

## Natural Resources Wales

- The monthly rainfall total received for Wales during August was 134% of the Long Term Average (LTA, 1961-90). North, South West and South East Wales received 101%, 146% and 158% of the LTA, respectively.
- At the end of August, soil moisture deficit (SMD) across Wales was between 0.0mm and 110.4mm for all MORECS squares. The difference when compared to the long term average August (1961-90), ranged from -54mm to 34mm. Most of the squares (18 out of 23) had SMD values less than the LTA (Wetter).
- For river flows in Wales, 10 out of 29 indicator sites were classed as *Normal*, 13 sites were classed as *Above normal*, 4 sites were *Below normal*. Of the remaining 2 sites, one was *Notably high* and one was *Notably low*.
- The overall reservoir storage across all indicator sites was above 67% full at the end of August and were within normal operating ranges.

### Rainfall\*

The monthly rainfall total received for Wales was 134% of the LTA for August.

The percentage of rainfall recorded in catchments compared with the long term average (1961-90) across Wales was between 77.1% (Dwyfor) and 189.2% (Lower Wye). The rainfall total for Wales was 35mm more than the August LTA. For South East and South West Wales the rainfall totals were 158% and 146% of the LTA, respectively. The rainfall total for North Wales was about the same (101%) as the August LTA. But the rainfall totals in some catchments were greater than the August LTA while in other catchments they were less than the August LTA.

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

For the SMD values, out of 23 MORECS squares, 5 had a SMD value greater than the LTA (Drier) while 18 sites had a value less than the LTA (Wetter).

SMD Map [National](#)

SMD Charts [Compare to LTA](#)

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## River Flows

River flows at 21 sites (out of 29) are classed as *Normal* or *Above normal* and 4 were classed as , *Below normal*. For the remaining 2 sites, one was *Notably low* and the other was *Notably high*.

**North:** Flows in the area had a range from 27% (River Clwyd at Ruthin Weir) to 113% (River Gelyn at Cynefail) of the August LTA Values.

**South East:** Flows in the area ranged from 51% (River Lugg at Butts Bridge) to 158% (River Taff at Pontypridd) of the August LTA values.

**South West:** The river flows within this area ranged from 87% (River Ystwyth at Pont Llolwyn) to 197% (River Tawe at Ynystanglws of the LTA).

River Flow Map	<a href="#">National</a>		
River Flow Table	<a href="#">% of LTA and compare to previous year</a>		
River Flow Charts	<a href="#">South East</a>	<a href="#">North</a>	<a href="#">South West</a>
	<a href="#">Wales</a>	<a href="#">Wales</a>	<a href="#">Wales</a>

## Groundwater Levels

Groundwater levels for August at all indicator sites are classed between *Notably low* to *Exceptionally high* with 3 sites (Pont y Cambwll, Llanfair DC and Eastwick) as *Below normal* and 1 site (Handley) as *Notably low*.

Groundwater Map	<a href="#">National</a>		
Groundwater Charts	<a href="#">South East</a>	<a href="#">North</a>	<a href="#">South West</a>
	<a href="#">Wales</a>	<a href="#">Wales</a>	<a href="#">Wales</a>

## Reservoir Storage

At the end of August all of the indicator reservoir storage exceeded 67% full and they were within their normal operating ranges .

All reporting reservoirs are within the normal operation levels for this time of the year.

Reservoir Charts	<a href="#">South East</a>	<a href="#">North Wales</a>	<a href="#">South West</a>
	<a href="#">Wales</a>		<a href="#">Wales</a>

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

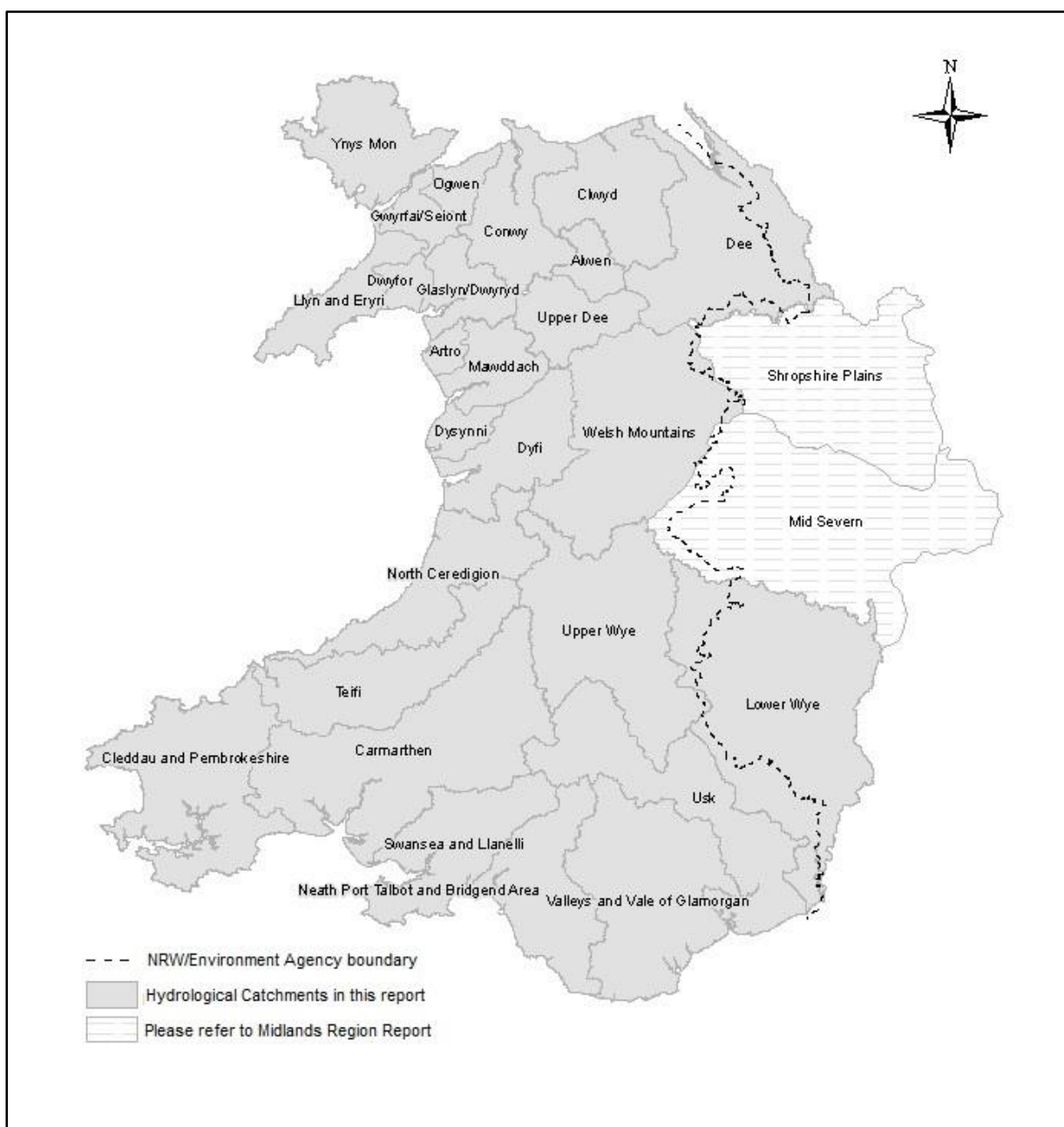
Author: Zhong Zhang Telephone: 03000 654521

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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.**

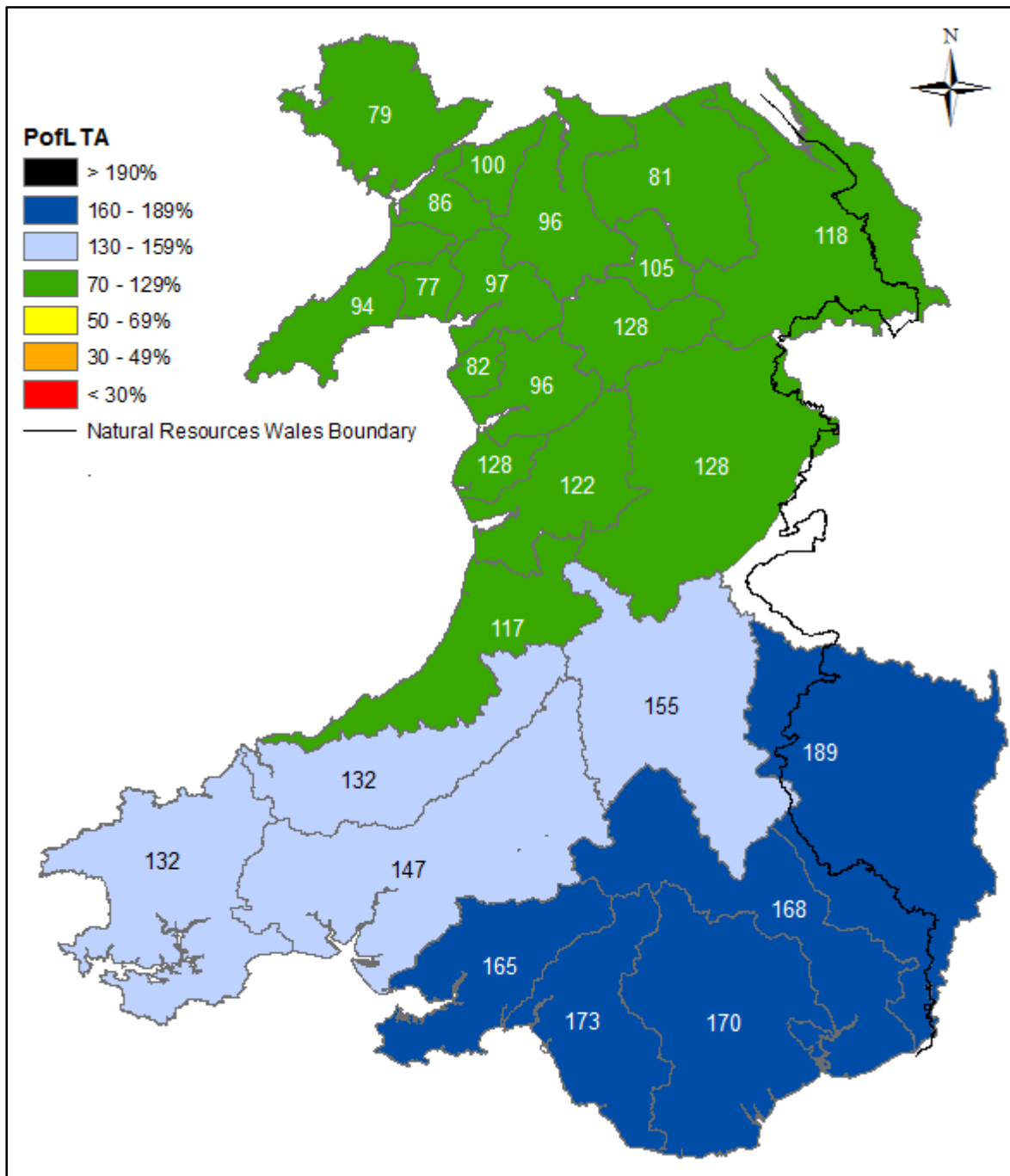
**For areas adjoining Natural Resources Wales, please see the reports for Environment Agency Midlands and North West England:**

