

# eDeposit Ireland

## Monthly Weather Bulletin September 2014

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## COUNTY ANALYSIS FOR 'DRY SPELLS' OR 'ABSOLUTE DROUGHT'

COUNTY	NO. OF STATIONS IN COUNTY	NO. OF STATIONS IN COUNTY WITH A DRY SPELL	NO. OF STATIONS IN COUNTY WITH ABSOLUTE DROUGHT	% OF STATIONS IN COUNTY AFFECTED	STATION WITH 'DRY SPELL' OR 'ABSOLUTE DROUGHT'	START DATE OF EVENT	LENGTH OF EVENT	MONTHLY RAINFALL (mm)	LTA (mm)	% OF LTA	DRIEST SEPTEMBER SINCE*	STATION OPENED
Carlow	5	3	0	60	TULLOW (WW)	1st	18	6.0	72.0	8	1986	1985
Cavan	13	2	11	100	BAILIEBORO (LEITER)	1st	21	9.1	81.8	11	1986	1973
Clare	25	6	17	92	DOO-LOUGH	1st	17	22	112.8	20	1986	1975
Cork	69	22	40	90	DONOUGHMORE	1st	18	25.6	99.5	26	1986	1948
Donegal	35	13	17	86	GLENTIES HATCHERY	5th	16	23.6	136.3	17	1941	1941
Dublin	13	7	1	62	DUN LAOGHAIRE	1st	18	2.1			1997	1997
Galway	34	5	26	91	MAAM VALLEY	1st	21	23	212.4	11	1983	1983
Kerry	37	3	26	78	KENMARE (DERREEN)	1st	16	34.3	155.5	22	1986	1941
Kildare	11	1	5	55	ATHY (CHANTERLANDS)	1st	17	10.0	66.8	15	2014	1993
Kilkenny	13	6	3	69	PILTOWN (KILDALTON AGR COLL)	1st	18	6.1	86.0	7	1986	1971
Laois	4	2	2	100	BALLYROAN (OATLANDS)	1st	17	27.9			2002	2000
Leitrim	10	0	10	100	MANORHAMILTON (AMORSET)	1st	22	13.4	119.6	11	2014	1981
Limerick	13	0	11	85	MOUNT RUSSELL	4th	15	34.5	101.5	34	1996	1984
Longford	2	0	1	50	GRANARD (BALLYMORE)	6th	16	15.5			2014	2005
Louth	7	0	3	43	DUNDALK(ANNASKEAGH WW)	6th	16	4.6	81.4	6	1986	1941
Mayo	35	3	30	94	NEWPORT (FURNACE)	1st	21	15.3	131.5	12	1972	1959
Meath	13	7	2	69	KINGSCOURT GYPSUM	6th	16	8.9	75.9	12	1986	1981
Monaghan	10	1	6	70	NEWBLISS (CRAPPAGH)	6th	16	11.3	78.1	14	1986	1985
Offaly	7	0	2	29	MEELICK (VICTORIA LOCK)	1st	18	12.3	68.4	18	1986	1941
Roscommon	11	4	7	100	BOYLE (MARIAN RD)	6th	16	6.7	91.2	7	2014	1971
Sligo	15	2	12	93	ARDTARMON	5th	17	11.4	87.8	13	2014	1985
Tipperary	23	10	10	87	BANSHA (AHERLOW WW)	1st	17	17.3	120.2	14	1986	1955
Waterford	20	2	17	95	BALLINAMULT (DOON)	1st	18	7.6	105.2	7	1986	1984
Westmeath	11	4	2	55	COOLE (COOLNAGUN)	6th	17	13.8			1993	1951
Wexford	22	10	7	77	JOHN F KENNEDY PARK	1st	18	7.5	84.5	9	1986	1965
Wicklow	26	6	7	50	KILCOOLE (TREATMENT PLANT)	1st	15	9.9	70.0	14	1986	1985

'Dry Spell' refers to a period of 15 or more consecutive days to none of which is credited 1.0 mm or more of precipitation. 'Absolute Drought' is a period of 15 or more consecutive days to none of which is credited 0.2 mm or more. Driest September since\*, \* refers to the driest September on available record for that station.

the driest September in over 68 years, but the majority reported it as the driest September since 1986. Countrywide, the number of wet days (*days with 1mm or more rainfall*) were well below LTA, with the number of days ranging from zero at some stations in county Louth to 11 days at stations in Kerry and Donegal.

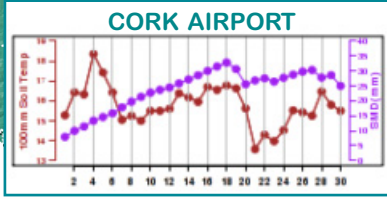
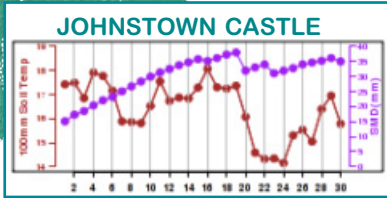
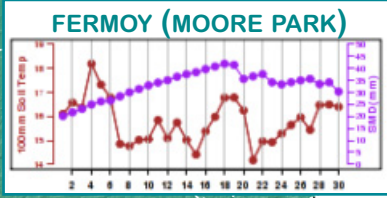
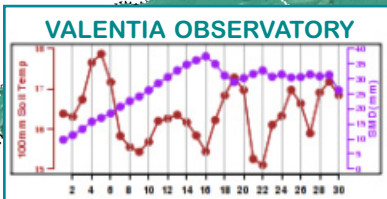
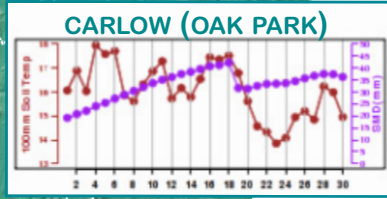
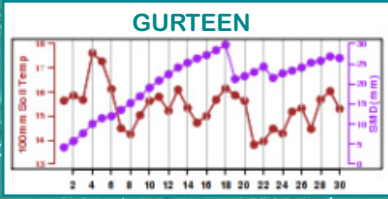
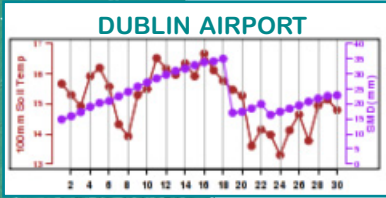
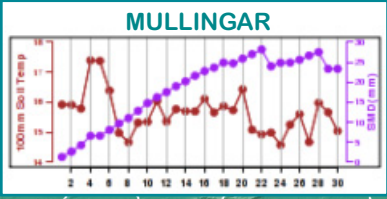
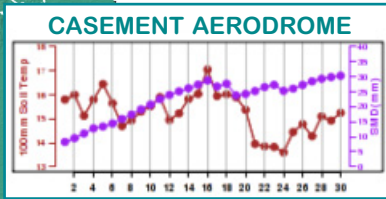
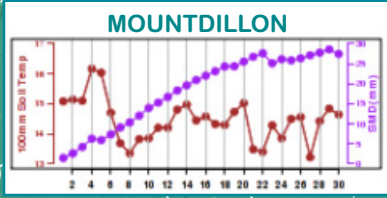
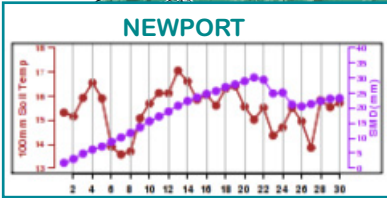
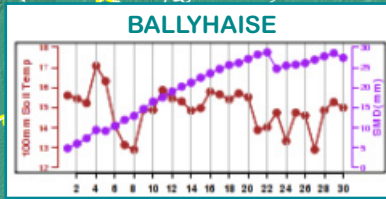
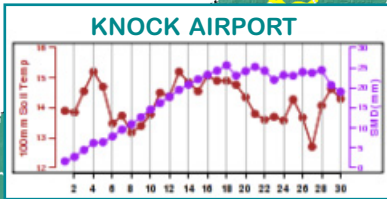
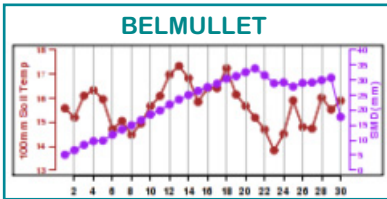
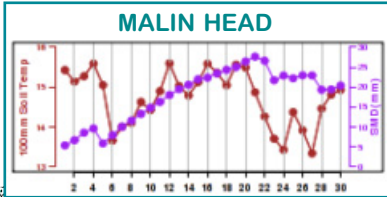
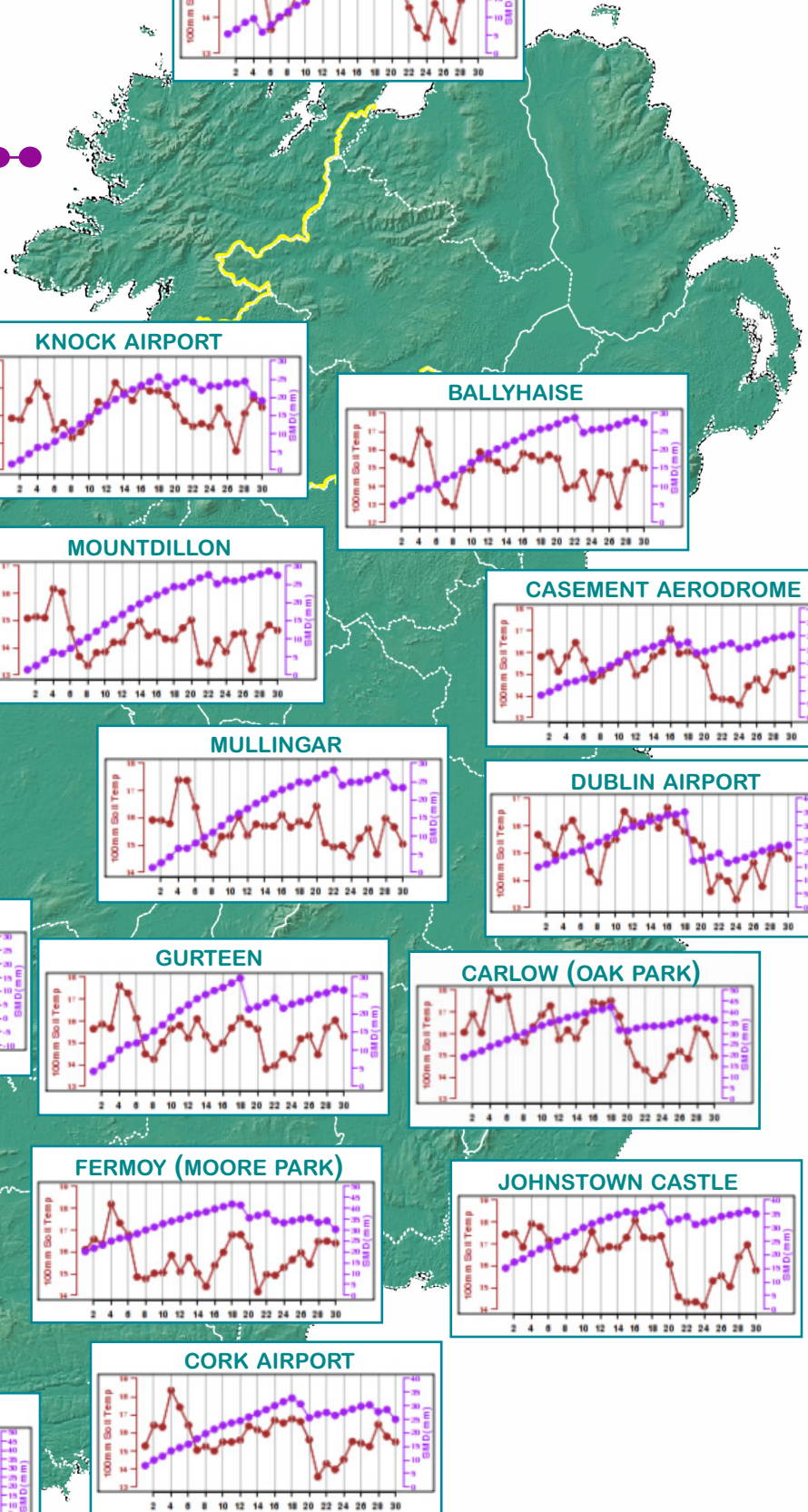
All monthly mean air temperatures were on or above their Long-Term Average (LTA). Nearly two-thirds of September's mean air temperatures were the same or higher than those in August 2014. Differences from September averages were up to 2.2°C at Fethard (Parsonshill), Co Tipperary with a mean temperature of 14.9°C. Mean air temperatures ranged from 13.4°C at Dublin Airport, Ballina Golf Club, Co Mayo and Littleton, Co Tipperary to 16.0°C at Glengarriff (Inacullin), Co Cork. Around a third of stations had their warmest September since 2006, while isolated stations mainly in Cork, Clare and Tipperary had their warmest September on record with the number years of observations between 19 and 53 years. The month's highest maxima was 25.0°C at Castleconnell, Co Limerick on the 4th, while the lowest air minima was 0.8°C on the 21st at Markree, Co Sligo. The month's lowest grass minimum was -2.9°C at Carron, Co Clare on the 22nd. Twenty-two stations reported ground frost during September with the number of days reported at each station

ranging from one at numerous locations to eight at Moundillon, Co Roscommon.

