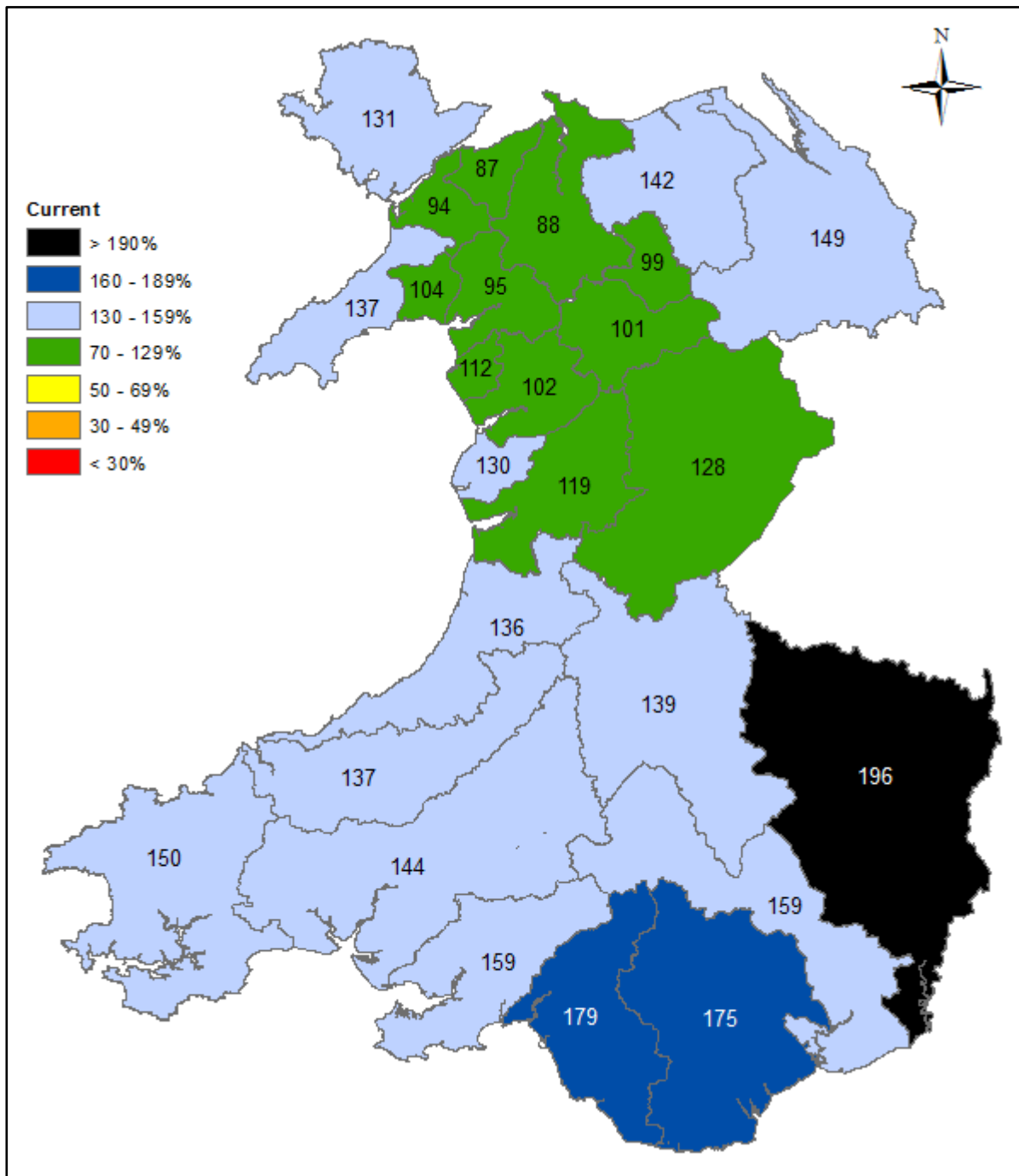


Figure 2: Calculated catchment average March rainfall totals as a percentage of the 1961-90 March long term average for Natural Resources Wales catchments, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

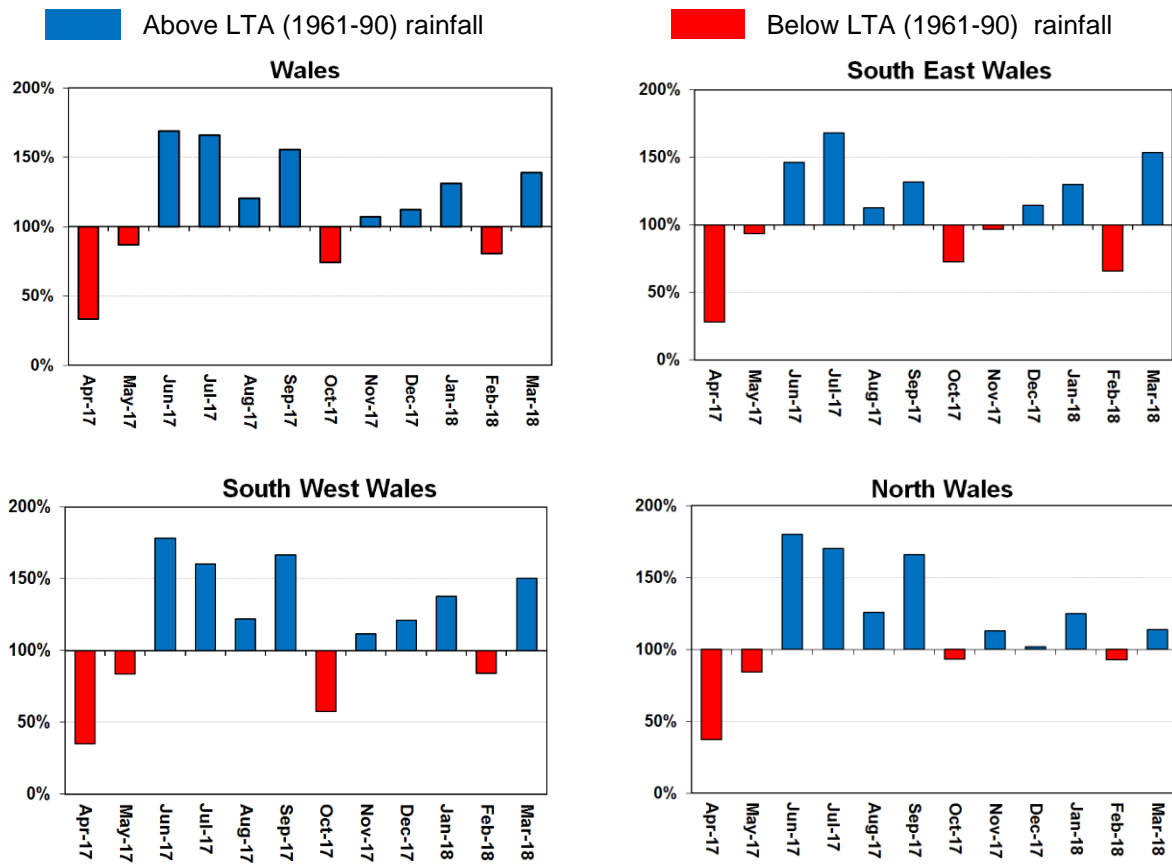
All data are provisional and may be subject to revision.

The views expressed in this document are not necessarily those of the Natural Resources Wales. Its officers, servants or agents accept no liability for any loss or damage arising from the interpretation or use the information, or reliance upon views contained herein.

[Return to Summary](#)

Rainfall Charts

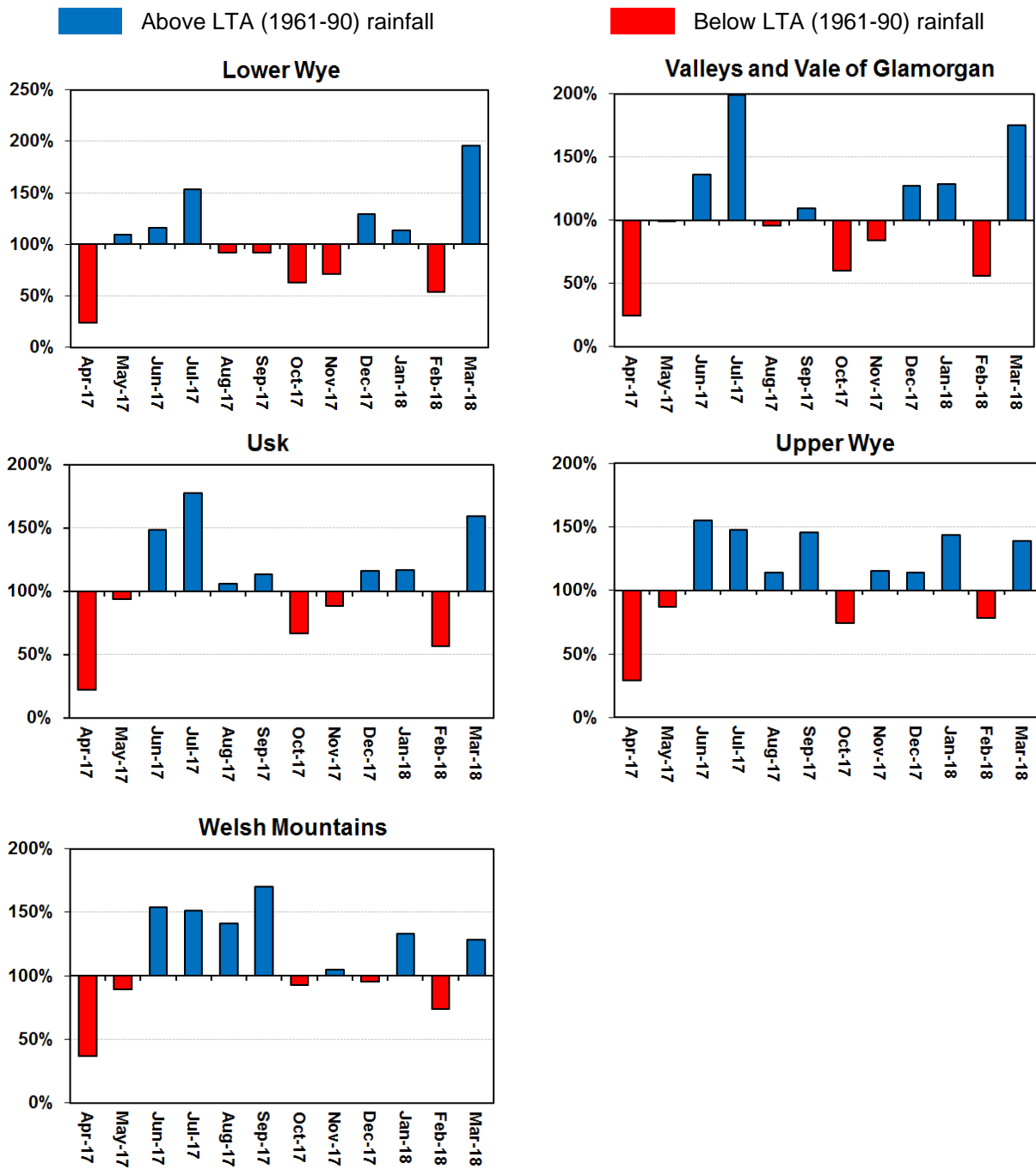
Figure 3: Rainfall Charts: National and Areas



Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for Natural Resources Wales and Areas, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

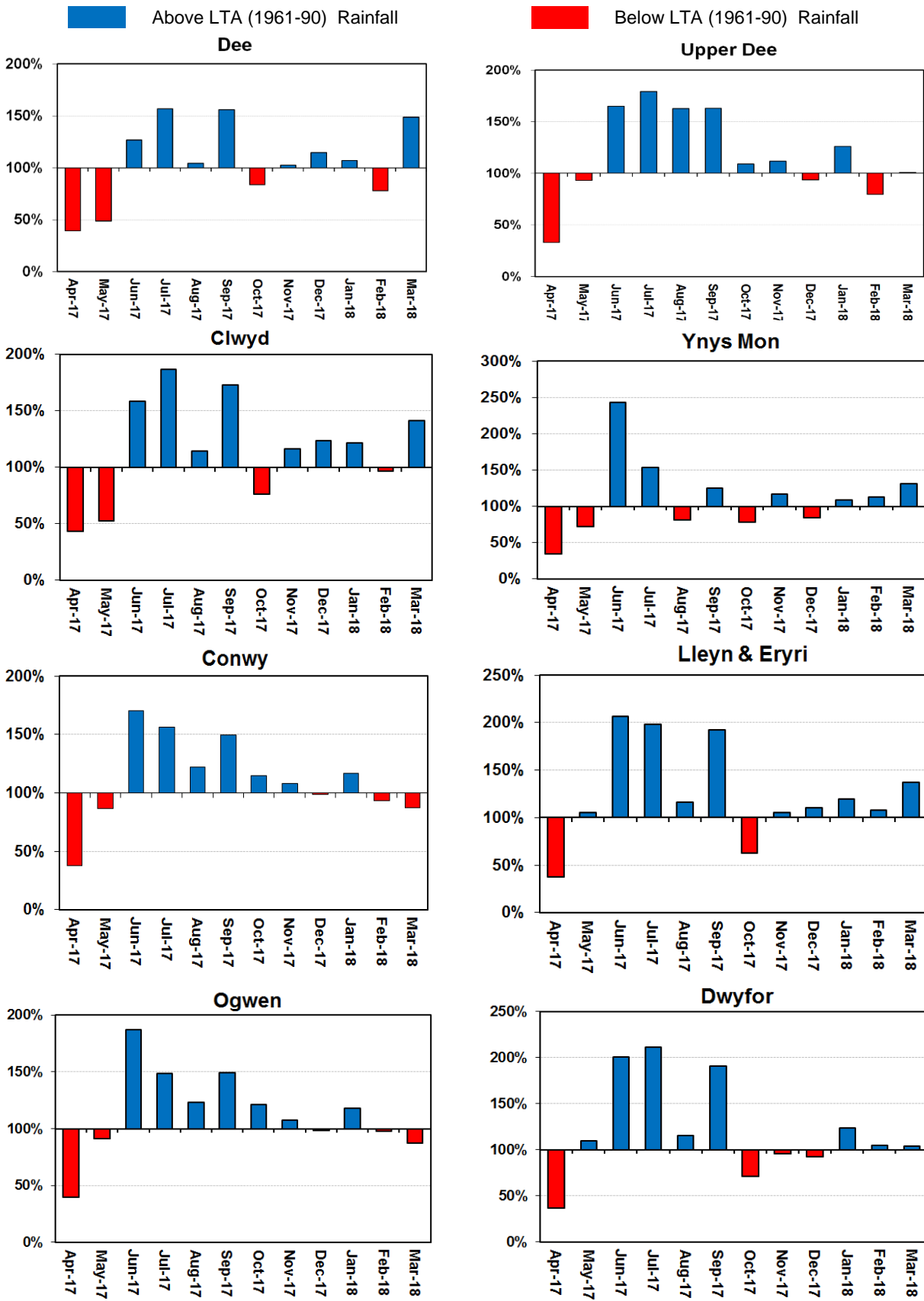
[Return to Summary](#)

Figure 4: Rainfall Charts: South East Wales



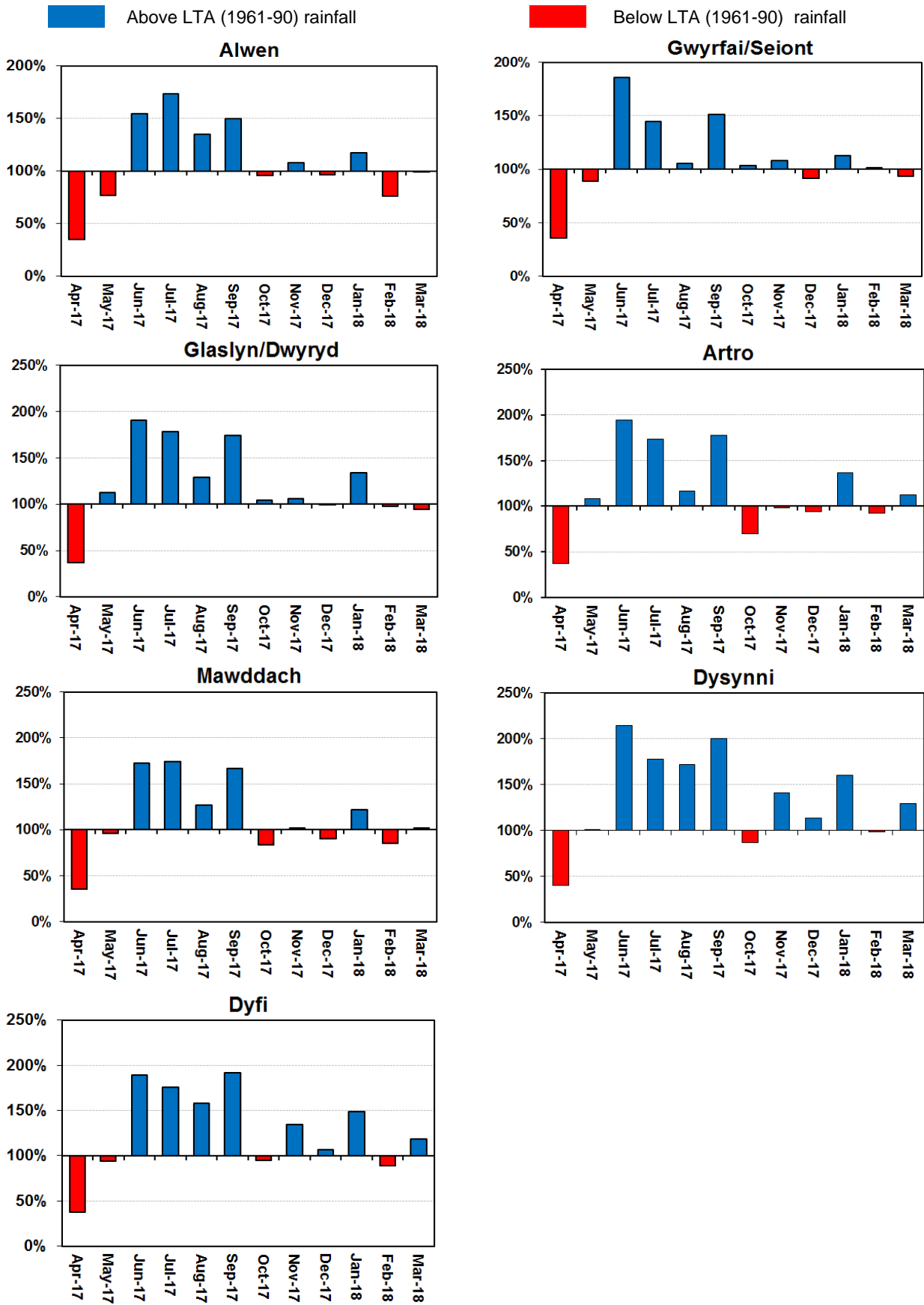
Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for South East Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

