

## Natural Resources Wales

- The monthly rainfall total for Wales during July was 166% of the Long Term Average (LTA, 1961-90). South East, South West and North Wales received 168%, 160% and 170% of the LTA, respectively.
- At the end of July, soil moisture deficit (SMD) values across Wales were from 0 to 119.2mm for all MORECS squares. Soil in 15 squares (out of 23) was wetter than the LTA while soil in the rest of the squares (8 out of 23) were drier than the LTA for July.
- For river flows in Wales, 16 out of 30 indicator sites (which had flow data available) were classed as *Normal* and 11 were classed as *Above normal*. 1 site was classed as *Below normal* and 1 site was *Notably low*. The remaining site was *Exceptionally low* for July.
- The overall cumulative reservoir storage across the indicator sites was greater than 85% except 5 reservoirs (Elan Valley, Usk, Ystradfellte, Llandegfedd and the Big Five) at the end of July and all reservoirs were within normal operating ranges.

### Rainfall\*

The monthly rainfall total for Wales was 166% of the LTA for July. The percentage of rainfall recorded in catchments compared with the LTA across Wales was between 145% (Gwyrfai/Seiont) and 212% (Dwyfor). The rainfall total for Wales was 51.5mm more than the July LTA. For South East, South West and North Wales the rainfall totals were 168%, 160% and 170% 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

All 23 MORECS squares had SMD values which were between 0 and 119.2mm. 15 squares were wetter than the long term average while the remaining 8 squares were drier than the LTA for July.

SMD Map [National](#)

SMD Charts [Compare to LTA](#)

All data are provisional and July be subject to revision.

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## River Flows

River flows were between exceptionally low to above normal for all the indicator sites across Wales. 16 out of 30 indicator sites (which had flow data available) were classed as *Normal* and 11 were classed as *Above normal*. 1 site was classed as *Below normal* and 1 site was *Notably low*. The remaining site was classed as *Exceptionally low* for July.

**South East:** Flows in the area ranged from 29% (River Lugg at Butts Bridge) to 120% (River Ely at St Fagans) of the July LTA values.

**South West:** The river flows within this area ranged from 71% (River Tywi at Capel Dewi) to 218% (River Neath at Resolven) of the July LTA values.

**North:** Flows in the area ranged from 43% (River Clwyd at Ruthin Weir) to 150% (River Cefni at Bodffordd) of the July 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 July at all indicator sites (10 sites) were classed between *Exceptionally low* (Pont y Cambwll and Eastwick) to *Above normal* (Pant-y-Lladron, Fernbank and Dodleston). 3 sites were classed as *Normal* (Greenfield Garage, Hollybush and Broxton) and 2 sites were classed as *Notably low* (Llanfair DC and Handley).

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

## Reservoir Storage

At the end of July most of the indicator reservoirs (13 out of 18) were greater than 85% full and the remaining five reservoirs (Usk, Elan Valley, Llandegfedd, Ystradfellte and Big 5) were 67%, 68%, 70%, 72% and 81% full respectively. All of them were in normal operation.

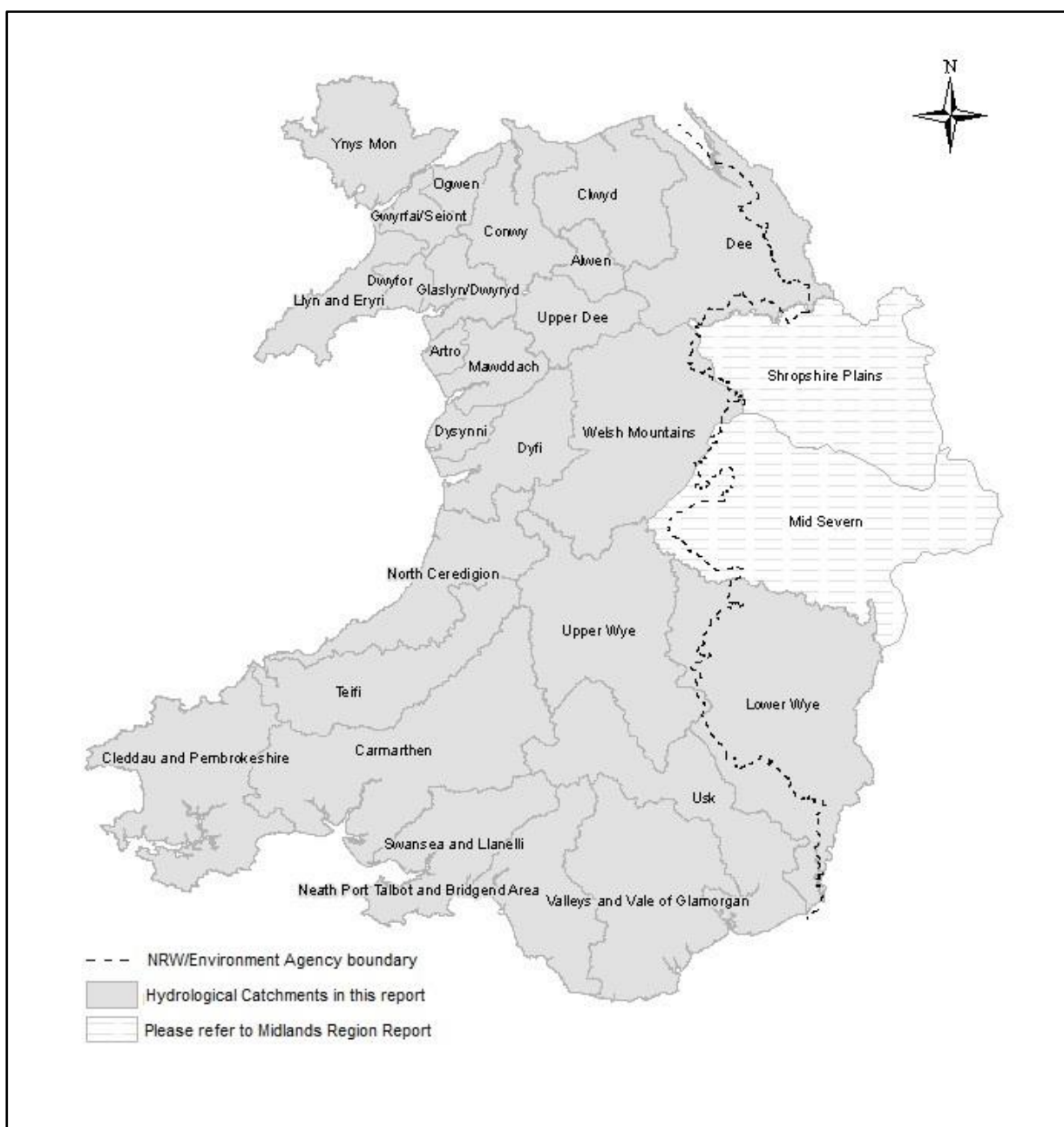
Reservoir Charts        [South East Wales](#)   [North Wales](#)   [South West Wales](#)

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

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## 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:**

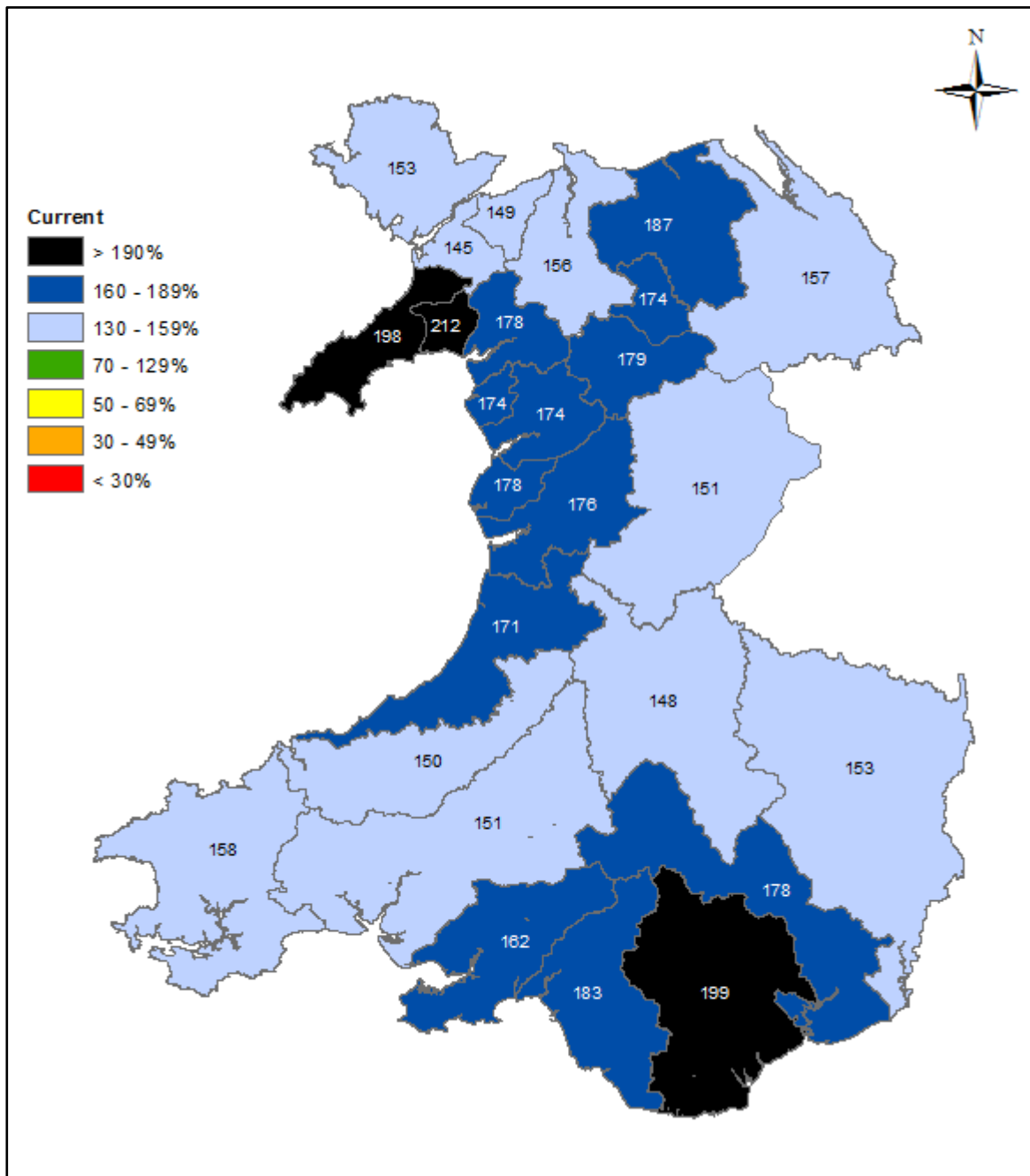
[Environment Agency - Midlands, England Water Situation Report](#)