Over half of sunshine totals were near or above their Long-term Average (LTA) with percentage of LTAs ranged from 81% at Newport (Furnace), Co Mayo to 120% at Ardfert (Liscahane), Co Kerry. Daily mean sunshine totals ranged from 2.8 hours per days at Newport (Furnace), Co Mayo to 5.2 hours per day at Sherkin Island, Co Cork. The month's sunniest day was the 2nd at Dungarvan (Carriglea), Co Waterford with 12.2 hours.

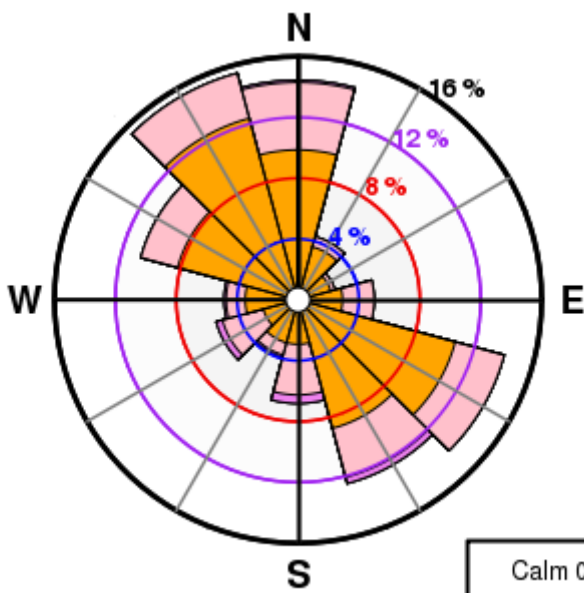
**Wind and Elements:** The month was dominated by extended periods of high pressure resulting in most places reporting their lowest monthly mean wind speeds in at least seven years. At long-term stations of Shannon Airport, Valentia Observatory and Mullingar their lowest September wind speed on record was reported with observations of between 64 and 74 years. Monthly mean wind speeds ranged from 3.7 knots (*7 km/h*) at Fermoy (Moore Park), Co Cork to 11.2 knots (*21 km/h*) at Sherkin Island, Co Cork. Gusts greater than 34 knots were reported on three days, the 18th, 25th and 26th with the month's highest gust reported at Malin Head, Co Donegal on the 26th with 40 knots (*74 km/h*). There was no gale force winds (*10-minute mean wind speed greater than 34 knots*) with the month's highest 10-minute wind speed recorded at Malin Head on the 25th with 28 knots (*52 km/h*).

# DAILY SOIL MOISTURE DEFICITS & SOIL TEMPERATURES

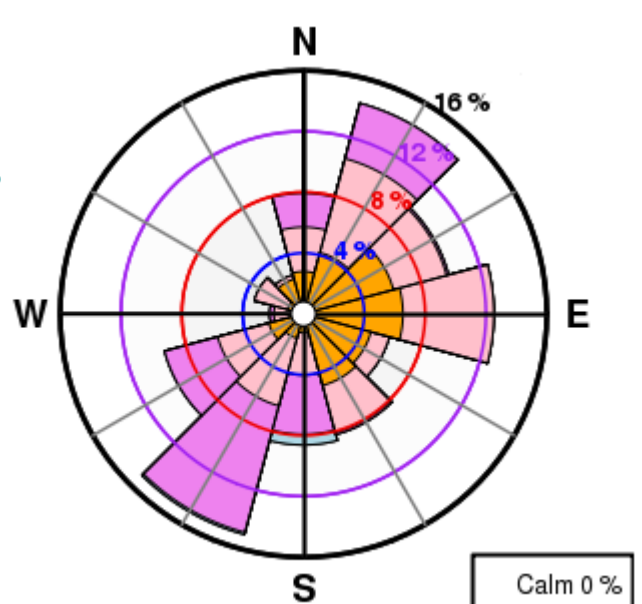


COUNTY / STATION	WIND (knots)										ELEMENTS (no.of days)					
	MEAN SPEED	MAX. 10-MIN. DIR.	MEAN		MAX. GUST DIR.	MAX. GUST SPEED	GUST DATE/TIME	DAYS WITH		HOURS WITH		SNOW	SNOW LYING	HAIL	THUNDER	FOG
			DATE/HOUR	DATE/HOUR				GALES	GUST > 34KNOTS	GUST > 34KNOTS	GUST > 34KNOTS					
<b>CO CARLOW</b> OAK PARK	4.2	160°	16	30/11	220°	22	25/2253	0	0	0						
<b>CO CAVAN</b> BALLYHAISE	3.9	230°	13	25/19	230°	23	26/0317	0	0	0						
<b>CO CLARE</b> SHANNON AIRPORT	5.6	290°	18	26/05	250°	23	25/1645	0	0	0	0	0	0	1	5	
<b>CO CORK</b> FERMOY (MOORE PARK)	3.7	40°	13	7/10	20°	23	7/0913	0	0	0						
SHERKIN ISLAND	11.2	80°	13	17/09	70°	34	18/1016	0	1	1						
ROCHE'S POINT	8.0	190°	26	30/06	170°	33	30/0902	0	0	0						
CORK AIRPORT	6.7	170°	25	30/08	100°	27	17/1439	0	0	0	0	0	0	0	10	
<b>CO DONEGAL</b> MALIN HEAD	10.2	90°	19	17/15	190°	27	30/0917	0	0	0						
FINNER	6.3	250°	28	25/17	270°	40	26/0247	0	2	5						
<b>CO DUBLIN</b> DUBLIN AIRPORT	6.5	250°	23	26/01	250°	31	26/0138	0	0	0						
CASEMENT AERODROME	5.7	260°	19	25/24	260°	28	25/2348	0	0	0	0	0	0	0	6	
<b>CO GALWAY</b> MACE HEAD	9.1	200°	21	30/12	180°	29	30/1127	0	0	0	0	0	0	0	4	
ATHENRY	4.9	220°	26	25/22	230°	32	25/2208	0	0	0						
<b>CO KERRY</b> VALENTIA OBSERVATORY	5.7	230°	14	25/18	240°	25	26/0153	0	0	0						
<b>CO MAYO</b> CLAREMORRIS	5.5	250°	14	30/16	90°	25	14/1408	0	0	0						
BELMULLET	7.6	260°	19	30/10	220°	24	27/1430	0	0	0						
NEWPORT	6.3	210°	16	27/15	180°	33	30/0001	0	0	0						
KNOCK AIRPORT	6.1	190°	27	30/01	200°	31	25/2038	0	0	0						
<b>CO MEATH</b> DUNSANY (GRANGE)	5.1	200°	21	25/19	220°	27	27/1423	0	0	0	0	0	0	0	10	
<b>CO ROSCOMMON</b> MOUNTDILLON	4.4	260°	18	26/ 2	250°	28	30/1834	0	0	0						
<b>CO TIPPERARY</b> GURTEEN (AG COLLEGE)	4.9	20°	14	20/12	350°	21	20/0955	0	0	0						
<b>CO WESTMEATH</b> MULLINGAR	3.9	250°	21	25/1606	250°	21	25/1606	0	0	0						
<b>CO WEXFORD</b> JOHNSTOWN CASTLE	5.9	230°	22	25/2222	230°	22	25/2222	0	0	0						
		160°	22	30/1036	160°	22	30/1036	0	0	0						
		230°	20	25/2217	230°	20	25/2217	0	0	0						
		180°	16	30/1151	180°	24	30/1151	0	0	0						

CARLOW (OAK PARK)



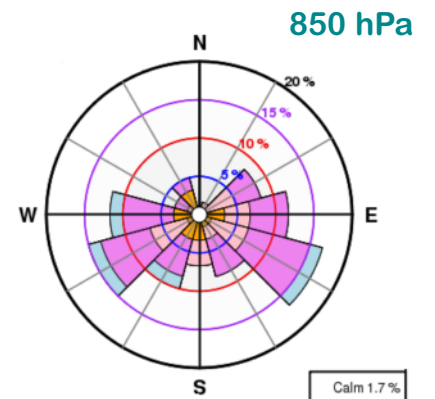
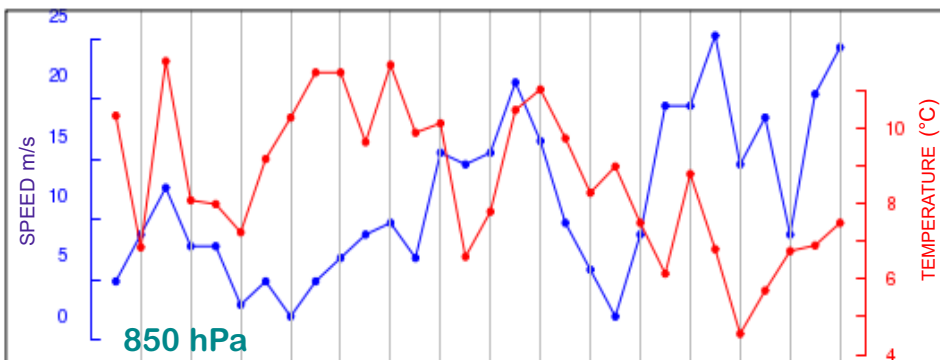
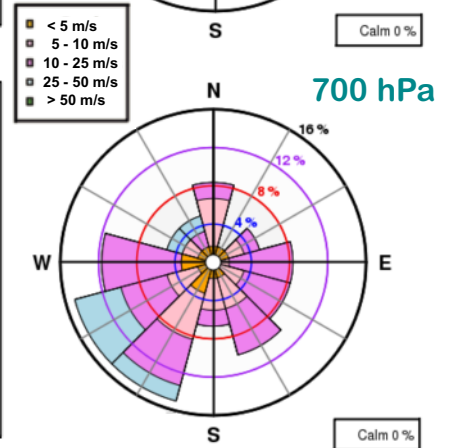
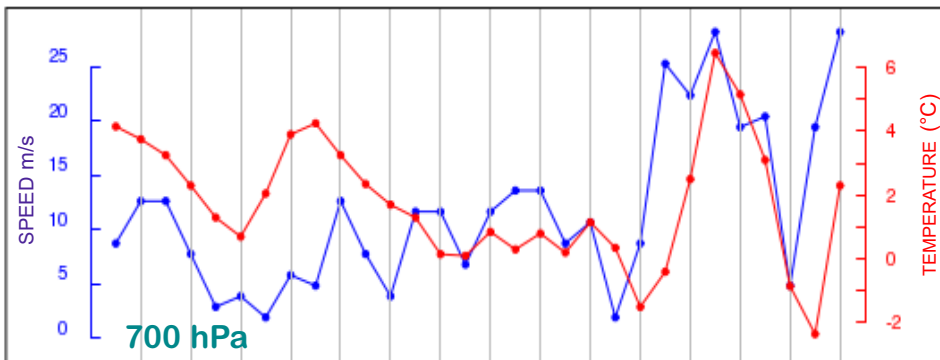
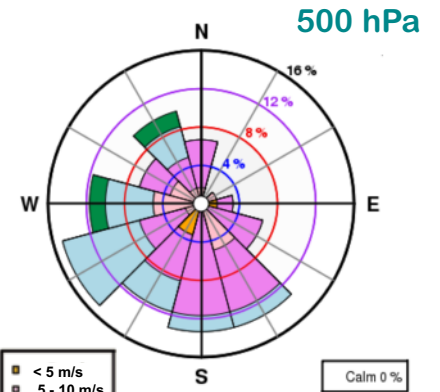
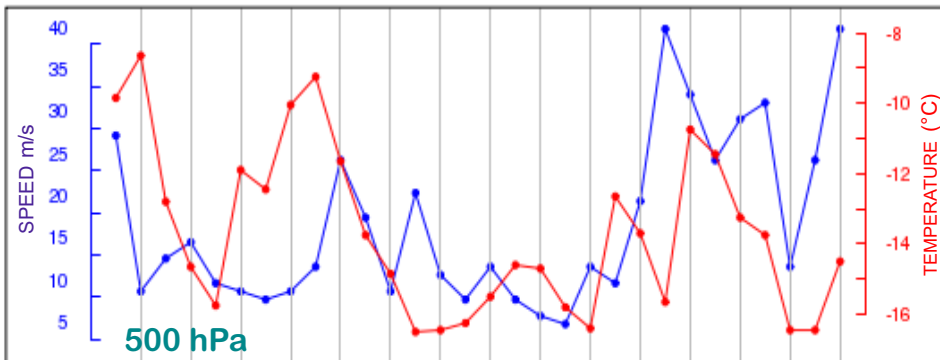
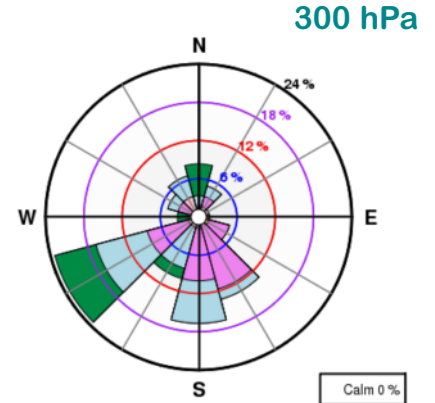
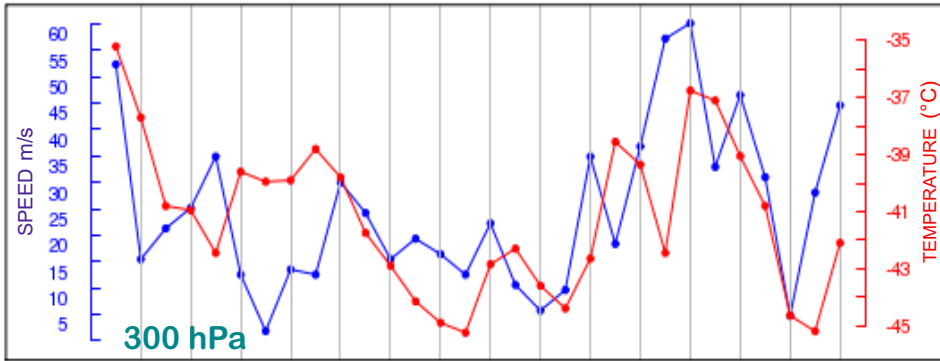
BELMULLET



PERCENTAGE FREQUENCY OF WIND DIRECTION

Upper Atmosphere wind and temperature readings are made at Valentia Observatory twice a day by a radiosonde (a balloon with instruments attached). Shown below are daily average wind speeds and temperatures at defined pressure levels, 850, 700, 500 and 300 hPa, corresponding approximately to heights of 1.5, 3, 6 and 10 km. Monthly wind roses are also shown for each pressure level.