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

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## Rainfall

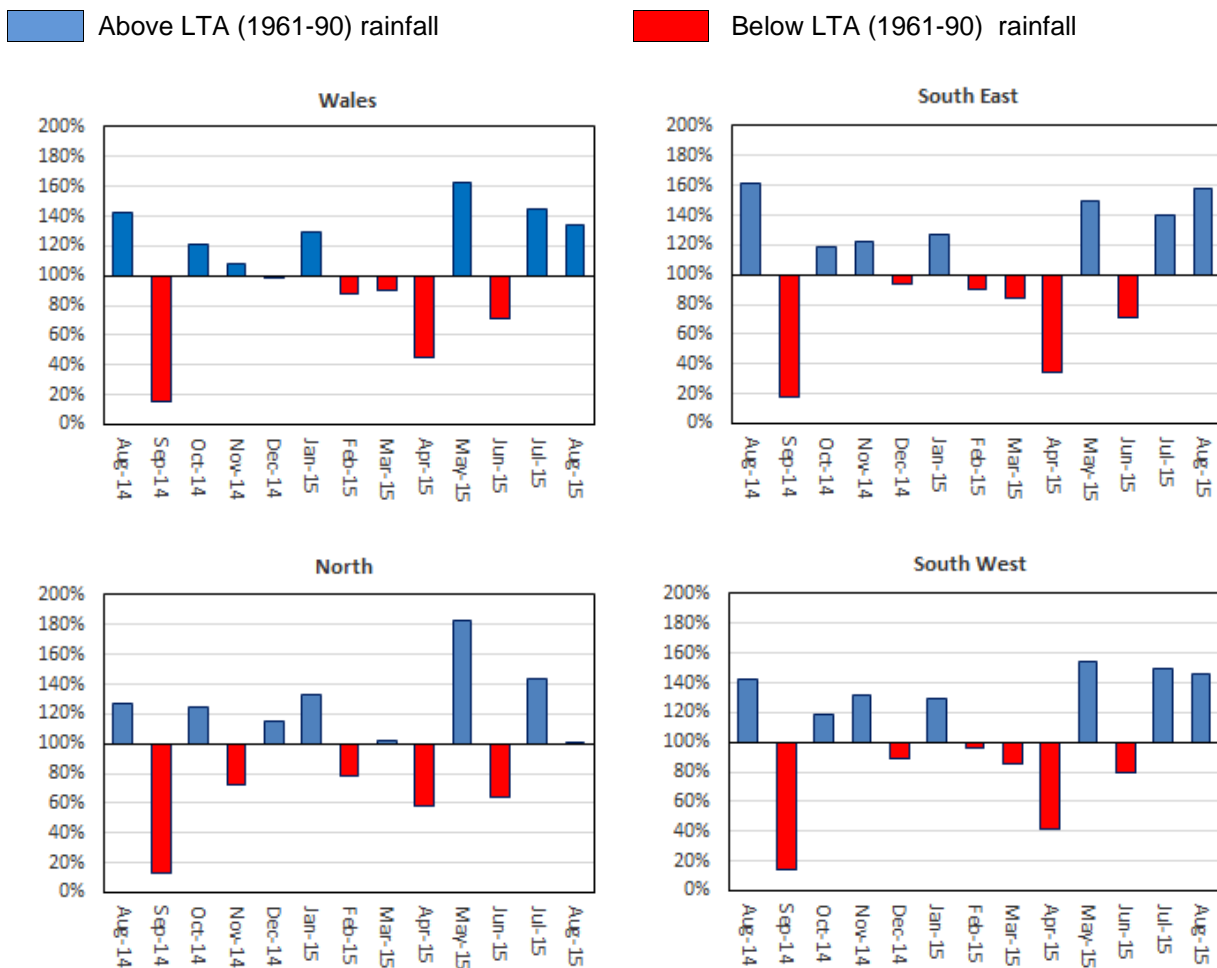


**Figure 2: Calculated catchment average August rainfall totals as a percentage of the 1961-90 August long term average for Natural Resources Wales catchments, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).**

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## Rainfall Charts

Figure 3: Rainfall Charts: National and Areas



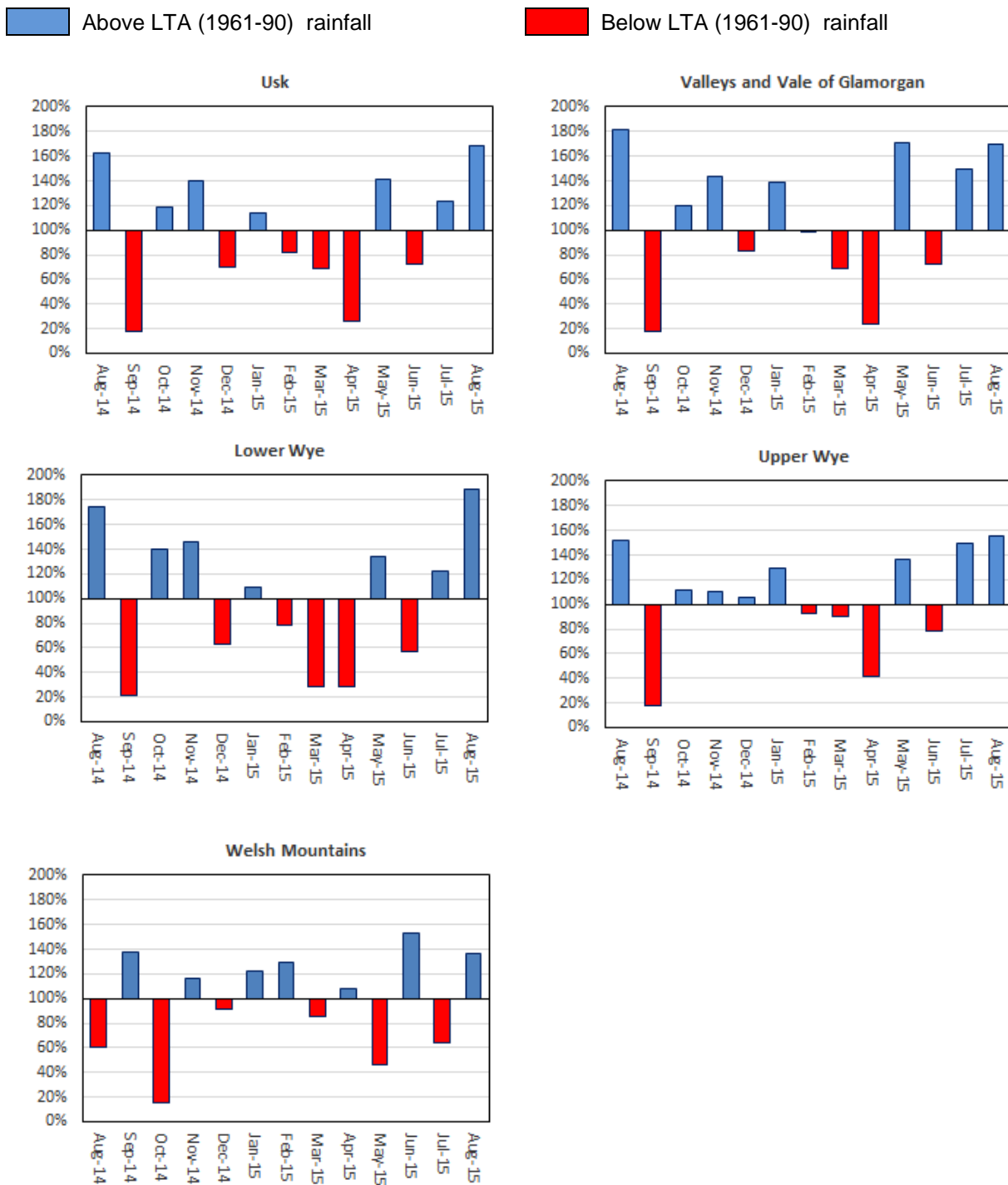
Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for Natural Resources Wales and Areas, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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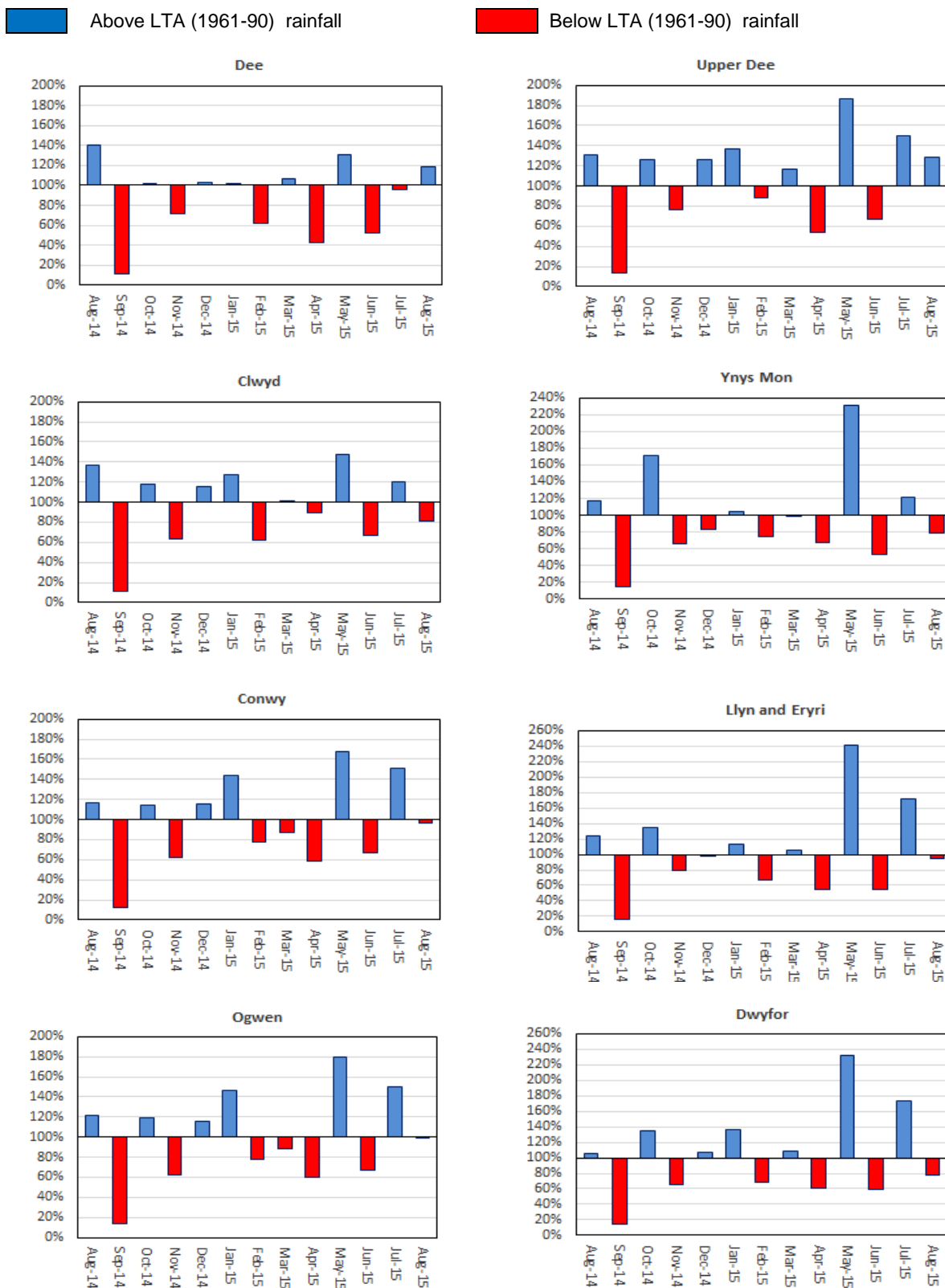
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**Figure 4: Rainfall Charts: South East Wales**



