

Natural Resources Wales

- The monthly rainfall total received for Wales during April was 111% of the Long Term Average (LTA, 1961-90). North, South West and South East Wales received 120%, 91% and 99% of the LTA, respectively.
- At the end of April, soil moisture deficit (SMD) values across Wales were between 1.1 and 32.7mm for all MORECS squares. The difference when compared to the long term average April (1961-90), ranged from -9.0mm to 12.4mm.
- For river flows in Wales, 22 out of 29 indicator sites which had flow data were classed as *Normal* for April and the 7 remaining sites were classed as *Above normal*.
- The overall reservoir storage across all indicator sites was greater than 96% full at the end of April and all reservoirs were within normal operating ranges.

Rainfall*

The monthly rainfall total received for Wales was 111% of the LTA for April. The percentage of rainfall recorded in catchments compared with the long term average (1961-90) across Wales was between 79% (Neath, Port Talbot and Bridgend Area and Valleys and Vale of Glamorgan) and 172% (Clwyd). The rainfall total for Wales was only 9mm more than the April LTA. For South East, South West and North Wales the rainfall totals were 99%, 91% and 120% of the 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

For the SMD values, The 23 MORECS squares had SMD values between 1.1 and 32.7mm. 15 out of 23 squares had SMD values which were greater than the long-term average (drier) and the resting 8 squares had SMD values which were lesser than the long-term average (wetter)

SMD Map [National](#)

SMD Charts [Compare to LTA](#)

All data are provisional and may be subject to revision.

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River Flows

River flows at 22 sites (out of 29 sites which had flow data) were classed as *Normal* and the remaining 7 sites were classed as *Above normal*.

North: Flows in the area ranged from 104% (River Gelyn at Cynefail) to 157% (River Ceiriog at Brynkinal Weir) of the April LTA Values.

South East: Flows in the area ranged from 75% (River Yscir at Pont ar Yscir) to 110% (River Usk at Trostrey Weir) of the April LTA values.

South West: The river flows within this area ranged from 75% (River Neath at Resolven) to 122% (River Taf at Clog y Fran) of the April 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 April at all indicator sites (10 sites) were classed between *Notably low* (Eastwick) and *Above normal* (Hollybush and Dodleston Obs). The remaining 7 sites were classed as *Normal* (Pant-y-Lladron, Fernbank, Greenfield Garage, Pont y Cambwll, Llanfair DC Obs, Handley, Broxton Obs).

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

Reservoir Storage

At the end of April almost all the indicator reservoirs (16 out of 18) were greater than 96% full.

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

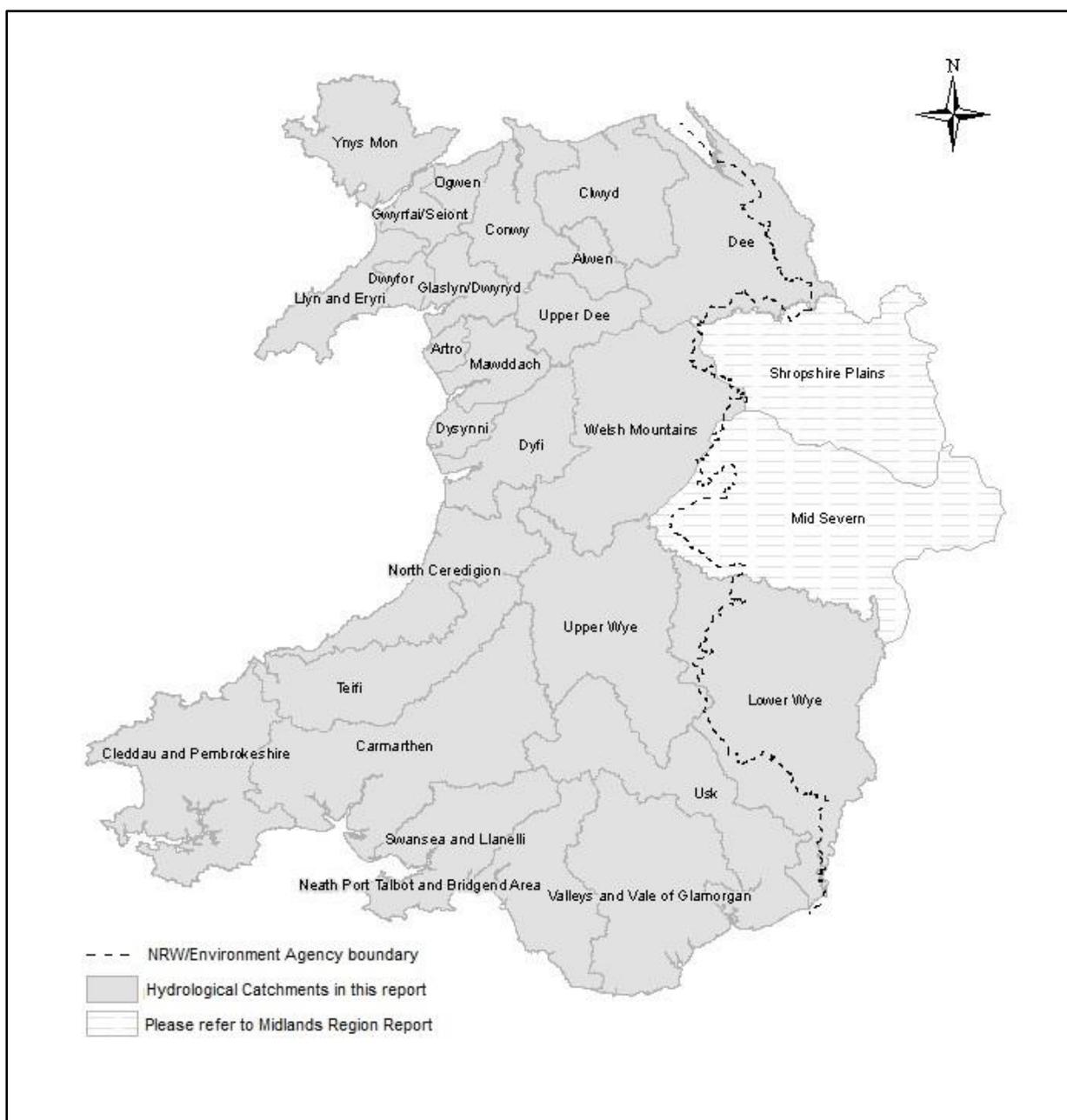


Figure 1: The Natural Resources Wales Water Situation Report features sites in the catchments shown. Parts of the Shropshire Plains and Mid Severn catchments are within Wales. For full information on these catchments, please see the Environment Agency Midlands Water Situation Report.