UPPER AIR WIND SPEED AND TEMPERATURE SEPTEMBER 2014



- < 5 m/s
- 5 - 10 m/s
- 10 - 25 m/s
- 25 - 50 m/s
- > 50 m/s

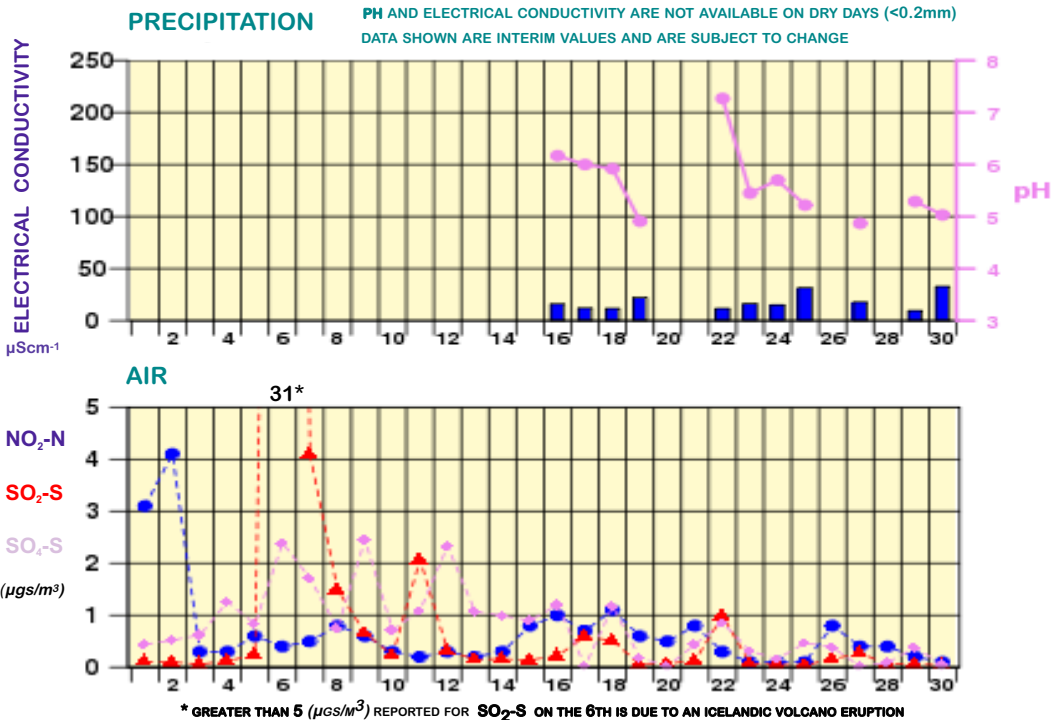
DAY OF MONTH

CHEMICAL ANALYSIS OF PRECIPITATION AND AIR SAMPLES AT VALENTIA OBSERVATORY

Acid rain occurs when pollutants combine with moisture in the air to form sulphuric or nitric acid. pH is the simplest way of measuring the acidity of precipitation. Usually pH of 7.00 is considered neutral but this is not the case in rainfall samples. Pure water in the atmosphere has an equilibrium pH value of 5.65 at 20°C owing to carbon dioxide in the air dissolving to form carbonic acid. Any value below pH 5.65 is considered acid while any value above is considered alkaline.

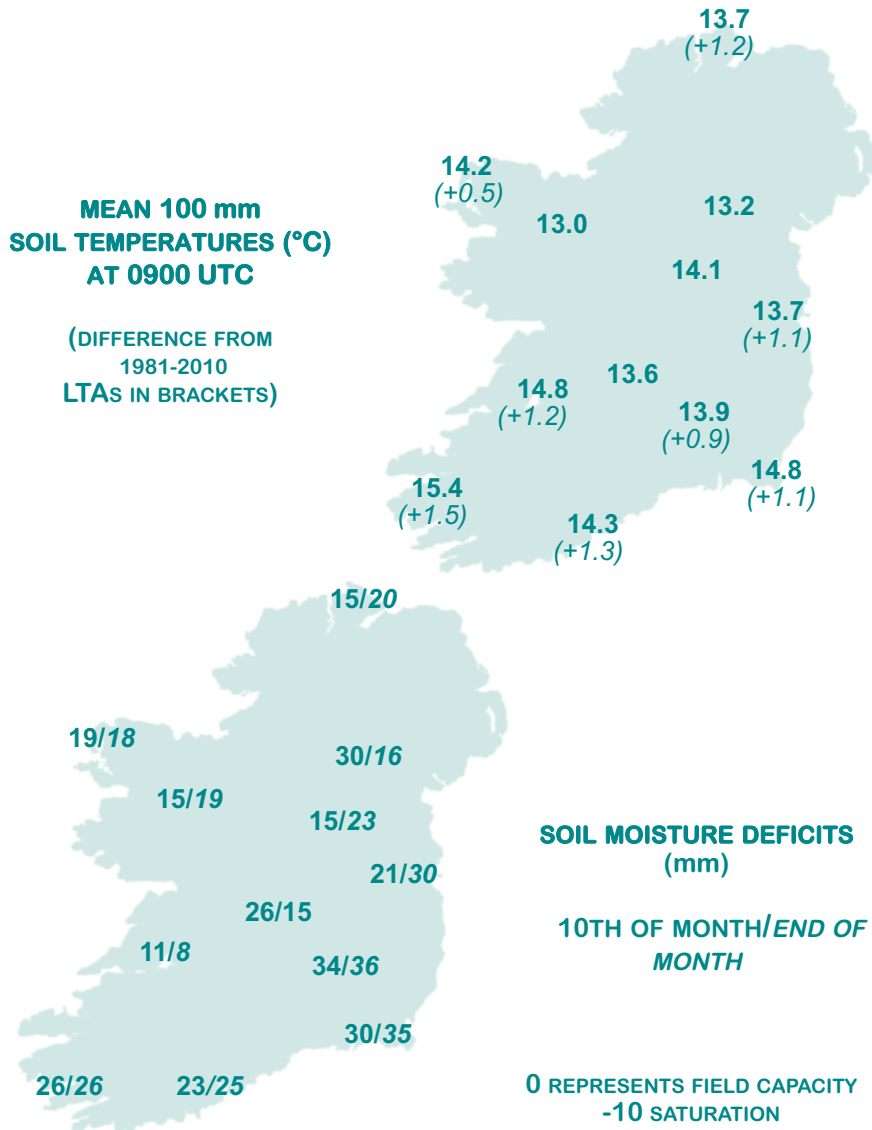
Conductivity measures the total ion activity in the rainfall, i.e. the higher the conductivity the greater the number of ions.

Sulphur dioxide and sulphate in air contribute to the formation of sulphuric acid; nitrate in air contributes to the formation of nitric acid.



MEAN 100 mm SOIL TEMPERATURES (°C) AT 0900 UTC

(DIFFERENCE FROM 1981-2010 LTAs IN BRACKETS)



SOIL MOISTURE DEFICITS (mm)

10TH OF MONTH/END OF MONTH

0 REPRESENTS FIELD CAPACITY -10 SATURATION

MEAN SOIL TEMPERATURES (°C) AT 0900 UTC

COUNTY/STATION	100 mm	200 mm	300 mm
<b>CO CARLOW</b>			
CARLOW (OAK PARK)	13.9	14.6	14.8
<b>CO. CAVAN</b>			
BALLYHAISE	13.2	14.1	15.0
<b>CO CLARE</b>			
SHANNON AIRPORT	14.8	15.4	15.8
CARRON	14.5		15.7
<b>CO CORK</b>			
ROCHE'S POINT	14.9	15.3	15.7
FERMOY (MOORE PARK)	14.3	14.8	15.3
CORK AIRPORT	14.3	14.9	15.4
SHERKIN ISLAND	15.0	15.3	15.8
BALINCURRIG (PEAFIELD)	14.2	14.4	15.2
<b>CO DONEGAL</b>			
MALIN HEAD	13.7	13.9	14.2
<b>CO DUBLIN</b>			
PHOENIX PARK	14.5	15.3	15.3
DUBLIN AIRPORT	13.6	14.3	14.8
CASEMENT AERODROME	13.7	14.2	14.7
<b>CO KERRY</b>			
VALENTIA OBSERVATORY	15.4	15.8	15.9
<b>CO KILKENNY</b>			
THOMASTOWN (MT JULIET)	15.5	15.9	16.2
<b>CO LIMERICK</b>			
MOUNT RUSSELL	13.8	14.8	
<b>CO MAYO</b>			
BELMULLET	14.2	15.1	15.9
STRAIDE	13.8		
KNOCK AIRPORT	13.0	13.7	13.6
<b>CO MEATH</b>			
WARRENSTOWN	13.8	14.9	15.8
DUNSANY (GRANGE)	13.7	14.7	15.0
<b>CO TIPPERARY</b>			
GURTEEN (AG COLLEGE)	13.6	14.2	14.5
FETHARD (PARSONSHILL)	14.7	15.6	
<b>CO WATERFORD</b>			
DUNGARVAN (CARRIGLEA)		15.4	15.9
<b>CO WESTMEATH</b>			
MULLINGAR	14.1	14.9	15.6
<b>CO. WEXFORD</b>			
JOHNSTOWN CASTLE	14.8	15.1	15.4
JFK PARK	15.5	16.0	16.9
<b>CO WICKLOW</b>			
ASHFORD (CRONYKEERY)	14.7	15.1	16.0