Figure 5: Rainfall Charts: North Wales



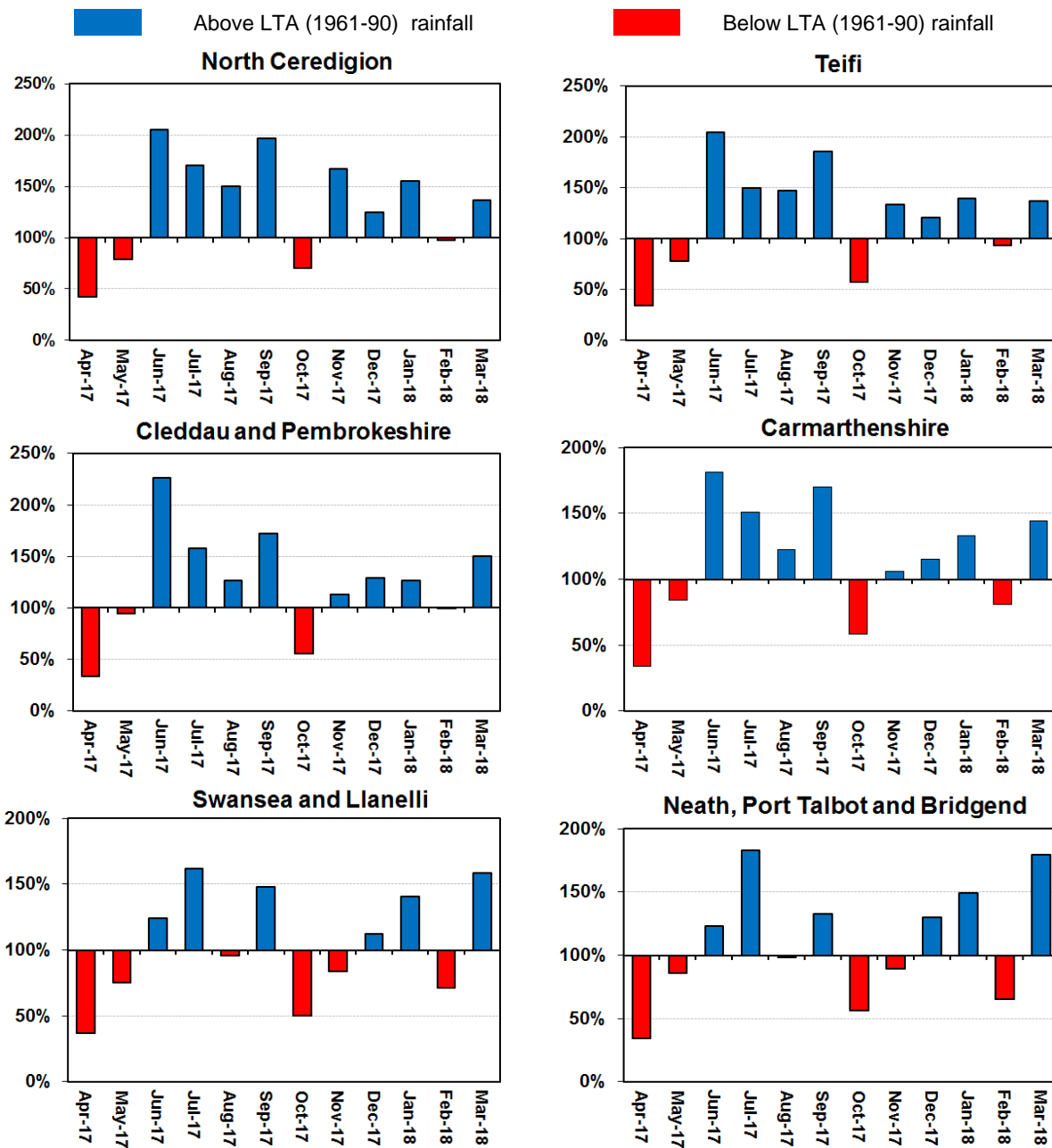
Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for North Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

[Return to Summary](#)



Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for North Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

Figure 6: Rainfall Charts: South West Wales



Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for South West Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

Soil Moisture Deficit (SMD)

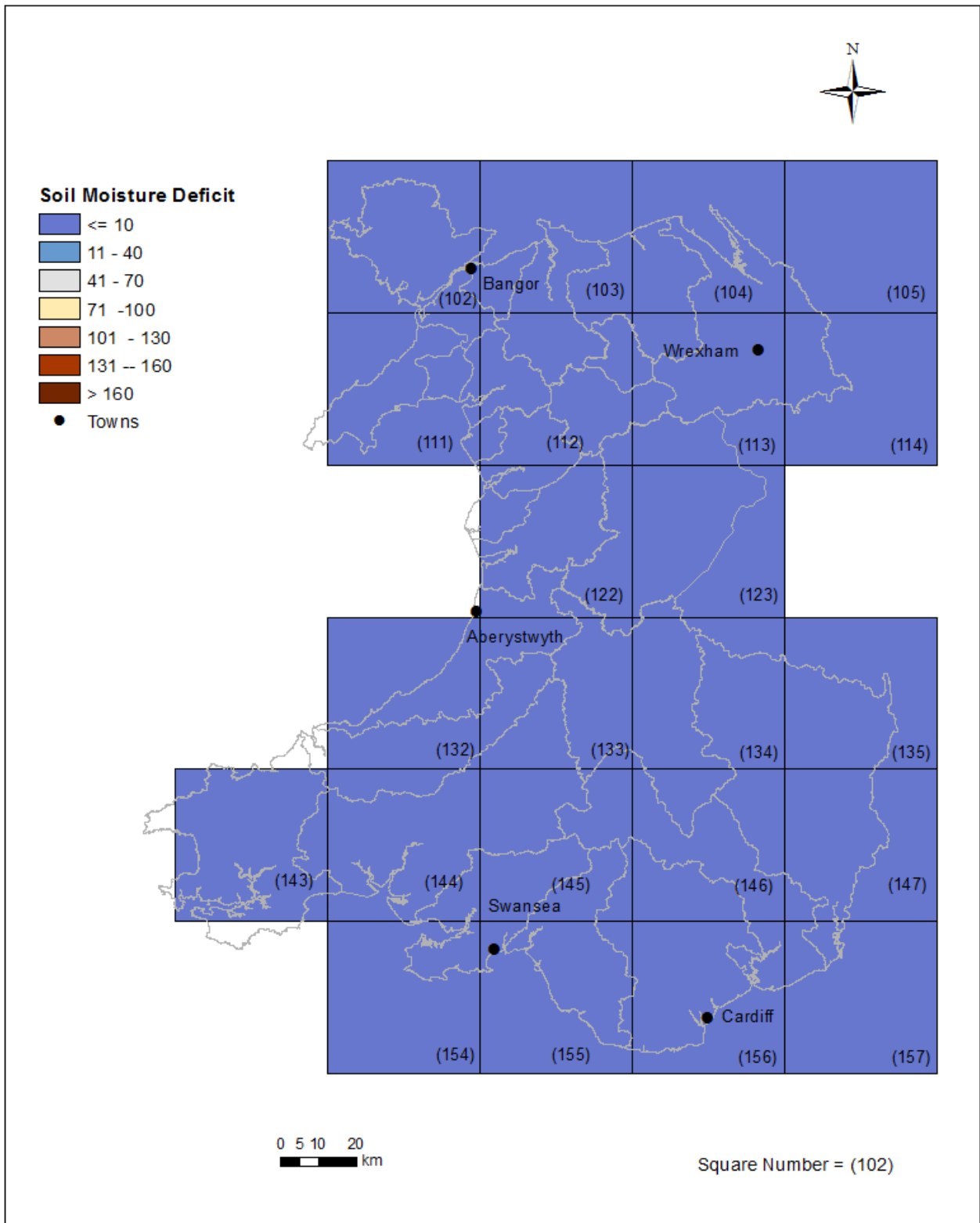


Figure 7: MORECS soil moisture deficits (mm) for March for real land use for Natural Resources Wales (Source: Met Office © Crown Copyright).

[Return to Summary](#)

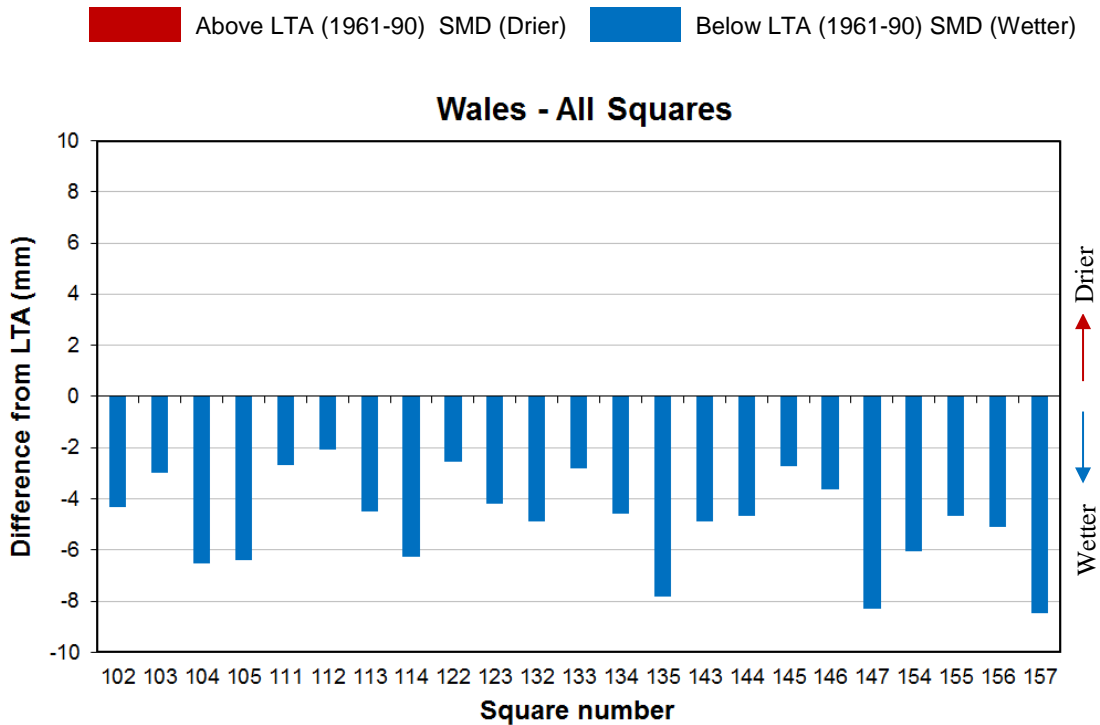


Figure 8: MORECS month end soil moisture deficits difference (mm) from the 1961-90 long term monthly average (LTA) for March for real land use for Natural Resources Wales squares (Source: Met Office © Crown Copyright).