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

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## Rainfall



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

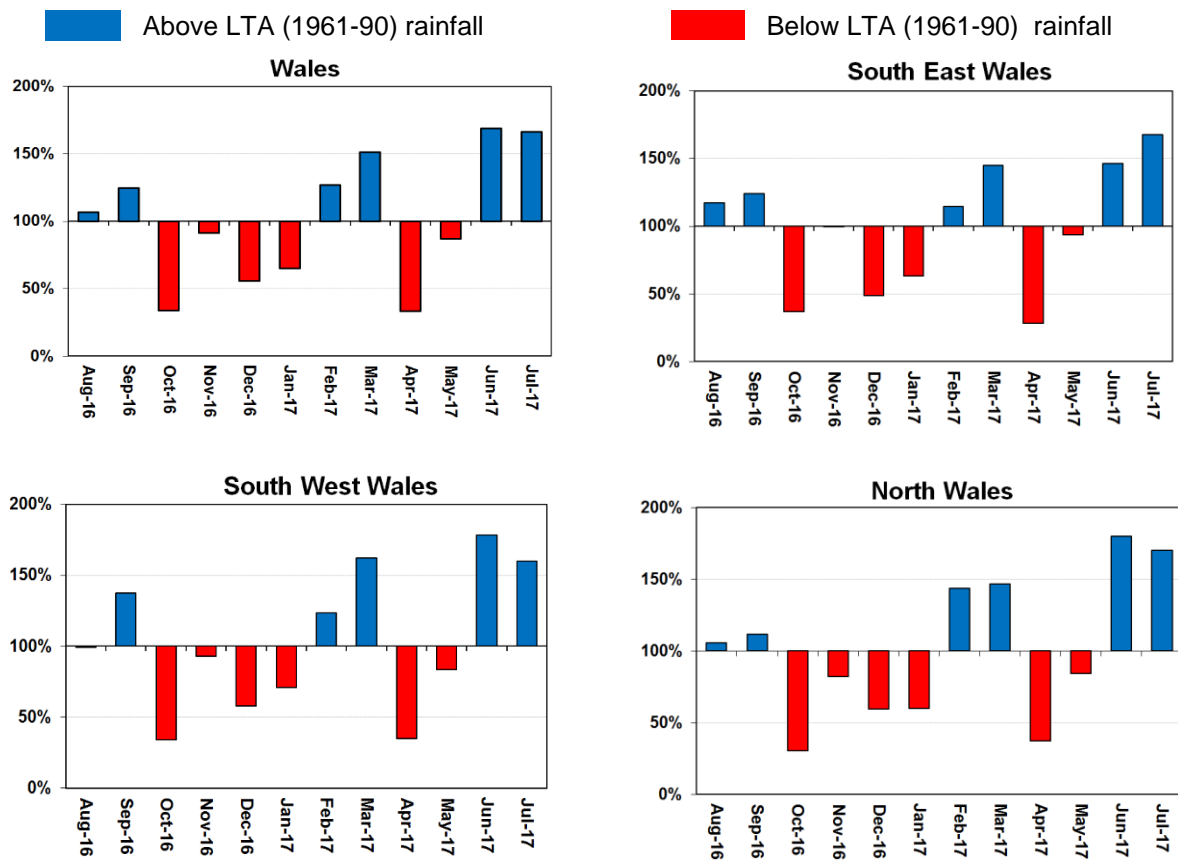
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## Rainfall Charts

Figure 3: Rainfall Charts: National and Areas

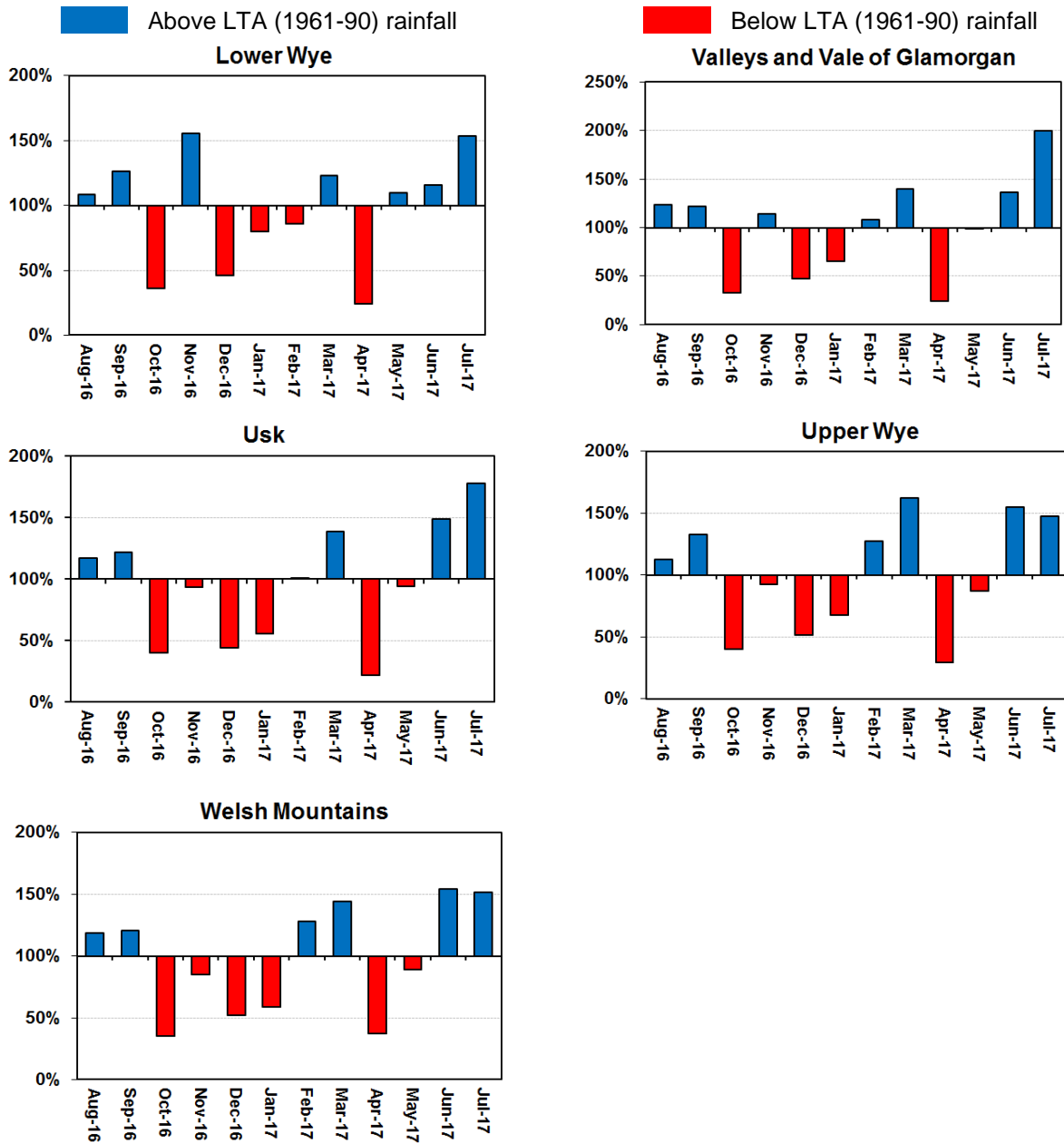


Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for Natural Resources Wales and Areas, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

All data are provisional and Jul be subject to revision.

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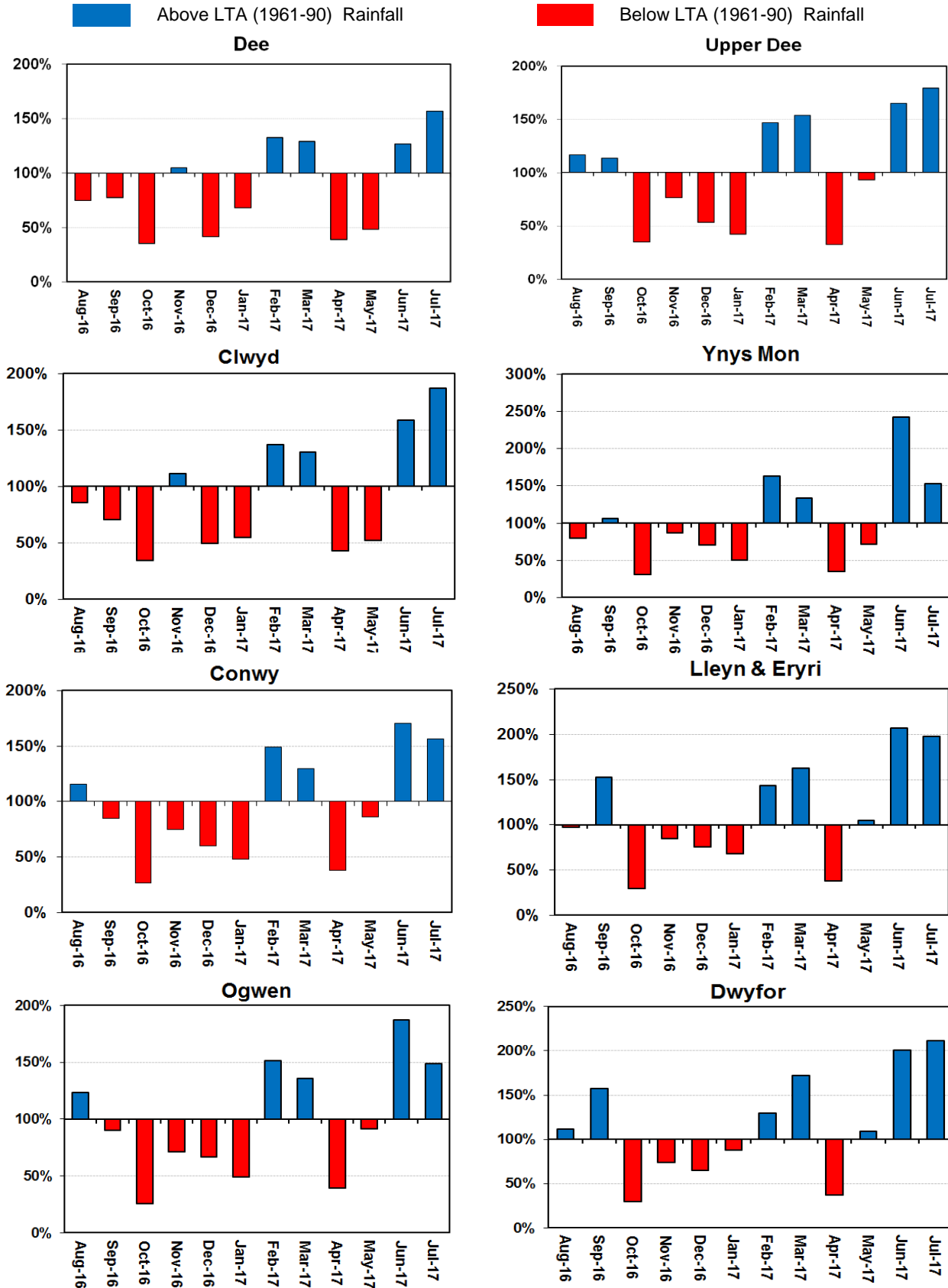
**Figure 4: Rainfall Charts: South East Wales**



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).