19/18

15/19

11/8

26/26

23/25

15/20

15/23

26/15

30/35

30/16

21/30

34/36

10-DAY VALUES FOR SELECTED AGROMETEOROLOGICAL STATIONS		RAINFALL (mm)				TEMPERATURE (°C)												SUNSHINE (hours)			
STATION	PERIOD	AMOUNT	% OF AVERAGE	RAIN DAYS	WET DAYS	MEAN MAX.	MEAN MIN.	MEAN DAILY	DIFF. FROM AVERAGE	LOWEST MIN.	DATE	DAYS WITH AIR FROST	DEGREE DAYS > 4.4°C	DEGREE DAYS > 10.0°C	LOWEST "GRASS-MIN."	DATE	DAYS WITH GROUND FROST	MEAN 10CM AT 0900H	MEAN 30CM AT 0900H	TOTAL NO. OF HOURS	% OF AVERAGE
<b>CO CORK</b>	1-10	0.2		1	0	19.5	9.4	14.5		5.8	9	0	100	48	5.7	9	0	13.8	15.3	59.7	
BALLINCURRIG	11-20	0.9		1	0	19.3	12.3	15.8		9.4	16	0	114	58	9.0	16	0	14.9	15.4	43.4	
(PEAFIELD)	21-END	11.5		6	4	19.1	10.4	14.8		6.8	21	0	103	49	6.5	21	0	13.9	14.9	35.3	
	<b>MONTH</b>	<b>12.6</b>	<b>12</b>	<b>8</b>	<b>4</b>	<b>19.3</b>	<b>10.7</b>	<b>15.0</b>	<b>1.9</b>	<b>5.8</b>	<b>9</b>	<b>0</b>	<b>317</b>	<b>155</b>	<b>5.7</b>	<b>9</b>	<b>0</b>	<b>14.2</b>	<b>15.2</b>	<b>138.4</b>	<b>105</b>
<b>CO DONEGAL</b>	1-10	2.4		2	1	17.9	7.6	12.8		2.5	6	0	NA	NA	1.3	8	0	-	-	-	
GLENTIES HATCHERY	11-20	0.0		0	0	21.1*	9.0	13.9*		6.4	11	0	NA	NA	3.9	11	0	-	-	-	
	21-END	21.2		8	5	17.3	9.0*	12.8*		2.5	22	0*	NA	NA	1.5	22	0	-	-	-	
	<b>MONTH</b>	<b>23.6</b>	<b>17</b>	<b>10</b>	<b>6</b>	<b>18.8*</b>	<b>8.5*</b>	<b>13.6*0.8</b>		<b>2.5*</b>	<b>6</b>	<b>0*</b>	<b>NA</b>	<b>NA</b>	<b>1.3</b>	<b>8</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>CO KERRY</b>	1-10	0.0		0	0	20.1	9.8	15.0		4.9	7	0	106	53	4.2	8	0	-	-	53.1	
ARDFERT	11-20	14.6		3	2	21.1	11.1	16.1		7.2	15	0	117	62	7.1	15	0	-	-	49.2	
(LISCAHANE)	21-END	7.1		6	3	19.0	10.6	14.8		5.8	21	0	104	50	5.0	21	0	-	-	46.6	
	<b>MONTH</b>	<b>21.7</b>	<b>24</b>	<b>9</b>	<b>5</b>	<b>20.1</b>	<b>10.5</b>	<b>15.3</b>	<b>1.5</b>	<b>4.9</b>	<b>7</b>	<b>0</b>	<b>326</b>	<b>165</b>	<b>4.2</b>	<b>7</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>148.9</b>	<b>120</b>
<b>CO MONAGHAN</b>	1-10	1.1		1	1	18.0	8.5	13.3		4.5	10	0	88	38	1.1	8	0	-	-	-	
CARRICKMACROSS	11-20	6.3		1	1	19.0	10.7	14.9		7.4	13	0	105	49	3.8	13	0	-	-	-	
	21-END	2.3		4	1	18.0	8.5	13.3		4.3	27	0	88	37	-0.5	27	1	-	-	-	
	<b>MONTH</b>	<b>9.7</b>	<b>14</b>	<b>6</b>	<b>3</b>	<b>18.3</b>	<b>9.2</b>	<b>13.8</b>	<b>1.0</b>	<b>4.3</b>	<b>27</b>	<b>0</b>	<b>281</b>	<b>124</b>	<b>-0.5</b>	<b>27</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>CO WATERFORD</b>	1-10	0.3		1	0	19.0	8.9	14.0		4.8	9	0	96	45	1.3	10	0	-	-	69.0	
DUNGARVAN	11-20	1.1		1	1	19.5	12.2	15.9		9.5	12	0	114	59	5.0	12	0	-	-	42.3	
(CARRIGLEA)	21-END	13.4		6	4	19.6	10.4	15.0		6.0	22	0	106	53	1.7	21	0	-	-	43.4	
	<b>MONTH</b>	<b>14.8</b>	<b>16</b>	<b>8</b>	<b>5</b>	<b>19.4</b>	<b>10.5</b>	<b>14.9</b>	<b>1.0</b>	<b>4.8</b>	<b>9</b>	<b>0</b>	<b>316</b>	<b>156</b>	<b>1.3</b>	<b>10</b>	<b>0</b>	<b>-</b>	<b>15.9</b>	<b>154.7</b>	<b>115</b>
<b>CO WEXFORD</b>	1-10	0.0		0	0	19.0	9.5	14.3		5.6	9	0	99	46	4.0	9	0	15.3	17.1	70.3	
JFK PARK	11-20	0.4		1	0	19.7	12.3	16.0		9.0	13	0	116	60	6.4	13	0	16.3	17.1	20.1	
	21-END	7.1		2	2	18.7	10.6	14.7		6.6	22	0	103	48	3.0	22	0	14.8	16.5	37.3	
	<b>MONTH</b>	<b>7.5</b>	<b>9</b>	<b>3</b>	<b>2</b>	<b>19.2</b>	<b>10.8</b>	<b>15.0</b>	<b>1.5</b>	<b>5.6</b>	<b>9</b>	<b>0</b>	<b>317</b>	<b>154</b>	<b>3.0</b>	<b>22</b>	<b>0</b>	<b>15.5</b>	<b>16.9</b>	<b>127.7</b>	<b>98</b>
<b>CO WICKLOW</b>	1-10	0.0		0	0	18.3	8.2	13.3		5.2	10	0	89	38	-0.8	8	2	14.9	16.4	66.4	
ASHFORD	11-20	5.8		3	2	18.5	11.5	15.0		6.6	12	0	106	52	2.4	12	0	15.4	16.2	42.4	
(CRONYKEERY)	1-END	1.8		2	1	19.0	9.2	14.1		6.3	21	0	97	45	0.0	27	0	13.9	15.4	36.3	
	<b>MONTH</b>	<b>7.6</b>	<b>10</b>	<b>5</b>	<b>3</b>	<b>18.6</b>	<b>9.6</b>	<b>14.1</b>	<b>0.5</b>	<b>5.2</b>	<b>10</b>	<b>0</b>	<b>292</b>	<b>135</b>	<b>-0.8</b>	<b>8</b>	<b>2</b>	<b>14.7</b>	<b>16.0</b>	<b>145.1</b>	<b>106</b>

P.E. (PENMAN)		GLOBAL SOLAR RADIATION (MJ/m <sup>2</sup> )				MONTHLY EVAPORATION (mm) FROM CLASS A PAN			
STATION /COUNTY	TOTAL (mm)	STATION /COUNTY	1ST-10TH	11TH-20TH	21ST-END	TOTAL	COUNTY/ STATION	MONTHLY RAINFALL (mm)	MONTHLY EVAPORATION (mm)
<b>CO CARLOW</b>		<b>CO CARLOW</b>							
CARLOW (OAK PARK)	54	CARLOW (OAK PARK)*	148.59	106.29	88.83	343.71			
<b>CO CAVAN</b>		<b>CO CAVAN</b>							
BALLYHAISE	42	BALLYHAISE*	109.09	98.34	91.11	298.54			
<b>CO CLARE</b>		<b>CO CORK</b>							
SHANNON AIRPORT	57	ROCHE'S POINT*	153.45	119.11	107.01	379.57	<b>CO KERRY</b>		
<b>CO CORK</b>		<b>CO DONEGAL</b>					VALENTIA OBSERVATORY	27.3	65.2
CORK AIRPORT	48	MALIN HEAD*	98.78	111.79	73.26	283.83	<b>CO KERRY</b>		
<b>CO DONEGAL</b>		<b>CO DUBLIN</b>					NORTH KERRY LANDFILL	N/A	N/A
MALIN HEAD	47	DUBLIN AIRPORT*	127.36	99.56	93.01	319.93	<b>CO MAYO</b>		
<b>CO DUBLIN</b>		<b>CO KERRY</b>					NEWPORT (FURNACE)	15.3	43.2
DUBLIN AIRPORT	45	VALENTIA OBS.*	141.56	114.44	103.83	359.83	<b>CO OFFALY</b>		
CASEMENT AERODROME	45	<b>CO MAYO</b>					DERRYGREENAGH	22.0	49.5
<b>CO KERRY</b>		BELMULLET*	112.94	108.07	92.27	313.28	<b>CO WATERFORD</b>		
VALENTIA OBS.	59	<b>CO TIPPERARY</b>					DUNGARVAN (CARRIGLEA)	14.8	56.5
<b>CO MAYO</b>		GURTEEN (AG.COLLEGE)*	130.13	107.82	104.02	341.97	<b>CO WEXFORD</b>		
BELMULLET	49	<b>CO WESTMEATH</b>					JFK PARK	7.5	86.5
KNOCK AIRPORT	44	MULLINGAR*	121.54	96.89	96.40	314.83			
<b>CO TIPPERARY</b>		<b>CO WEXFORD</b>							
GURTEEN (AG.COLLEGE)	51	JOHNSTOWN CASTLE*	165.90	119.87	95.02	380.79			
<b>CO WESTMEATH</b>									
MULLINGAR	46								
<b>CO WEXFORD</b>									
JOHNSTOWN CASTLE	51								

GLOBAL SOLAR RADIATION VALUES FOR STATIONS MARKED  
\* ARE PROVISIONAL  
\* ARE FROM NEW AUTOSOL INSTRUMENTS  
RAINFALL VALUES MARKED \* ARE ESTIMATED.

**Monday 1st:** A ridge of high pressure built from the West in a westerly airflow. Dry overnight, just some mist in places. The day continued dry with some sunny/clear periods over the country. Winds were light, northwest to west.

**Rainfall:** Nil at numerous locations to 3.5 mm at Falcarragh (Lough Altan)  
**Temperature:** Lowest max. 15.6°C at Ballinamore, highest max. 19.4°C at Ardfert (Liscahane). Lowest min. 7.0°C at Mallow (Spa Hse), highest min. 14.2°C at Mace Head 14.2°C at Dublin (Glasnevin)  
**Sunshine:** 0.1 hours at Shannon Apt and Knock Apt to 3.3 hours at Dungarvan (Carriglea)

**Tuesday 2nd:** The day was dry everywhere, with some good sunshine in the South and Southeast, but remained cloudy over the rest of the country. The evening and night continued dry with some bright/clear periods countrywide. Winds were light, southeasterly.

**Rainfall:** Nil at numerous locations to 1.7 mm at Limerick Junction (Solohead)  
**Temperature:** Lowest max. 14.4°C at Knock Apt, highest max. 20.1°C at Waterford (Tycor). Lowest min. 7.7°C at Ashford (Cronykeery), highest min. 14.0°C at Dublin (Glasnevin)  
**Sunshine:** Nil at numerous locations to 12.2 hours at Dungarvan (Carriglea)

**Wednesday 3rd:** Dry overnight with some clear periods and mist in places also. The day was dry with good sunny/clear spells but with mist in places. Winds were light, south to southeast.

**Rainfall:** Nil at numerous locations to 6.2 mm at Limerick Junction (Solohead)  
**Temperature:** Lowest max. 17.8°C at Cork Apt, highest max. 22.1°C at Kilkenny (Greenshill). Lowest min. 5.7°C at Mt Dillon, highest min. 13.2°C at Sligo Apt  
**Sunshine:** Nil at Edenderry (Ballinla) to 6.0 hours at Sherkin Island and Shannon Apt

**Thursday 4th:** Many areas had a dull and misty start with some fog patches, but it became warm with temperatures in the 20s. It was mostly dry with just a few scattered light showers. Winds were light and variable in direction.

**Rainfall:** Nil at numerous locations to 5.0 mm at Malin Head  
**Temperature:** Lowest max. 17.8°C at Belmullet, highest max. 25.0°C at Castleconnell. Lowest min. 7.4°C at Dublin Apt, highest min. 15.3°C at Sherkin Island  
**Sunshine:** 0.7 hours at Newport (Furnace) to 9.6 hours at Clonroche (Knoxtown)

**Friday 5th:** Dry cloudy and misty overnight with some rain in the Northwest. The showery rain continued moving southeastwards getting heavy. Some hazy sunshine as the rain cleared, but continued outbreaks of rain and drizzle in the Northwest. Winds were light, northerly.

**Rainfall:** Nil at numerous locations to 38.0 mm at Shannon Apt  
**Temperature:** Lowest max. 15.1°C at Knock Apt, highest max. 22.8°C at Durrow. Lowest min. 6.3°C at Thomastown (Mt Juliet), highest min. 15.0°C at Newport (Furnace)  
**Sunshine:** Nil at numerous locations to 3.6 hours at JFK Park

**Saturday 6th:** A band of light rain, moved southwards overnight, dying out as it did so. Cloudy in the South and Southwest, more broken cloud with good sunny spells elsewhere. Cool, overnight but afternoon temperatures were around normal for time of year. Winds were light to moderate, north to northwest.

**Rainfall:** Nil at numerous locations to 3.5 mm at Tullyco (Artonagh)  
**Temperature:** Lowest max. 14.4°C at Ballyhaise 14.4°C at Knock Apt, highest max. 20.4°C at JFK Park. Lowest min. 2.2°C at Markree, highest min. 14.3°C at Valentia Obs  
**Sunshine:** 0.4 hours at Sherkin Island to 7.6 hours at Arklow (Ballyrichard Hse)

**Sunday 7th:** Cold, inland, overnight with mist thickening to fog in parts of the Midlands. The mist/fog cleared during the morning, and afternoon temperatures recovered to normal. Dry countrywide. All areas had good spells of pleasant sunshine. Winds were light, northerly.

**Rainfall:** Nil at numerous locations to 2.0 mm at Lullymore Nature Centre  
**Temperature:** Lowest max. 14.4°C at Belderrig, highest max. 20.3°C at Glengarriff (Innacullin). Lowest min. 1.5°C at Athleague, highest min. 11.8°C at Malin Head  
**Sunshine:** 1.8 hours at Newport (Furnace) to 11.7 hours at Arklow (Ballyrichard Hse)

**Monday 8th:** Cold, inland, overnight with mist thickening to fog in parts of the Midlands. The fog cleared during the morning. Dry countrywide. Sunny in the south and east, progressively cloudier further north. Winds were light, northerly.

**Rainfall:** Nil at numerous locations to 0.2 mm at Sherkin Island  
**Temperature:** Lowest max. 14.8°C at Malin Head, highest max. 20.3°C at Glengarriff (Innacullin). Lowest min. 1.0°C at Mt Dillon, highest min. 12.2°C at Malin Head  
**Sunshine:** 0.3 hours at Knock Apt to 11.2 hours at Sherkin Island

**Tuesday 9th:** Dry overnight with mist and fog in many areas. A dry day with good sunshine after the mist and fog lifted. The evening and night continued dry with sunny/clear periods. Winds were light, variable in direction.

**Rainfall:** Nil at numerous locations to 0.5 mm at Elphin  
**Temperature:** Lowest max. 16.2°C at Dun Laoghaire, highest max. 21.9°C at Listowel. Lowest min. 2.3°C at Mt Dillon, highest min. 10.3°C at Dublin Apt (Merriion Square)  
**Sunshine:** 6.3 hours at Newport (Furnace) to 12.0 hours at Dublin Apt

**Wednesday 10th:** Dry overnight with mist and fog fairly widespread, with a slight ground frost in parts. The day was dry and sunny after mist and fog cleared and became warm by afternoon. Mist and fog returned again by late evening and night. Winds were light, variable in direction.

**Rainfall:** Nil at numerous locations to 0.3 mm at Ballyhaise and Cork Apt  
**Temperature:** Lowest max. 16.8°C at Malin Head, highest max. 23.7°C at Dooks. Lowest min. 1.9°C at Mt Dillon, highest min. 10.2°C at Arklow (Ballyrichard Hse)  
**Sunshine:** 9.5 hours at Ashford (Cronykeery) to 11.6 hours at Ballyshannon (Cathleen's Fall)

**Thursday 11th:** There was some dense fog inland at first but this cleared soon after dawn, and most areas became warm by afternoon and had long spells of sunshine. Warmest in the West. Winds mainly light, easterly.