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

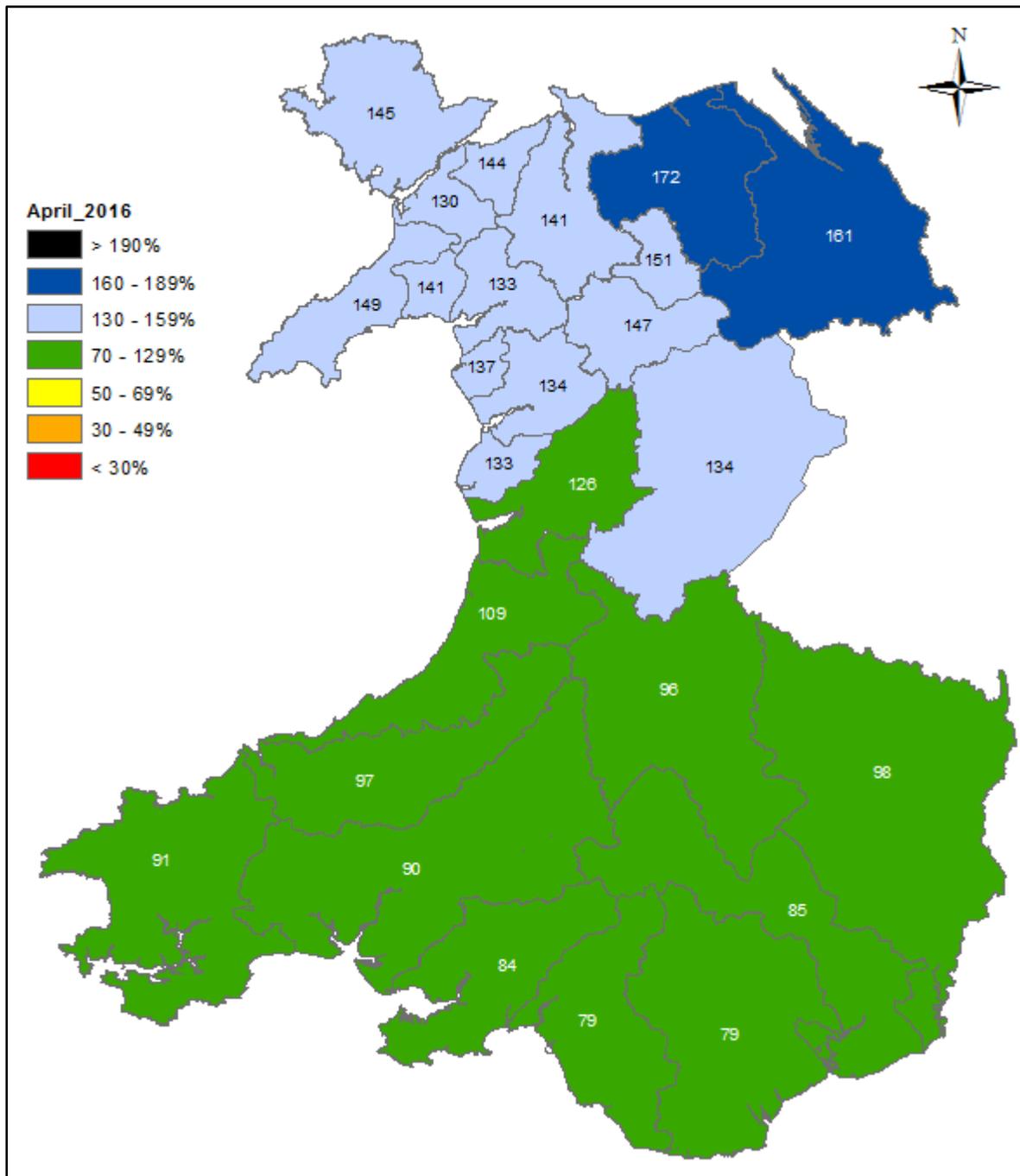


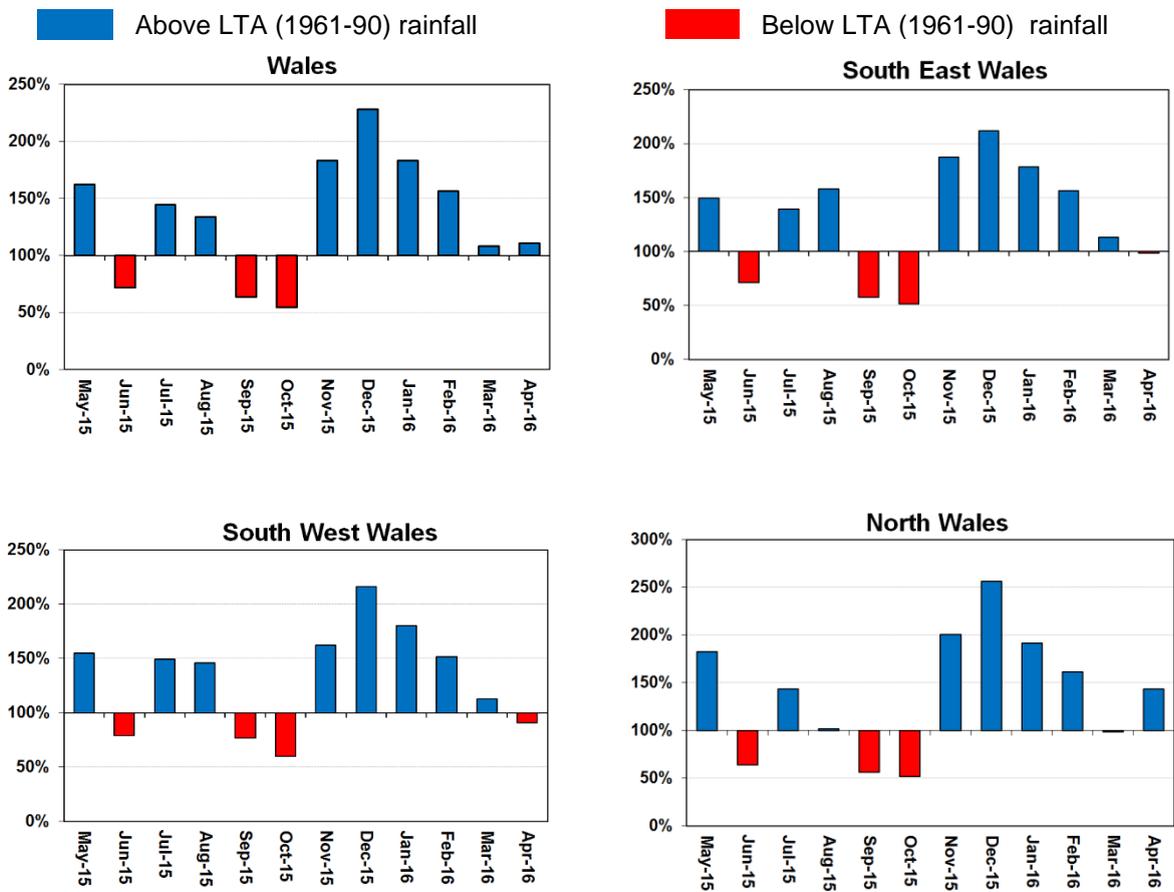
Figure 2: Calculated catchment average April rainfall totals as a percentage of the 1961-90 April long term average for Natural Resources Wales catchments, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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Rainfall Charts

Figure 3: Rainfall Charts: National and Areas

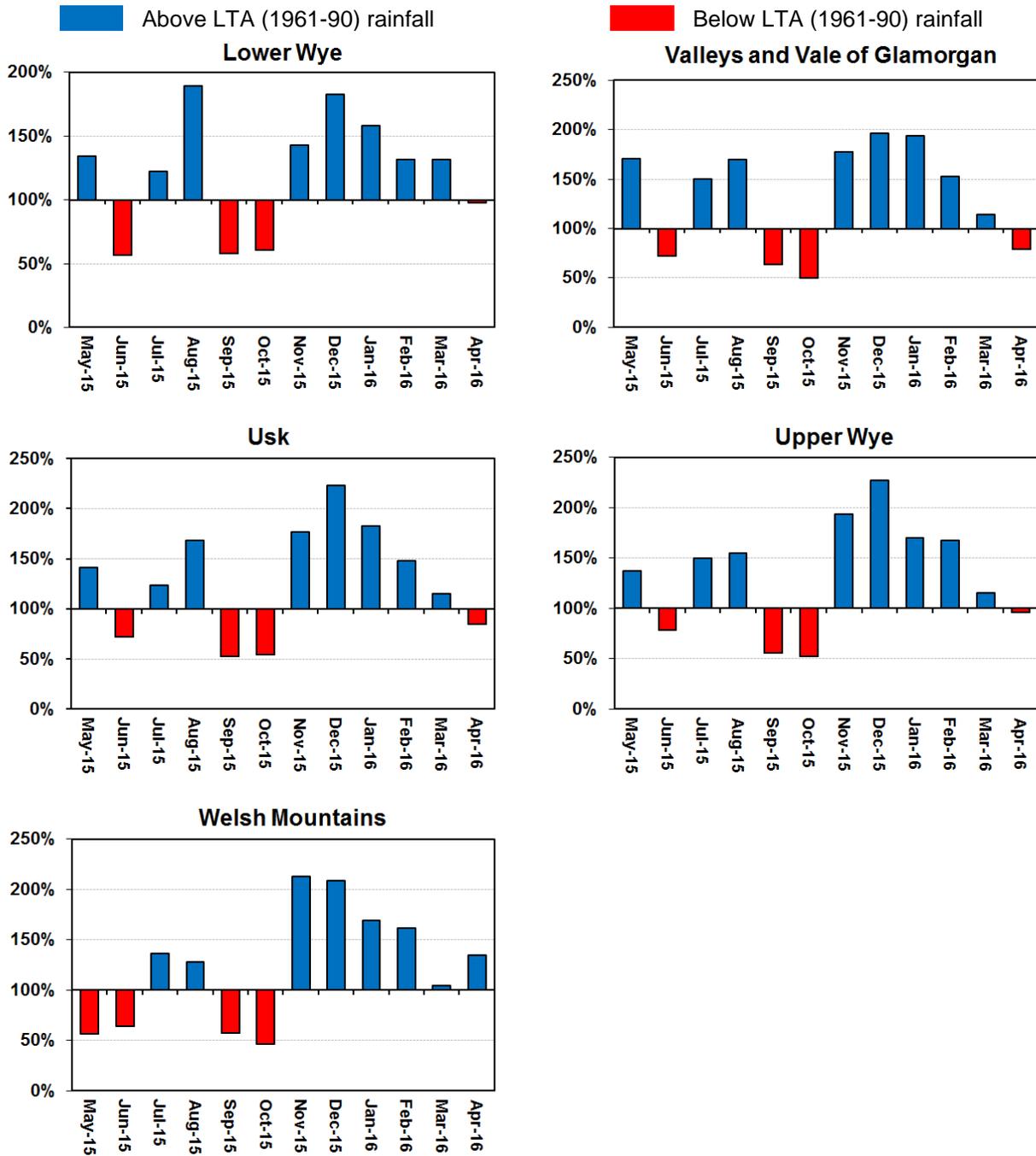


Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for Natural Resources Wales and Areas, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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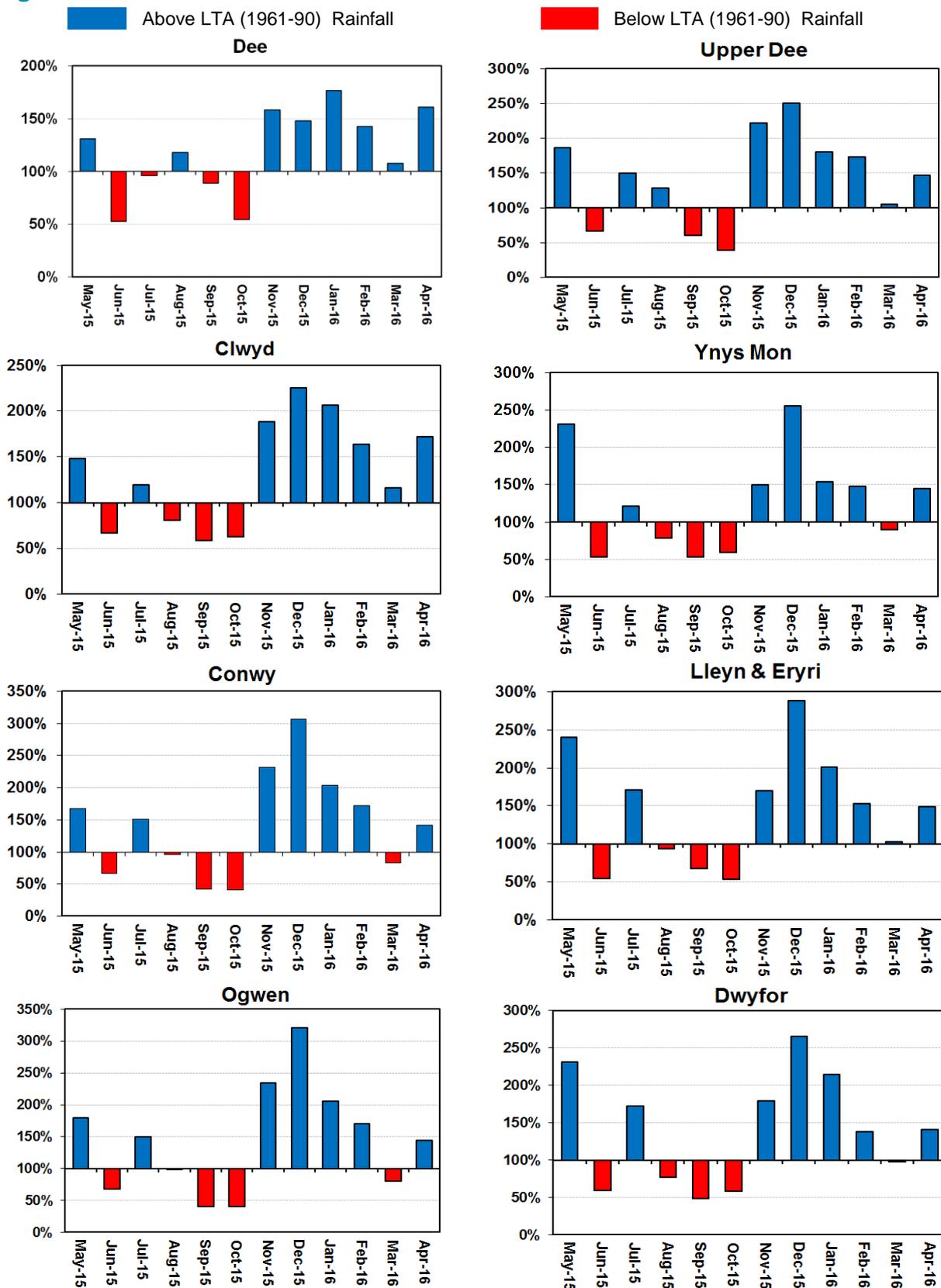
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Figure 4: Rainfall Charts: South East Wales



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).