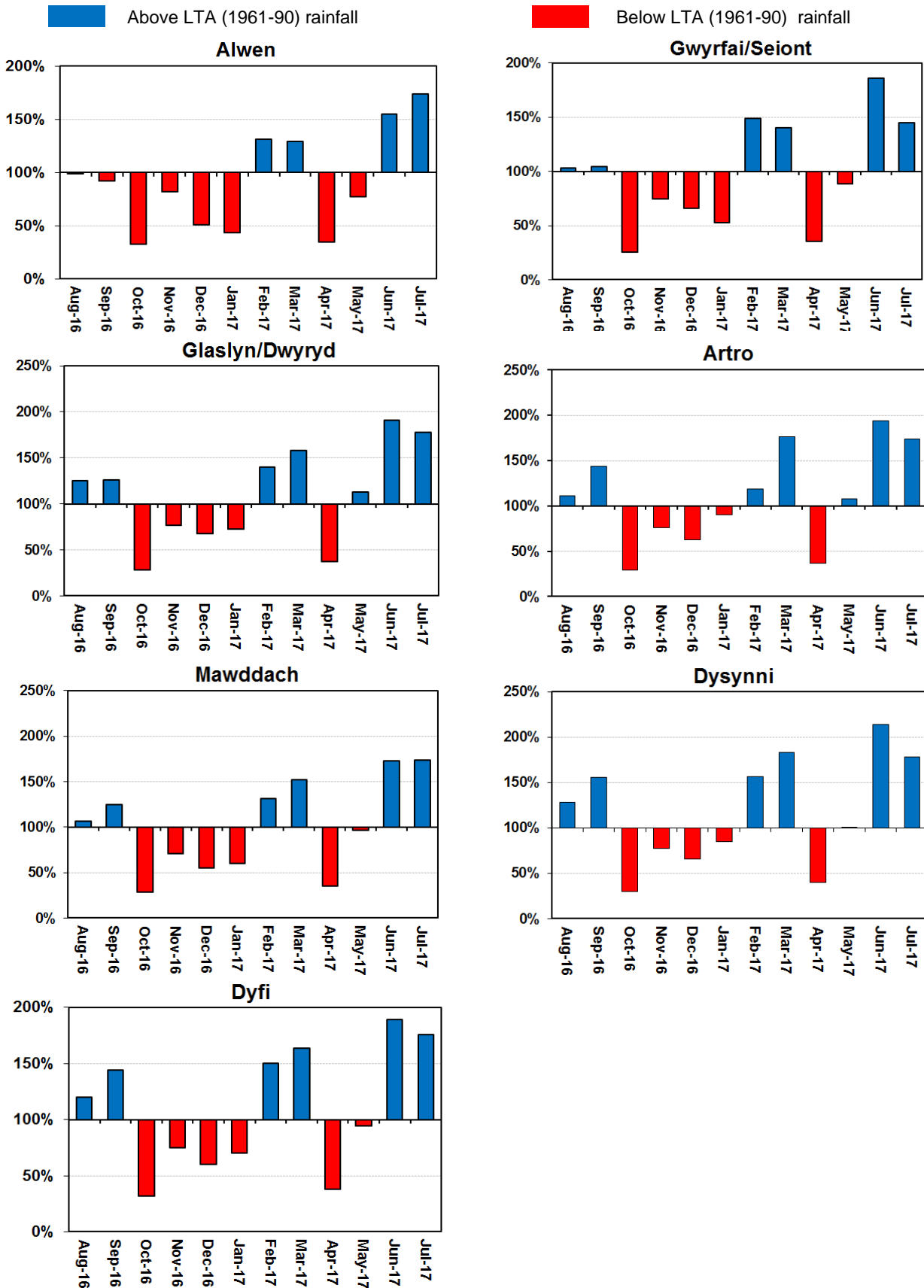
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**Figure 5: Rainfall Charts: North Wales**



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).

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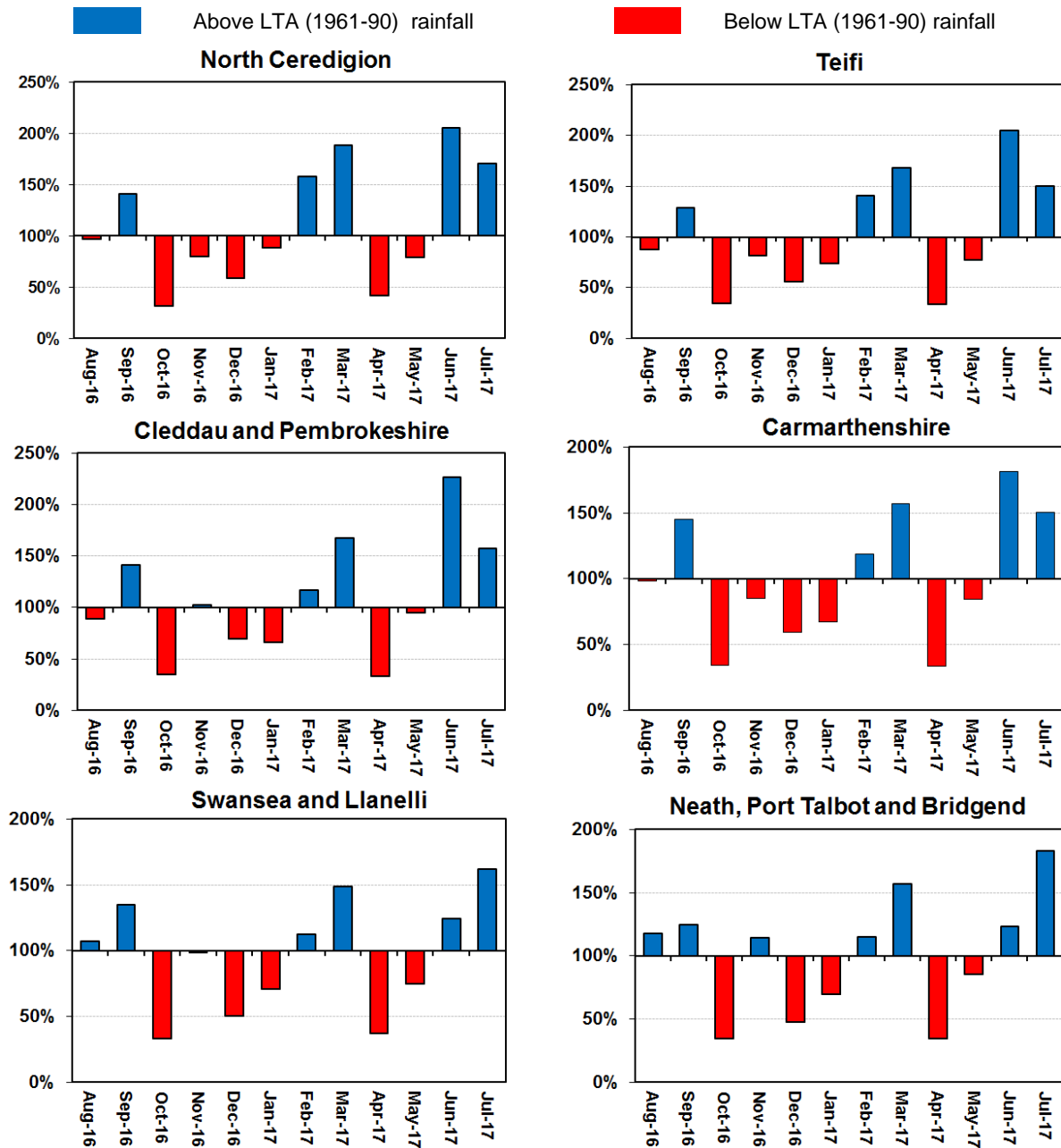


Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for North Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).



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**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)

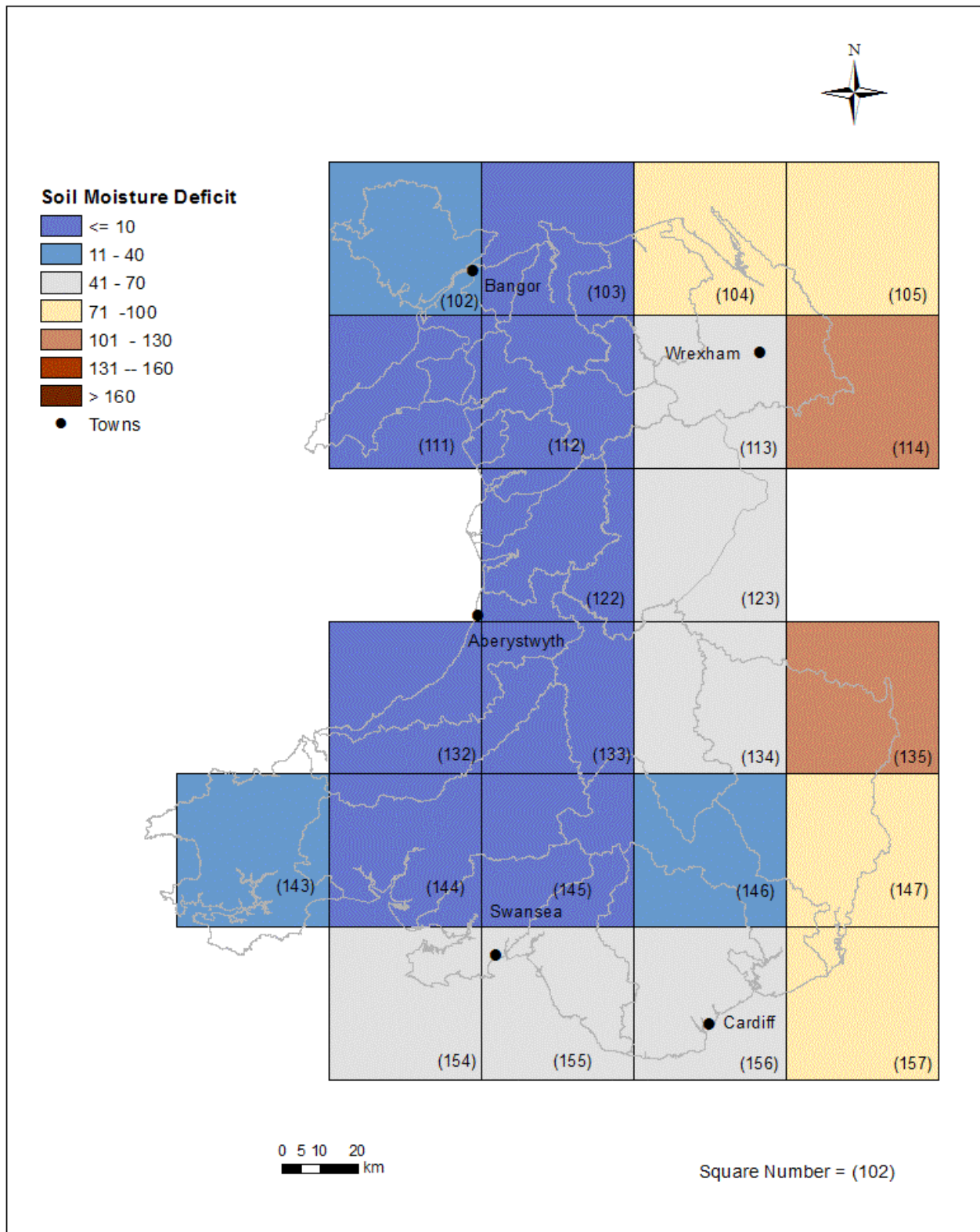


Figure 7: MORECS soil moisture deficits (mm) for July for real land use for Natural Resources Wales (Source: Met Office © Crown Copyright).