**Rainfall:** Nil at numerous locations to 2.1 mm at Goleen  
**Temperature:** Lowest max. 17.0°C at Cork Apt, highest max. 23.8°C at Dooks. Lowest min. 5.0°C at Cavan (Drumconnick), highest min. 14.8°C at Sherkin Island  
**Sunshine:** 2.2 hours at Newport (Furnace) to 11.3 hours at Casement

**Friday 12th:** Mist and fog widespread overnight. The day saw a lot of hazy sunshine over the country which became misty with some sunshine/clear periods later on. Winds were light to moderate, east to southeast.

**Rainfall:** Nil at numerous locations to 1.7 mm at Duncannon  
**Temperature:** Lowest max. 17.1°C at Cork Apt, highest max. 22.0°C at Glengarriff (Innacullin). Lowest min. 4.4°C at Thomastown (Mt Juliet), highest min. 14.3°C at Valentia Obs  
**Sunshine:** 0.3 hours at Ballincurrag (Peafield) and Cork Apt to 8.7 hours at Ballyshannon (Cathleen's Fall)

**Saturday 13th:** Overnight mist and fog cleared in the morning to give a dry warm day with hazy sunshine, but some cloudy periods too. A warm day with highest temperatures along the Atlantic coasts, Shannon recording 22.4°C. Winds were light to moderate, east to southeast.

**Rainfall:** Nil at numerous locations to 0.9 mm at Duncannon  
**Temperature:** Lowest max. 17.7°C at Malin Head, highest max. 23.1°C at Glengarriff (Innacullin), Ardfert (Liscahane) and Listowel (Bunaghara). Lowest min. 5.9°C at Thomastown (Mt Juliet), highest min. 15.5°C at Valentia Obs  
**Sunshine:** 2.9 hours at Ballyshannon (Cathleen's Fall) to 10.8 hours at Shannon Apt

**Sunday 14th:** A misty night with some dense fog in places especially towards morning. As the fog cleared there were some sunny spells in mainly cloudy conditions. Winds were moderate, easterly.

**Rainfall:** Nil at numerous locations to 3.0 mm at Gap of Dunloe  
**Temperature:** Lowest max. 15.5°C at Malin Head, highest max. 23.1°C at Oughterrard (Ardnasillagh). Lowest min. 6.0°C at Thomastown (Mt Juliet), highest min. 14.2°C at Sherkin Island  
**Sunshine:** Nil at Edenderry (Ballinla) to 7.4 hours at Cork Apt

**Monday 15th:** Another misty morning with foggy patches, dense in places, clearing to give a mix of sunny and cloudy periods, best of the sunshine in the Midlands and West. A mainly dry day with only some very patchy light rain or drizzle in some parts. Winds were light to moderate, northeasterly.

**Rainfall:** Nil at numerous locations to 2.8 mm at Gap of Dunloe  
**Temperature:** Lowest max. 15.7°C at Malin Head, highest max. 21.9°C at Glengarriff (Innacullin). Lowest min. 5.8°C at Moore Park, highest min. 14.2°C at Dublin (Glasnevin)  
**Sunshine:** 0.2 hours at JFK Park to 9.3 hours at Sherkin Island

**Tuesday 16th:** Some overnight and early morning mist and dense fog, drizzle in places, cleared through the morning in most places to give some hazy sunshine in the afternoon. Remained dry for the evening before some heavy showers in the southeast towards nightfall. Winds were light, northeasterly.

**Rainfall:** Nil at numerous locations to 11.8 mm at Monamol  
**Temperature:** Lowest max. 16.3°C at Malin Head, highest max. 22.5°C at Lullymore Nature Centre. Lowest min. 5.6°C at Adare Manor, highest min. 14.6°C at Dublin (Glasnevin)  
**Sunshine:** 1.3 hours at JFK Park to 8.0 hours at Sherkin Island

**Wednesday 17th:** Some showers affected eastern areas overnight, but dry elsewhere with widespread mist and fog. Misty conditions persisted through the day with just short sunny periods. Winds were light to moderate, easterly.

*Rainfall: Nil at numerous locations to 7.8 mm at Ballinskelligs (The Glen)*  
*Temperature: Lowest max. 16.1°C at Malin Head, highest max. 23.5°C at Adare Manor.*  
*Lowest min. 8.9°C at Listowel (Gurtochlohan), highest min. 16.0°C at Cloyne (Lisanley)*  
*Sunshine: Nil at numerous locations to 5.4 hours at Clonroche (Knoxtown)*

**Thursday 18th:** Misty through the day, with some thundery showers broke out in the southwest. Some showers in the Southwest during early afternoon, but continued dry and misty elsewhere, with some short sunny breaks. Winds were light, northeasterly.

*Rainfall: Nil at numerous locations to 75.0 mm at Adare Manor*  
*Temperature: Lowest max. 16.1°C at Malin Head, highest max. 23.5°C at Adare Manor.*  
*Lowest min. 7.8°C at Ardee (Boharnamoe), highest min. 16.8°C at Valentia Obs*  
*Sunshine: Nil at numerous locations to 5.0 hours at Ballincurrig (Peafield) and Shannon Apt*

**Friday 19th:** Thundery showers in West and Southwest through the morning, but mainly dry elsewhere with mist persisting. Thundery showers throughout the day in eastern parts, but elsewhere mostly dry and misty. Winds were light, northeasterly.

*Rainfall: Nil at numerous locations to 71.3 mm at Aherlamore*  
*Temperature: Lowest max. 15.5°C at Belderrig, highest max. 21.3°C at Glengarriff (Innacullin).*  
*Lowest min. 8.1°C at Straide, highest min. 16.5°C at Cloyne (Lisanley)*  
*Sunshine: Nil at numerous locations to 0.2 hours at Newport (Furnace)*

**Saturday 20th:** Rain across the southern half of the country moved southeastwards and cleared shortly after dawn. Winds were light, northerly.

*Rainfall: Nil at numerous locations to 32.4 mm at Parknahown Cullahill*  
*Temperature: Lowest max. 15.4°C at Knock Apt, highest max. 19.8°C at JFK Park. Lowest min. 8.4°C at Glenties Hatchery 8.4°C at Mt Russell, highest min. 15.6°C at Sherkin Island*  
*Sunshine: 1.1 hours at Dublin (Glasnevin) to 6.8 hours at Edenderry (Ballinla)*

**Sunday 21st:** Some isolated thunder overnight in what was mainly a misty and cool overnight with some fog in places, and a touch of frost also. Fog cleared mostly by morning becoming a warm day with some good sunny spells. More mist and fog patches formed towards nightfall. Winds were light and variable.

*Rainfall: Nil at numerous locations to 5.7 mm at Ferns*  
*Temperature: Lowest max. 14.9°C at Malin Head, highest max. 20.4°C at Lullymore Nature Centre. Lowest min. 0.8°C at Markree, highest min. 12.0°C at Malin Head*  
*Sunshine: 4.3 hours at Dublin (Glasnevin) to 11.8 hours at Sherkin Island*

**Monday 22nd:** There were patches of mist in fog in many areas during the early hours but these burned away in the morning as temperatures rose and there was long spells of sunshine in the South. A cold front brought outbreaks of rain to the northwest after dark. Winds were light, southwesterly.

*Rainfall: Nil at numerous locations to 8.4 mm at Bandon (The Gully)*  
*Temperature: Lowest max. 16.3°C at Glenties Hatchery, highest max. 21.4°C at Adare Manor.*  
*Lowest min. 2.5°C at Glenties Hatchery and Straide, highest min. 12.0°C at Sherkin Island*  
*Sunshine: 3.3 hours at Ballincurrig (Peafield) to 9.5 hours at Ardferit (Lisachane)*

**Tuesday 23rd:** Rain, drizzle or showers in all areas overnight continuing albeit intermittently, giving a damp start to the morning. Mainly cloudy, with some sunny spells, the day improved slightly before rain became heavy in places towards evening and night. Winds were light to moderate, southwesterly.

*Rainfall: Nil at numerous locations to 17.2 mm at Cloone Lake (Caragh River Area)*  
*Temperature: Lowest max. 14.0°C at Belderrig, highest max. 20.1°C at Glengarriff (Innacullin).*  
*Lowest min. 4.8°C at Thomastown (Mt Juliet), highest min. 14.5°C at Sherkin Island*  
*Sunshine: Nil at JFK Park to 2.0 hours at Sherkin Island*

**Wednesday 24th:** A mainly dry day with some good sunny periods, but also a lot of cloud. Cloudy and misty conditions from the warm fronts later on, brought some patchy rain, drizzle and fog to most parts. Temperatures were low. Winds were moderate, northwesterly.

*Rainfall: Nil at numerous locations to 11.5 mm at Kilcar (Cronasillagh) and Ardnacrusha Gen.Stn.No.2*  
*Temperature: Lowest max. 15.5°C at Markree and JFK Park, highest max. 20.3°C at Glengarriff (Innacullin). Lowest min. 5.3°C at Athenry, highest min. 14.3°C at Sherkin Island*  
*Sunshine: 3.3 hours at Dublin (Glasnevin) to 9.8 hours at Dungarvan (Carriglea)*

**Thursday 25th:** The rain and drizzle in places through the morning. The day was mainly dry with some sunny breaks, just the odd scattered shower about. Winds moderate to fresh, southwesterly.

*Rainfall: Nil at numerous locations to 7.2 mm at Falcarragh (Lough Altan)*  
*Temperature: Lowest max. 16.1°C at Malin Head, highest max. 22.7°C at Glengarriff (Innacullin). Lowest min. 7.2°C at Dundalk (Annaskeagh WW), highest min. 15.0°C at Dooks*  
*Sunshine: 0.1 hours at Arklow (Ballyrichard Hse) to 1.7 hours at Shannon Apt*

**Friday 26th:** Patchy rain in places overnight. A slight ground frost in Midlands overnight also. The day was dry with some good sunshine in places, a bit more cloud in the west though. Winds were moderate, southwesterly.

*Rainfall: Nil at numerous locations to 13.7 mm at Ballymote (Rathmullen)*  
*Temperature: Lowest max. 15.9°C at Knock Apt and Ballycroy-Knockmoyleen, highest max. 22.0°C at Cahore (Kilmichael Hse). Lowest min. 7.0°C at Ballymore, highest min. 15.4°C at Sherkin Island*  
*Sunshine: 3.1 hours at Ballincurrig (Peafield) to 10.4 hours at Knock Apt*

**Saturday 27th:** The morning was dry with some good sunshine. The afternoon saw some showers break out in places, but a mainly dry day with some good sunshine. Winds were light to moderate, southwesterly.

*Rainfall: Nil at numerous locations to 14.7 mm at Gernapeka*  
*Temperature: Lowest max. 16.0°C at Knock Apt, highest max. 22.1°C at Dooks. Lowest min. 2.2°C at Markree, highest min. 12.5°C at Waterford (Tycor)*  
*Sunshine: Nil at Straide to 5.4 hours at Casement*

**Sunday 28th:** Some rain in North during the afternoon, with showers in parts of the West, but dry elsewhere with some sunshine. The day was mainly dry with mist developing in places. Winds were light, southwesterly.

*Rainfall: Nil at numerous locations to 11.0 mm at Inishcarra (Gen.Stn.)*  
*Temperature: Lowest max. 16.6°C at Malin Head, highest max. 22.0°C at Castleconnell.*  
*Lowest min. 8.4°C at Piltown (Kildalton Agr Col) 8.4°C at Edenderry (Ballinla), highest min. 15.3°C at Valentia Obs*  
*Sunshine: 0.1 hours at Casement to 3.1 hours at Ballincurrig (Peafield)*

**Monday 29th:** A mild and humid night with some mist and drizzle in places, giving way to outbreaks of showery rain mainly in the West and Northwest, some heavy showers in places, later in the day. Winds were light, southeasterly.

*Rainfall: Nil at numerous locations to 20.6 mm at Dooncarton*  
*Temperature: Lowest max. 17.2°C at Dundalk (Annaskeagh WW), highest max. 21.5°C at Castleconnell. Lowest min. 8.7°C at Dublin Apt, highest min. 15.6°C at Valentia Obs*  
*Sunshine: Nil at Ballyshannon (Cathleen's Fall) to 6.9 hours at Sherkin Island*

**Tuesday 30th:** Rain spreading from the West overnight, cleared most parts of the east coast by morning. Some further outbreaks of rain in the early afternoon. Winds were light to moderate, southeasterly.

*Rainfall: Nil at numerous locations to 10.6 mm at Cuilcagh Mtns.*  
*Temperature: Lowest max. 16.0°C at Belderrig, highest max. 22.1°C at Castleconnell. Lowest min. 8.6°C at Kilkenny (Greenshill), highest min. 16.0°C at Valentia Obs*  
*Sunshine: Nil at numerous locations to 3.9 hours at Straide 3.9 hours at Dublin Apt*

**EXTREMELY DRY;  
DRIEST SEPTEMBER ON RECORD  
AT SOME LOCATIONS**

Nearly all rainfall totals were well below their Long-Term Average (LTA) with extremely dry conditions (less than 25% of LTA) reported at over half of stations. Isolated stations in the East, Galway and Waterford had percentage of monthly LTAs values of below 5%. Low rainfall totals across the country were attributed to 'dry spells' and periods of 'absolute drought' which were recorded between the 1st and 29th (see page two for Drought Analysis).