Figure 5: Rainfall Charts: North Wales

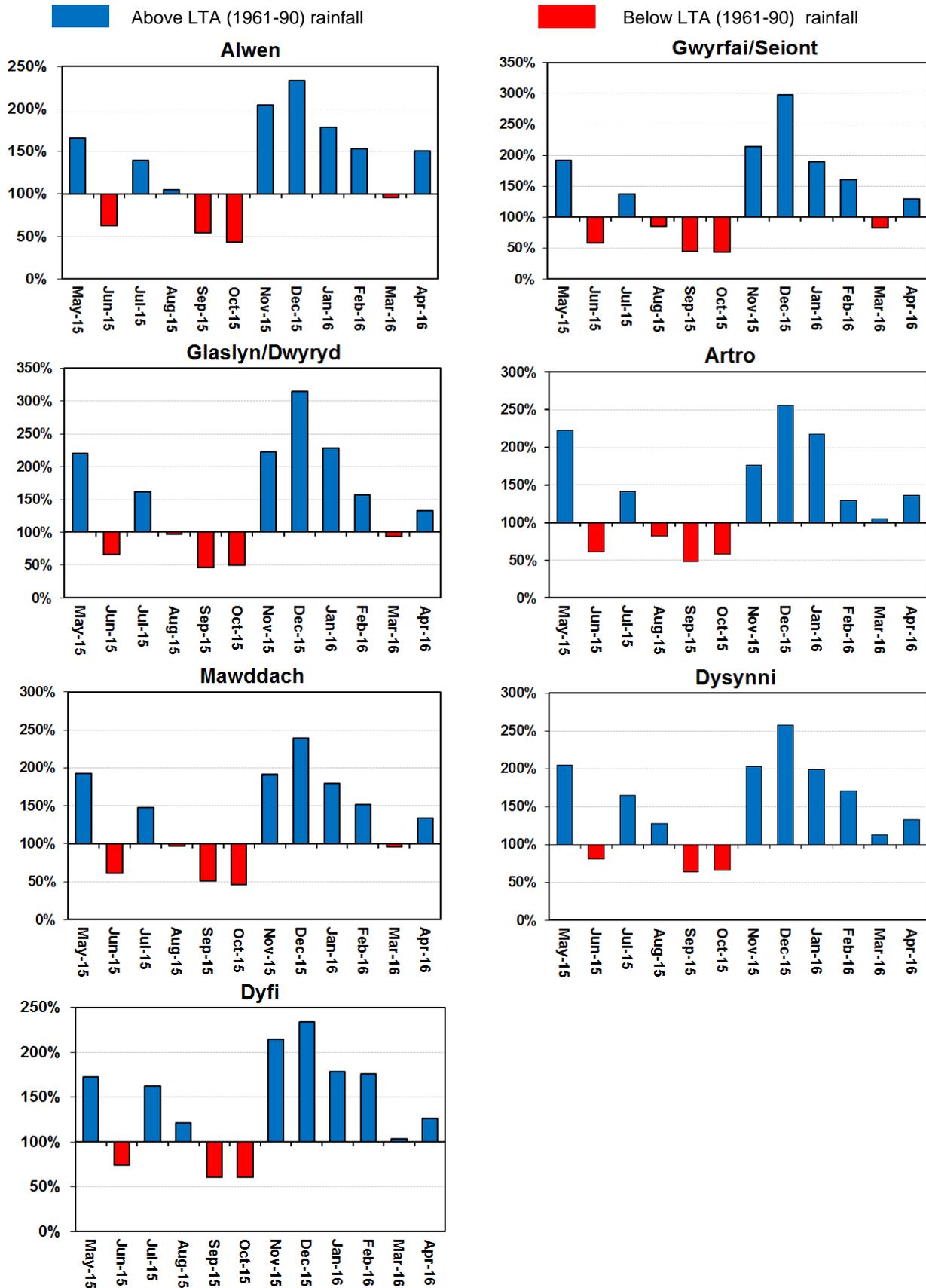


Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for North Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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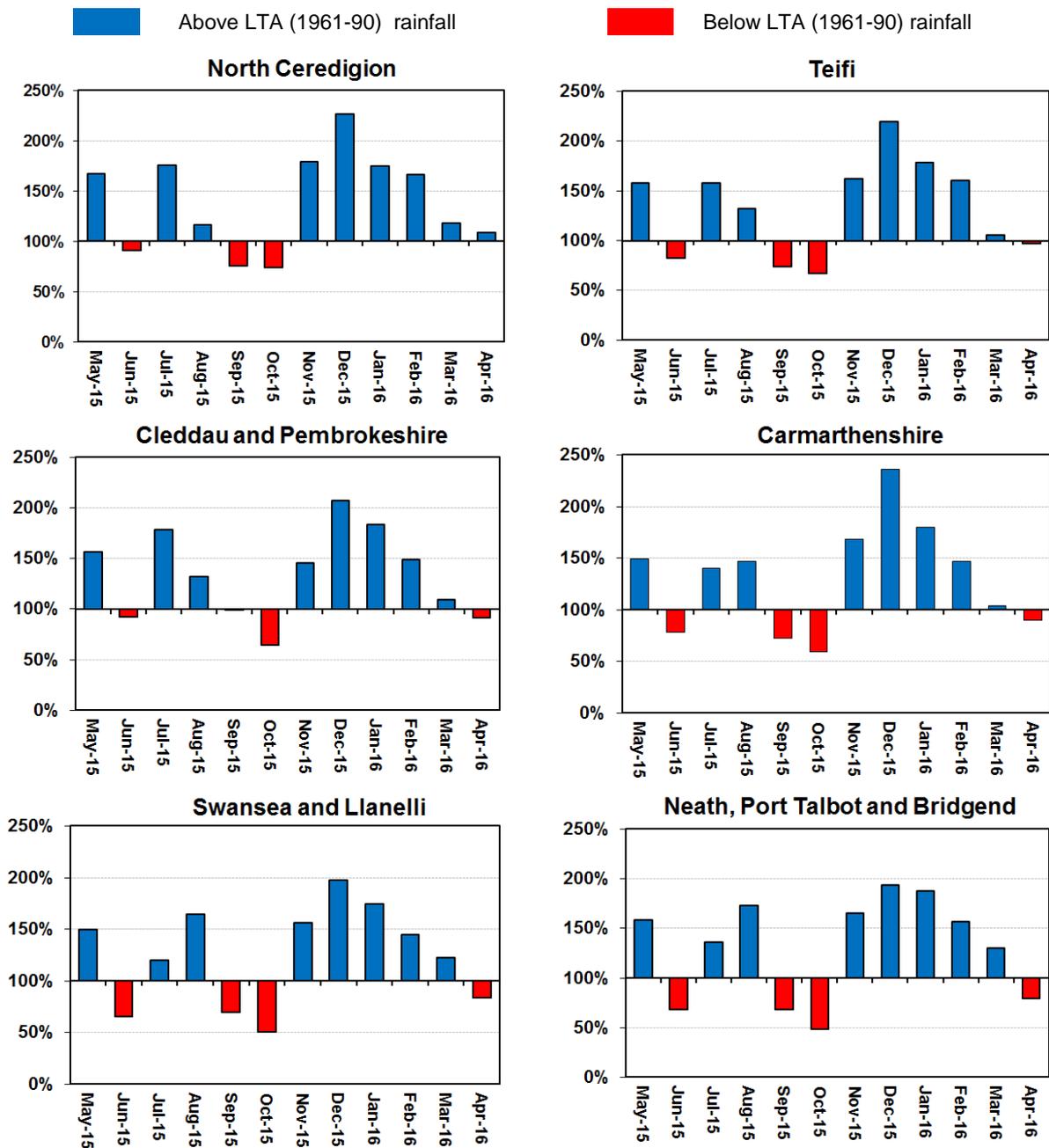
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Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for North Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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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)

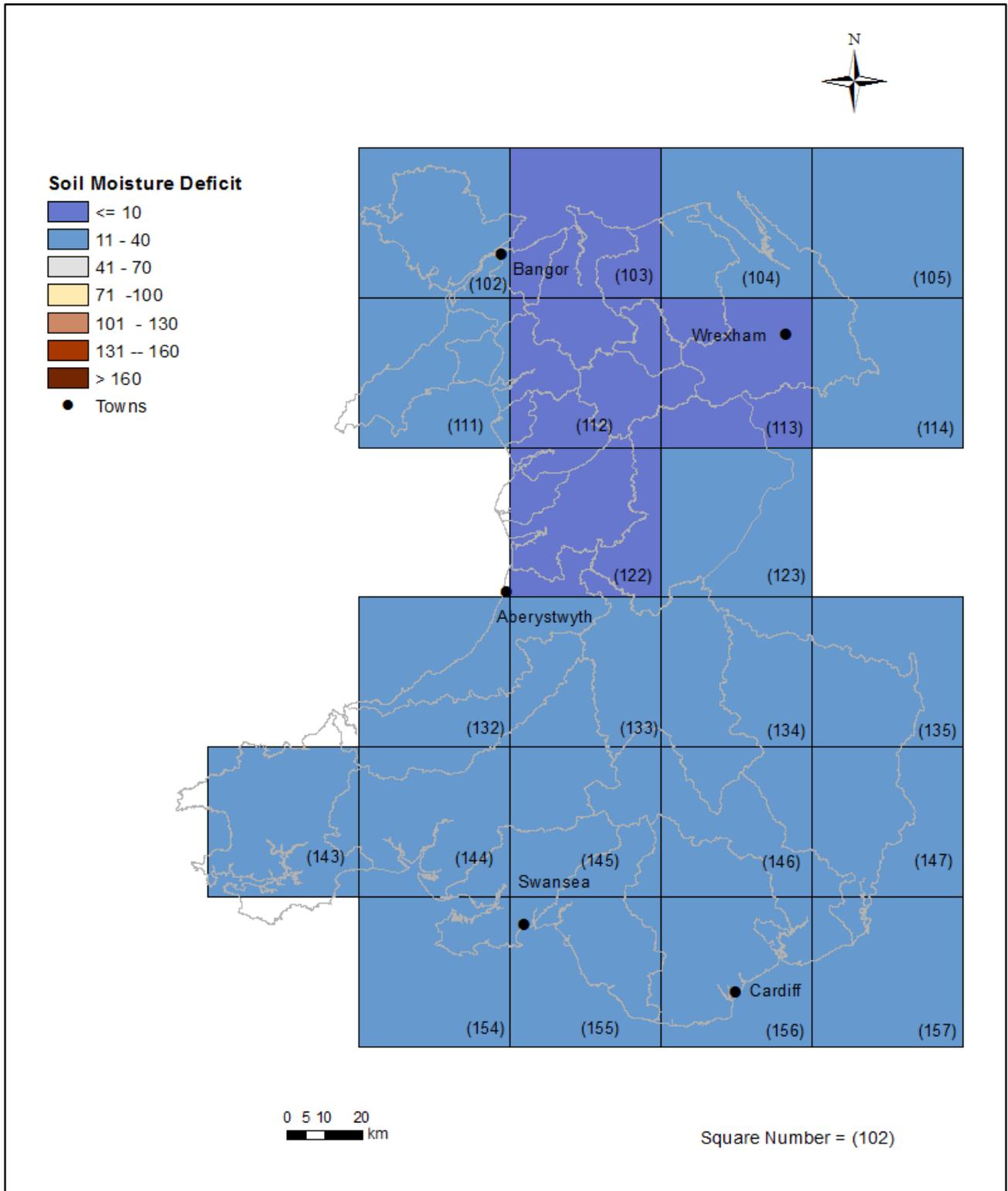


Figure 7: MORECS soil moisture deficits (mm) for April for real land use for Natural Resources Wales (Source: Met Office © Crown Copyright).