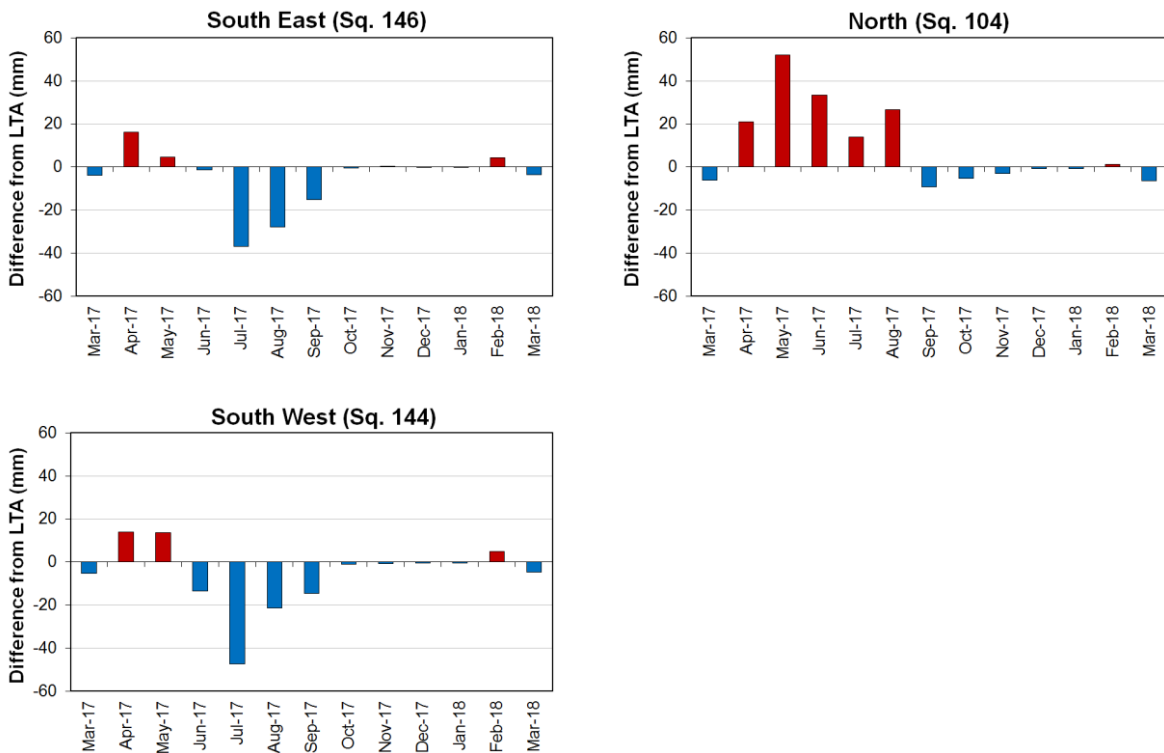


Figure 9: MORECS month end soil moisture deficit difference (mm) from the 1961-90 long term monthly average (LTA) for real land use for South East, North and South West (Source: Met Office © Crown Copyright). (Note: no LTA available for Natural Resources Wales.)

River Flow

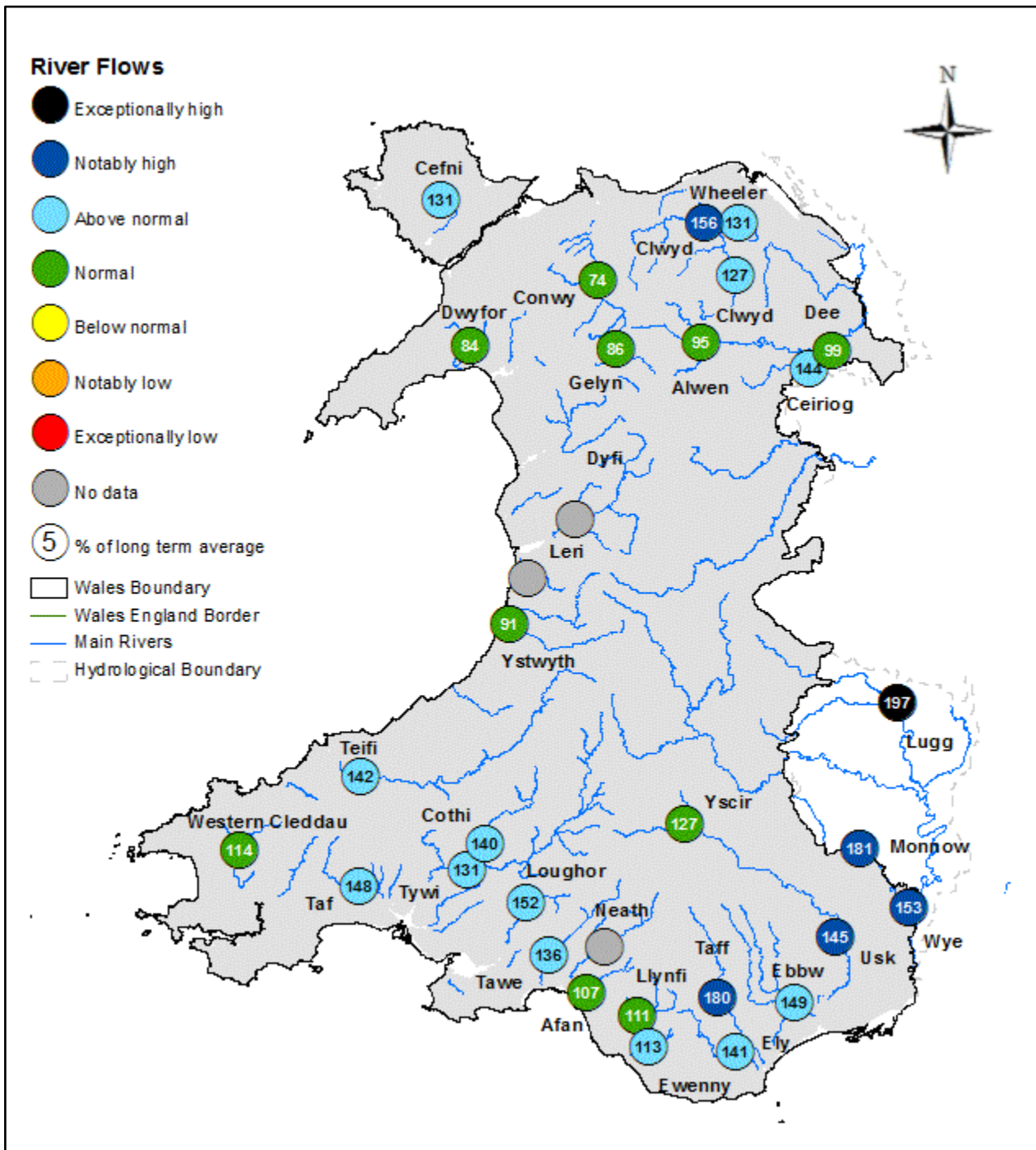


Figure 10: Monthly mean river flow for March, classed relative to analysis of historic March monthly means (Source: Natural Resources Wales).

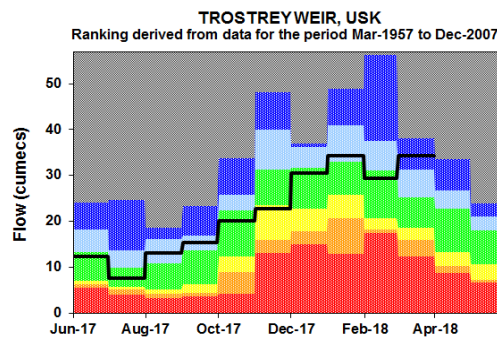
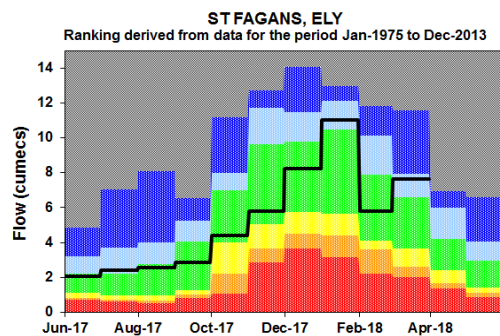
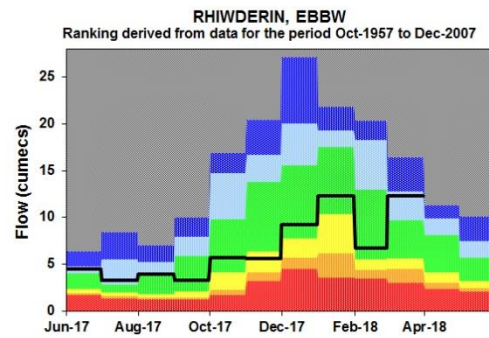
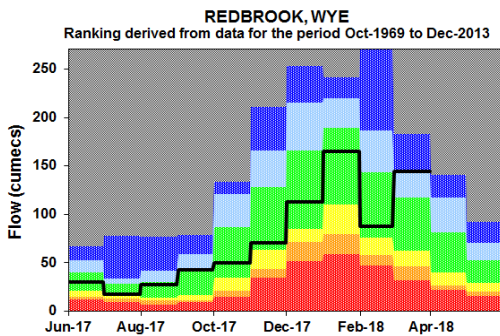
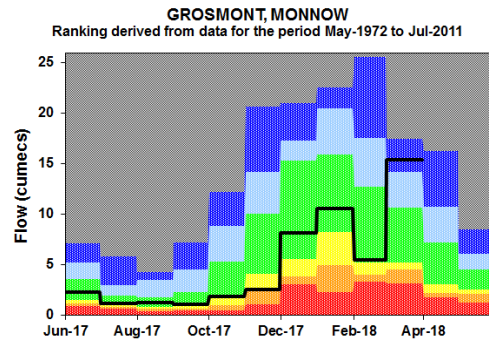
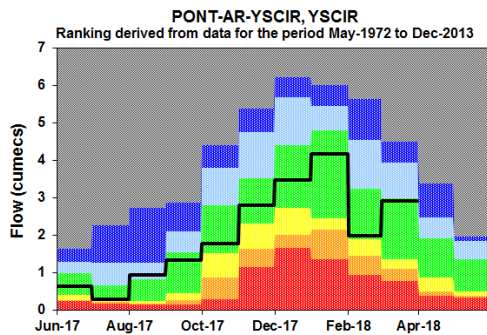
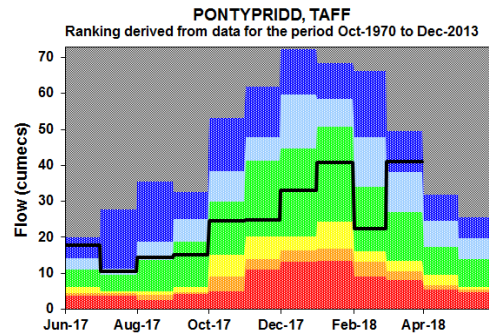
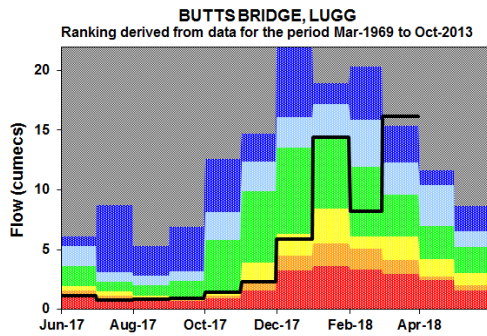
[Return to Summary](#)