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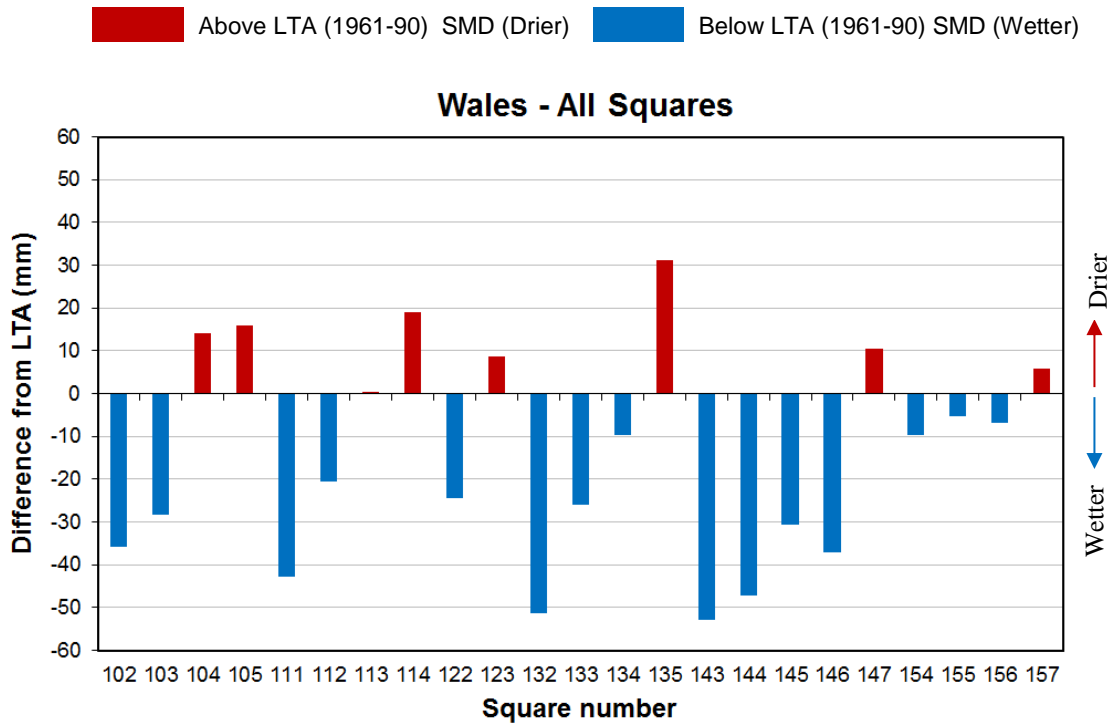


Figure 8: MORECS month end soil moisture deficits difference (mm) from the 1961-90 long term monthly average (LTA) for July for real land use for Natural Resources Wales squares (Source: Met Office © Crown Copyright).

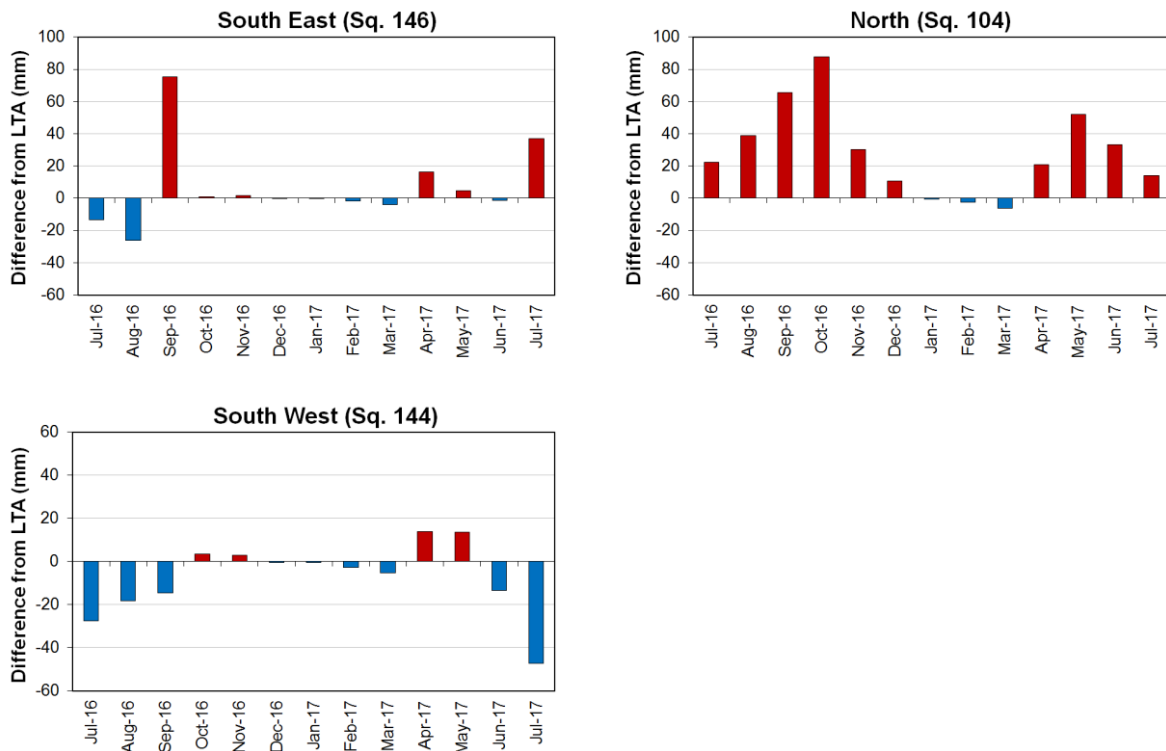


Figure 9: MORECS month end soil moisture deficit difference (mm) from the 1961-90 long term monthly average (LTA) for real land use for South East, North and South West (Source: Met Office © Crown Copyright). (Note: no LTA available for Natural Resources Wales.)

## River Flow

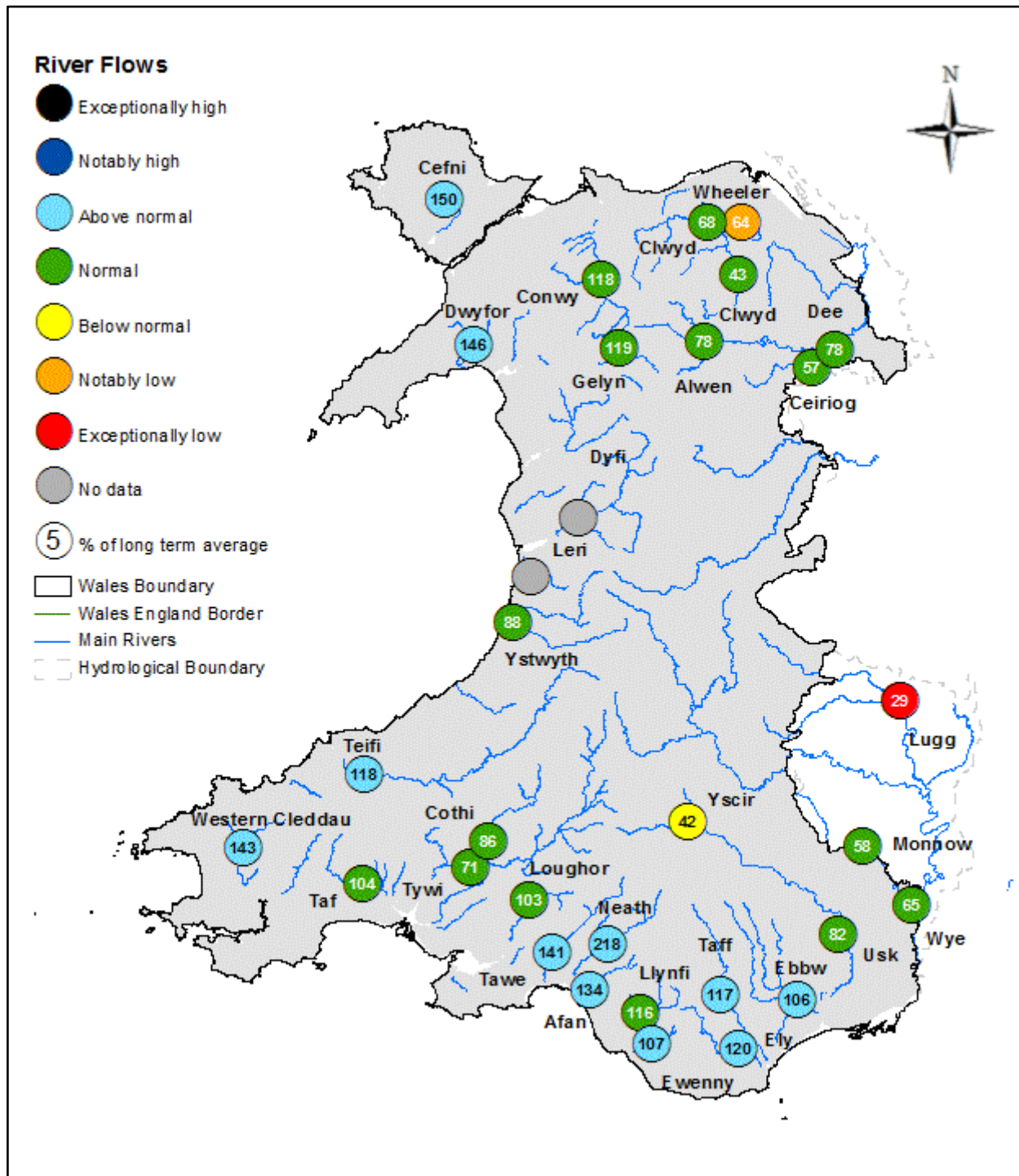


Figure 10: Monthly mean river flow for July, classed relative to analysis of historic July monthly means (Source: Natural Resources Wales).