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**

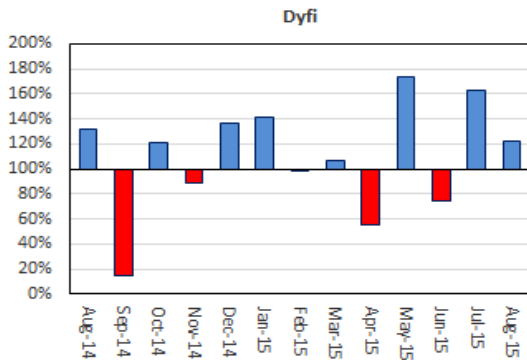
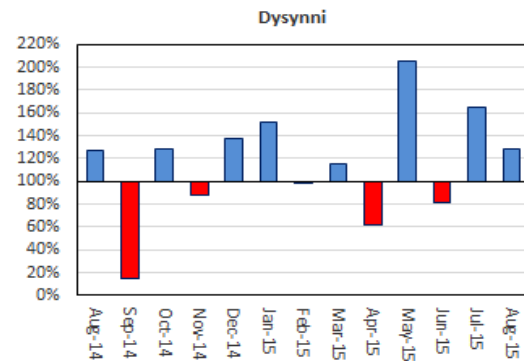
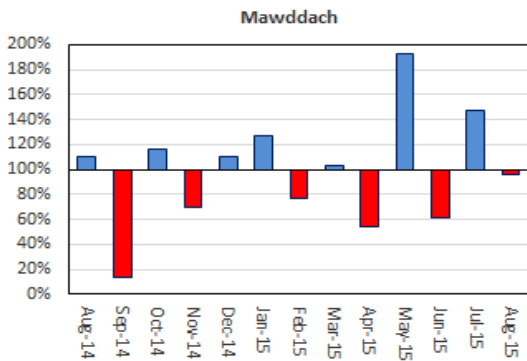
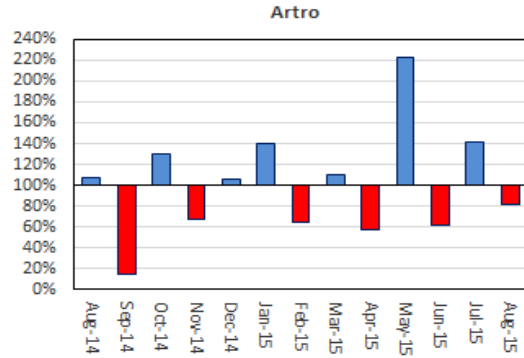
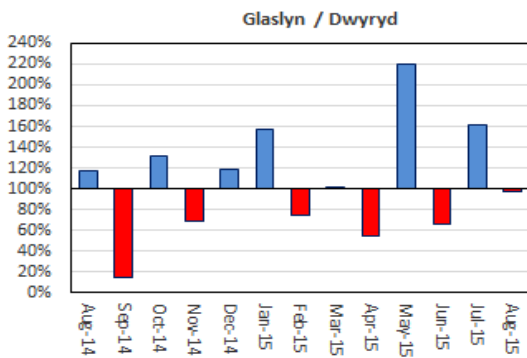
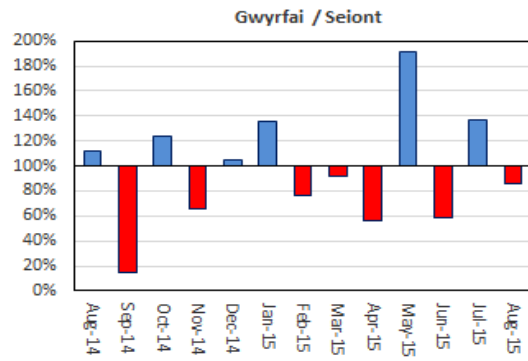
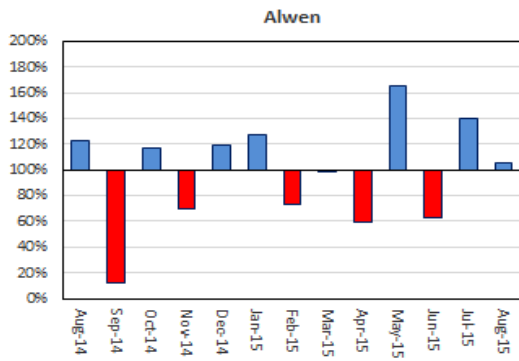
Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for North Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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■ Above LTA (1961-90) rainfall

■ Below LTA (1961-90) rainfall



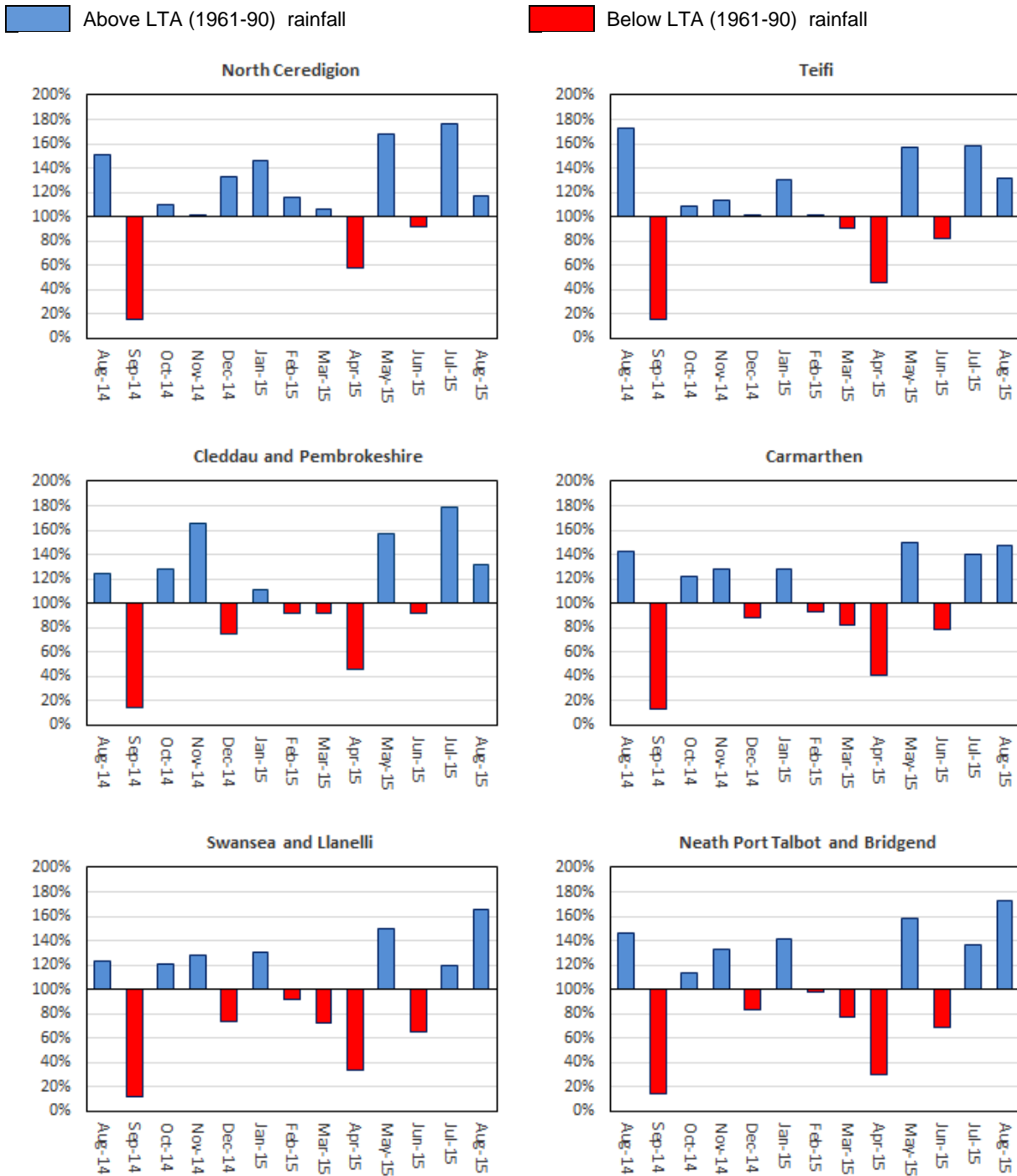
Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for North Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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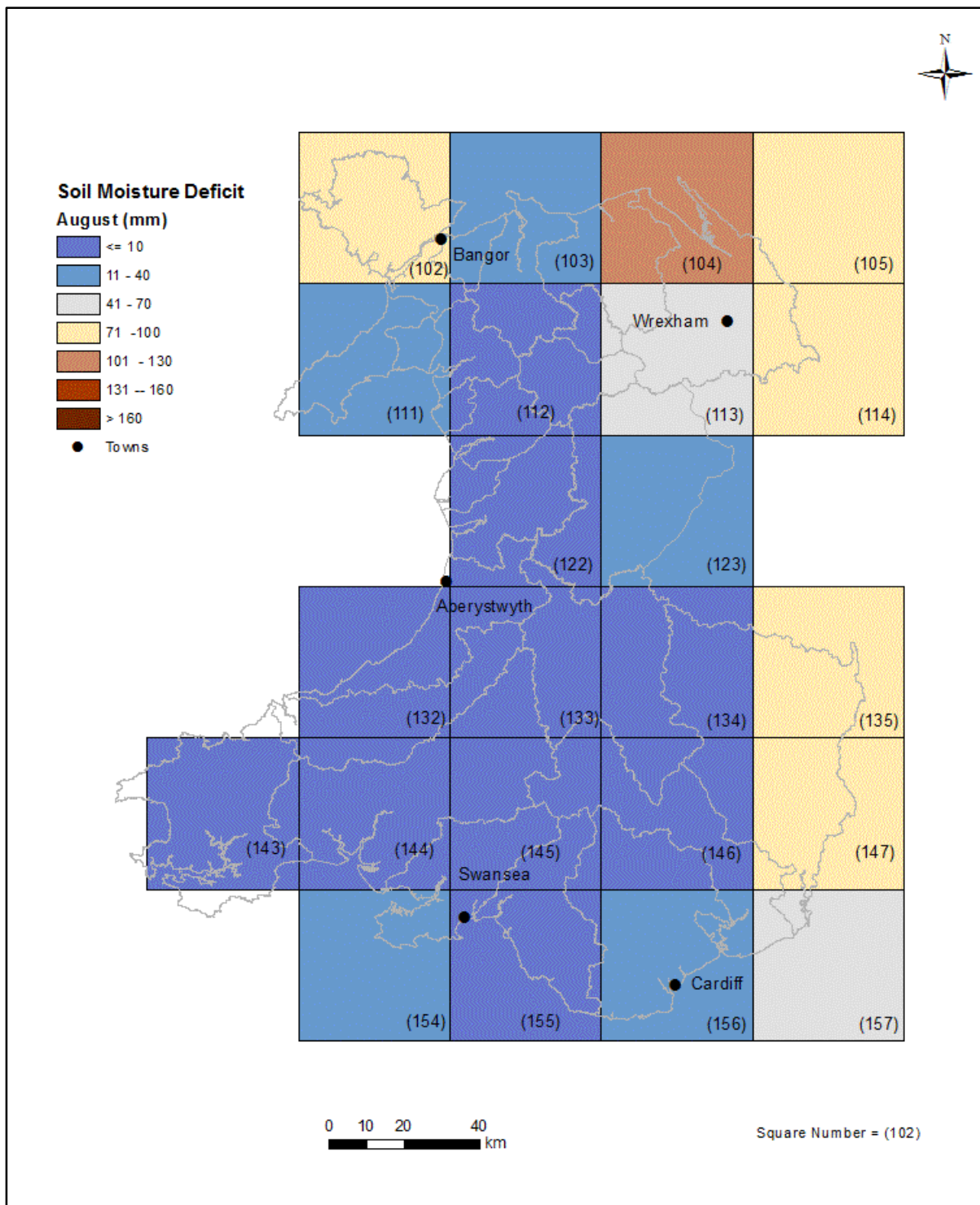
**Figure 6: Rainfall Charts: South West Wales**



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).