SITE NAME	RIVER	March 2018			March 2017		March LTA		
		Class	% of LTA	Flow (m3/s)	% of LTA	Flow (m3/s)	LTA	Monthly Min (m3/s)	Monthly Max (m3/s)
River Flow Sites : South East Area									
Butts Bridge	Lugg	Exceptionally high	197%	16.20	120%	9.84	8.21	1.97	19.80
Grosmont	Monnow	Notably high	181%	15.40	94%	7.97	8.49	1.66	22.50
Pont ar Yscir	Yscir	Normal	127%	2.91	142%	3.26	2.30	0.38	6.30
Pontypridd	Taff	Notably high	180%	41.00	124%	28.30	22.74	4.87	72.70
Redbrook	Wye	Notably high	153%	144.00	132%	124.00	93.85	20.80	245.00
Rhiwderin	Ebbw	Above normal	149%	12.30	107%	8.85	8.26	2.29	25.00
St Fagans	Ely	Above normal	141%	7.64	132%	7.14	5.41	1.37	13.60
Trostrey Weir	Usk	Notably high	145%	34.30	134%	31.80	23.73	8.23	66.70
River Flow Sites : North Area									
Bodfari	Wheeler	Above normal	131%	1.24	136%	1.29	0.95	0.47	1.76
Bodffordd	Cefni	Above normal	126%	0.54	170%	0.73	0.43	0.16	0.93
Brynkinalt Weir	Ceiriog	Above normal	144%	5.32	130%	4.80	3.70	0.73	9.04
Cwmlanerch	Conwy	Normal	74%	14.70	152%	30.10	19.84	5.08	56.00
Cynefail	Gelyn	Normal	86%	0.60	151%	1.06	0.70	0.20	1.63
Dol y Bont	Leri						1.69	0.48	3.90
Druid	Alwen	normal	95%	5.25	129%	7.10	5.52	1.64	15.30
Dyfi bridge	Dyfi						27.25	5.65	75.80
Garndolbenmaen	Dwyfor	Normal	84%	2.34	174%	4.84	2.78	0.83	6.96
Manley Hall	Dee	Normal	99%	34.10	141%	48.30	34.37	10.50	83.60
Pont y Cambwll	Clwyd	Notably high	156%	11.40	162%	11.80	7.30	2.26	17.80
Ruthin Weir	Clwyd	Above normal	127%	2.48	114%	2.23	1.96	0.41	4.00
River Flow Sites : South West Area									
Capel Dewi	Tywi	Above normal	131%	57.80	111%	48.90	44.18	11.00	138.00
Clog y Fran	Taf	Above normal	148%	12.10	153%	12.50	8.18	2.88	26.60
Coytrahen	Llynfi	Normal	111%	2.75	119%	2.94	2.47	0.67	7.64
Felin Mynachdy	Cothi	Above normal	140%	17.00	165%	20.00	12.15	2.82	40.70
Glanteifi	Teifi	Above normal	142%	43.20	176%	53.60	30.47	8.28	96.70
Keepers Lodge	Ewenny	Above normal	113%	2.45	119%	2.58	2.16	0.80	6.00
Marcroft	Afan	Normal	107%	6.03	133%	7.48	5.61	1.31	16.50
Pont Llolwyn	Ystwyth	Normal	91%	5.63	194%	12.00	6.17	1.72	18.50
Treffgarne *	Western Cleddau	Normal	114%	4.92	104%	4.49	4.32	1.66	11.89
Resolven	Neath				125%	13.60	10.91	1.89	33.00
Tir-y-Dail	Loughor	Above normal	152%	3.42	154%	3.46	2.25	0.74	5.23
Ynystanglws	Tawe	Above normal	136%	16.30	157%	18.90	12.01	3.18	41.60

Figure 11: Monthly mean river flow for March with comparison against previous year expressed as a percentage of the March long term average and classed relative to analysis of historic March monthly means. (Source: Natural Resources Wales). (* For Treffgarne station the LTAs were derived using scaled historical flows (1965-2003) from the downstream station at Prendergast Mill. There was no flow data for Resolven due to the maintenance work at the gauge station.)

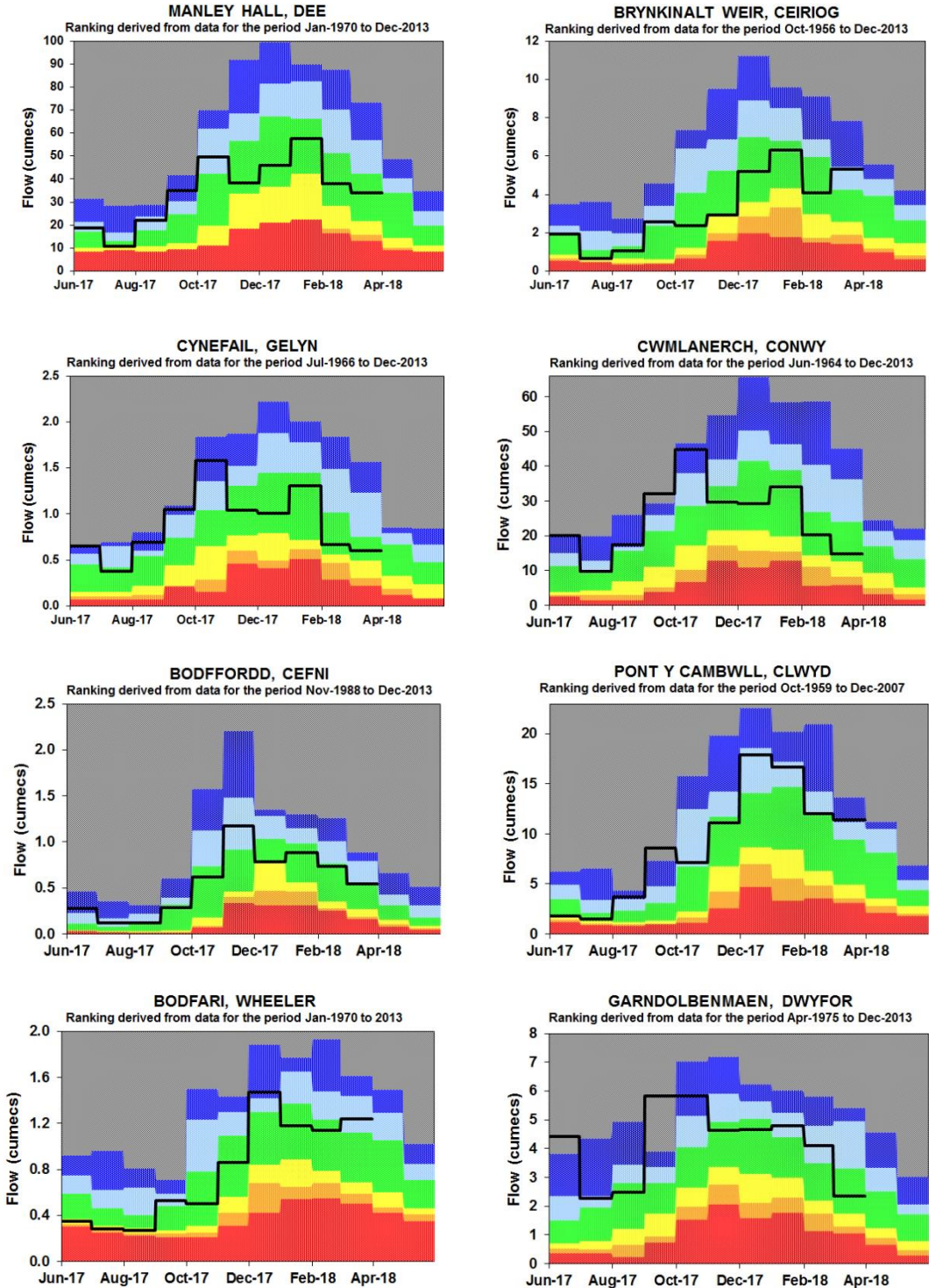
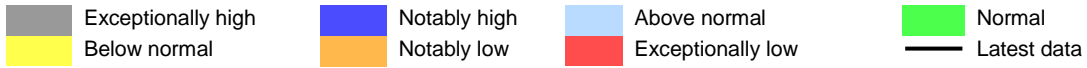
River Flow Charts

Figure 12: River Flow Charts: South East Wales



Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels (*Source: Natural Resources Wales*).

Figure 13: River Flow Charts: North Wales



Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels (Source: Natural Resources Wales).

[Return to Summary](#)