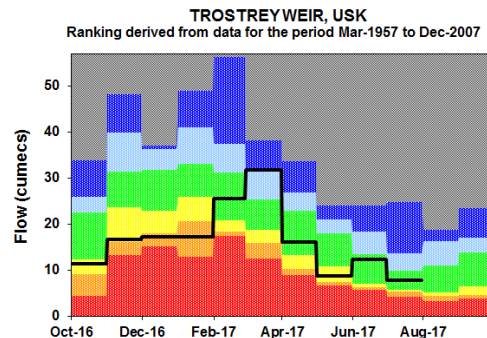
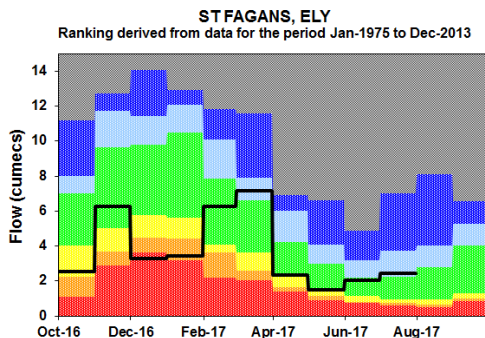
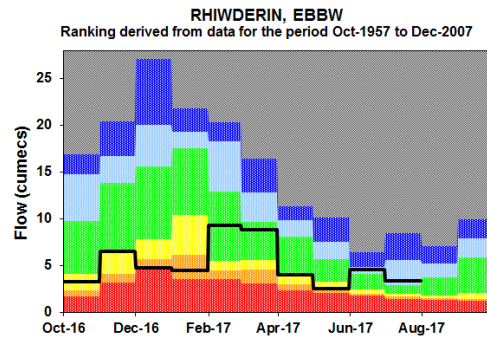
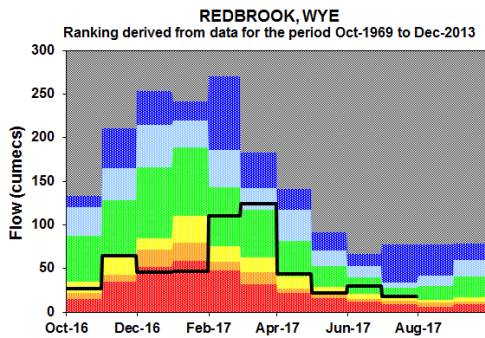
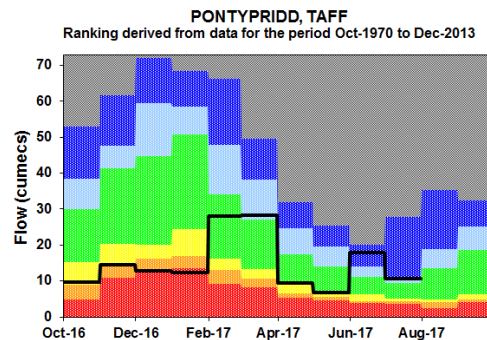
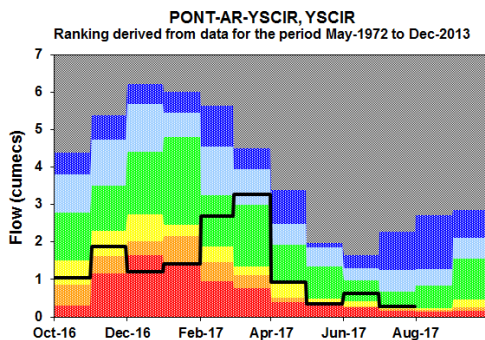
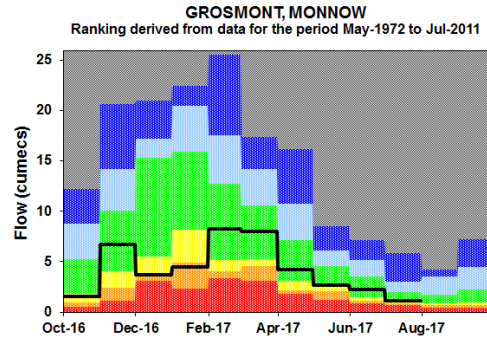
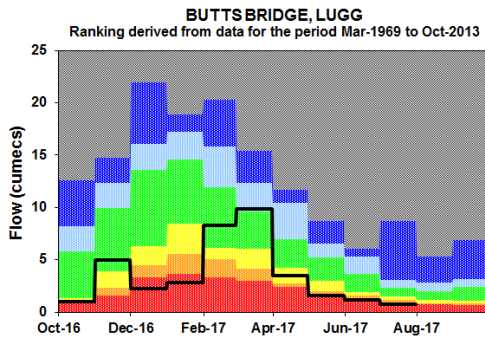
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SITE NAME	RIVER	July 2017			July 2016		July LTA		
		Class	% of LTA	Flow (m3/s)	% of LTA	Flow (m3/s)	LTA	Monthly Min (m3/s)	Monthly Max (m3/s)
<b>River Flow Sites : South East Area</b>									
Butts Bridge	Lugg	Exceptionally low	29%	0.77	64%	1.68	2.64	0.64	23.20
Grosmont	Monnow	Normal	58%	1.14	103%	2.04	1.98	0.44	13.20
Pont ar Yscir	Yscir	Below normal	42%	0.28	101%	0.68	0.67	0.15	3.13
Pontypridd	Taff	Above normal	117%	10.60	104%	9.37	9.03	2.59	36.60
Redbrook	Wye	Normal	65%	17.70	125%	34.00	27.27	7.43	174.00
Rhiwderin	Ebbw	Above normal	106%	3.30	76%	2.35	3.11	1.26	10.90
St Fagans	Ely	Above normal	120%	2.42	96%	1.93	2.02	0.47	7.69
Trostrey Weir	Usk	Normal	82%	7.72	109%	10.20	9.37	3.39	32.10
<b>River Flow Sites : North Area</b>									
Bodfari	Wheeler	Notably low	64%	0.28	105%	0.46	0.44	0.23	1.34
Bodffordd	Cefni	Above normal	150%	0.12	88%	0.07	0.08	0.01	0.44
Brynkinalt Weir	Ceiriog	Normal	57%	0.66	121%	1.40	1.16	0.28	6.37
Cwmlanerch	Conwy	Normal	118%	9.71	266%	21.90	8.22	0.65	30.80
Cynefail	Gelyn	Normal	119%	0.38	231%	0.74	0.32	0.04	1.05
Dol y Bont	Leri						0.96	0.13	3.50
Druid	Alwen	Normal	78%	1.44	141%	2.60	1.85	0.53	10.30
Dyfi bridge	Dyfi						9.48	0.82	42.50
Garndolbenmaen	Dwyfor	Above normal	146%	2.27	291%	4.51	1.55	0.10	5.88
Manley Hall	Dee	Normal	78%	10.70	157%	21.60	13.79	8.52	58.40
Pont y Cambwll	Clwyd	Normal	68%	1.52	103%	2.30	2.23	0.69	13.00
Ruthin Weir	Clwyd	Normal	43%	0.17	145%	0.58	0.40	0.05	3.47
<b>River Flow Sites : South West Area</b>									
Capel Dewi	Tywi	Normal	71%	11.30	146%	23.20	15.90	2.75	70.40
Clog y Fran	Taf	Normal	104%	2.68	97%	2.49	2.57	0.38	12.40
Coytrahen	Llynfi	Normal	116%	1.60	N/A	N/A	1.38	0.24	4.53
Felin Mynachdy	Cothi	Normal	86%	3.920	146%	6.63	4.54	0.38	20.80
Glanteifi	Teifi	Above normal	118%	12.400	148%	15.50	10.50	1.82	50.90
Keepers Lodge	Ewenny	Above normal	107%	1.020	95%	0.90	0.95	0.30	2.90
Marcroft	Afan	Above normal	134%	4.300	158%	5.09	3.22	0.56	9.99
Pont Llolwyn	Ystwyth	Normal	88%	2.520	259%	7.37	2.85	0.38	12.60
Treffgarne *	Western Cleddau	Above normal	143%	1.590	101%	1.12	1.11	0.33	2.62
Resolven	Neath	Above normal	218%	10.500	N/A	N/A	4.81	0.41	19.00
Tir-y-Dail	Loughor	Normal	103%	1.060	142%	1.46	1.03	0.20	4.49
Ynystanglws	Tawe	Above normal	141%	8.950	141%	8.97	6.34	1.03	27.80

**Figure 11: Monthly mean river flow for July with comparison against previous year expressed as a percentage of the July long term average and classed relative to analysis of historic July 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.)**

## River Flow Charts

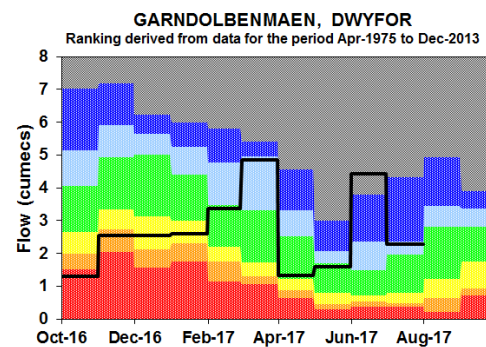
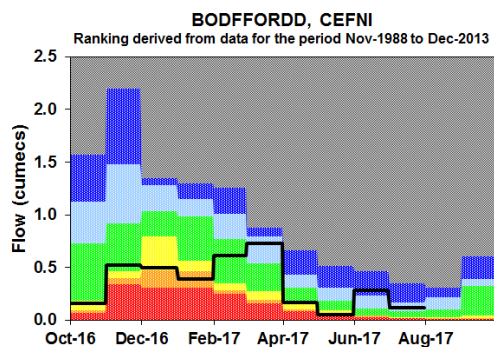
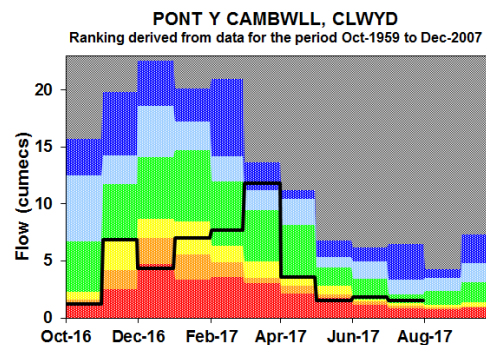
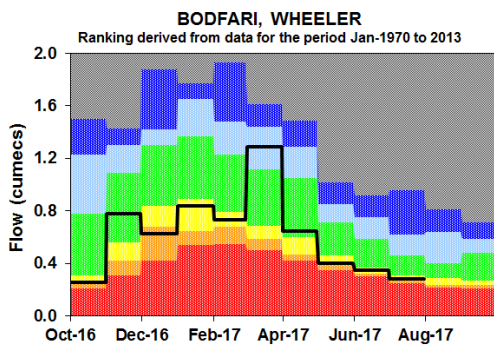
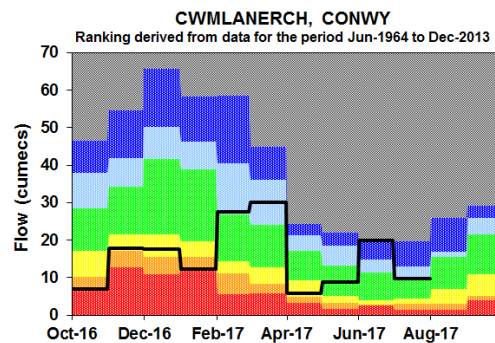
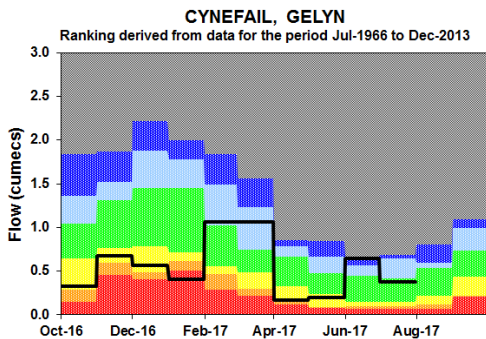
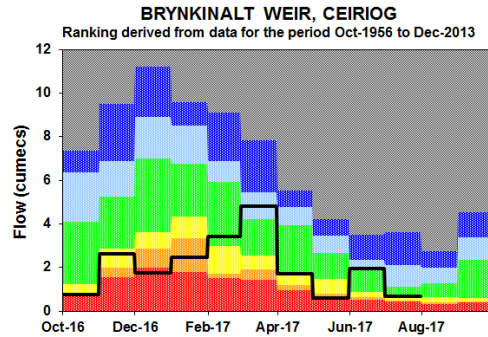
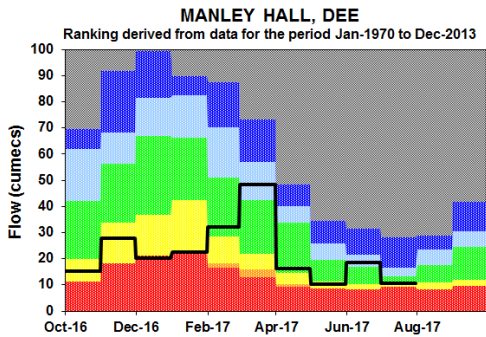
Figure 12: River Flow Charts: South East Wales