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■ Above LTA (1961-90) SMD (Drier)
 ■ Below LTA (1961-90) SMD (Wetter)

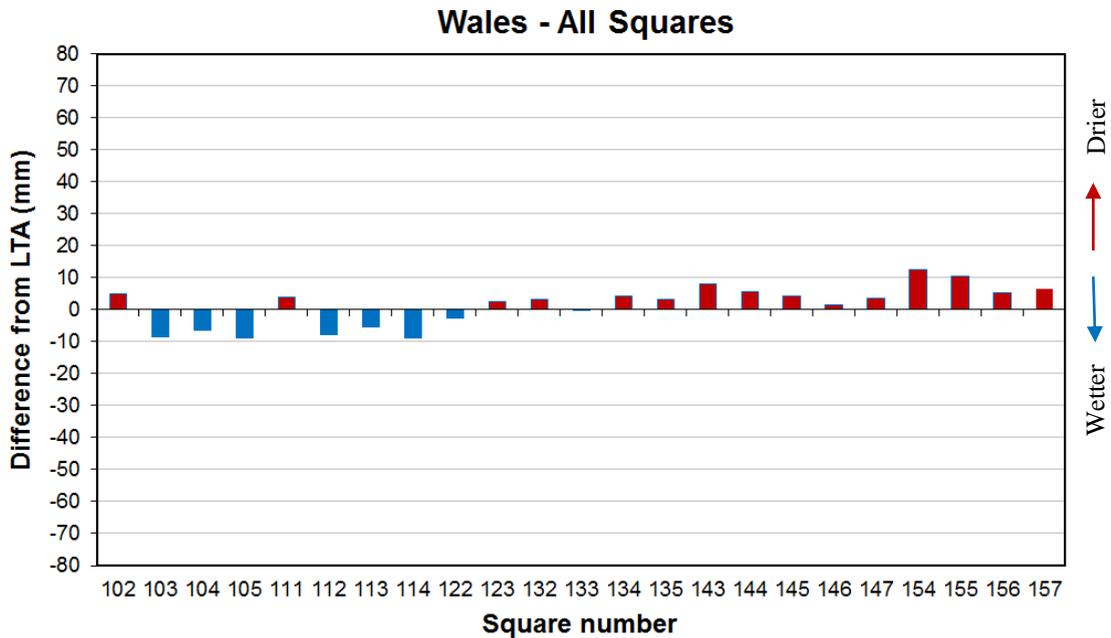


Figure 8: MORECS month end soil moisture deficits difference (mm) from the 1961-90 long term monthly average (LTA) for April for real land use for Natural Resources Wales squares (Source: Met Office © Crown Copyright).

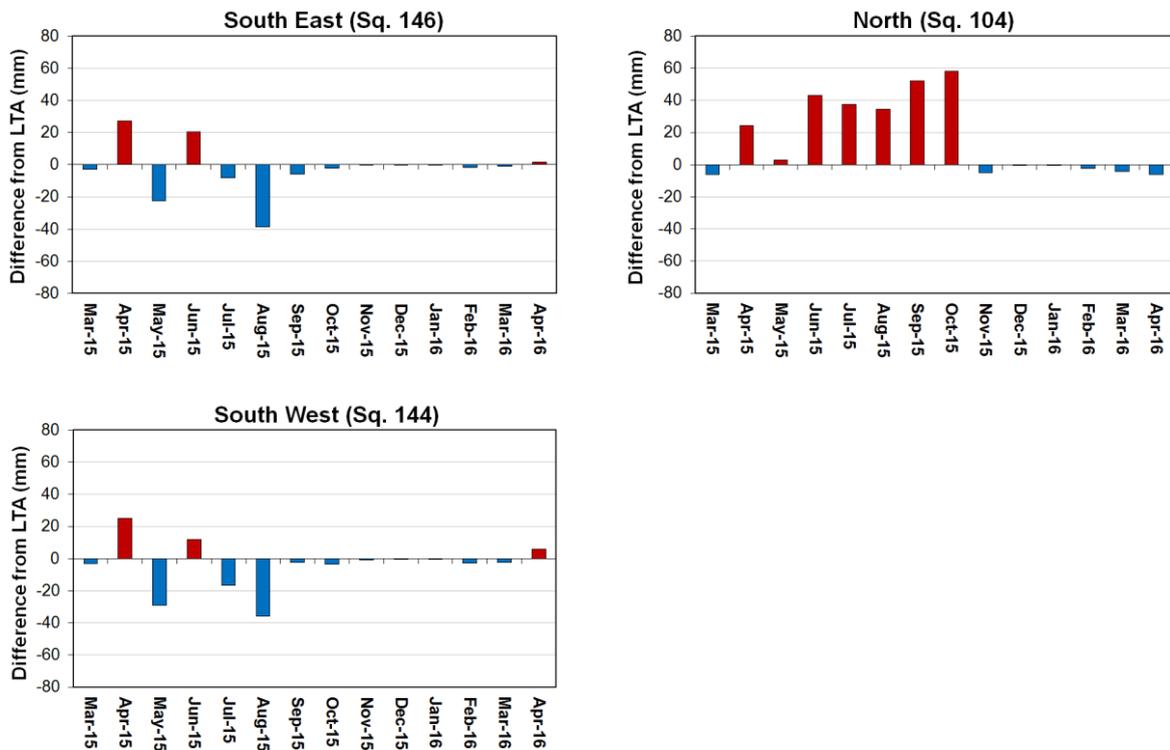


Figure 9: MORECS month end soil moisture deficit difference (mm) from the 1961-90 long term monthly average (LTA) for real land use for South East, North and South West (Source: Met Office © Crown Copyright). (Note: no LTA available for Natural Resources Wales)

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River Flow

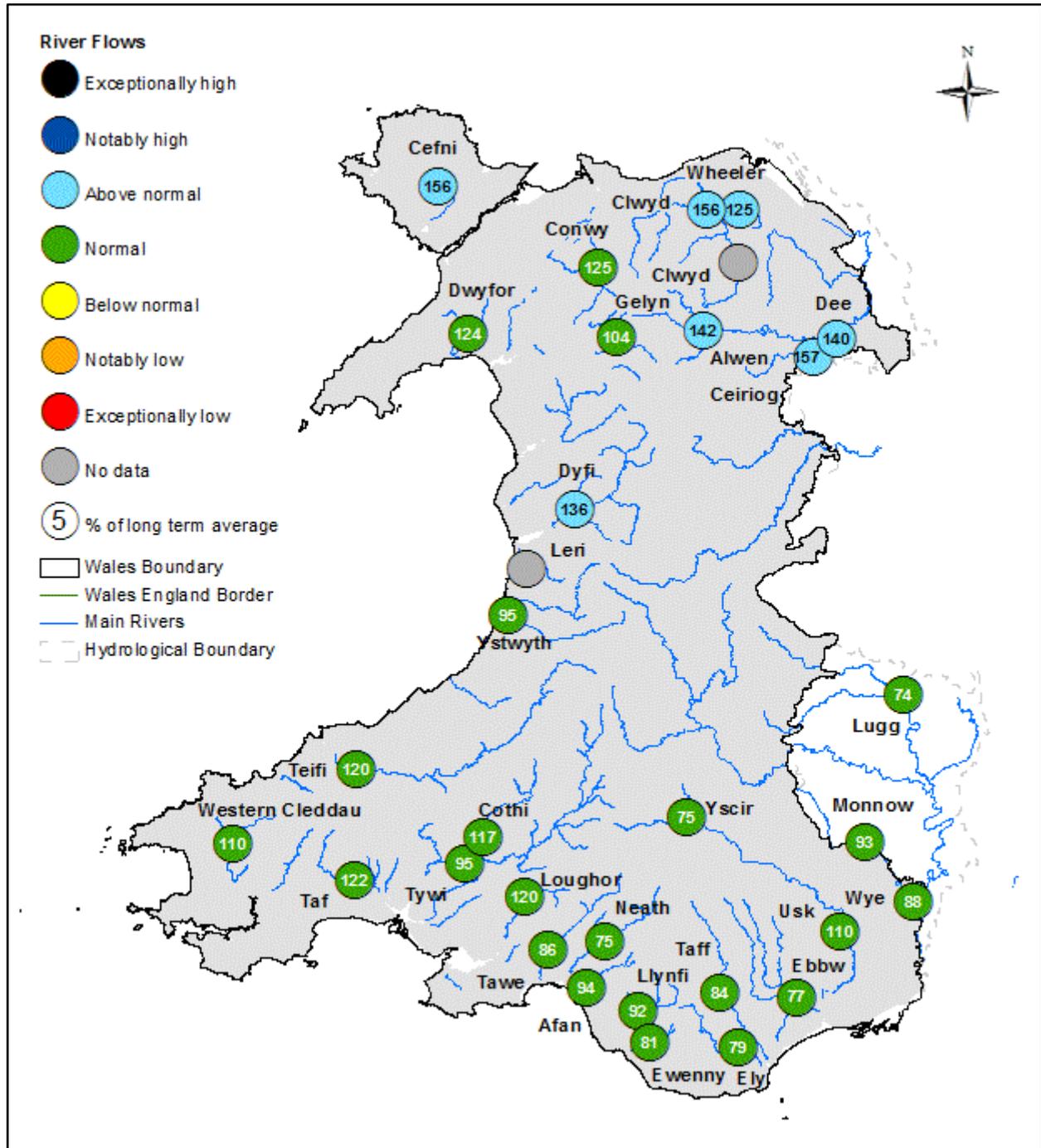


Figure 10: Monthly mean river flow for April, classed relative to analysis of historic April monthly means (Source: Natural Resources Wales).