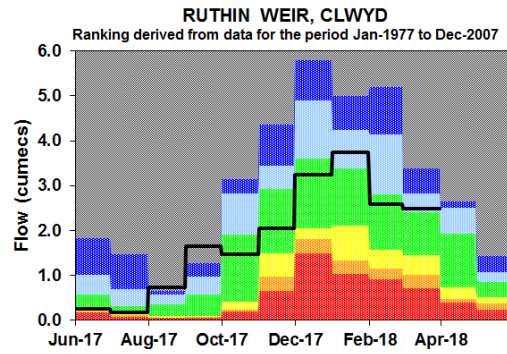
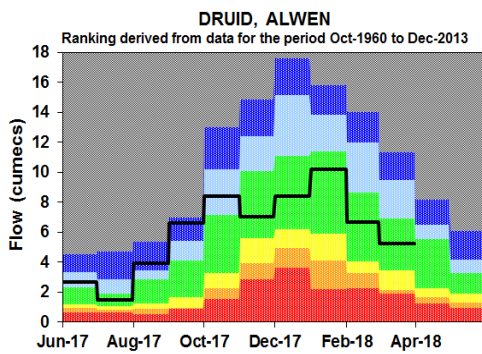
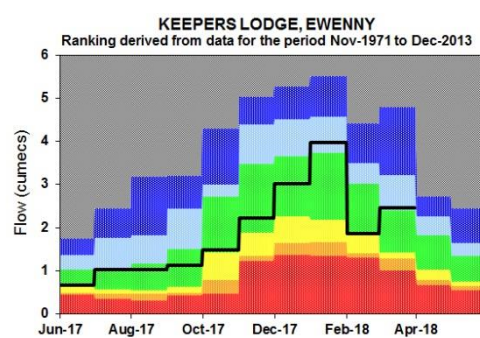
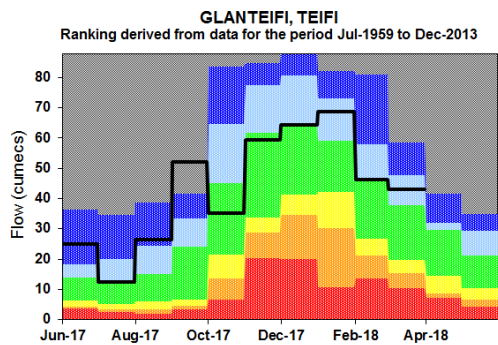
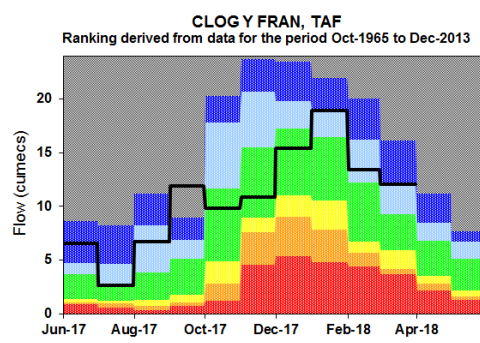
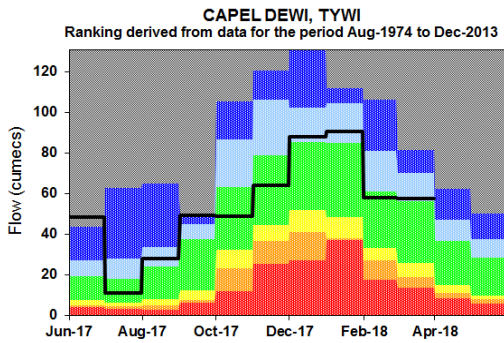
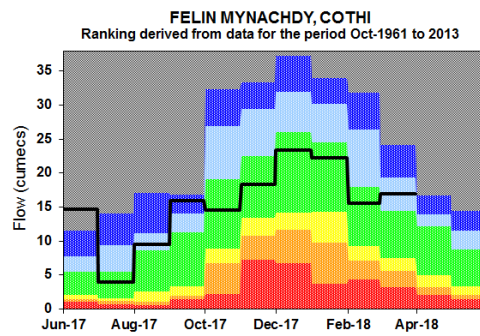
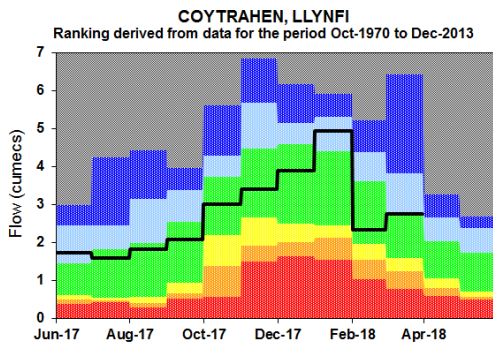
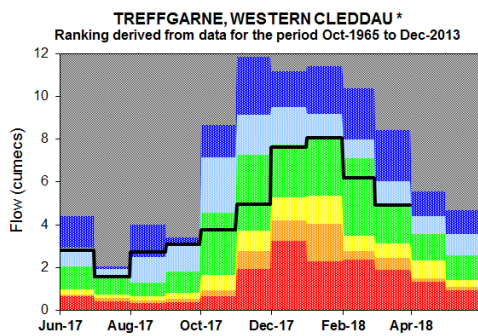
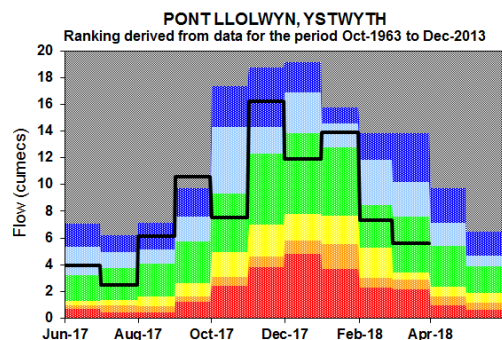
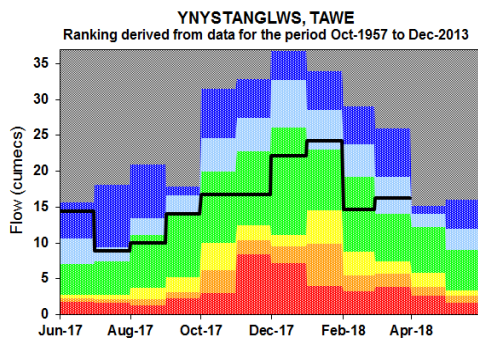
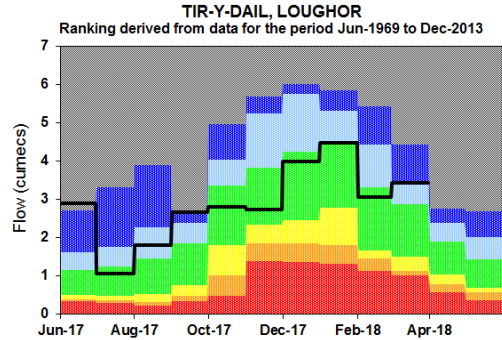
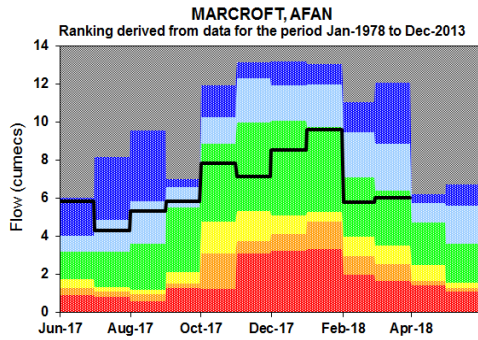
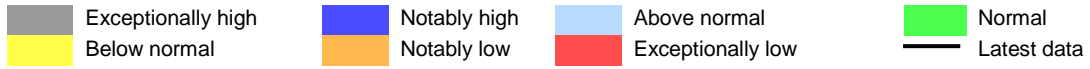


Figure 14: River Flow Charts: South West Wales



[Return to Summary](#)



Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels. (Source: Natural Resources Wales).

(* Please note that for Treffgarne station the ranking bands were derived using scaled historical flows (1965-2003) from the downstream station at Prendergast Mill)

Groundwater Levels

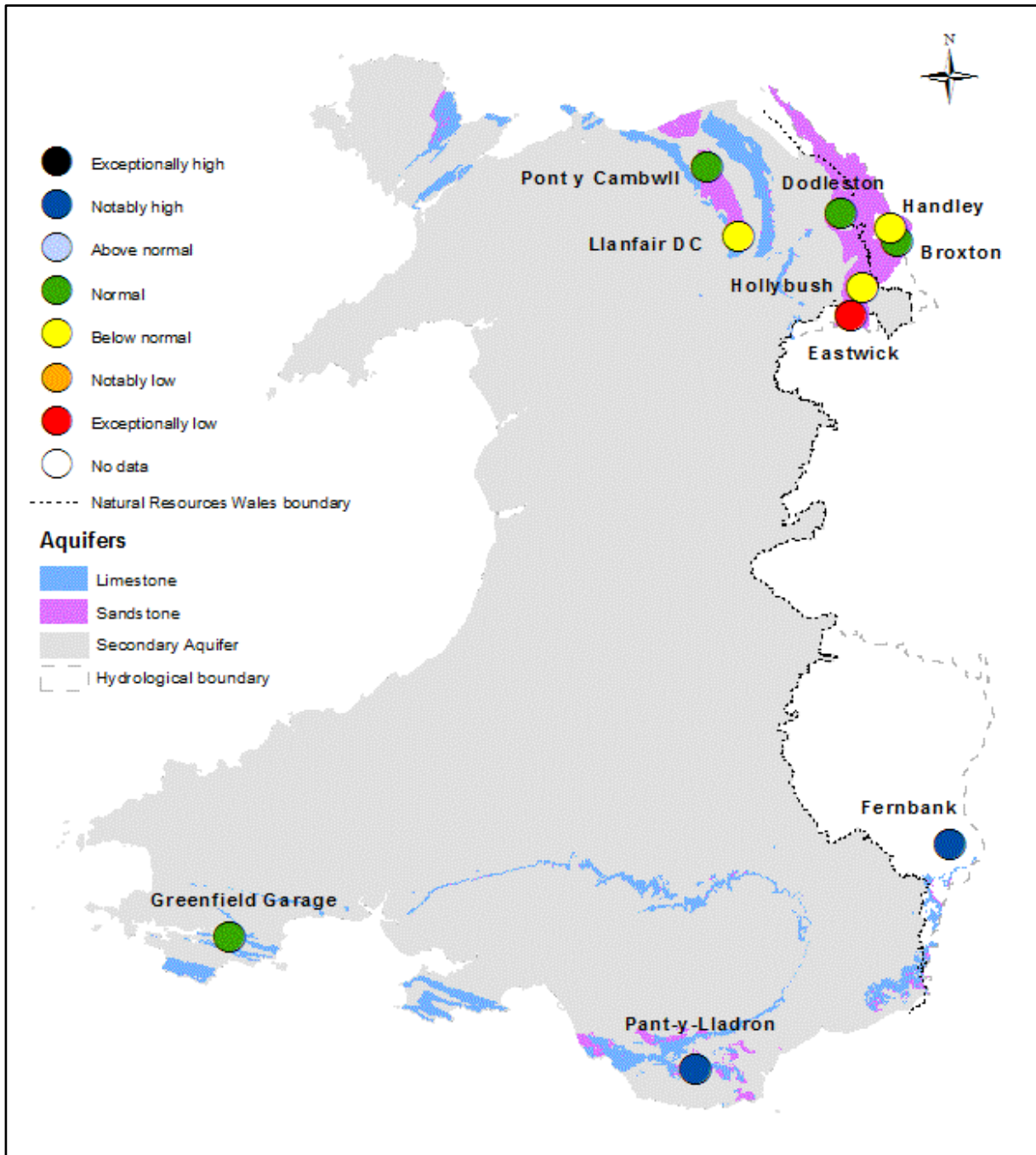
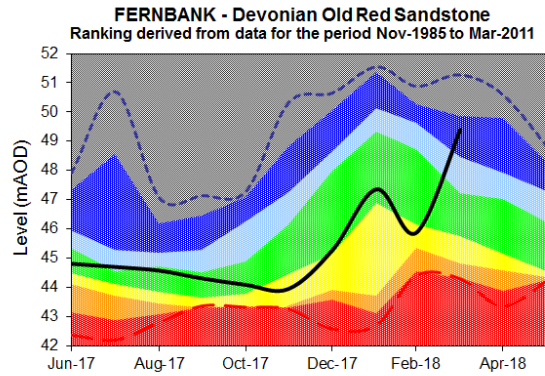
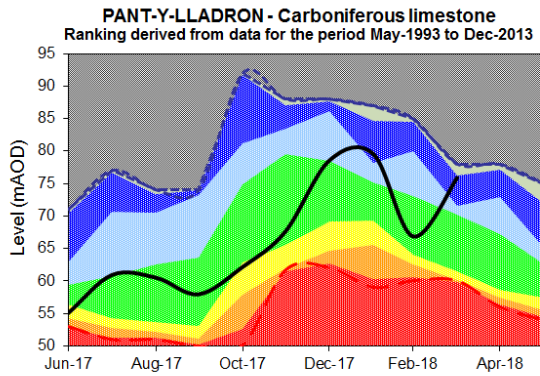
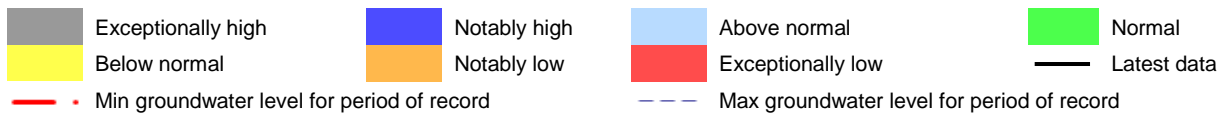