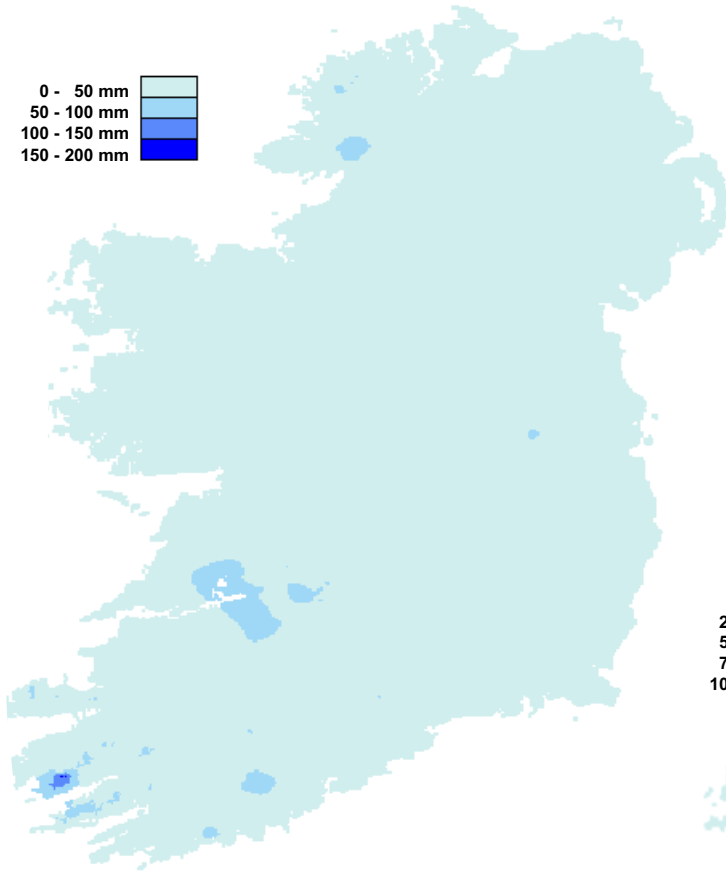
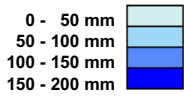
The month's lowest percentage of LTA and lowest monthly rainfall was at Kilberry, Co Kildare with 2% and 1.6 mm, its lowest monthly rainfall on record since the site opened in 1999. Over 220 stations reported their driest September on record, with Glenties Hatchery, Co Donegal reporting the longest series of observations exceeded with 73 years (monthly total of 23.6 mm, 17% of its LTA). Other stations mainly in isolated mountainous regions of Kerry, Wicklow, Cork and Donegal also had their driest Septembers in 68 years or more. The majority of remaining stations reported their driest conditions since 1971, 1972 and 1986.

The month's highest percentage of LTA and highest monthly rainfall total in a low-lying region (area below 200 m) was at Dromoland Castle, Co Clare with 111% of LTA with 97.3 mm. Nearly two-thirds of this fell (63.2 mm) during heavy thundery showers which affected parts of the Southwest during the night of the 18th/19th. The month's wettest day was also at this time, with Adare Manor, Co Limerick reporting 75.0 mm in the 24-hour period (9am on the 18th to 9am on the 19th). This was its wettest day at the station since it opened in 2004. The month's overall highest rainfall accumulation was at a gauge in the Cummeragh Mountains, Co Kerry with 145.2 mm (63% of its LTA).

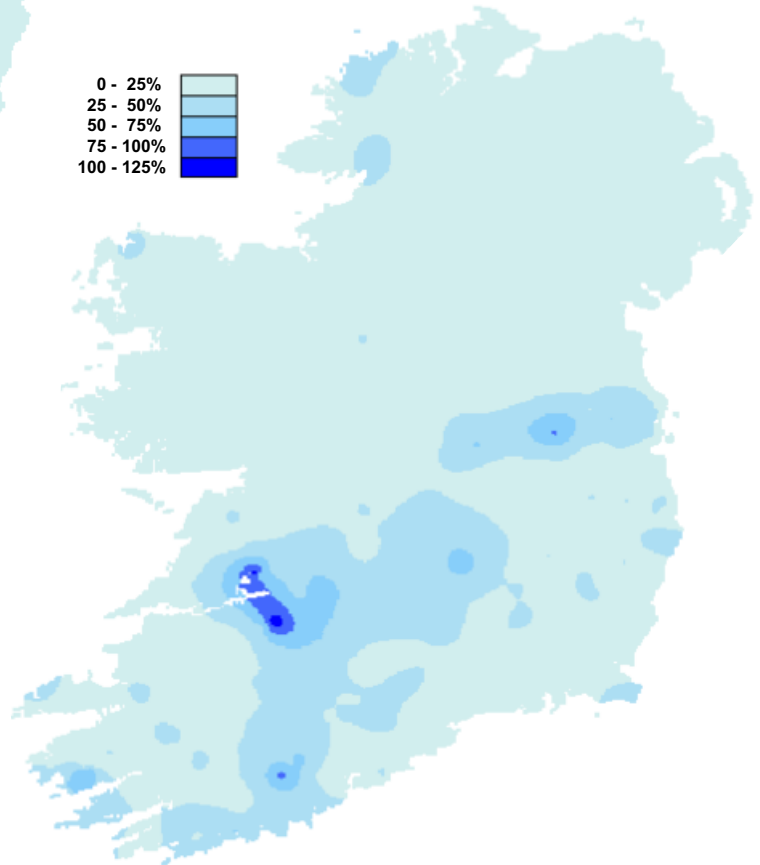
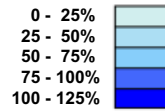
COUNTY/ STATION	TOTAL AMOUNT (mm)	% OF 1981-2010 AVERAGE	MOST IN A DAY / DATE		NUMBER OF RAINDAYS (>0.2mm)	NUMBER OF WETDAYS (>1mm)
<b>CO CARLOW</b>						
CARLOW (OAK PARK)	18.4	26	12.4	19	8	4
<b>CO CAVAN</b>						
BALLYHAISE	11.7	15	4.8	22	6	4
<b>CO CLARE</b>						
CARRON	39.6	29	9.0	29	12	6
SHANNON AIRPORT	73.8	98	38.0	5	10	6
<b>CO CORK</b>						
BALLINCURRIG (PEAFIELD)	12.6	12	4.0	29	8	4
CORK AIRPORT	20.4	22	8.2	19	10	6
FERMOY (MOORE PARK)	23.2	29	7.6	19	9	7
ROCHE'S POINT	19.2	23	7.9	19	8	4
SHERKIN ISLAND	22.8	25	7.7*	18	8*	5*
<b>CO DONEGAL</b>						
BALLYSHANNON (CATHLEEN'S FALL)	25.1	25	13.5	23	9	6
GLENTIES HATCHERY	23.6	17	10.4	23	10	6
MALIN HEAD	23.7	25	6.0	23	10	7
<b>CO DUBLIN</b>						
CASEMENT AERODROME	13.0	22	4.8	19	5	4
DUBLIN (MERRION SQUARE)	8.3	14	4.0	19	6	2
DUBLIN AIRPORT	26.5	45	19.2	19	8	2
DUBLIN (PHOENIX PARK)	15.8	26	11.2	19	7	2
<b>CO GALWAY</b>						
MAAM VALLEY	23.0	11	4.8	25	9	7
<b>CO KERRY</b>						
ARDFERT (LISCAHANE)	21.7	24	9.1	19	9	5
VALENTIA OBSERVATORY	27.3	22	4.9	29	12	11
<b>CO KILKENNY</b>						
THOMASTOWN (MT. JULIET)	19.6	26	11.3	19	7	4
<b>CO LIMERICK</b>						
MOUNT RUSSELL	34.5	34	16.9	19	8	5
<b>CO MAYO</b>						
BELMULLET	25.7	25	13.0	29	9	6
DELPHI LODGE	34.6		7.5	24	8	7
KNOCK AIRPORT	21.1	19	4.4	30	11	6
STRAIDE	9.2	9	3.3	30	6	4
<b>CO MEATH</b>						
WARRENTOWN	16.4	23	8.3	19	7	3
<b>CO MONAGHAN</b>						
CARRICKMACROSS (DUNOGE)	9.7	14	6.3	16	6	3
<b>CO OFFALY</b>						
DERRYGREENAGH	22.0	30	15.7	19	6	4
<b>CO ROSCOMMON</b>						
MOUNTDILLON	10.8	14	2.7	30	8	5
<b>CO SLIGO</b>						
ARDTARMON	11.4	13	2.7	23	7	4
<b>CO TIPPERARY</b>						
FETHARD (PARSONSHILL)	24.3	31	17.6	19	9	4
GURTEEN (AG.COLLEGE)	18.7	25	6.8	19	11	5
<b>CO WATERFORD</b>						
DUNGARVAN (CARRIGLEA)	14.8	16	6.8	30	8	5
WATERFORD (TYCOR)	3.6	4	1.6	24	3	2
<b>CO WESTMEATH</b>						
MULLINGAR	16.4	21	5.2	29	10	5
<b>CO WEXFORD</b>						
CLONROCHE (KNOXTOWN)	11.8		5.7	30	7	4
JOHNSTOWN CASTLE	16.2	18	6.6	19	11	4
<b>CO WICKLOW</b>						
ASHFORD (CRONYKEERY)	7.6	10	3.2	18	5	3

\* ESTIMATED DATA USED IN CALCULATION. TABLE REPRESENTS DATA FROM A SMALL SELECTION OF RAINFALL STATIONS. ALL DATA IS 09-09 HR

TOTAL RAINFALL (mm)



PERCENTAGE OF NORMAL RAINFALL  
(1981-2010 NORMALS)



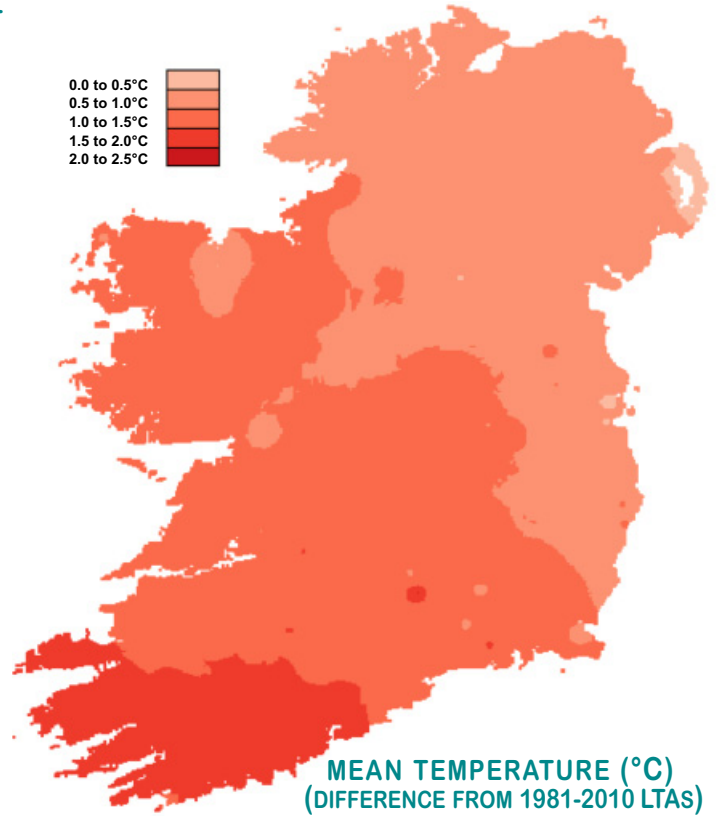
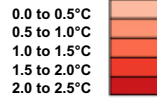
DAILY 0901-0900hr RAINFALL VALUES (mm)



**WARMER CONDITIONS THAN AUGUST 2014 AT AROUND TWO-THIRDS OF STATIONS**

All monthly mean air temperatures were on or above their Long-Term Average (LTA). Nearly two-thirds of September mean air temperatures were on or higher than those in August 2014. Valentia Observatory reported the largest temperature difference between the two months, with 0.9°C (August mean 14.9°C, September mean 15.8°C) and its warmest September conditions since 1991. Differences from September LTA were up to 2.2°C at Fethard (Parsonshill), Co Tipperary with a mean temperature of 14.9°C, equalling its warmest September on record since the station opened in 1986. The month's lowest mean air temperature was 13.4°C reported at Dublin Airport (same as LTA), Ballina Golf Club, Co Mayo (difference from LTA 0.4°C) and Littleton, Co Tipperary (difference from LTA 0.7°C). The month's highest mean temperature was at Glengarriff (Inacullin), Co Cork with 16.0°C (difference from LTA 1.9°C), its warmest September on available record since 1975. Around a third of stations had their warmest September since September 2006 (where all monthly means were more than 2.0°C above their LTA). While isolated stations mainly in Cork, Clare and Tipperary had their warmest September on record with number of years of observations between 19 years at Ballincurrig (Peafield), Co Cork and 53 years at Cork Airport.