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SITE NAME	RIVER	April 2016			April 2015		April 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	Normal	74%	4.55	65%	4.00	6.12	1.61	12.70
Grosmont		Normal	93%	5.61	60%	3.62	6.02	1.57	17.10
Pont ar Yscir	Yscir	Normal	75%	1.14	61%	0.92	1.51	0.34	3.98
Pontypridd	Taff	Normal	84%	12.30	51%	7.49	14.73	5.26	36.00
Redbrook	Wye	Normal	88%	58.50	68%	45.42	66.73	18.20	152.00
Rhiwderin	Ebbw	Normal	81%	6.68	49%	3.04	6.22	1.87	12.70
St Fagans	Ely	Normal	79%	2.75	68%	2.35	3.46	1.13	7.17
Trostrey Weir	Usk	Normal	110%	21.10	74%	14.15	19.10	7.84	37.32
River Flow Sites : North Area									
Bodfari	Wheeler	Above normal	125%	1.06			0.85	0.41	1.63
Bodffordd	Cefni	Above normal	156%	0.42	85%	0.23	0.27	0.08	0.98
Brynkinalt Weir	Ceiriog	Above normal	157%	4.58	60%	1.75	2.91	0.69	6.34
Cwmlanerch	Conwy	Normal	125%	16.80	52%	7.00	13.48	1.42	39.20
Cynefail	Gelyn	Normal	104%	0.52	56%	0.28	0.50	0.09	1.47
Dol y Bont	Leri						1.20	0.27	2.53
Druid	Alwen	Above normal	142%	5.79	61%	2.47	4.08	1.00	10.70
Dyfi bridge	Dyfi	Above normal	136%	22.80			16.71	2.63	42.50
Garndolbenmaen	Dwyfor	Normal	124%	2.46	71%	1.41	1.99	0.43	4.74
Manley Hall	Dee	Above normal	140%	36.20	71%	18.26	25.79	8.59	61.40
Pont y Cambwll	Clwyd	Above normal	156%	9.23	79%	4.65	5.91	1.83	14.70
Ruthin Weir	Clwyd						1.31	0.37	2.79
River Flow Sites : South West Area									
Capel Dewi	Tywi	Normal	95%	27.50	53%	15.15	28.81	6.20	64.80
Clog y Fran	Taf	Normal	122%	6.79	76%	4.25	5.58	1.74	12.10
Coytrahen	Llynfi	Normal	92%	1.52	74%	1.23	1.66	0.39	3.84
Felin Mynachdy	Cothi	Normal	117%	9.95	47%	4.04	8.52	1.44	20.40
Glanteifi	Teifi	Normal	120%	26.40	72%	15.79	21.95	5.82	48.20
Keepers Lodge	Ewenny	Normal	81%	1.22	72%	1.09	1.51	0.65	3.92
Marcroft	Afan	Normal	94%	3.40			3.63	1.02	7.57
Pont Llolwyn	Ystwyth	Normal	95%	4.06	68%	2.90	4.26	0.96	10.10
Resolven	Neath						4.48	1.91	8.64
Tir-y-Dail	Loughor	Normal	75%	5.08	45%	3.05	6.77	2.20	14.60
Treffgarne	Western Cleddau	Normal	110%	3.33					
Ynystanglws	Tawe	Normal	120%	1.85	61%	0.94	1.54	0.54	3.00

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

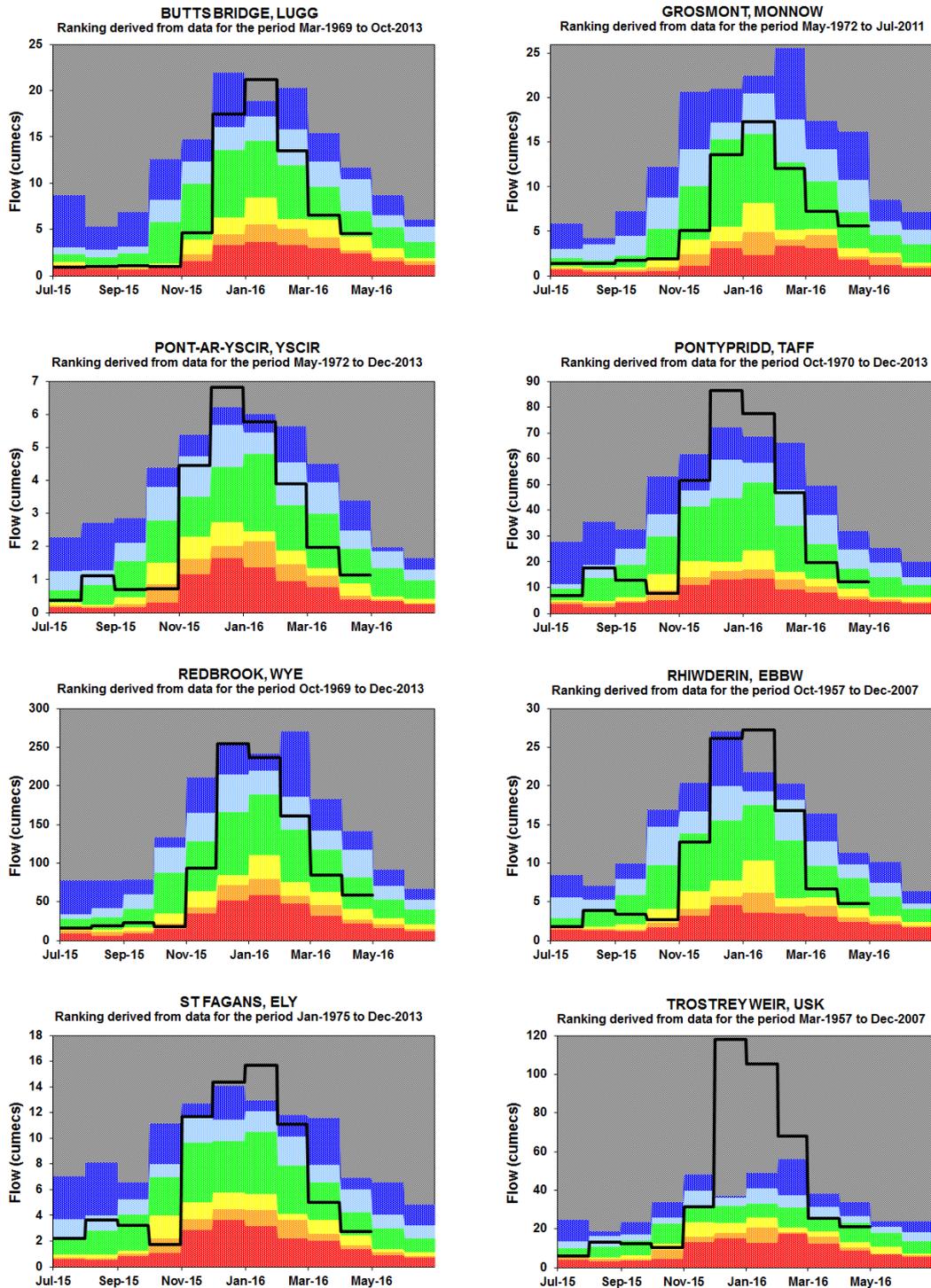
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River Flow Charts

Figure 12: River Flow Charts: South East Wales



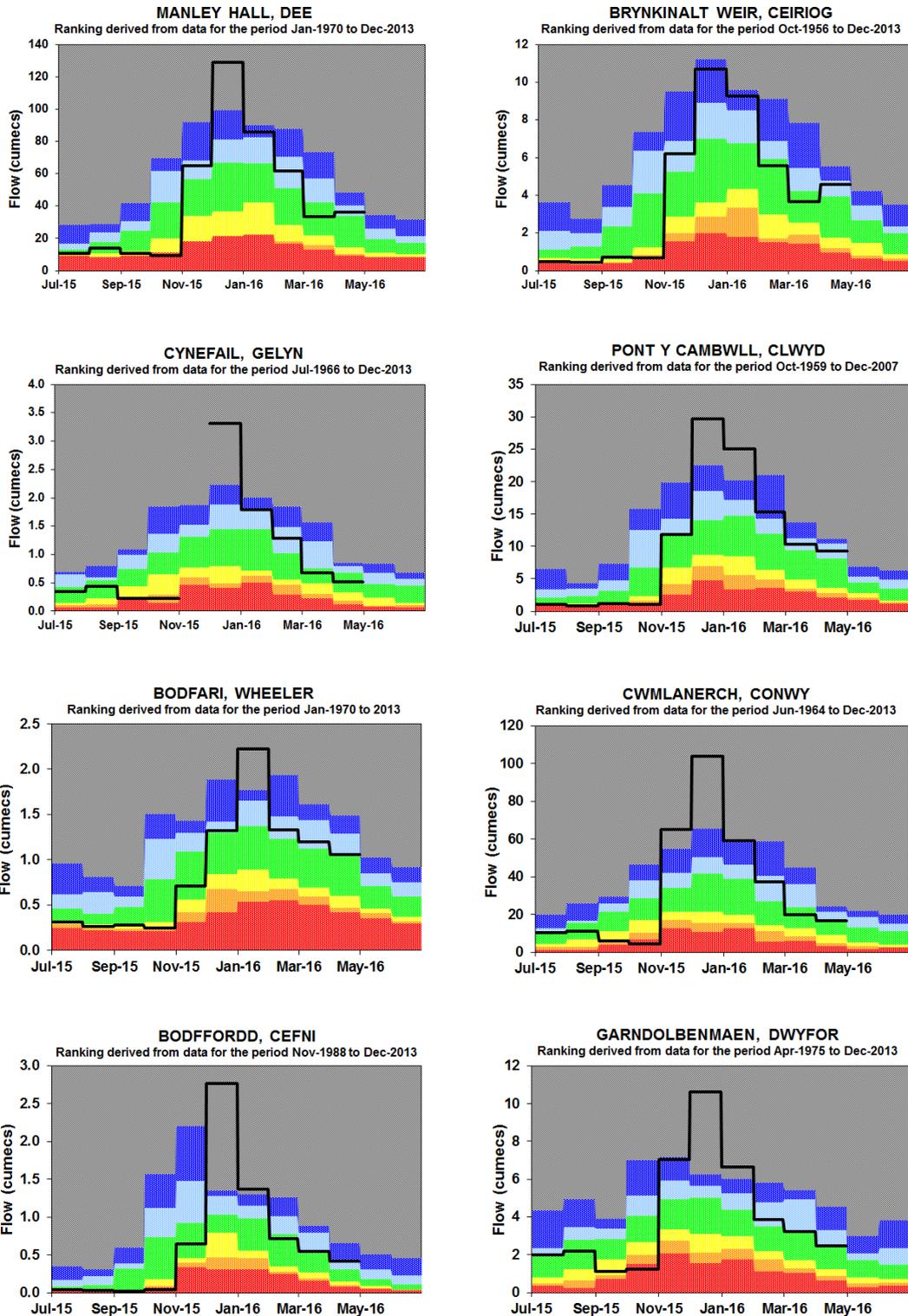
Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels (Source: Natural Resources Wales).