Figure 15: Groundwater levels at the end of month classed relative to an analysis of historic March groundwater levels (Source: Natural Resources Wales and Environment Agency).

[Return to Summary](#)

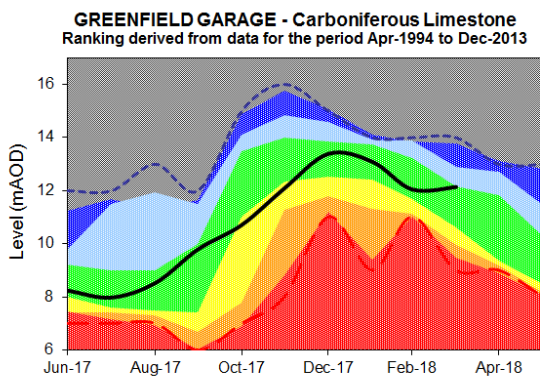
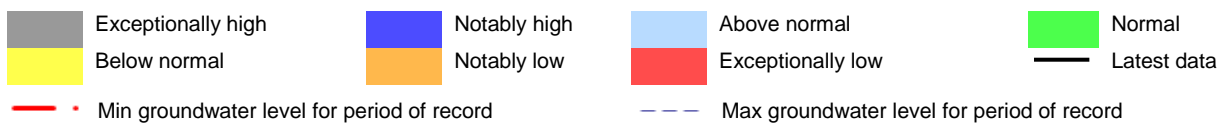
Groundwater charts

Figure 16: Groundwater level charts: South East Wales



End of month groundwater levels for the past 10 months for index sites (Source: Natural Resources Wales).

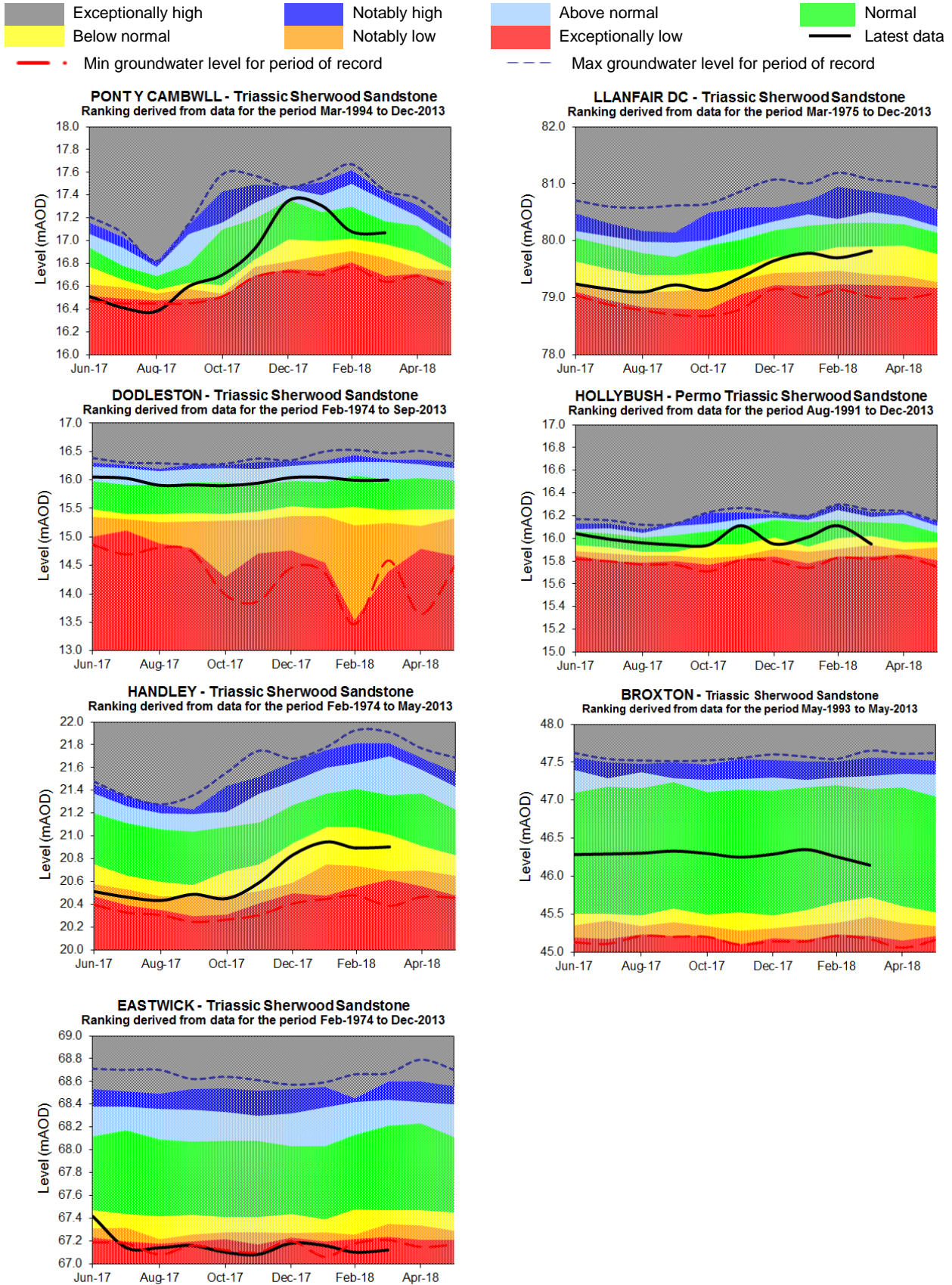
Figure 17: Groundwater level charts: South West Wales



End of month groundwater levels for the past 10 months for index sites (Source: Natural Resources Wales).

[Return to Summary](#)

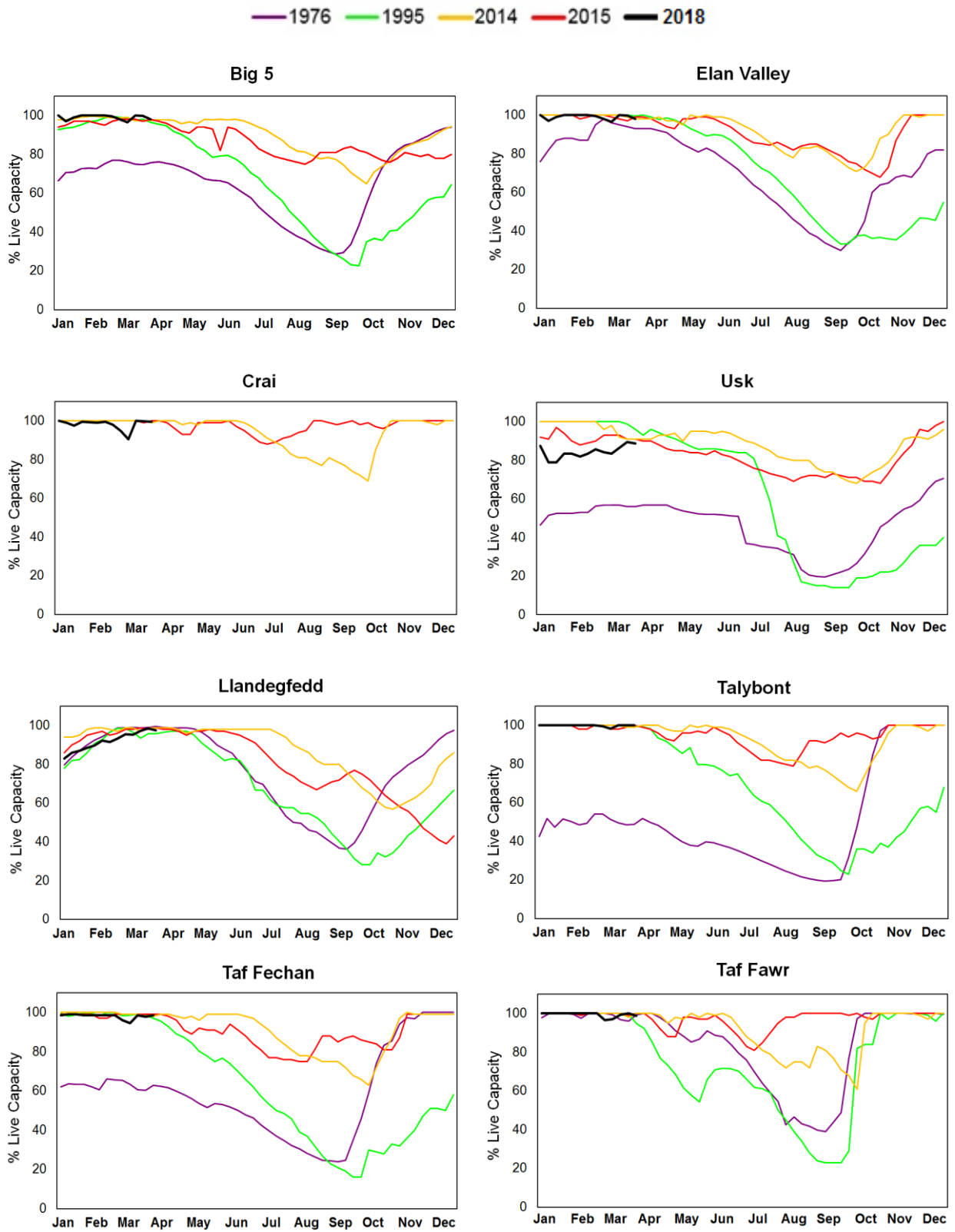
Figure 18: Groundwater level charts: North Wales



End of month groundwater levels for the past 10 months for index sites (Source: Natural Resources Wales and Environment Agency).