Monthly highest maxima were mainly recorded on the 4th and between the 10th and 13th. Highest maxima

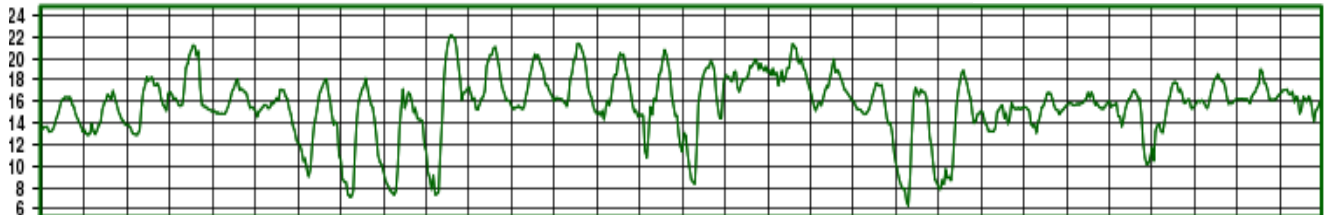


**MEAN TEMPERATURE (°C)  
(DIFFERENCE FROM 1981-2010 LTAS)**

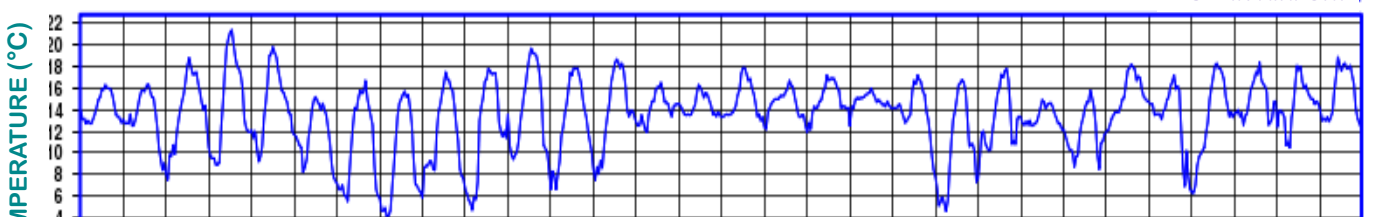
ranged from 19.8°C at Dublin (Merrion Sq) on both the 11th and 30th to 25.0°C at Castleconnell, Co Limerick on the 4th, its highest September maximum in ten years. Lowest air minima were mainly between the 6th and 10th and ranged from 0.8°C on the 21st at Markree, Co Sligo to 9.4°C on the 22nd at Malin Head, Co Donegal. There was no air frost reported in September.

**HOURLY TEMPERATURES SEPTEMBER 2014**

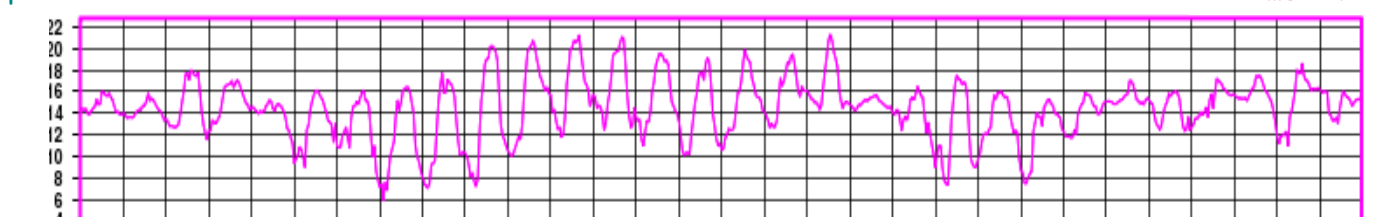
VALENTIA OBSERVATORY



DUBLIN AIRPORT



BELMULLET



DAY OF MONTH

COUNTY/ STATION	MEAN MAX.	MEAN MIN.	DIFFERENCE FROM 1981-2010		HIGHEST MAX./DATE	LOWEST MIN./DATE	LOWEST GRASS MIN./DATE		DAYS WITH FROST	
			MEAN	AVERAGE			AIR	GROUND		
<b>CO CARLOW</b>										
CARLOW (OAK PARK)	19.4	9.4	14.4	0.7	22.8 4	4.4 10	0.7 10	0	0	
<b>CO CAVAN</b>										
BALLYHAISE	18.0	8.9	13.5	0.3	22.4 4	3.0 8	0.3 21	0	0	
<b>CO CLARE</b>										
CARRON	18.3	10.2	14.2	1.3	21.5 4	4.1 22	-2.9 22	0	6	
SHANNON AIRPORT	19.6	11.0	15.3	1.1	23.9 4	5.9 8	0.4 15	0	0	
<b>CO CORK</b>										
BALLINCURRIG (PEAFIELD)	19.3	10.7	15.0	1.9	22.1 4	5.8 9	5.7 9	0	0	
CORK AIRPORT	18.2	11.7	14.9	1.6	20.6 4	7.5 7	2.4 8,9	0	0	
FERMOY (MOORE PARK)	19.3	9.6	14.4	1.1	22.0 18	3.8 7	1.6 7	0	0	
ROCHE'S POINT	18.4	13.1	15.7	1.6	20.3 18,25	8.8 7	4.6 22	0	0	
SHERKIN ISLAND	18.3	13.0	15.7	1.4	20.4 18	7.4 7	6.0 7	0	0	
<b>CO DONEGAL</b>										
BALLYSHANNON (CATHLEEN'S FALL)	18.2	10.7	14.4	1.2	21.5 11	4.9 21		0		
GLENTIES HATCHERY	18.8*	8.5*	13.6*	0.8	23.0* 11	2.5* 6,22	1.3* 8	0*	0*	
MALIN HEAD	16.6	12.0	14.3	1.0	20.4 30	9.4 10,22	5.6 10	0	0	
<b>CO DUBLIN</b>										
CASEMENT AERODROME	18.0	9.6	13.8	0.5	21.8 4	3.3 8	-1.1 8	0	1	
DUBLIN (MERRION SQUARE)	17.6	11.5	14.5	0.2	19.8 11,30	8.1 7,8		0		
DUBLIN AIRPORT	17.8	9.0	13.4	0.0	22.0 4	3.7 8	0.3 8	0	0	
DUBLIN (PHOENIX PARK)	18.5	9.9	14.2	0.8	22.7 4	5.1 8	0.1 21	0	0	
<b>CO GALWAY</b>										
MAAM VALLEY	18.7	10.3	14.5	1.1	21.6 13	5.2 8,22	2.8 8	0	0	
<b>CO KERRY</b>										
ARDFERT (LISCAHANE)	20.1	10.5	15.3	1.5	24.0 4	4.9 7	4.2 7,8	0	0	
VALENTIA OBSERVATORY	19.1	12.4	15.8	1.7	22.4 10	6.1 21	1.9 21	0	0	
<b>CO KILKENNY</b>										
THOMASTOWN (MT. JULIET)	20.0	8.1	14.1	0.8	23.1 4	2.4 8	-1.2 8	0	4	
<b>CO LIMERICK</b>										
MOUNTRUSSELL	19.2	10.3	14.7	1.5	22.9 4	6.0 8	1.2 8	0	0	
<b>CO MAYO</b>										
BELMULLET	18.1	11.0	14.5	0.9	22.0 11,13	5.8 8	2.2 21	0	0	
DELPHI LODGE	18.6	10.9	14.7	1.0	21.5 10	5.0 21	0.2 21	0	0	
KNOCK AIRPORT	17.2	10.1	13.7	1.6	20.7 4	6.0 27	1.7 8	0	0	
STRAIDE	18.9	8.4	13.6	0.7	22.0 11	1.2 21	-2.2 8	0	7	
<b>CO MEATH</b>										
WARRENTOWN	19.0	9.6	14.3	1.1	22.6 4	2.5 8	-1.1 8	0	1	
<b>CO MONAGHAN</b>										
CARRICKMACROSS (DUNOGE)	18.3	9.2	13.8	1.0	22.5 4	4.3 27	-0.5 27	0	1	
<b>CO OFFALY</b>										
DERRYGREENAGH	19.1	9.4	14.3	1.5	23.7 4	4.1 21	0.6 21	0	0	
<b>CO ROSCOMMON</b>										
MOUNTDILLON	18.9	8.2	13.5	0.5	22.9 4	1.0 8	-2.0 21	0	8	
<b>CO SLIGO</b>										
ARDTARMON	18.9	11.4	15.1	1.3	22.7 11	7.4 6	n/a n/a	0	n/a	
<b>CO TIPPERARY</b>										
FETHARD (PARSONSHILL)	19.2	10.6	14.9	2.2	22.4 4	6.4 22	5.4 21	0	0	
GURTEEN (AG.COLLEGE)	18.9	9.4	14.2	1.0	23.1 4	3.5 7	-0.4 21	0	1	
<b>CO WATERFORD</b>										
DUNGARVAN (CARRIGLEA)	19.4	10.5	14.9	1.0	21.5 18	4.8 9	1.3 10	0	0	
WATERFORD (TYCOR)	19.8	11.5	15.6	1.7	22.3 4	7.8 9		0		
<b>CO WESTMEATH</b>										
MULLINGAR	18.6	9.1	13.9	1.1	23.3 4	2.8 9	-0.8 8,10	0	2	
<b>CO WEXFORD</b>										
CLONROCHE (KNOXTOWN)	19.0	9.5	14.2	1.4	22.0 4	3.0 8	-0.5 8	0	1	
JOHNSTOWN CASTLE	17.7	11.7	14.7	0.9	20.1 5	6.9 22	3.1 22	0	0	
<b>CO WICKLOW</b>										
ASHFORD (CRONYKEERY)	18.6	9.6	14.1	0.5	21.4 4	5.2 10	-0.8 8	0	2	

\* PARTIAL DATA USED IN CALCULATION. TABLE REPRESENTS DATA FROM A SMALL SELECTION OF STATIONS. ALL DATA IS 09-09 HR

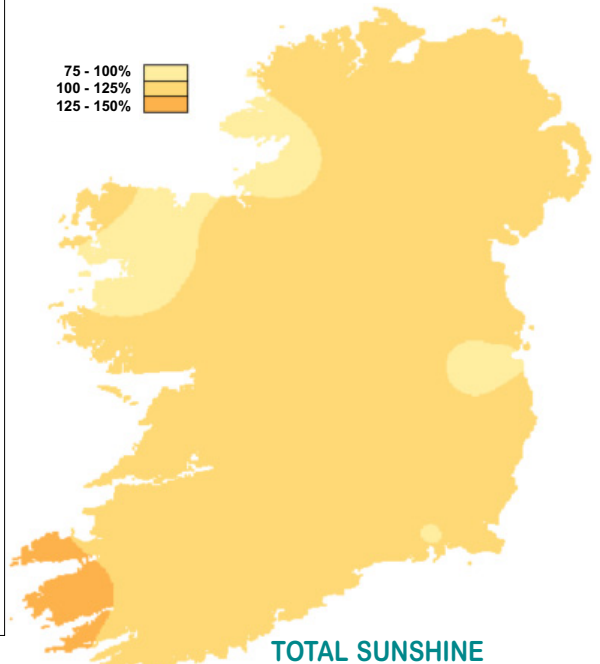
COUNTY/ STATION	DAILY MEAN (HOURS/DAY)	% OF 1981-2010 LTA	DULL DAYS (<0.5 HRS)	MOST IN A DAY/DATE
<b>CO CLARE</b>				
SHANNON AIRPORT	4.70	119	3	10.8 13
<b>CO CORK</b>				
BALLINCURRIG (PEAFIELD)	4.61	105	2	10.8 10
CORK AIRPORT	4.46	102	3	10.6 8
SHERKIN ISLAND	5.16	111	3	11.8 21
<b>CO DONEGAL</b>				
BALLYSHANNON (CATHLEEN'S FALL)	3.55	96	7	11.6 10
<b>CO DUBLIN</b>				
CASEMENT AERODROME	3.94	95	8	11.3 9,11
DUBLIN (GLASNEVIN)	3.90	93	4	10.2 9
DUBLIN AIRPORT	4.71	109	3	12.0 9
<b>CO KERRY</b>				
ARDFERT (LISCAHANE)	4.96	120	3	11.4 10
VALENTIA OBSERVATORY	-----	not available	-----	-----
<b>CO OFFALY</b>				
EDENDERRY (BALLINLA)	3.61		7	10.0 10
<b>CO MAYO</b>				
BELMULLET	-----	not available	-----	-----
KNOCK AIRPORT	3.83	109	8	11.0 21
NEWPORT (FURNACE)	2.77*	81*	6*	9.8 10
STRAIDE	3.64	95	5	10.3 26
<b>CO WATERFORD</b>				
DUNGARVAN (CARRIGLEA)	5.15	115	2	12.2 2
<b>CO WEXFORD</b>				
CLONROCHE (KNOXTOWN)	5.14	117	4	10.6 9,10
JFK PARK	4.26	98	7	11.0 10
WEXFORD WILDFOWL RESERVE	-----	not available	-----	-----
<b>CO WICKLOW</b>				
ARKLOW (BALLYRICHARD HSE.)	5.14		4	11.7 7
ASHFORD (CRONYKEERY)	4.84	106	2	11.5 7