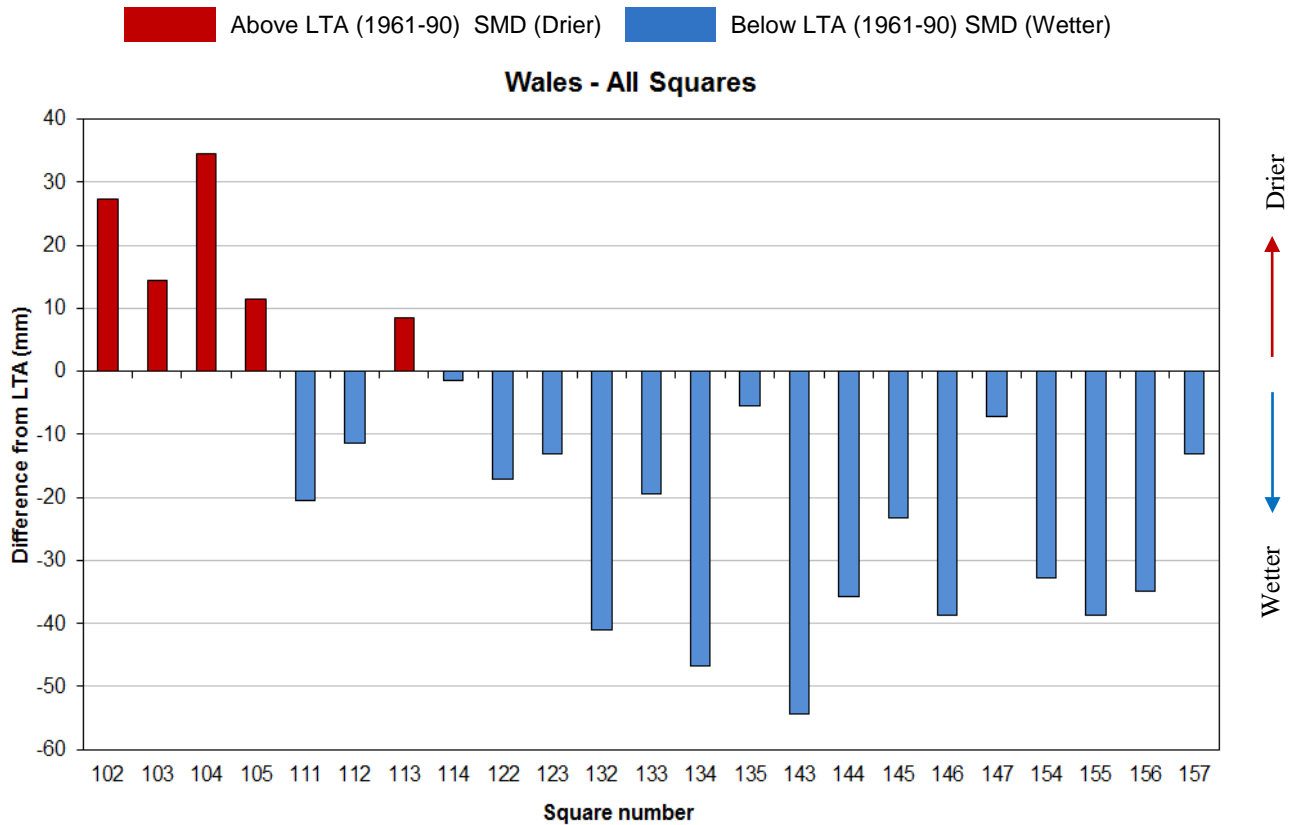
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## Soil Moisture Deficit (SMD)

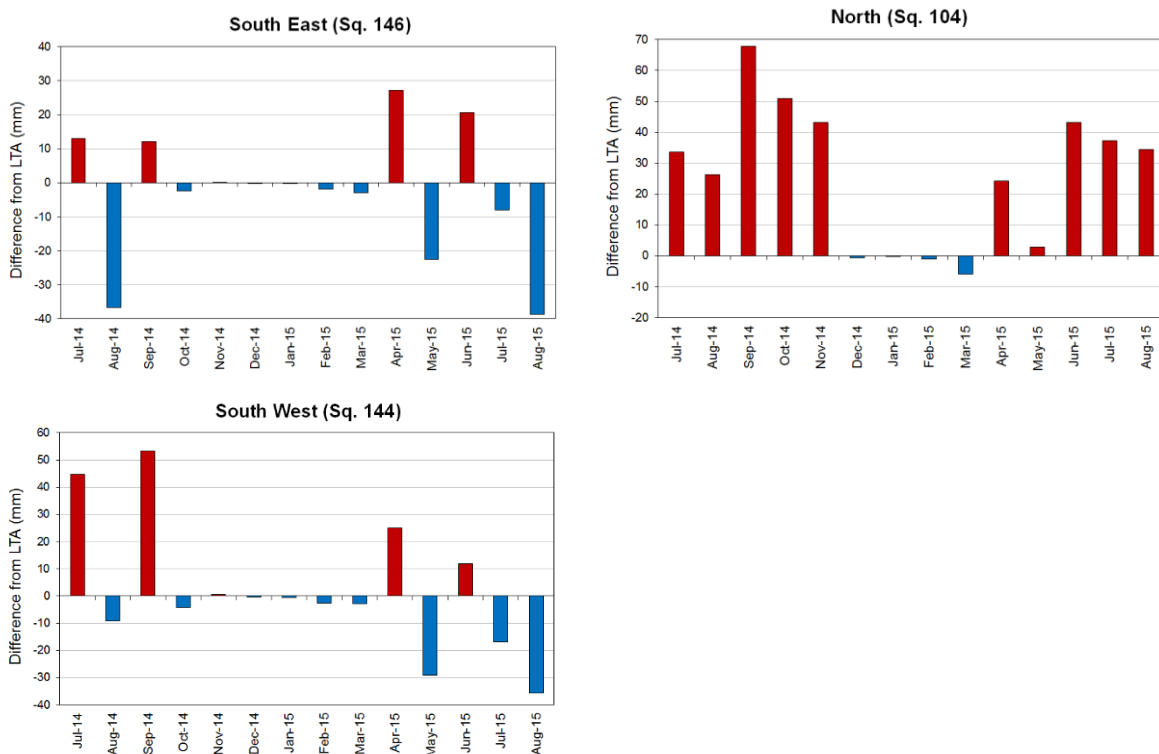


**Figure 7: MORECS soil moisture deficits (mm) for August for real land use for Natural Resources Wales (Source: Met Office © Crown Copyright).**

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



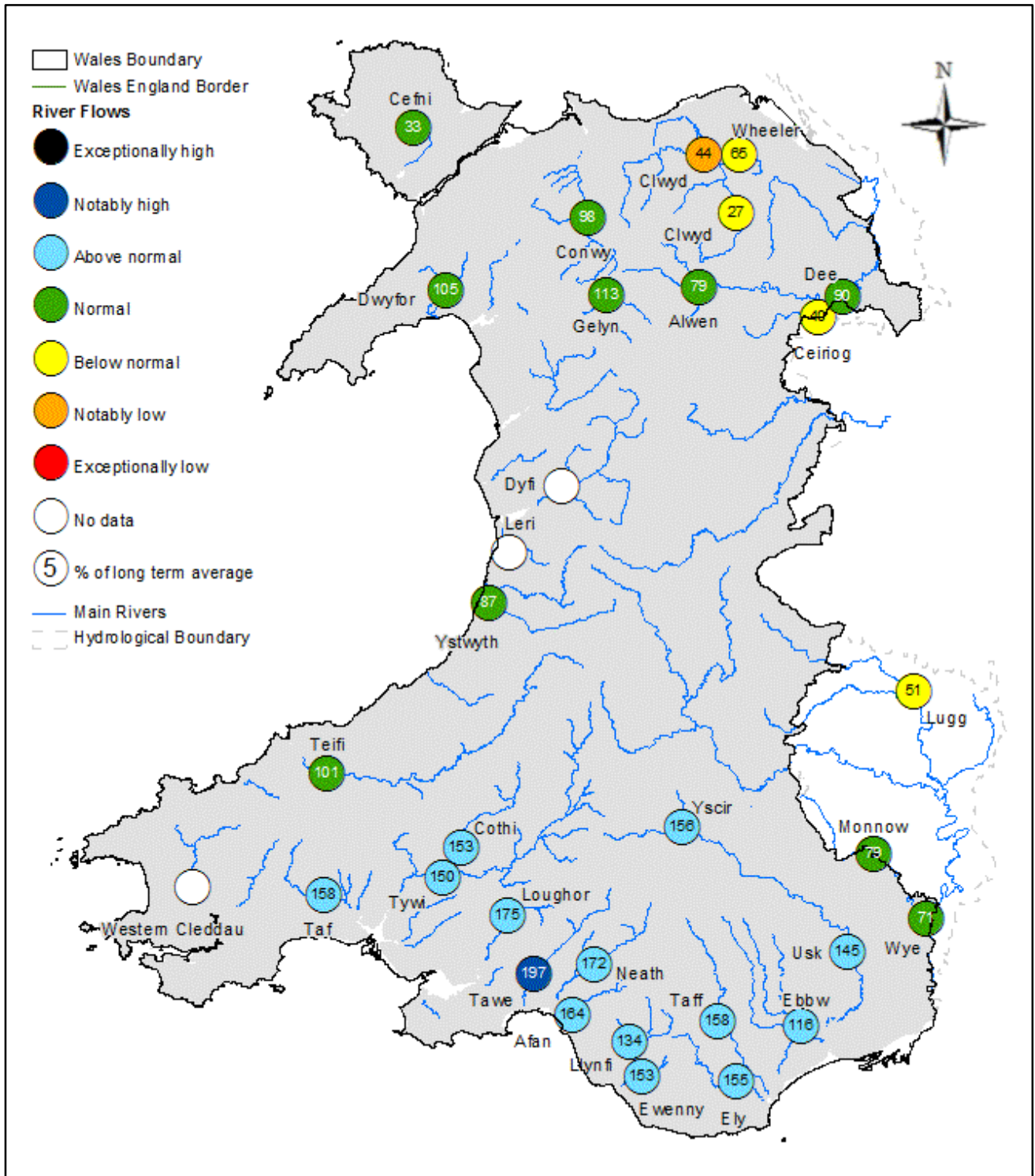
**Figure 9: MORECS month end soil moisture deficit difference (mm) from the 1961-90 long term monthly average (LTA) for real land use for South East, North and South West (Source: Met Office © Crown Copyright). (Note: no LTA available for Natural Resources Wales)**