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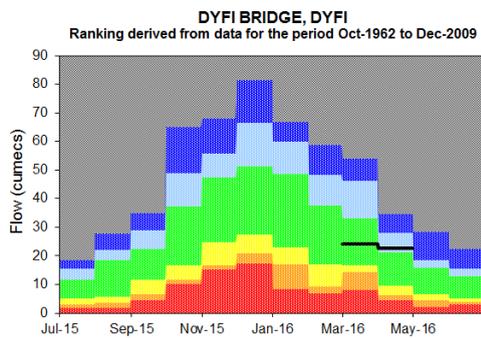
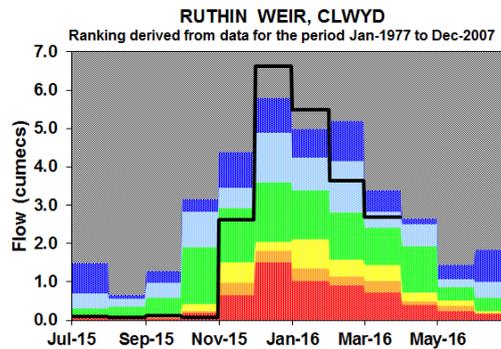
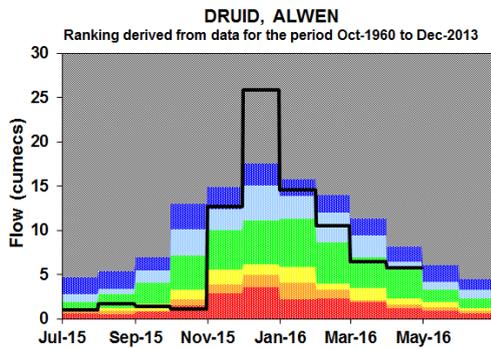
Figure 13: River Flow Charts: North Wales



Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels (Source: Natural Resources Wales). (Please note that there was no data available for River Gelyn at Cynefail in November 2015)

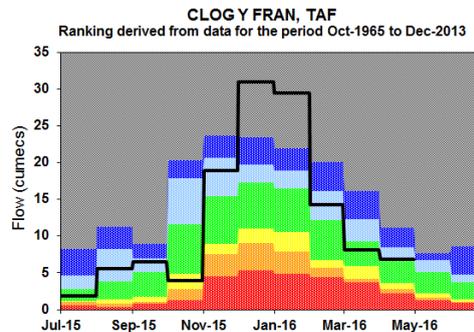
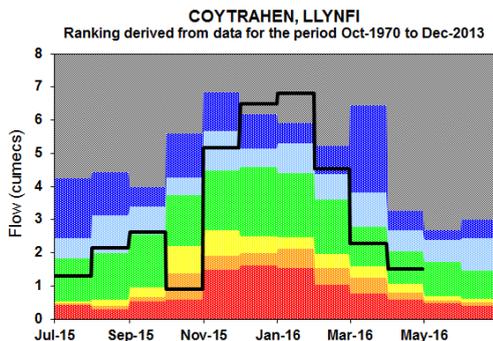
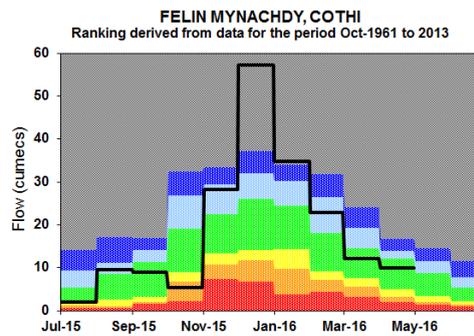
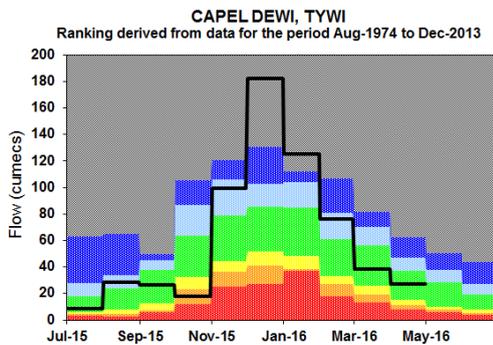
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(Please note that there were no data available for River Dyfi at Dyfi Bridge before March 2016 and for River Clwyd at Ruthin Weir for April 2016)

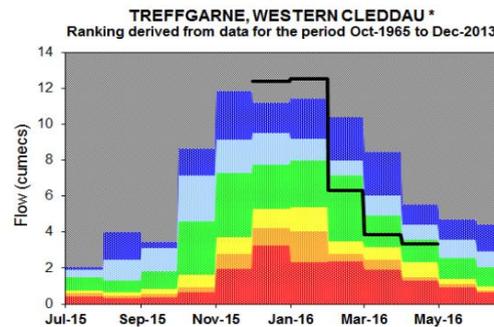
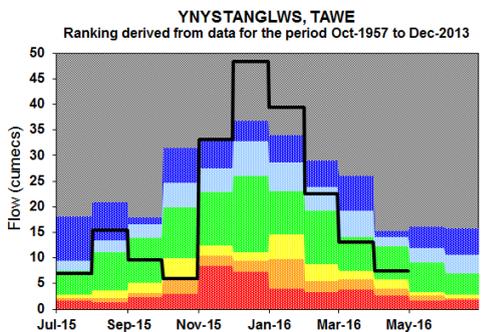
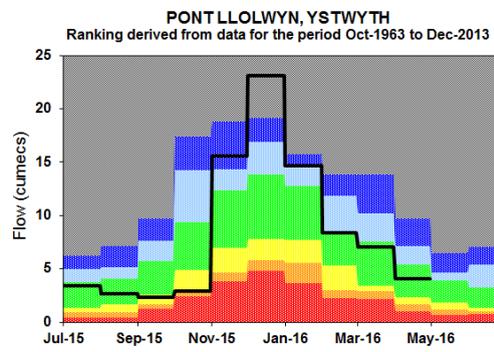
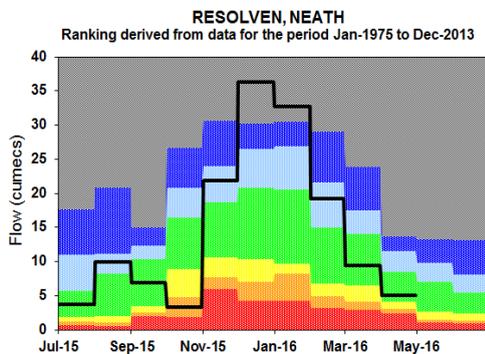
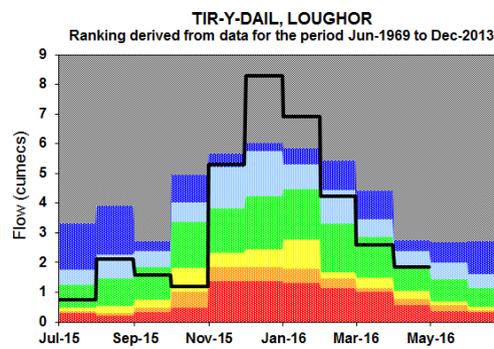
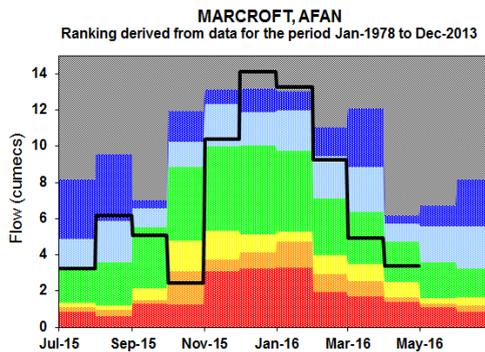
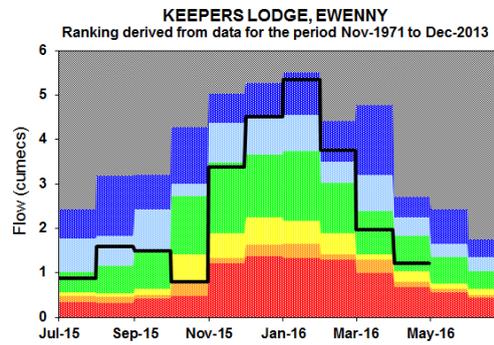
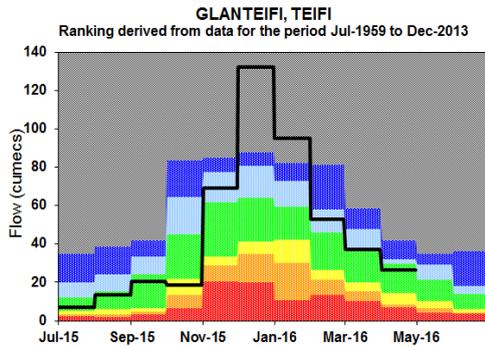
Figure 14: River Flow Charts: South West Wales



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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 there was no data available before June 2015 for the site of River Afan at Marcroft. For Treffarne station the ranking bands were derived by using a factor based on scaling of historical flows (1965-2013) at the nearby station of Prendergast.)