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

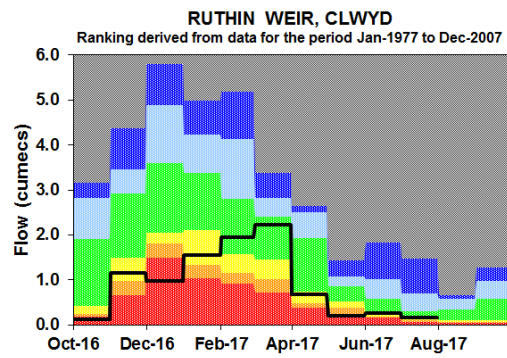
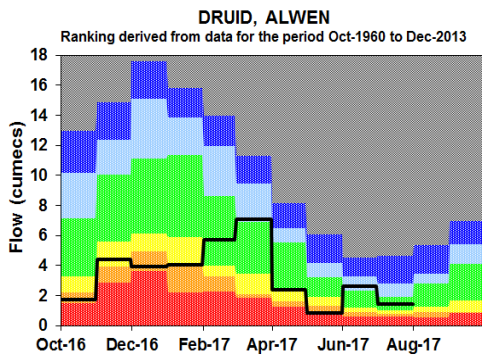
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### Figure 13: River Flow Charts: North Wales

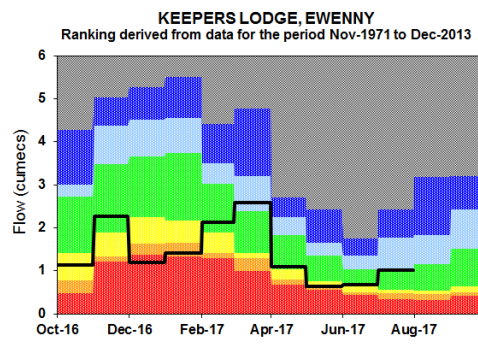
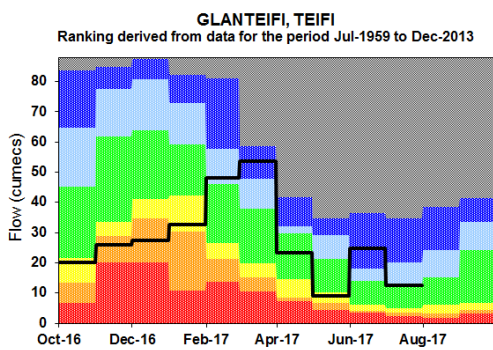
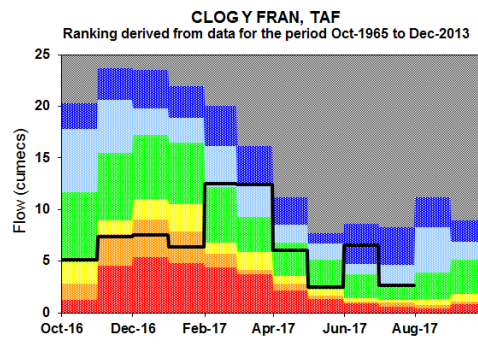
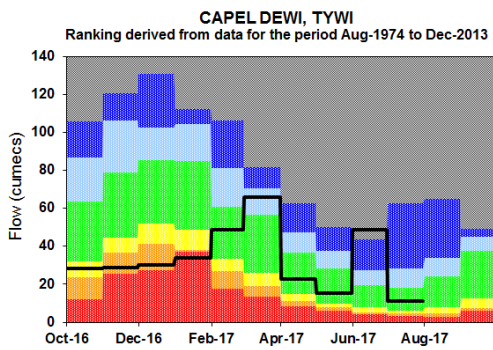
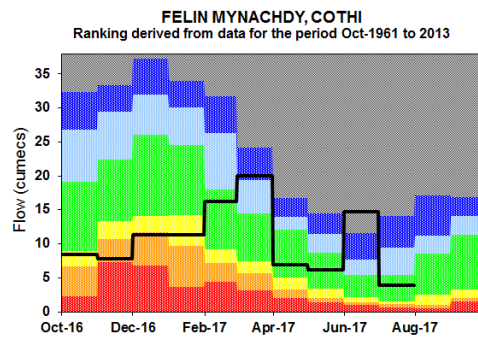
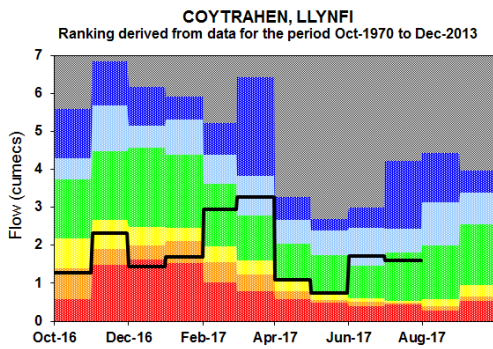


Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels (Source: Natural Resources Wales).

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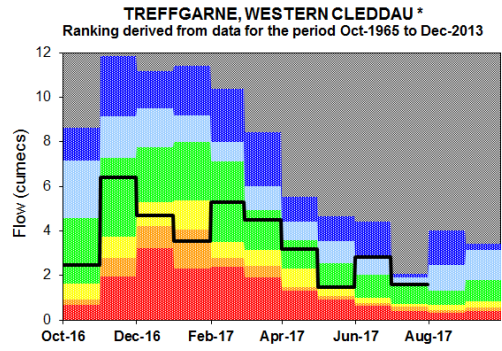
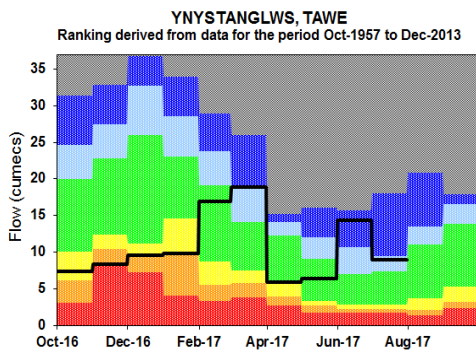
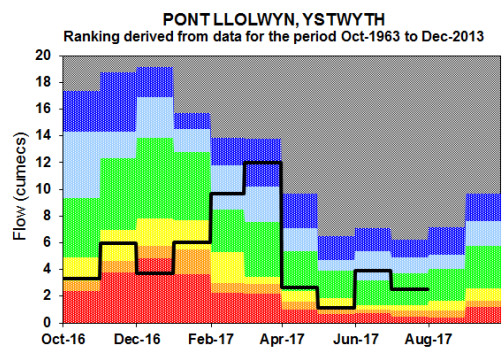
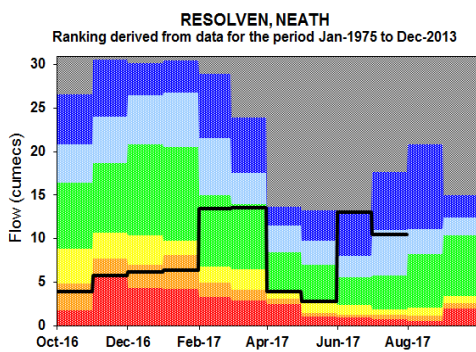
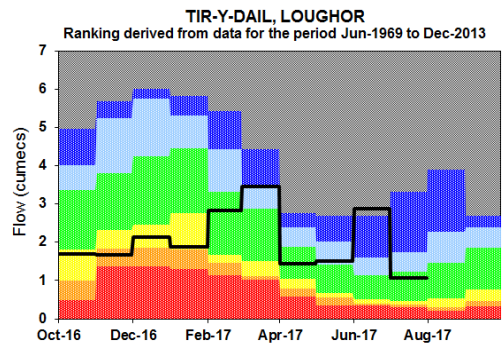
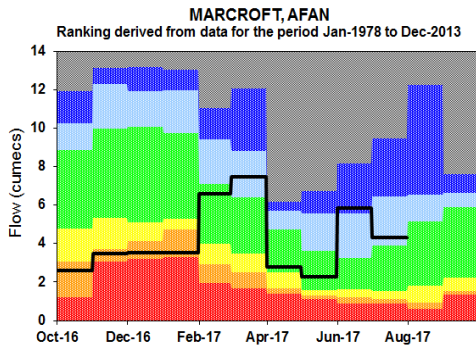
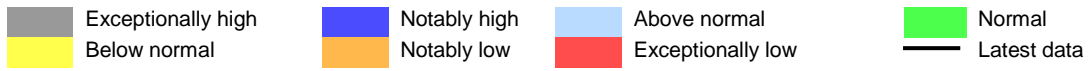


**Figure 14: River Flow Charts: South West Wales**





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**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