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## River Flow



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

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SITE NAME	RIVER	August 2015			August 2014		August 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	Below normal	51%	0.96	73	1.34	1.90	0.51	6.97
Grosmont	Monnow	Normal	79%	1.34	143	1.88	1.69	0.36	8.17
Pont ar Yscir	Yscir	Above normal	156%	1.12	71	0.47	0.72	0.10	3.23
Pontypridd	Taff	Above normal	158%	17.49	135	12.77	11.10	2.29	49.00
Redbrook	Wye	Normal	71%	18.48	87	22.03	25.95	5.18	79.70
Rhiwderin	Ebbw	Above normal	116%	3.88	100	3.05	3.35	0.93	14.30
St Fagans	Ely	Above normal	155%	3.62	192	3.84	2.34	0.46	11.30
Trostrey Weir	Usk	Above normal	145%	13.01	84	8.06	8.96	2.70	27.50
<b>River Flow Sites : North Area</b>									
Bodfari	Wheeler	Below normal	65%	0.26	76	0.31	0.40	0.19	0.87
Bodffordd	Cefni	Normal	33%	0.03	78	0.05	0.09	0.00	0.36
Brynkinalt Weir	Ceiriog	Below normal	40%	0.45	57	0.63	1.13	0.18	5.20
Cwmlanerch	Conwy	Normal	98%	11.22	61	6.50	11.41	0.73	37.40
Cynefail	Gelyn	Normal	113%	0.44	80	0.29	0.39	0.03	1.09
Dol y Bont	Leri						1.03	0.08	3.00
Druid	Alwen	Normal	79%	1.67	131	2.66	2.12	0.39	5.90
Dyfi bridge	Dyfi						12.52	0.66	40.40
Garndolbenmaen	Dwyfor	Normal	105%	2.17	47	0.85	2.06	0.12	6.25
Manley Hall	Dee	Normal	90%	13.79			15.32	7.08	38.60
Pont y Cambwll	Clwyd	Notably low	44%	0.87	67	1.33	1.99	0.51	7.18
Ruthin Weir	Clwyd	Below normal	27%	0.07			0.26	0.05	0.74
<b>River Flow Sites : South West Area</b>									
Capel Dewi	Tywi	Above normal	150%	28.65	75	12.99	19.16	2.70	78.50
Clog y Fran	Taf	Above normal	158%	5.60	81	2.39	3.54	0.33	18.30
Coytrahen	Llynfi	Above normal	134%	2.15	118	1.70	1.61	0.26	6.06
Felin Mynachdy	Cothi	Above normal	153%	9.59	64	3.63	6.25	0.36	23.40
Glanteifi	Teifi	Normal	101%	13.69	93	11.64	13.56	1.13	77.30
Keepers Lodge	Ewenny	Above normal	153%	1.59	140	1.30	1.04	0.22	4.24
Marcroft	Afan	Above normal	164%	6.14			3.75	0.55	13.30
Pont Llolwyn	Ystwyth	Normal	87%	2.69	112	3.35	3.11	0.18	8.57
Prendergast Mill	Western Cleddau						2.55	0.37	11.60
Resolven	Neath	Above normal	172%	9.90	78	3.78	5.76	0.40	22.50
Tir-y-Dail	Loughor	Above normal	175%	2.13	81	0.90	1.22	0.18	4.40
Ynystanglws	Tawe	Notably high	197%	15.37	77	5.61	7.80	1.07	28.60

**Figure 11: Monthly mean river flow for August with comparison against previous year expressed as a percentage of the August long term average and classed relative to analysis of historic August monthly means. (Source: Natural Resources Wales).**

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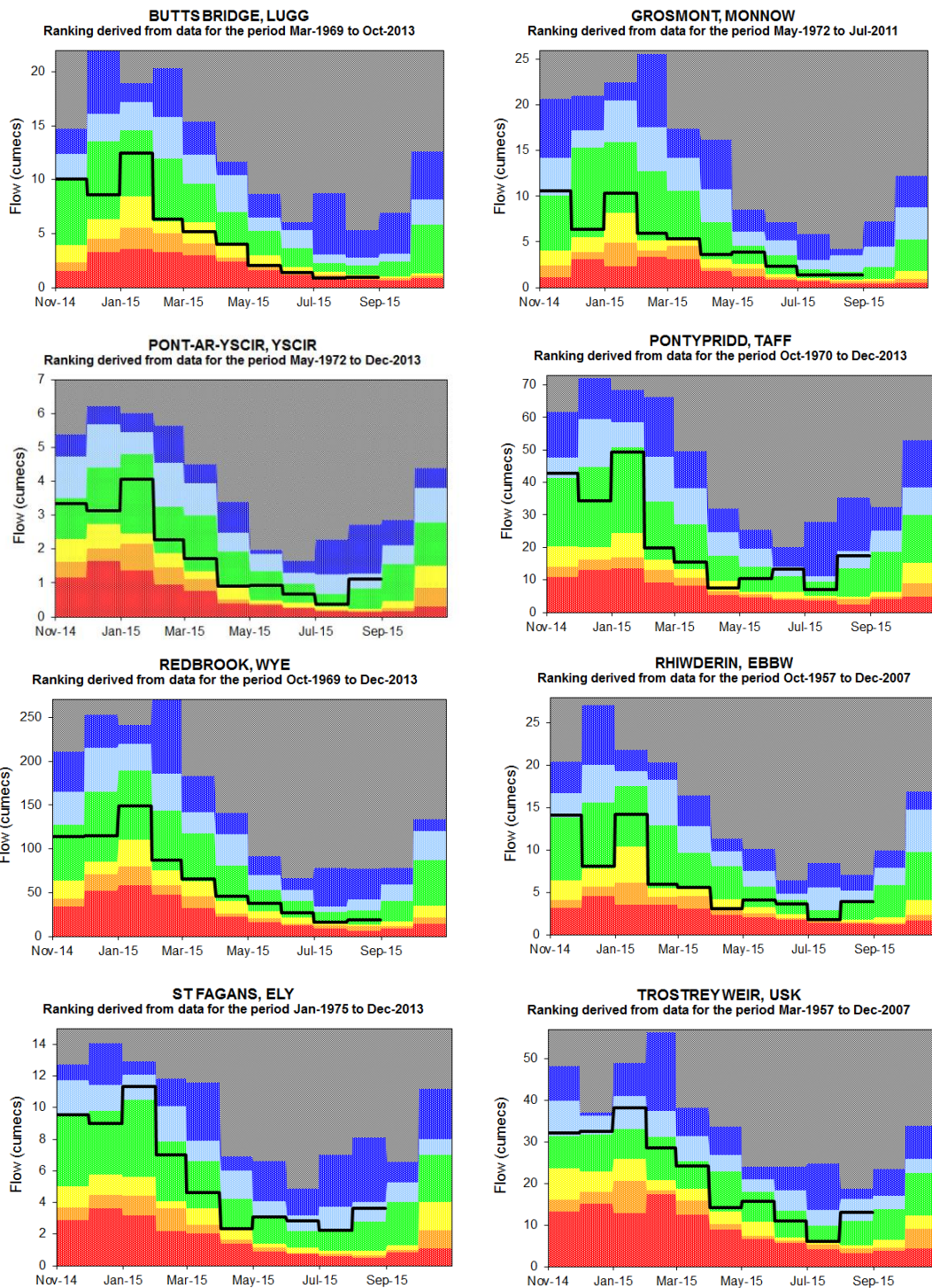
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## River Flow Charts

Figure 12: River Flow Charts: South East Wales



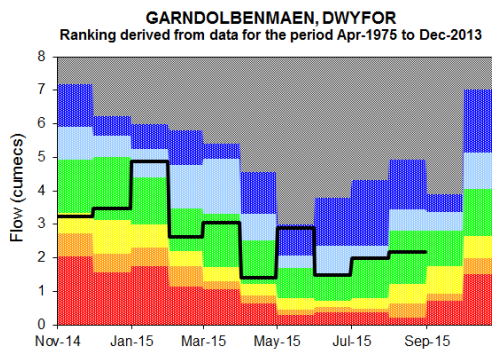
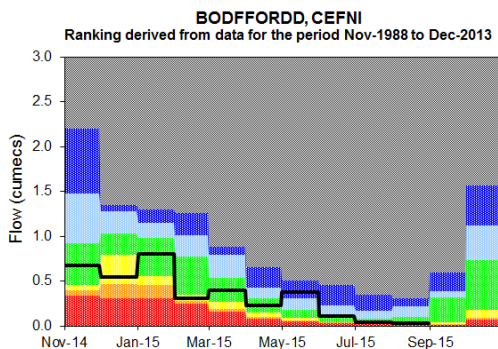
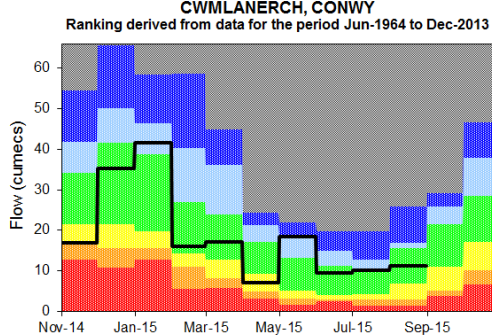
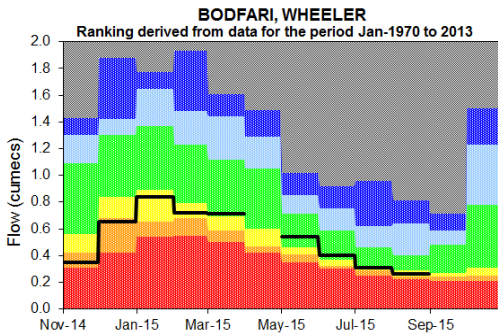
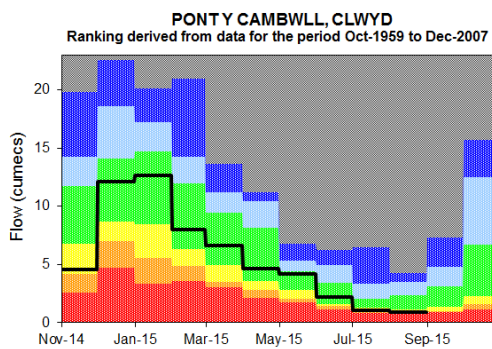
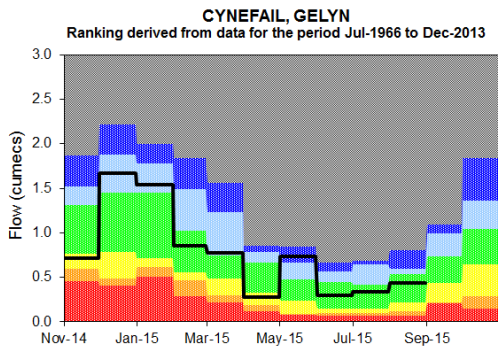
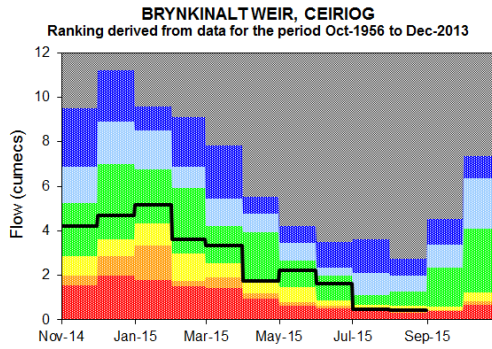
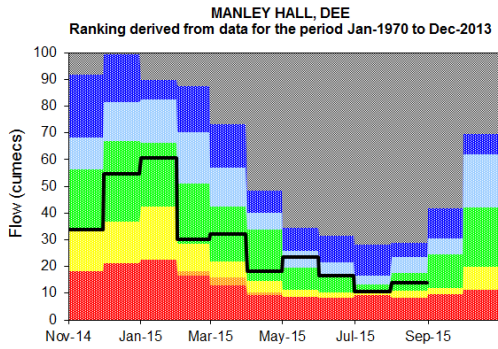
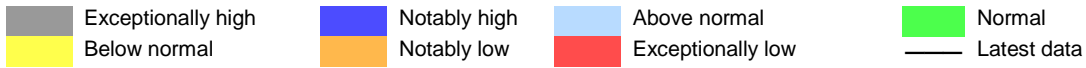
Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels (Source: Natural Resources Wales).