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Groundwater Levels

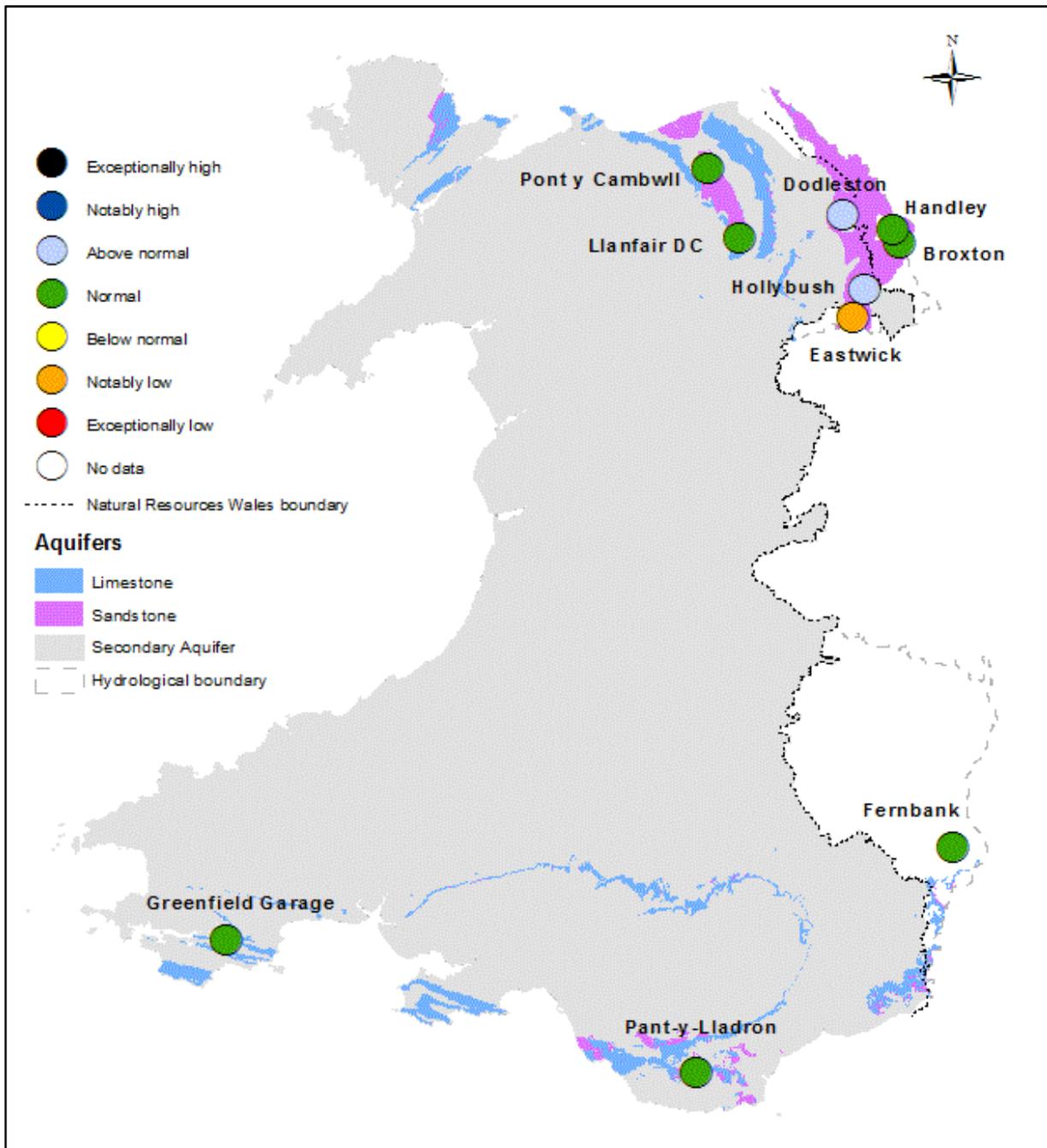


Figure 15: Groundwater levels at the end of month classed relative to an analysis of historic April groundwater levels (Source: Natural Resources Wales and Environment Agency).

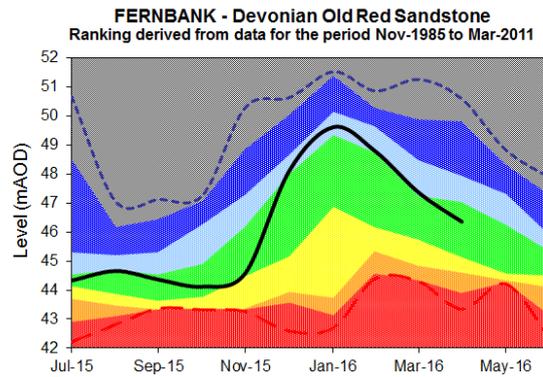
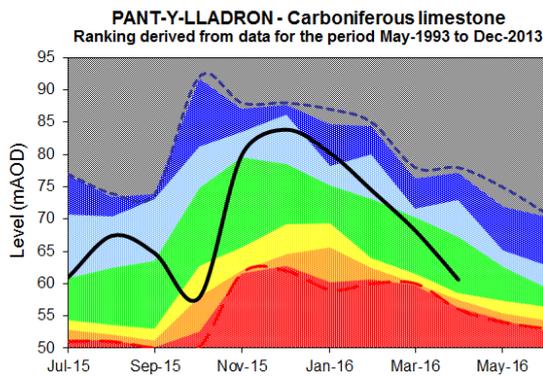
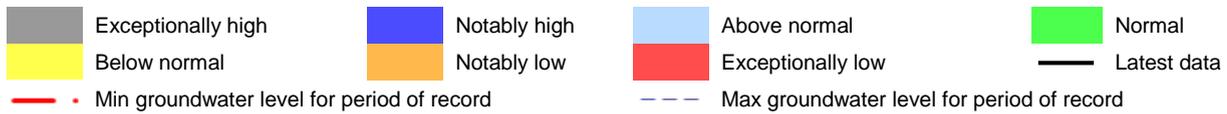
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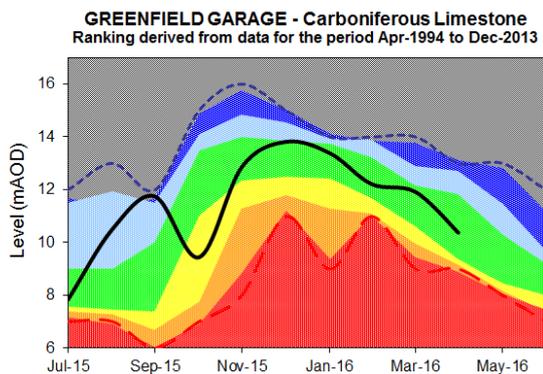
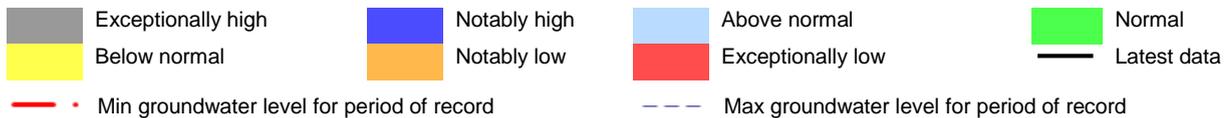
Groundwater charts

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).

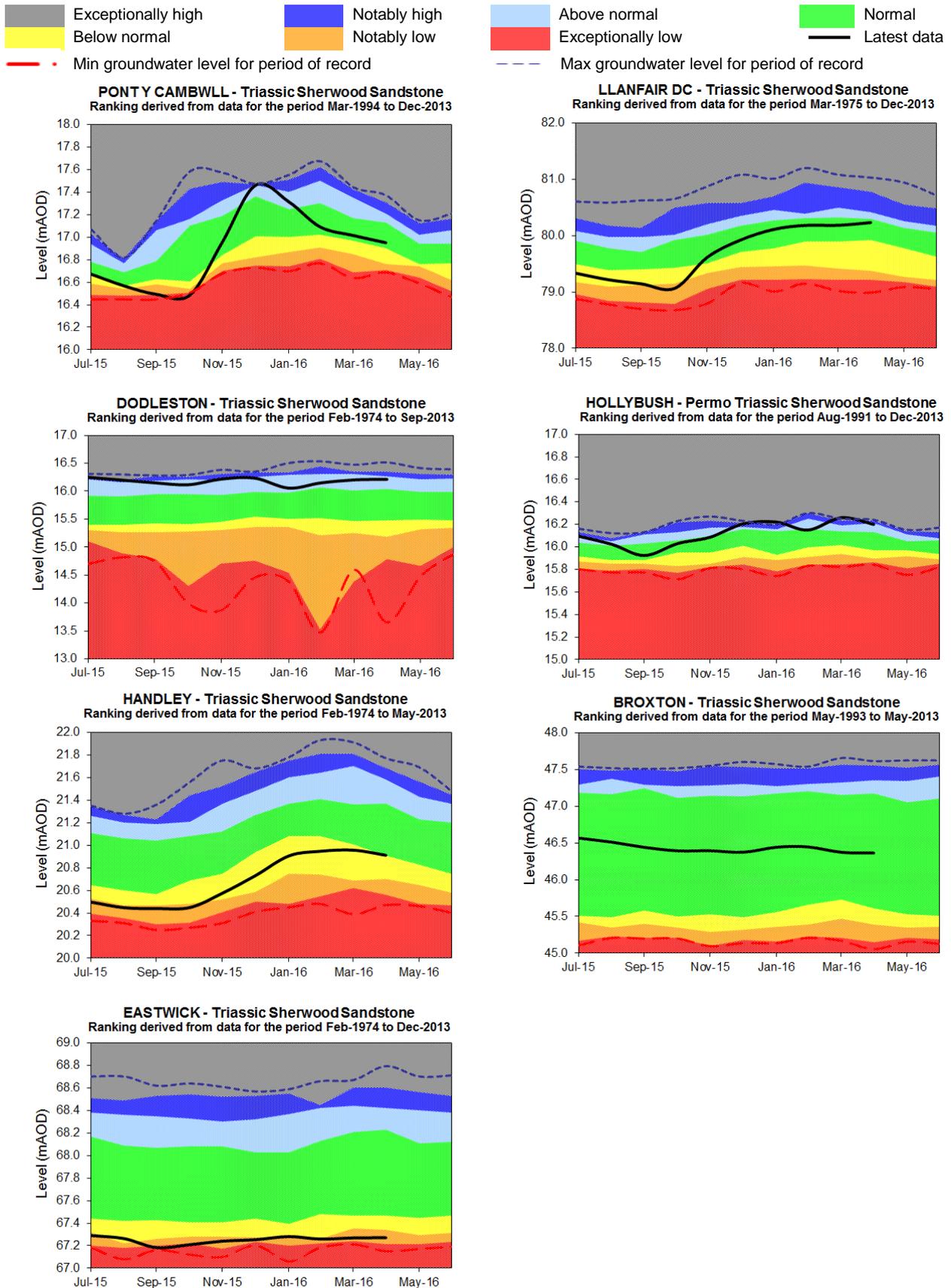
Figure 17: Groundwater level charts: South West Wales



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).