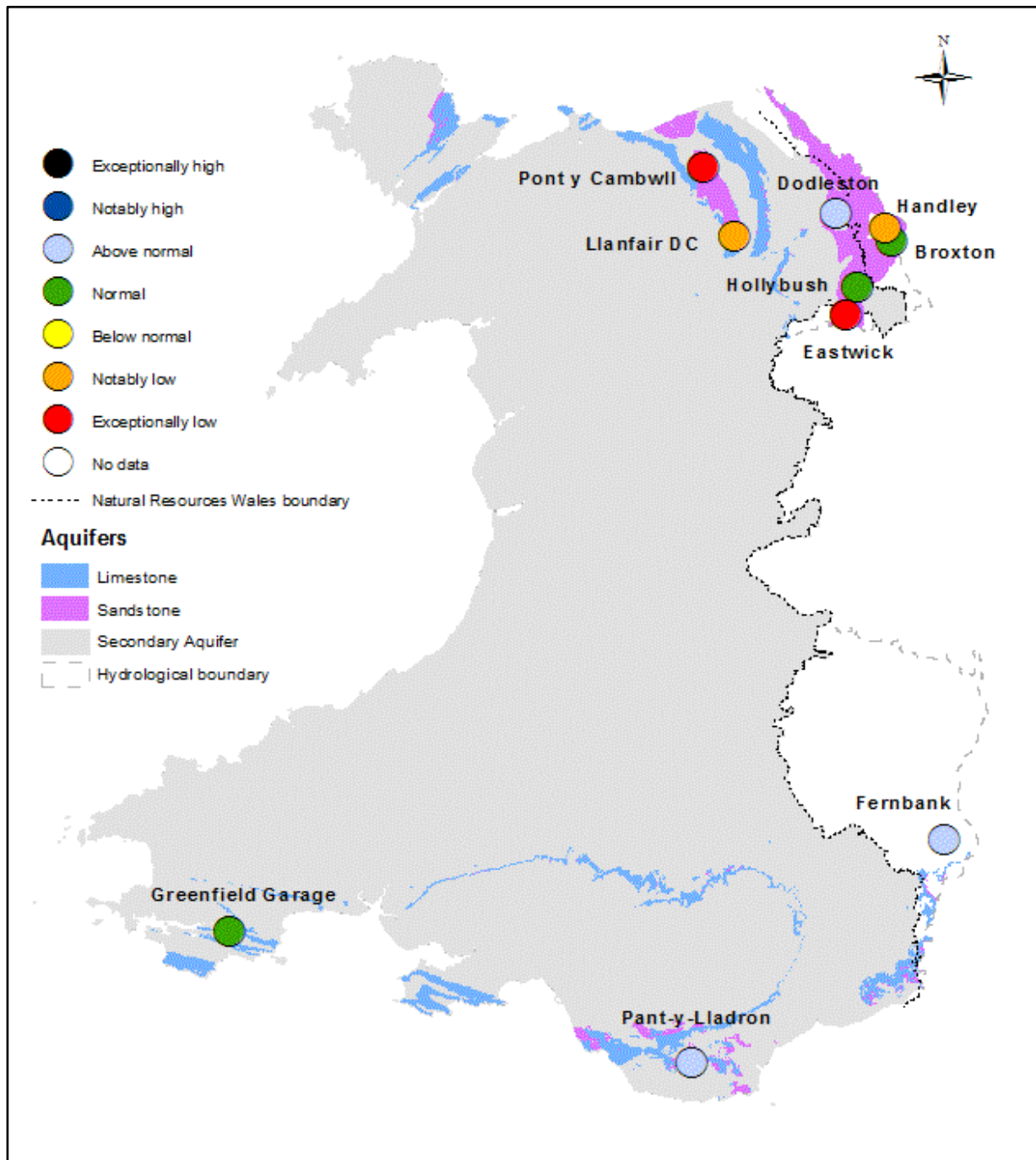
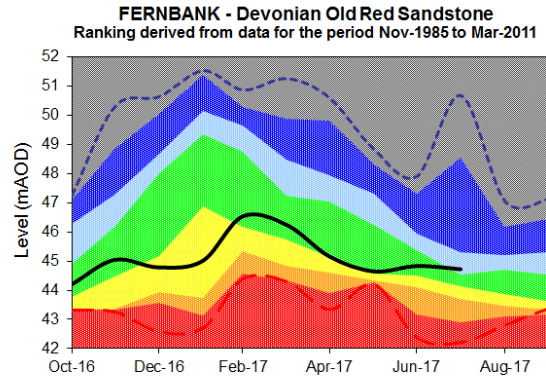
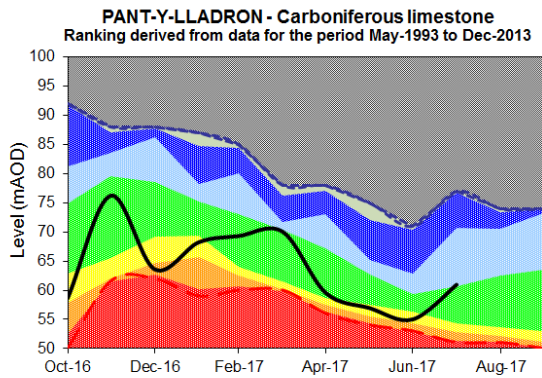
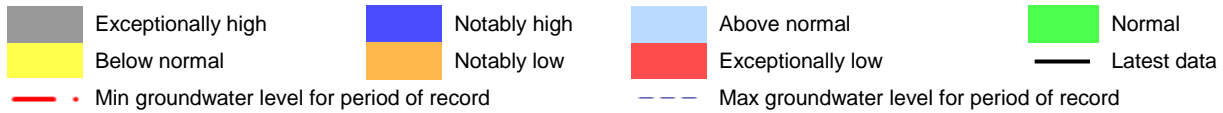


Figure 15: Groundwater levels at the end of month classed relative to an analysis of historic July groundwater levels (Source: Natural Resources Wales and Environment Agency).

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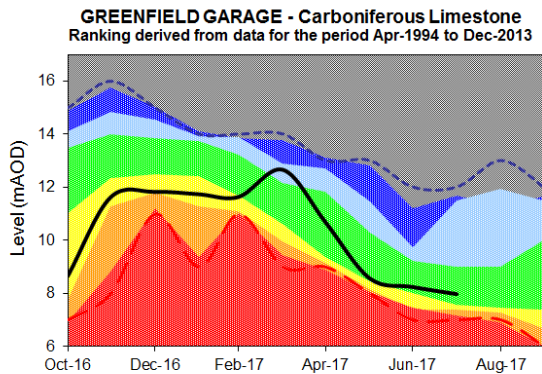
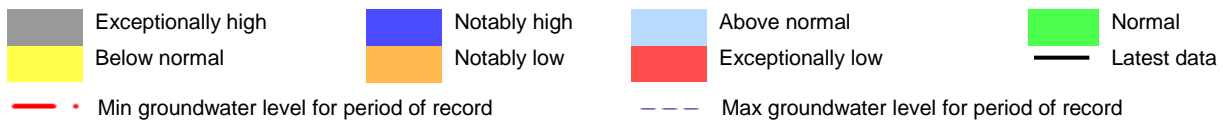
## Groundwater charts

**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).

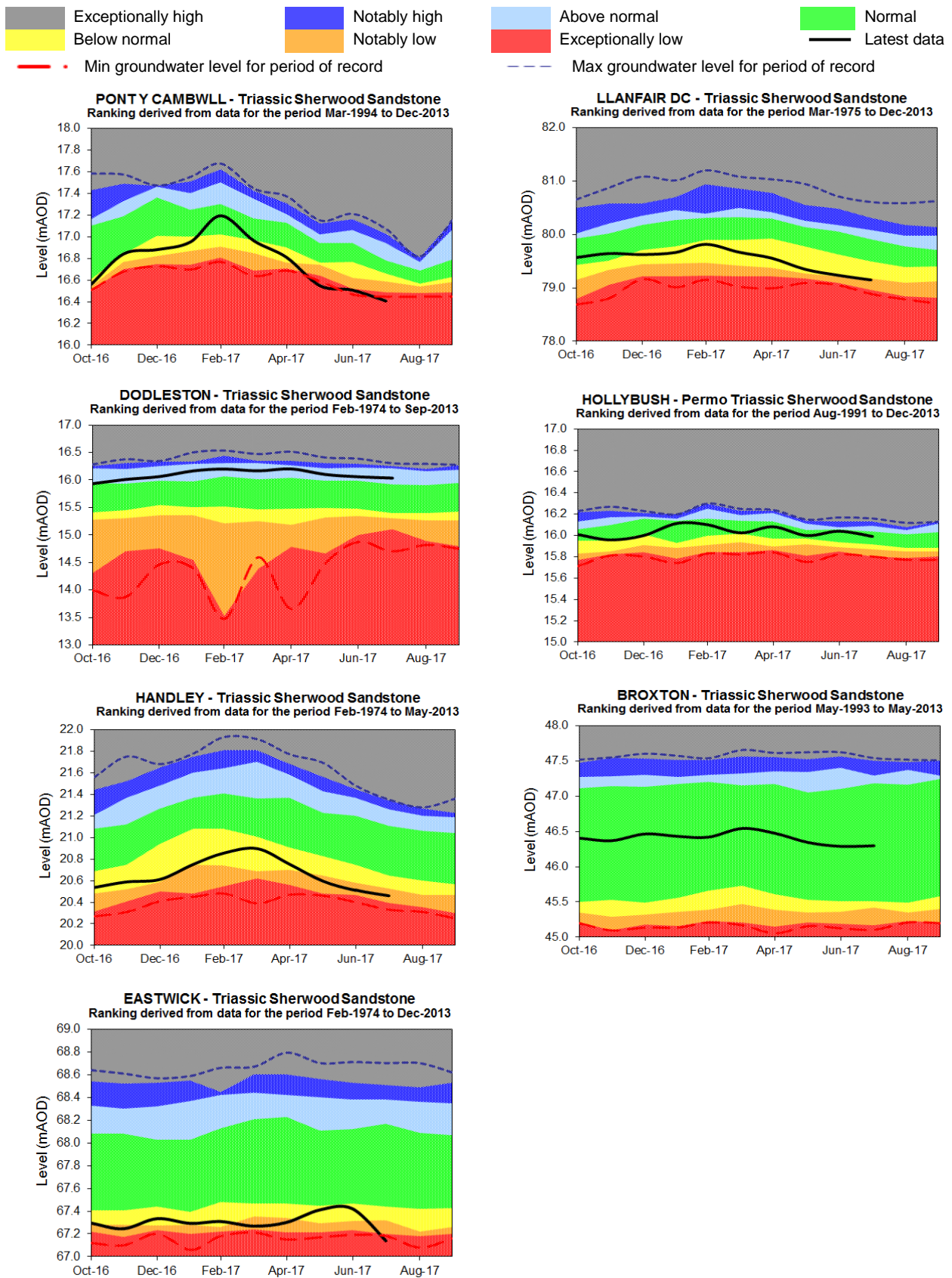
**Figure 17: Groundwater level charts: South West Wales**