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

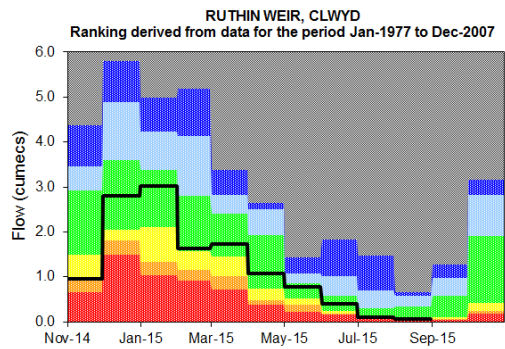
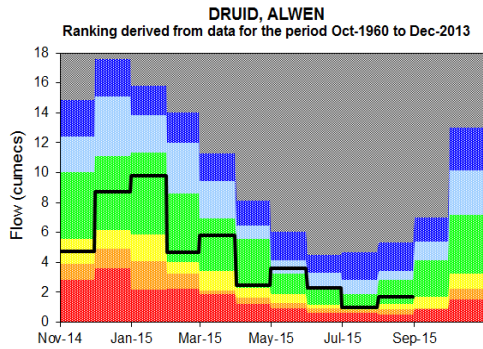


### Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels (Source: Natural Resources Wales).

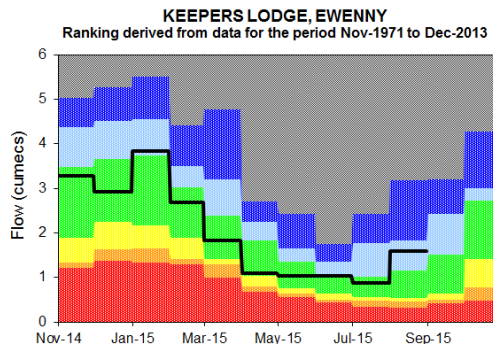
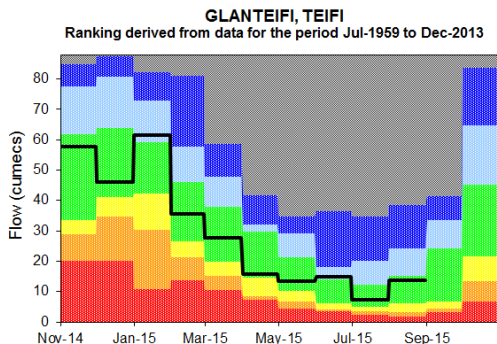
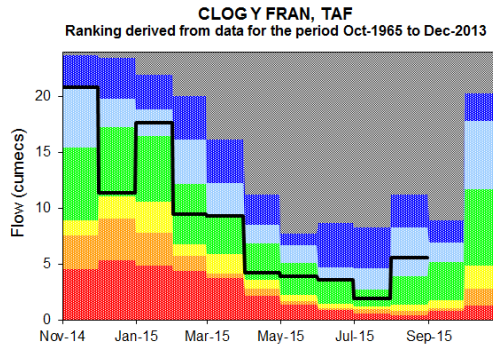
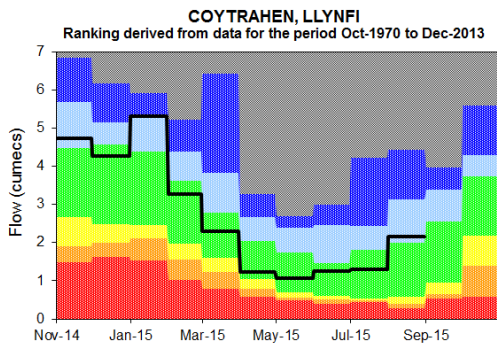
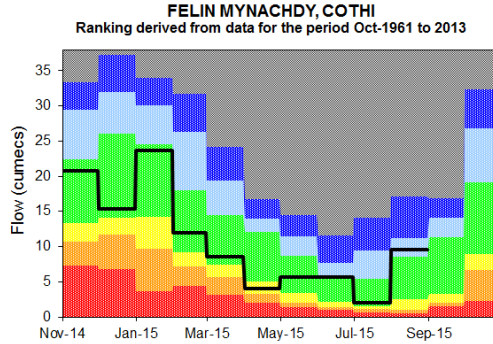
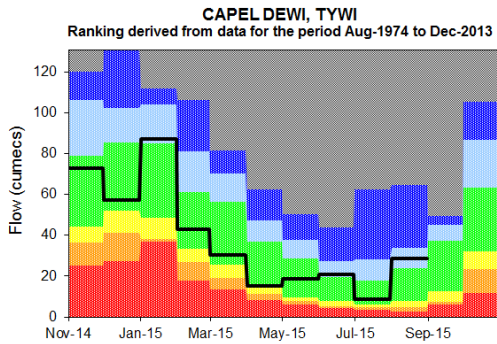
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**Figure 14: River Flow Charts: South West Wales**

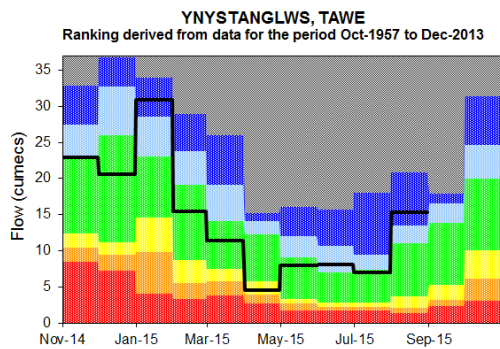
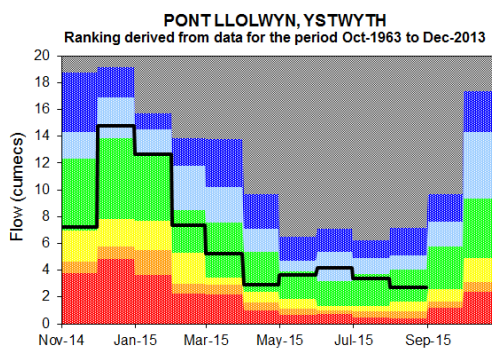
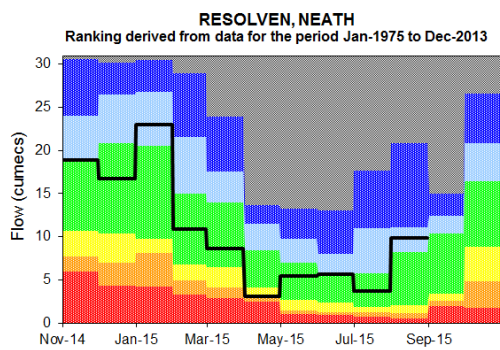
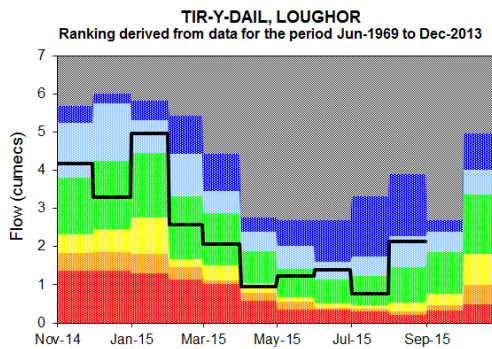
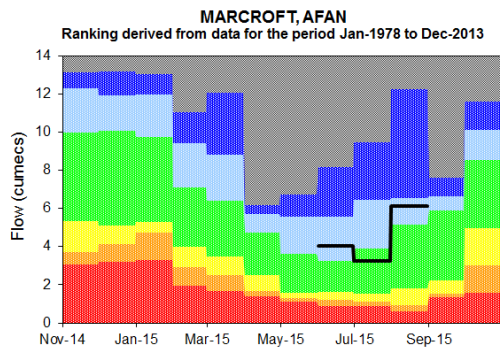