Reservoir Storage

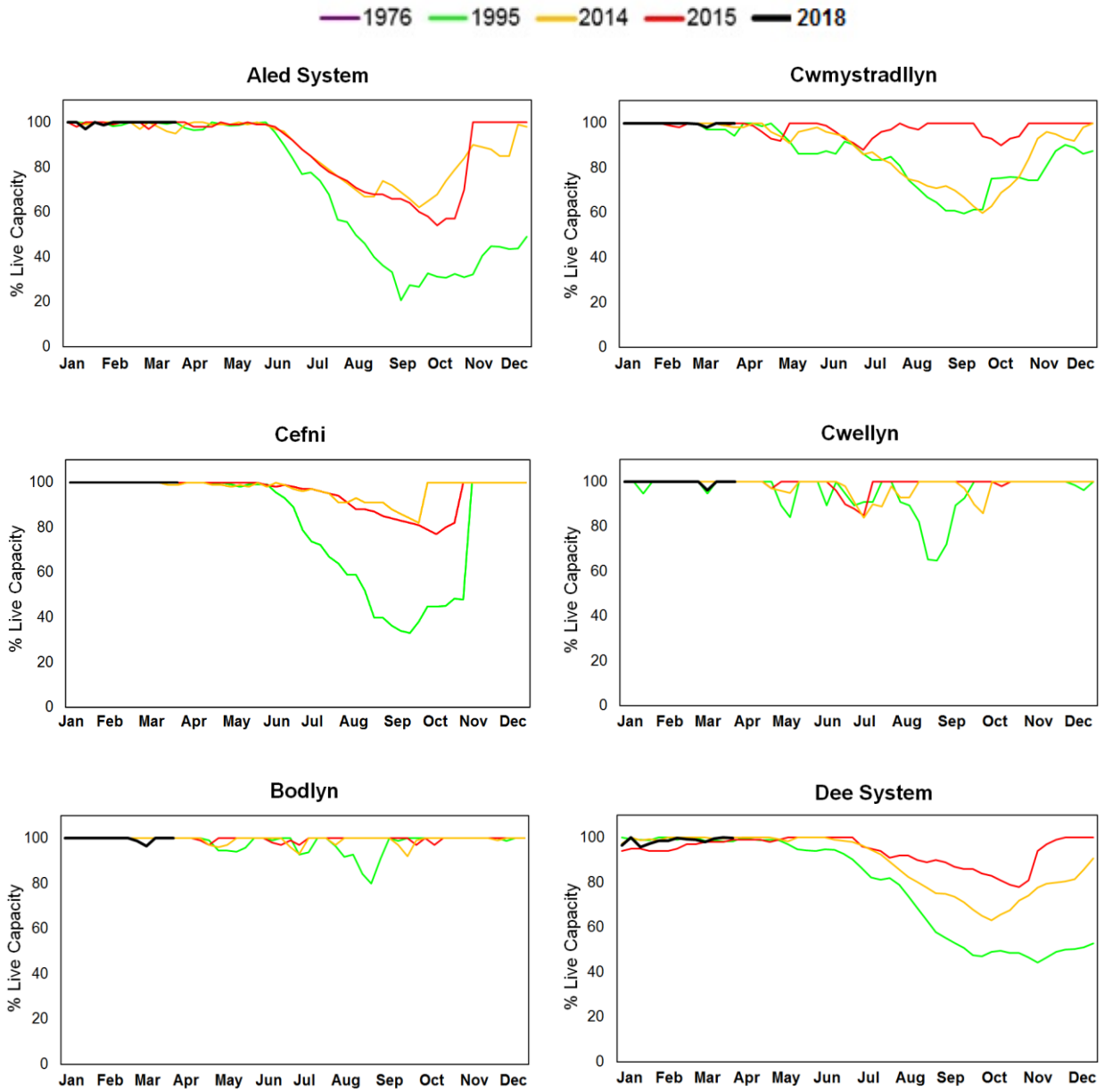
Figure 19: Reservoir charts: South East Wales



Weekly reservoir stocks for Natural Resources Wales index sites (Source: Welsh Water)

[Return to Summary](#)

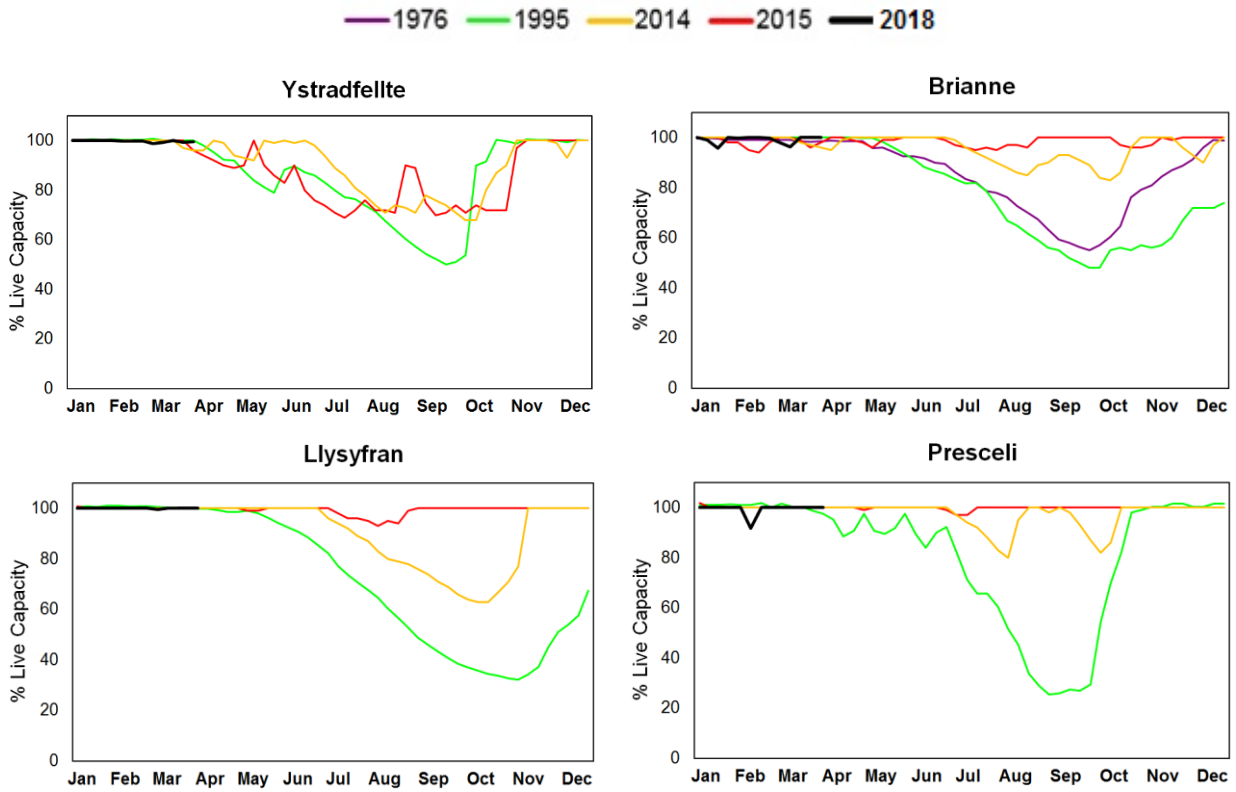
Figure 20: Reservoirs charts: North Wales



Weekly reservoir stocks for Natural Resources Wales index sites (Source: Welsh Water).

[Return to Summary](#)

Figure 21: Reservoirs charts: South West Wales



Weekly reservoir stocks for Natural Resources Wales index sites (Source: Welsh Water).

Glossary

Term	Definition
Aquifer	A geological formation able to store and transmit water.
Areal average rainfall	The estimated average depth of rainfall over a defined area. Expressed in depth of water (mm).
Effective rainfall	The rainfall available to percolate into the soil or produce river flow. Expressed in depth of water (mm).
Groundwater	The water found in an aquifer
Meteorological Office Rainfall and Evaporation Calculating System (MORECS)	The Met Office provides climate data for grid squares measuring 40km by 40km across the UK using MORECS
Recharge	The process of increasing the water stored in the saturated zone of an aquifer. Expressed in depth of water (mm).
Reservoir live capacity	The reservoir capacity normally usable for storage to meet established reservoir operating requirements. It is the total capacity less that not available because of operating agreements or physical restrictions. Only under abnormal conditions, such as a severe water shortage might this additional water be extracted.
Soil moisture deficit (SMD)	The difference between the amount of water actually in the soil and the amount of water that the soil can hold. Expressed in depth of water (mm).

Categories

Exceptionally high	Value likely to fall within this band 5% of the time
Notably high	Value likely to fall within this band 8% of the time
Above normal	Value likely to fall within this band 15% of the time
Normal	Value likely to fall within this band 44% of the time
Below normal	Value likely to fall within this band 15% of the time
Notably low	Value likely to fall within this band 8% of the time
Exceptionally low	Value likely to fall within this band 5% of the time

Units

cumecs	Cubic metres per second ($\text{m}^3 \text{s}^{-1}$)
mAOD	Metres Above Ordnance Datum (mean sea level at Newlyn Cornwall).