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

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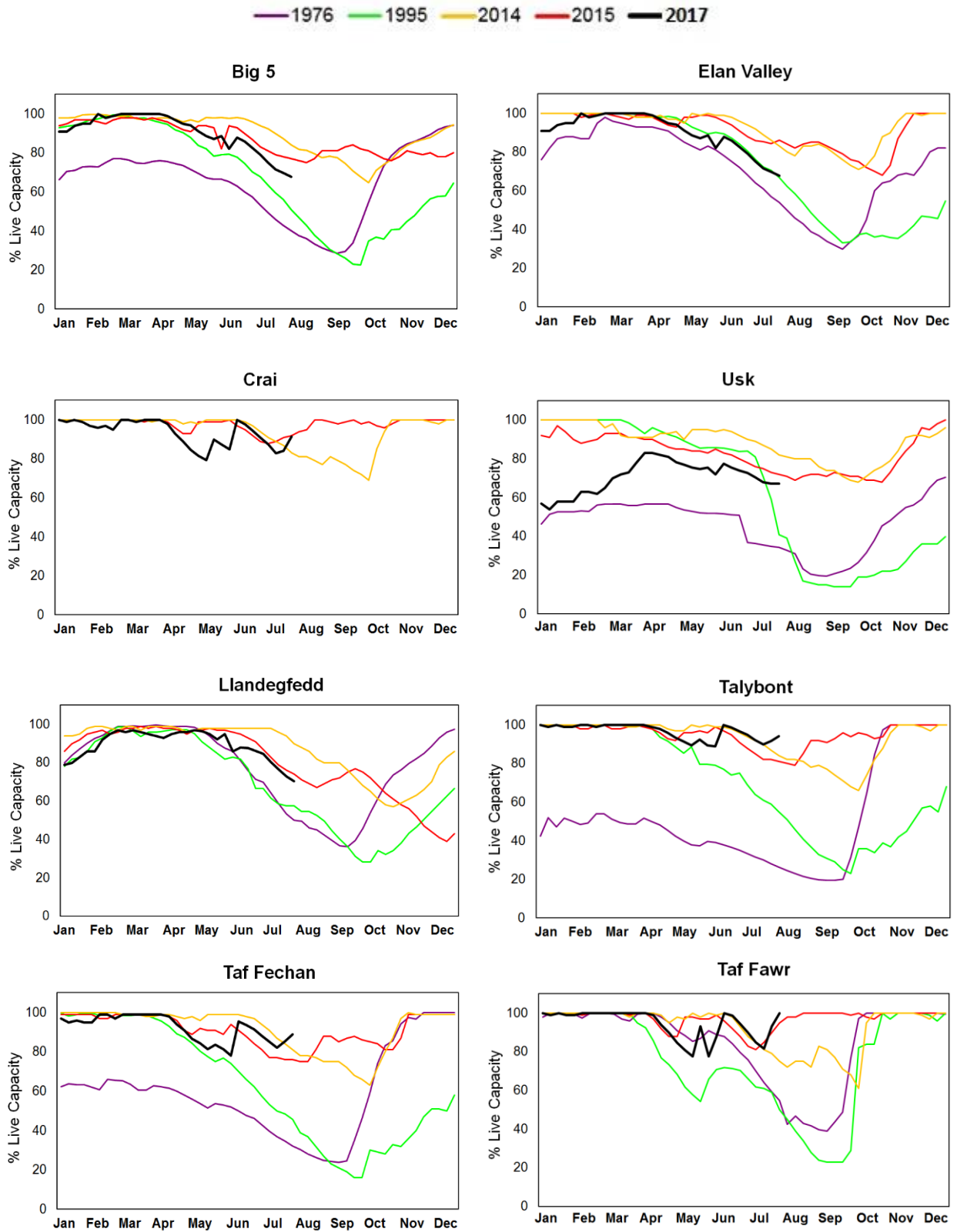
**Figure 18: Groundwater level charts: North Wales**



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

## Reservoir Storage

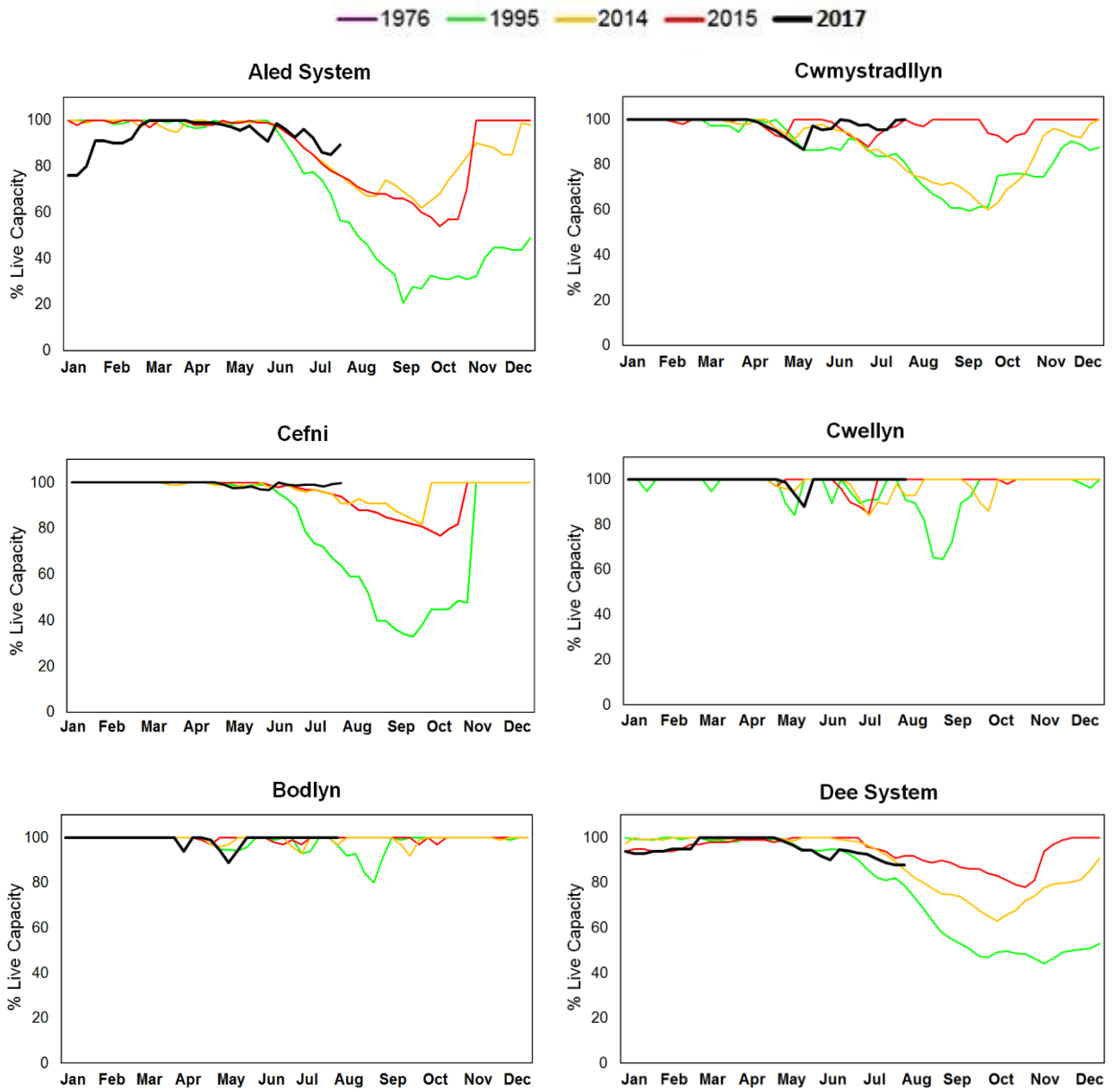
Figure 19: Reservoir charts: South East Wales



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

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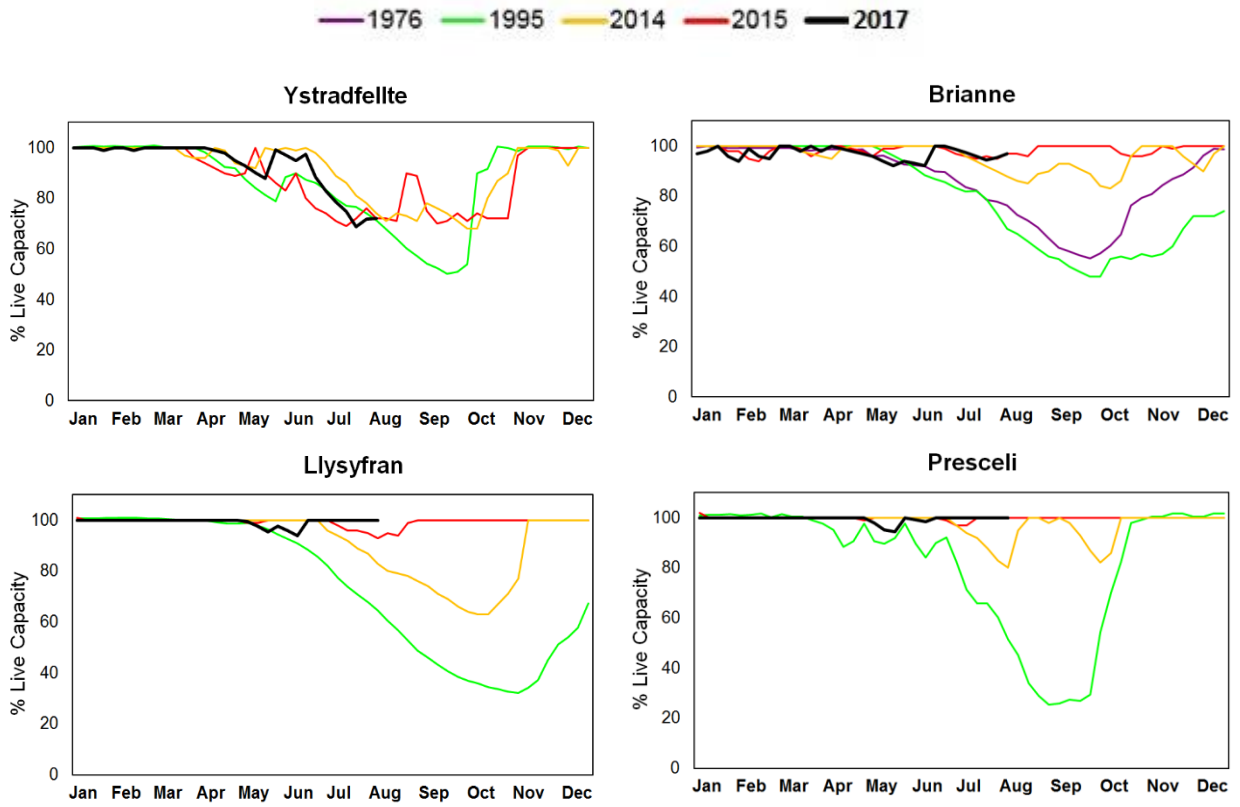
**Figure 20: Reservoirs charts: North Wales**



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

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**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).