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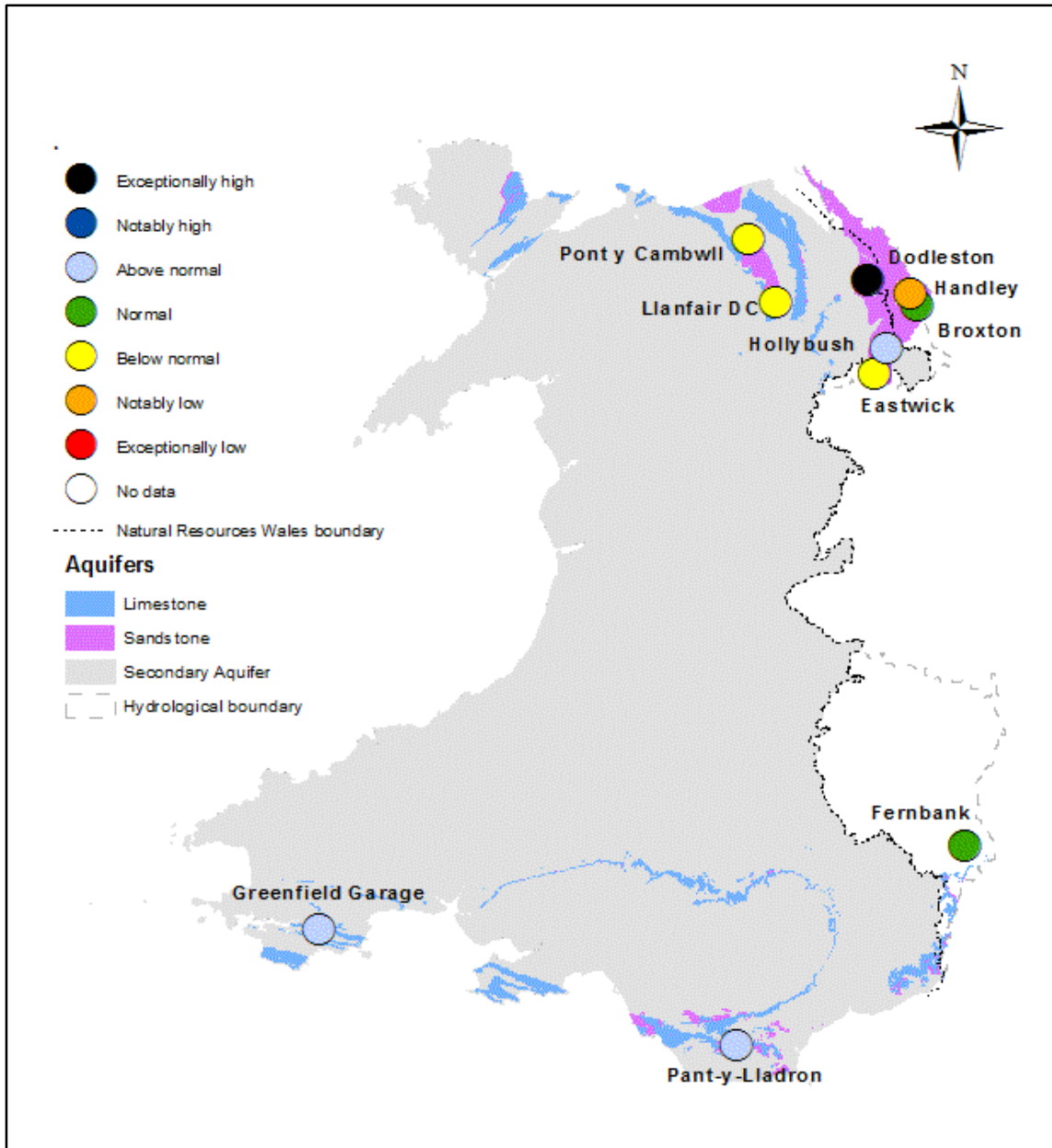


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Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels. (Source: Natural Resources Wales). (please note that there was no data available pre-June 2015 for the site of Marcroft in the river Afan.)

## Groundwater Levels



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

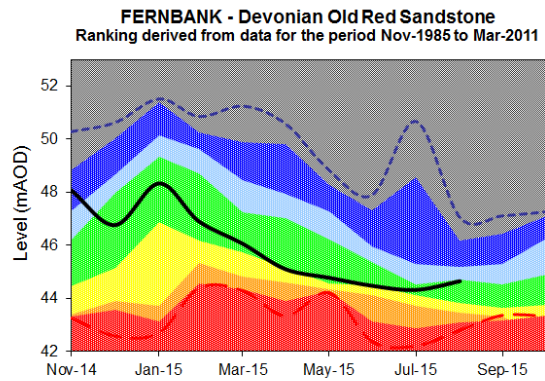
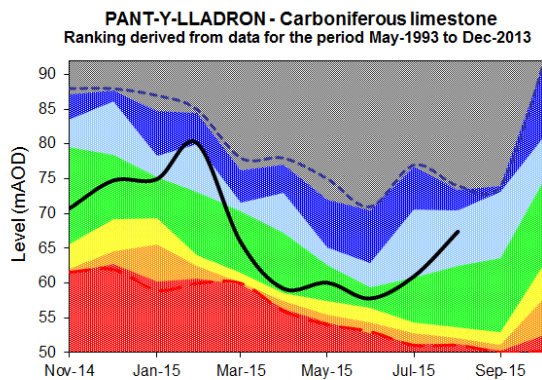
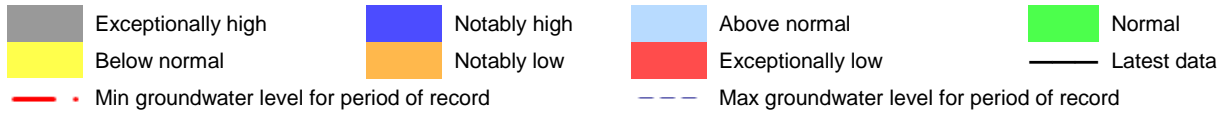
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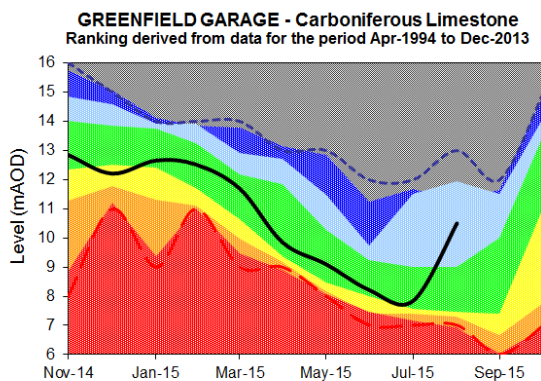
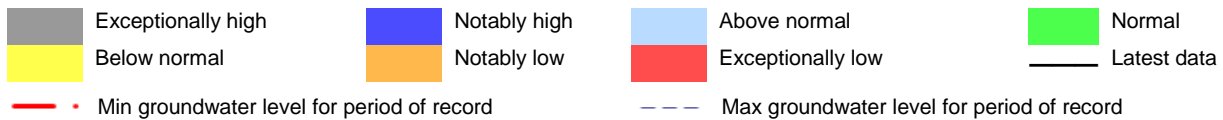
## Groundwater charts

**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).

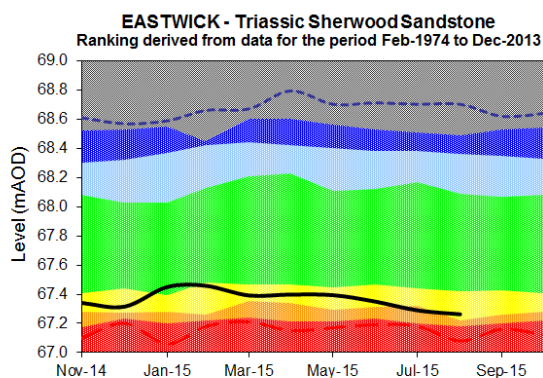
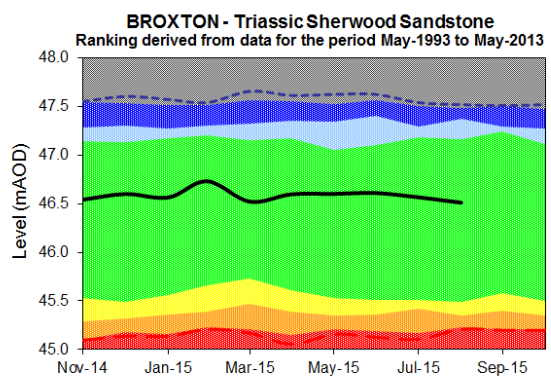
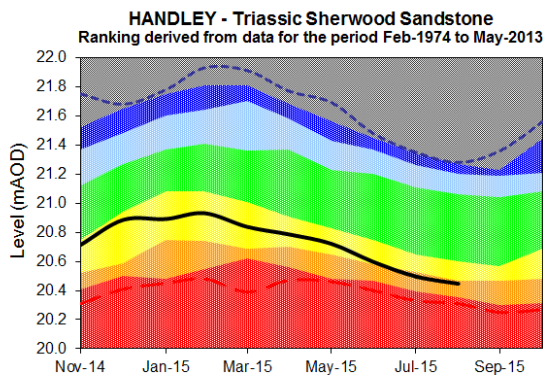
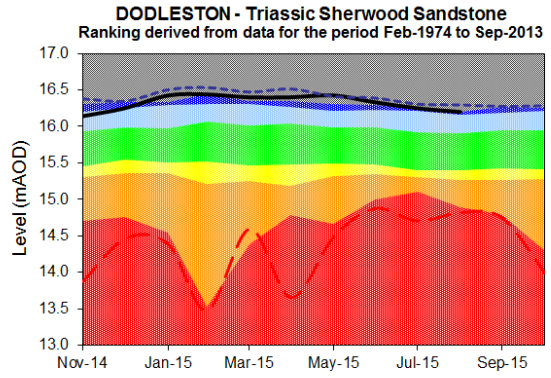
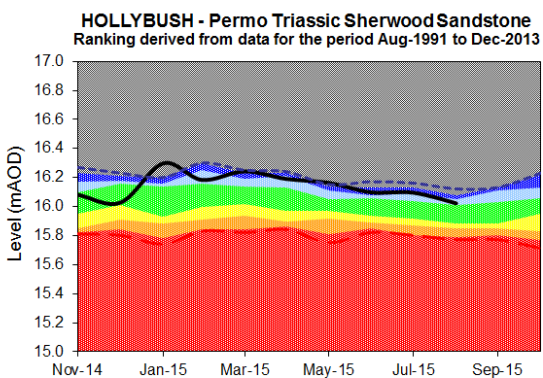
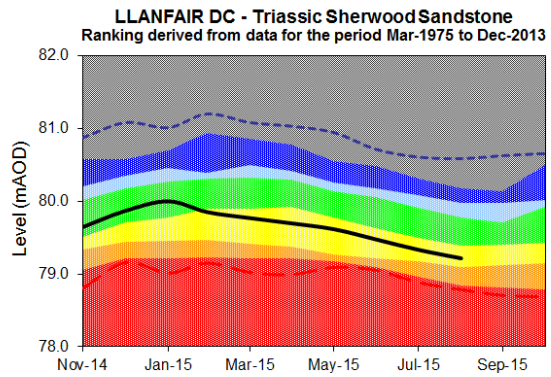
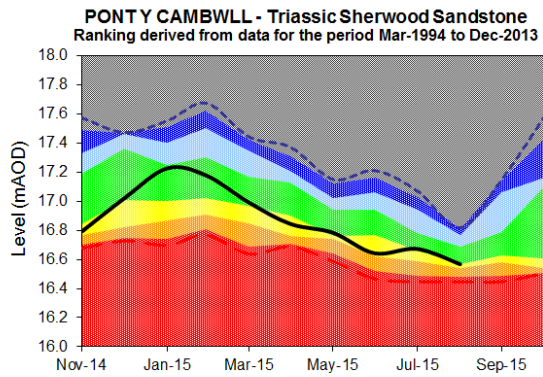
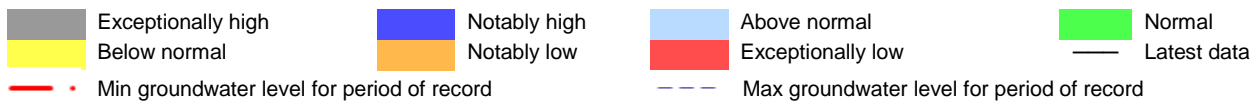
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**Figure 18: Groundwater level charts: North Wales**