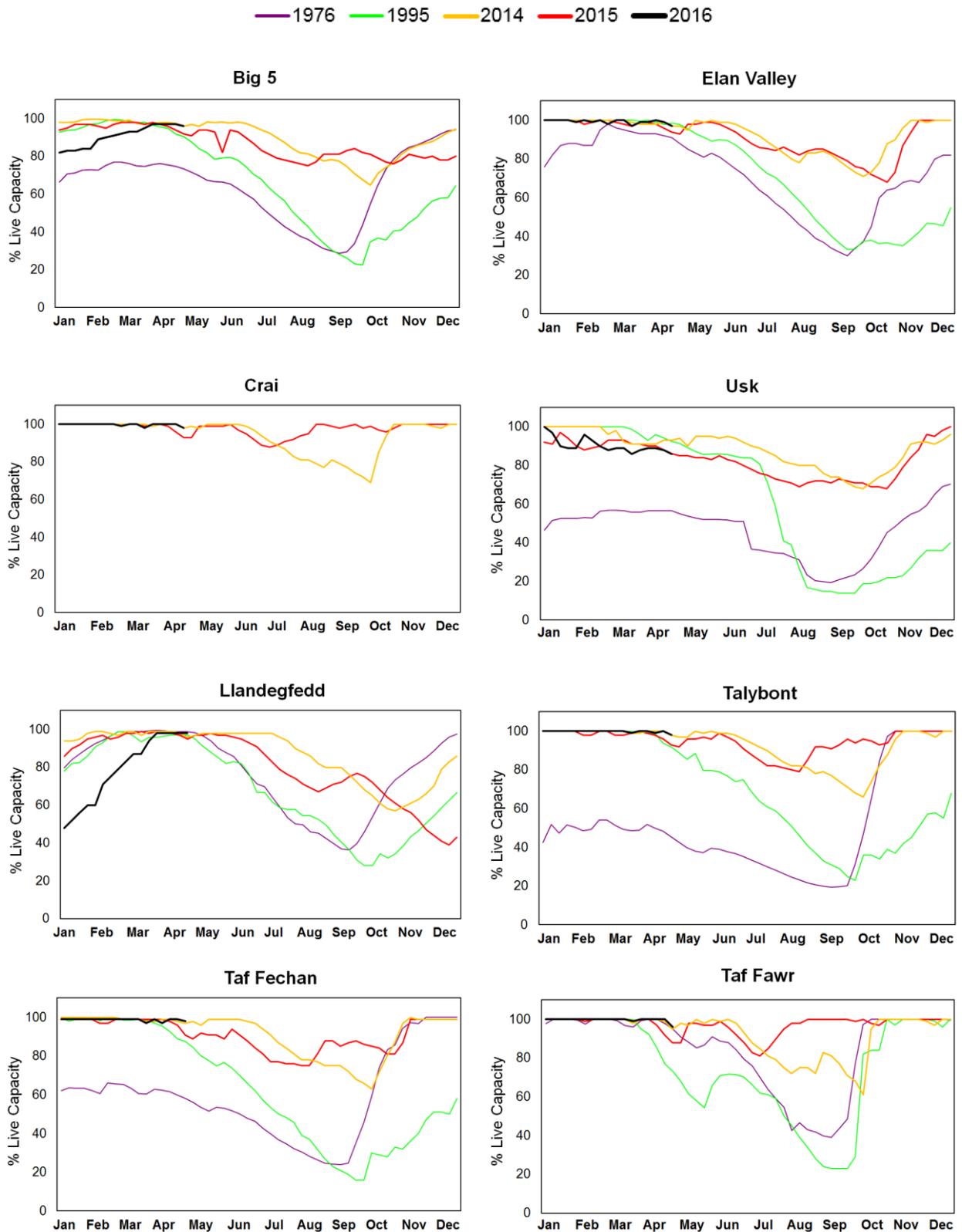
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Reservoir Storage

Figure 19: Reservoir charts: South East Wales



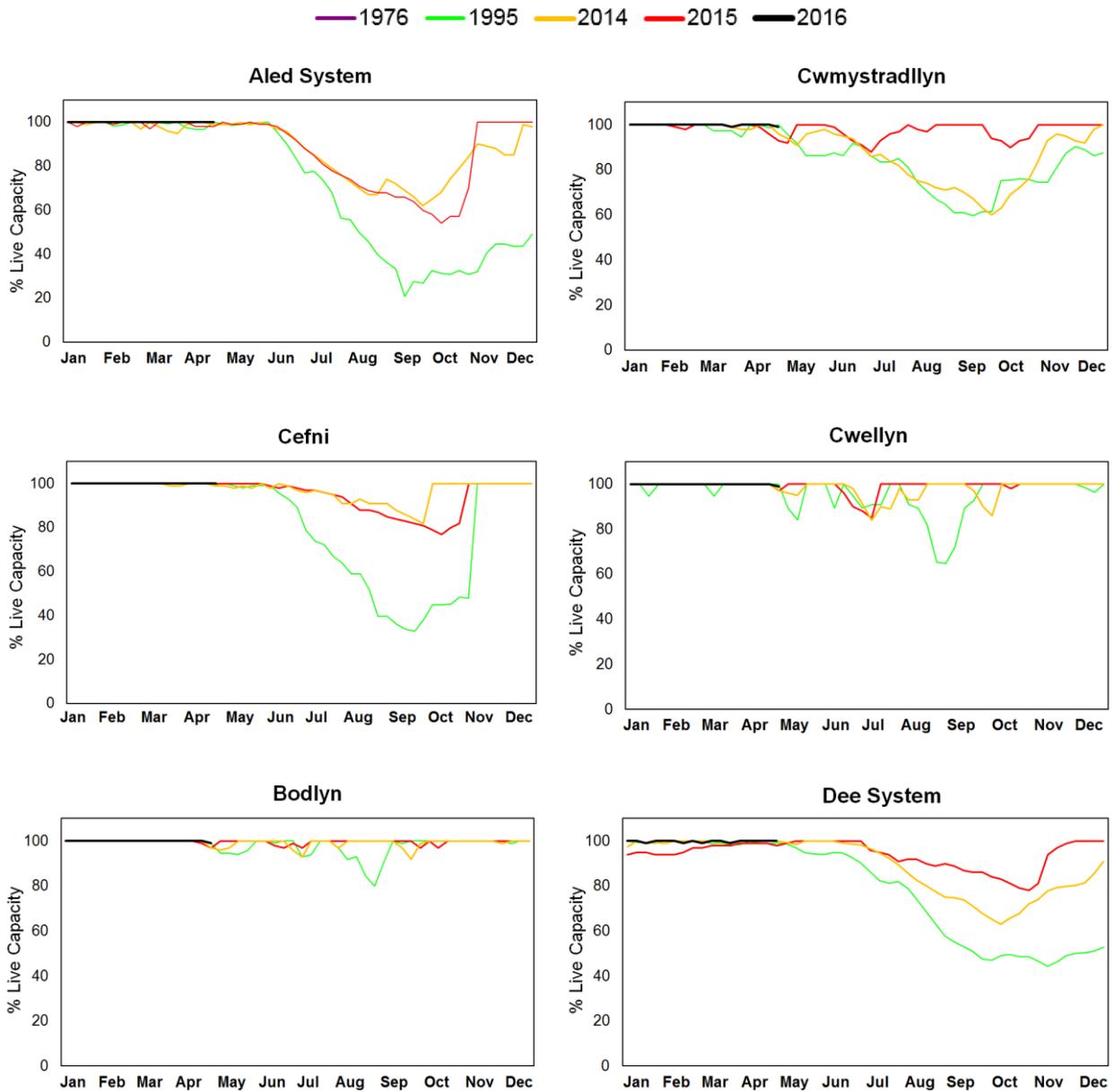
Weekly reservoir stocks for Natural Resources Wales index sites (Source: Water Companies)

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Figure 20: Reservoirs charts: North Wales



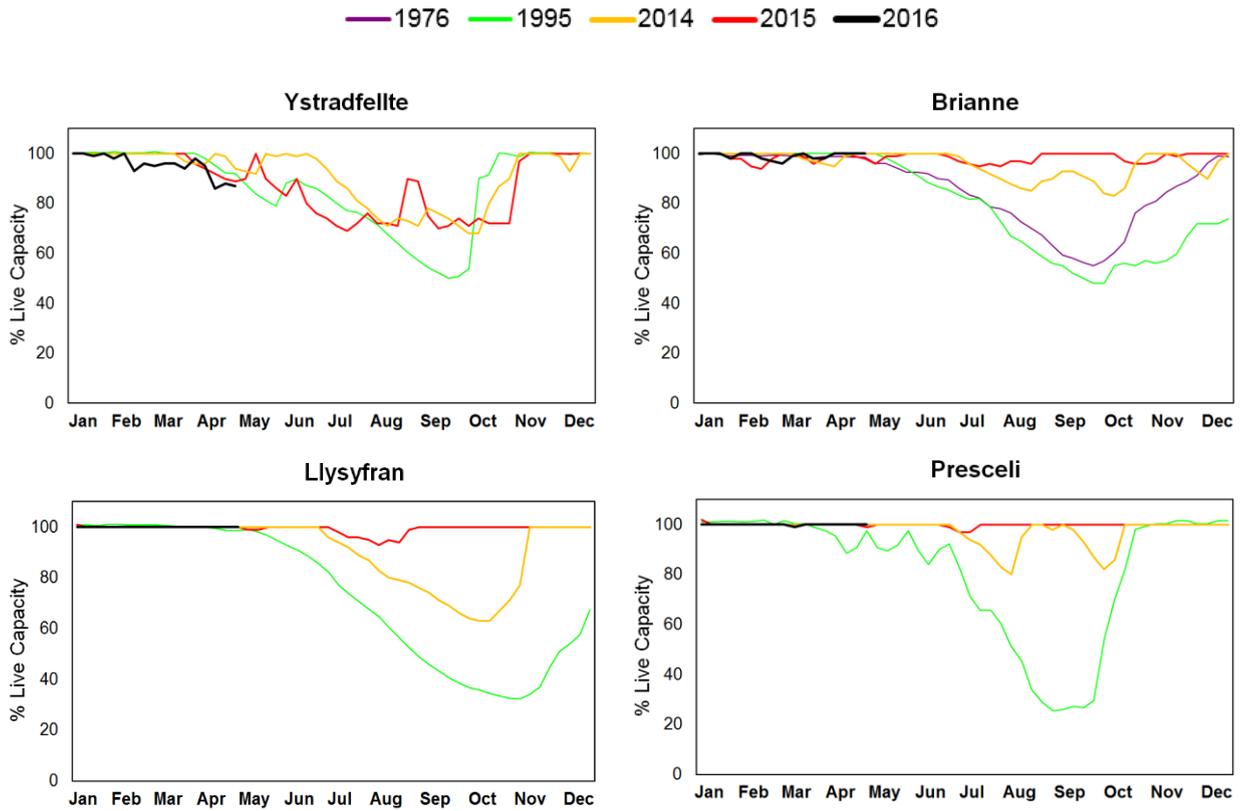
Weekly reservoir stocks for Natural Resources Wales index sites (Source: Water Companies).

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Figure 21: Reservoirs charts: South West Wales



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

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).