\* PARTIAL DATA USED IN CALCULATION  
NEWPORT MISSING SUNSHINE DATA FROM 30TH

**ABOVE AVERAGE SUNSHINE  
IN THE MAJORITY OF PLACES**

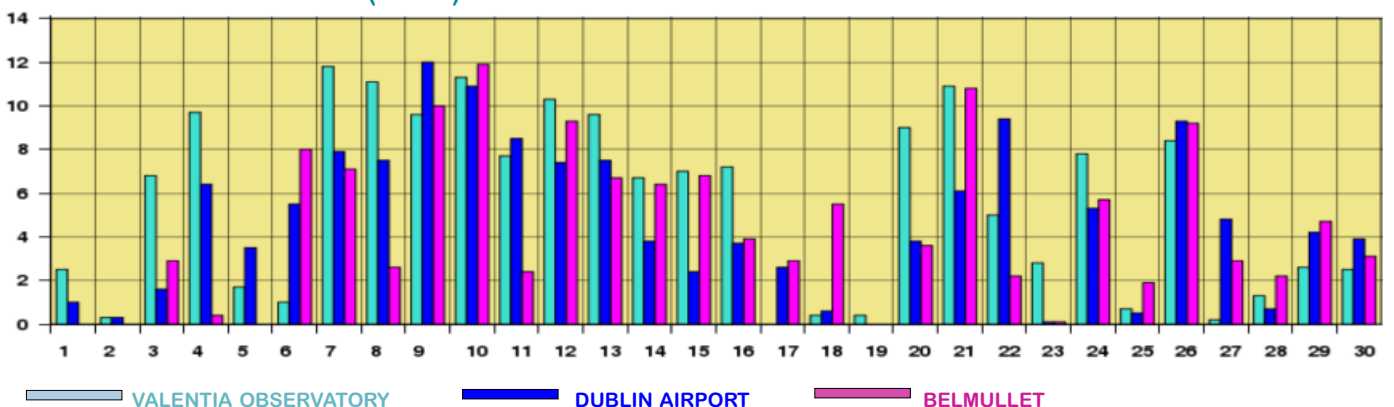
The majority of sunshine totals were near or above their Long-term Average (LTA) with exception of some places in the West, Northwest and East. Percentage of LTAs ranged from 81%\* at Newport (Furnace), Co Mayo (the month's lowest daily mean of 2.8 hours per day\*) to 120% at Ardfert (Liscahane), Co Kerry (daily mean of 5.0 hours per day), its sunniest September since 2007. The month's highest daily mean sunshine was at Sherkin Island, Co Cork with 5.2 hours per day (111% of its LTA). The sunniest day was on the 2nd at Dungarvan (Carriglea), Co Waterford with 12.2 hours, its sunniest September day since the station opened in 1983. The number of dull days (*days with less than 0.5 hours of sun*) ranged from two at both Dungarvan (Carriglea) and Ballincurrig (Peafield), Co Cork to eight at both Knock Airport, Co Mayo and Casement Aerodrome, Co Dublin.

Percentage of global radiation LTA values were all on or above average, with LTAs values up to 117% at Valentia Observatory.

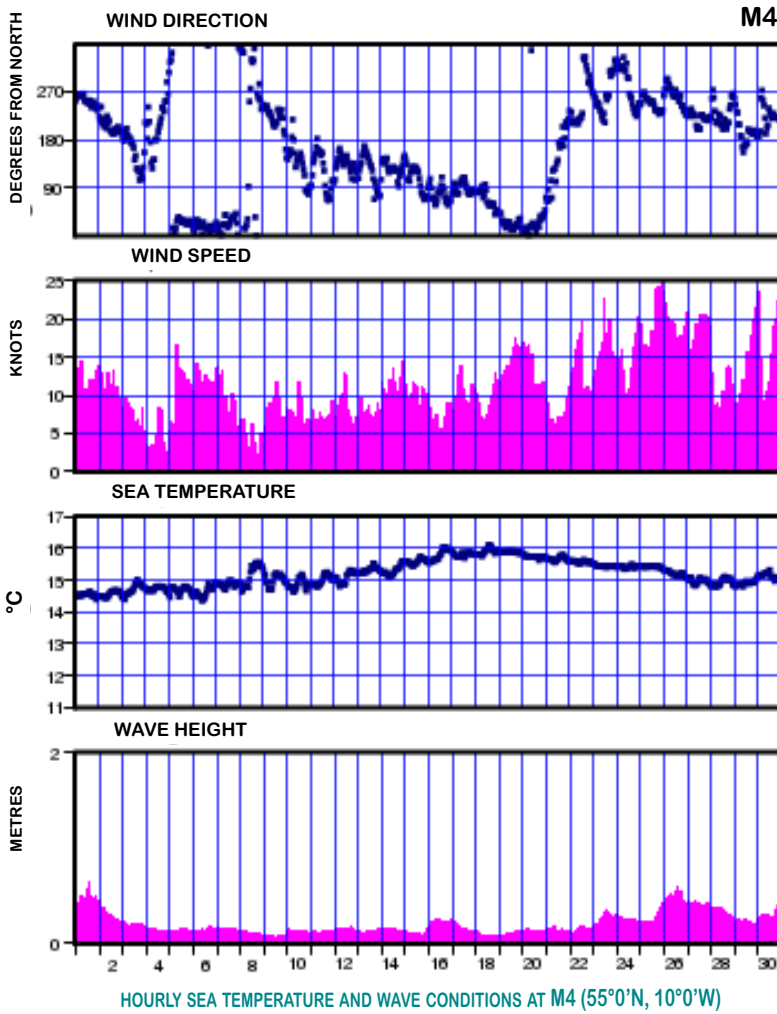


**TOTAL SUNSHINE  
(PERCENTAGE OF 1981-2010 NORMALS)**

**DAILY SUNSHINE VALUES (HOURS)**

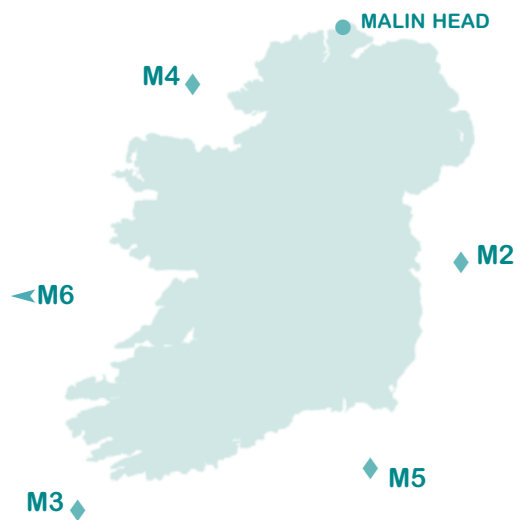


MARINE OBSERVATIONS FROM IRISH MARINE DATA BUOY NETWORK

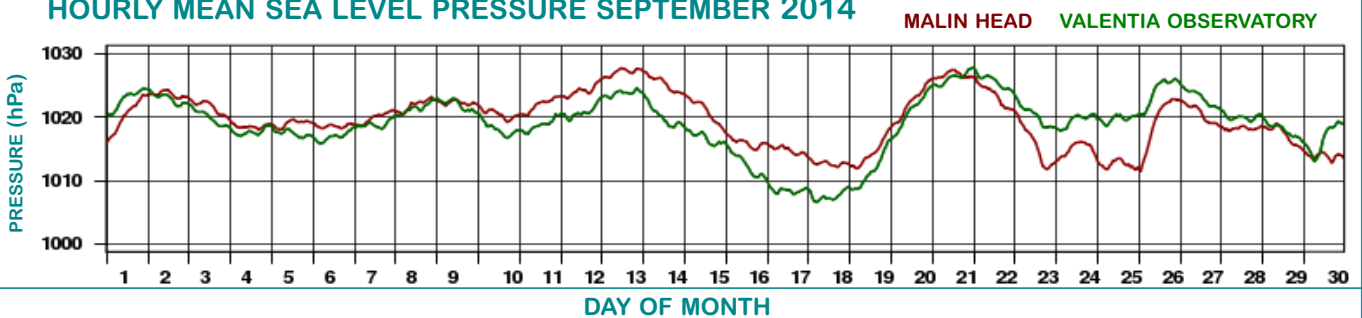


BUOY	SEA SURFACE TEMP. (°C)	MEAN WIND SPEED (knots)	MAX 10-MIN WIND (knots)	MEAN SIGNIFICANT WAVE HEIGHT (m)	MAX SIGNIFICANT WAVE HEIGHT (m)
M2	15.1	9.3*	22.8*	0.5	1.8
M3	16.2	10.8	22.9	1.8	4.5
M4	15.2	10.7	24.8	2.0	6.5
M5	-----	not available	-----	-----	-----
M6	15.9	n/a	n/a	2.2	5.8
MALIN HEAD	14.8	* PARTIAL DATA			

SUMMARY OF MEAN MONTHLY VALUES

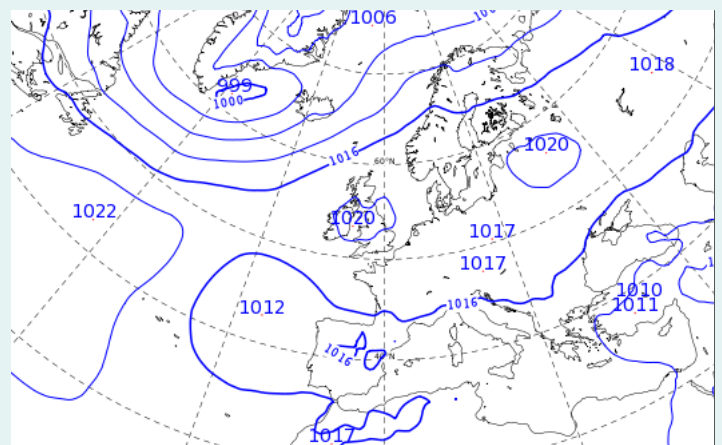


HOURLY MEAN SEA LEVEL PRESSURE SEPTEMBER 2014



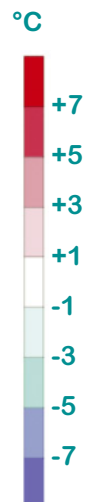
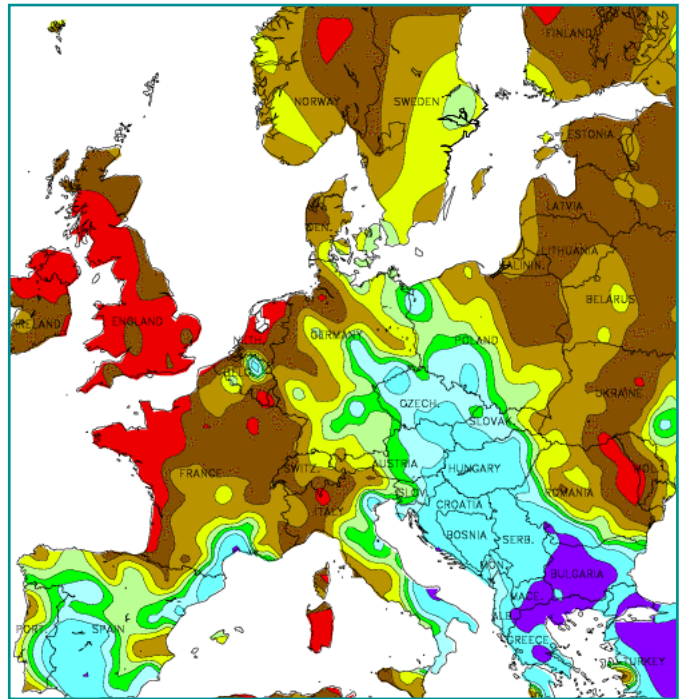
ATMOSPHERIC PRESSURE

Monthly mean sea level pressure values ranged from just above 1019 hPa in the Southwest to just over 1020 hPa in the East. The month's lowest pressure value of 1006.5 hPa was recorded at Sherkin Island, Co Cork on the 18th at 0500 UTC, as a depression of 994 hPa was located off the northern coastline of Spain. The month's highest pressure value of 1028.2 hPa was recorded at Cork Airport on the 22nd at 0100 UTC as a high pressure system of 1029 hPa was situated over Ireland, the United Kingdom and northern France.



MONTHLY MEAN MSL PRESSURE, BASED ON 1200 UTC VALUES

**SEPTEMBER RAINFALL**  
(PERCENTAGE OF 1961-1990 NORMAL)



**SEPTEMBER MEAN TEMPERATURE**  
(DIFFERENCE FROM 1961-1990 NORMAL)

MAPS SUPPLIED BY NOAA CLIMATE PREDICTION CENTRE, US DEPARTMENT OF COMMERCE. GLOBAL WEATHER HIGHLIGHTS SUPPLIED BY AON BENFIELD

Tropical Storm Dolly made landfall near Tuxpan, Mexico on the 2nd of September with maximum sustained winds of 41 knots (75 km/h), 203 mm of rainfall fell in northeastern Mexico. Hurricane Norbert brought winds of tropical storm strength and heavy rain to many parts of western Mexico, including the Baja Peninsula. Three fatalities were reported after torrential rains caused rivers to overflow.

Severe thunderstorms and heavy rainfall led to severe flooding across Bulgaria, killing at least three people. Flash floods also swept through Italy's Puglia region, killing at least two people. There were strong thunderstorms which led to flash floods in numerous locations. Trees were uprooted and there was structural damage in many areas.

Severe thunderstorms brought heavy rain, large hail and tornadoes to many parts. Flash floods were also noted in multiple states. The remnants of Hurricane Norbert and Tropical Storm Dolly combined with the Southwest Monsoon generated record highs for rainfall throughout the Desert Southwest.

Torrential monsoon rains led to devastating flooding throughout parts of Pakistan and India, causing widespread damage and large loss of life. This is the fifth year running that Pakistan has endured a billion-dollar flood event. Seasonal rains produced extensive flooding across parts of Thailand, China, and northeastern India, which resulted in 200 deaths. Typhoon Kalmaegi made separate landfalls in the Philippines, China, and Vietnam with wind speeds of 76 knots (140 km/h). There were large economic losses and numerous fatalities. Tropical Storm Fung-Wong brought torrential rains to the Philippines, Taiwan, and China, killing at least 21 people. The highest winds recorded were 51 knots (95 km/h).

**GLOBAL WEATHER SUMMARY**