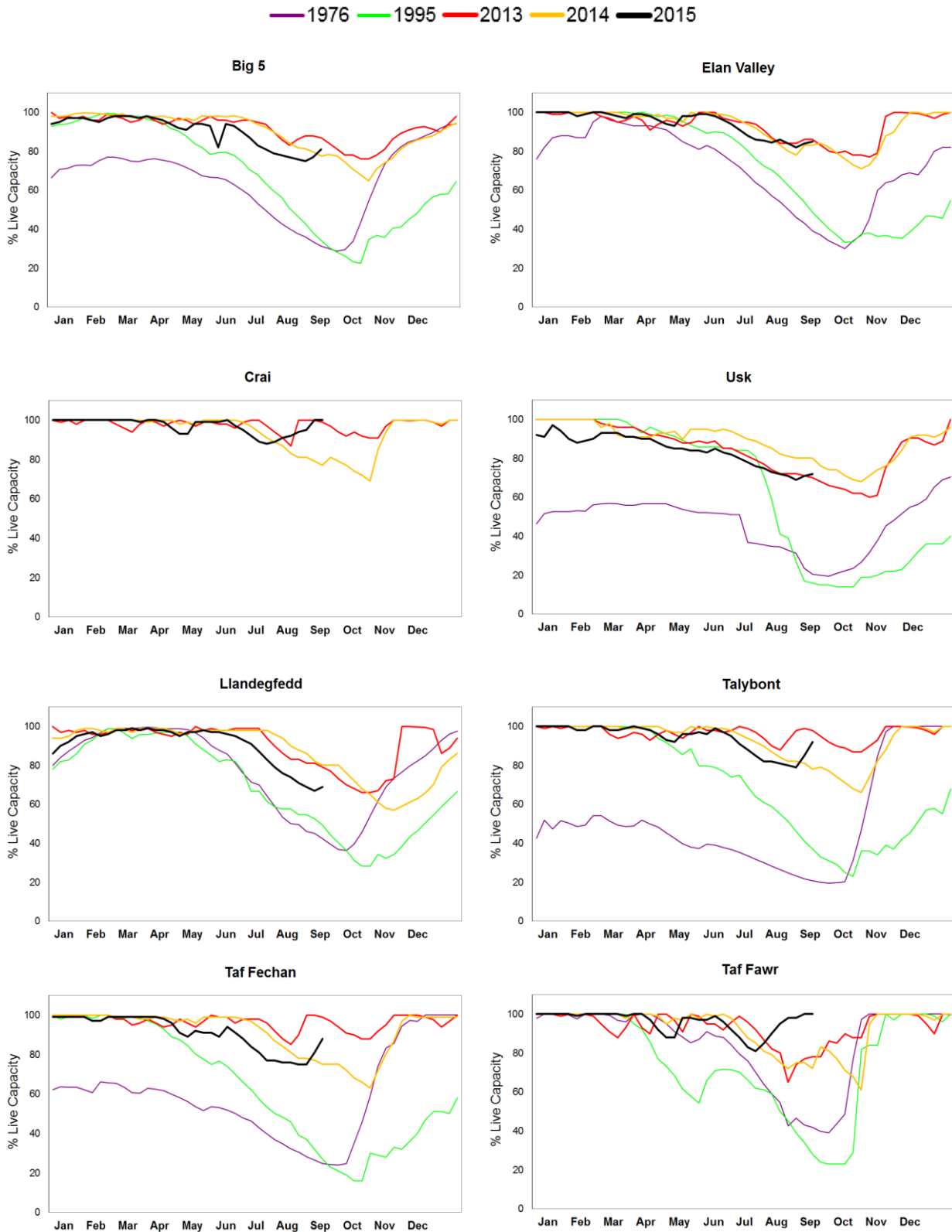
**End of month groundwater levels for the past 10 months for index sites (Source: Natural Resources Wales and Environment Agency).**

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## Reservoir Storage

Figure 19: Reservoir charts: South East Wales

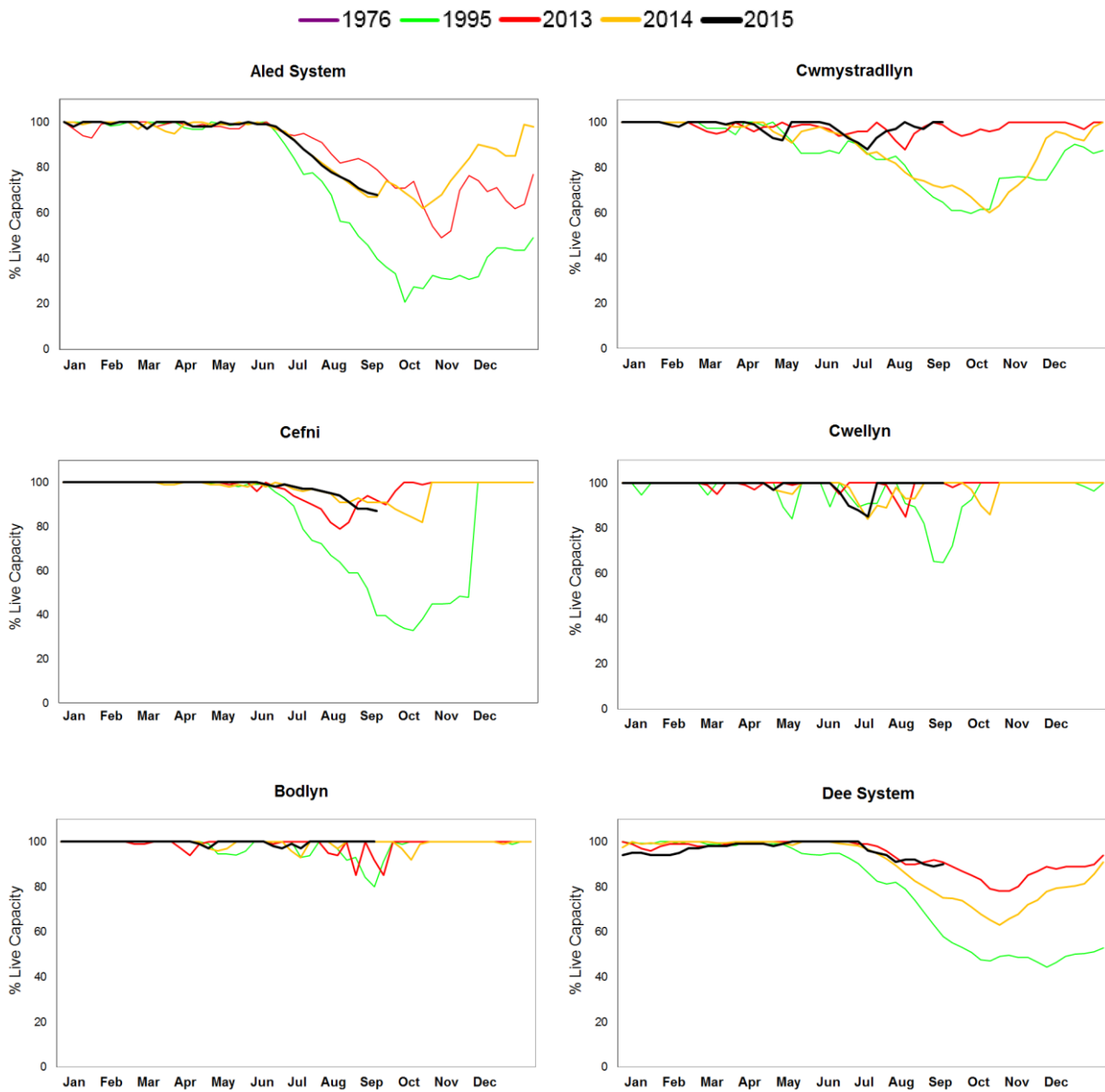


Weekly reservoir stocks for Natural Resources Wales index sites (Source: Water Companies).

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

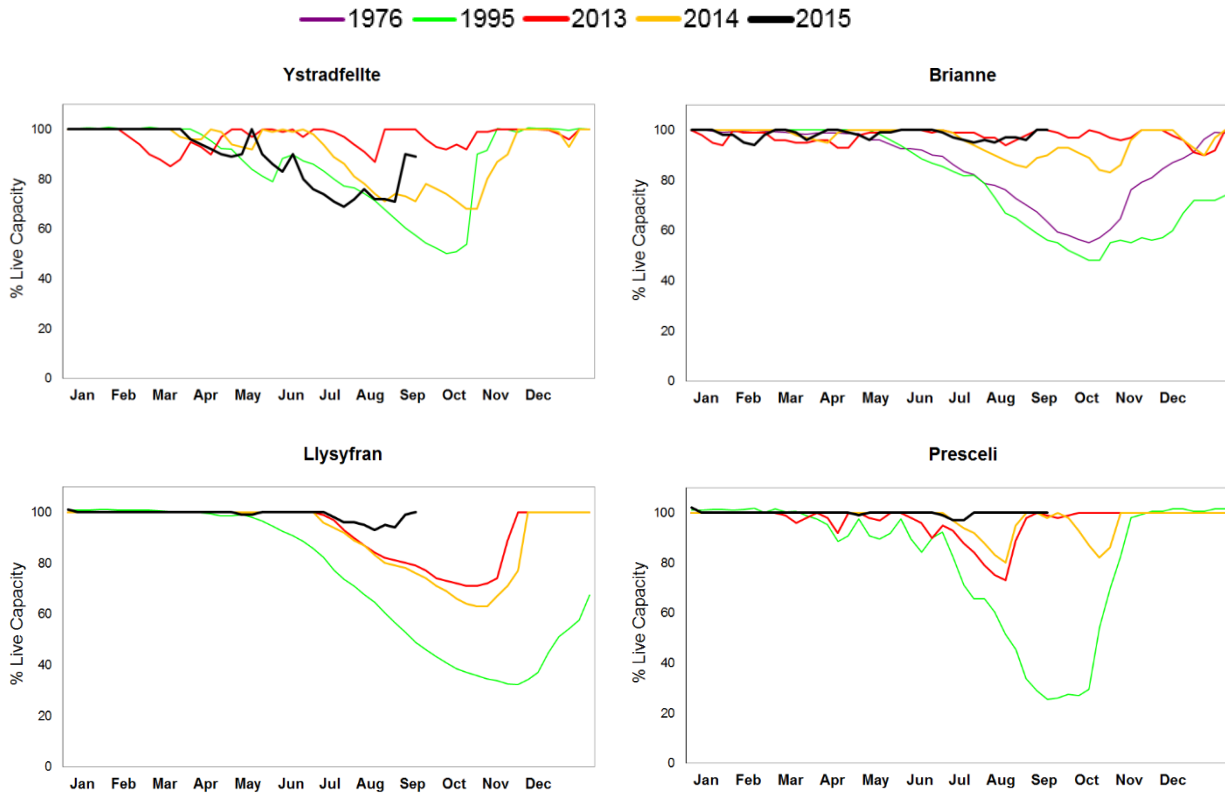


**Weekly reservoir stocks for Natural Resources Wales index sites (Source: Water Companies).**

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**Figure 21: Reservoirs charts: South West Wales**



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

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## 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).

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