

Report

# Technical Report on Introduction of Water Conservation Order for the Kells/Oldcastle (County Meath), Milford (County Donegal), and Mullingar (County Westmeath) Areas

Under Section 56(16) of the Water Services Act 2007 (S.I. 30 2007) and Water Services Act 2007 (Commencement) Order 2007 (S.I. No. 528 of 2008), art. 2



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# 1. Note of Technical Expertise

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I am a Water Asset Strategy Technical Lead, working within the Asset Management Section of Uisce Éireann. I am a Scientist by training and hold an BSc in Geography and dual MSc in Environmental Water Management and Land and Water Management. My recent experience includes analysis of water supply and demand balances, the preparation of Ireland's first National Water Resource Plan (NWRP) and development of Drought Plans.

## 2. Technical Justification for Water Conservation Order

At present (25<sup>th</sup> April 2025) the European Drought Observatory classifies the entire Irish territory as under early warning of agricultural drought, with over 95% of the country already at the second of their three drought classes: "Warning". This classification is likely linked to the significantly below average rainfall recorded in the country through Autumn and Winter 2024/2025, especially in the North-West, East and Midlands. The situation has worsened in early-spring 2025 with below average rainfall recorded across the country in the month of March, putting raw water supplies under significant stress.

Three of these sources have reached a critical stage, namely: Lough Bane (Kells/Oldcastle supply, Co Meath), Lough Colmcille (Milford supply, Co Donegal), and Lough Owel (Mullingar supply, Co Westmeath). These three lakes are currently at the lowest level ever recorded for this time of year. For Lough Owel, for example, which has the longest historical monitoring data available, this means the lowest levels since 1979. Under the current circumstances it will take a significant increase in rainfall over the coming months for water levels to recover to typical average levels. However, current weather forecast predictions do not indicate any significant period of prolonged rainfall in the near future.

A detailed list of all towns potentially impacted by the low levels in each of the three supplies is presented in Table 1. Maps of the affected areas are provided in Appendix 1, Appendix 2 and Appendix 3.

Table 1. Supplies and their towns impacted by Water Conservation Order

Supply	Towns
Kells/Oldcastle	Oldcastle, Crossakeel, Carlanstown
Milford	Milford, Carrowkeel, Ramelton
Mullingar	Mullingar Town, Ballynacarrigy, Moyvore, Ballymore, Moate, Rathowen, Streete, Rathconrath, Killucan, Coralstown, Kinnegad, Milltownpass, Tyrrellspass, Kilbeggan, Ballinagore, Gaybrook, Horseleap

Met Éireann data demonstrates that the North, the West and the East of the country has been consistently drier than normal since May 2024.

Autumn 2024 was ‘driest in the northwest and east’ as described by Met Éireann. Nearly all rainfall totals were below their Long-Term Average (LTA) for the autumn season in this region of the country. Rainfall in Winter 2024/2025 was also below average for most of Ireland’s weather stations.

Further to this, it has been an exceptionally dry start to the spring with March 2025 being one of the driest on record for several weather stations across the country:

- Dunsany (Co. Meath) - driest March on record;
- Ballyhaise (Co. Cavan) - driest March since 1953;
- Gurteen (Co. Tipperary) – driest March since 1961;
- Dublin Airport (Co. Fingal) – driest March since 1990.

March 2025 has been described as ‘very dry everywhere’ by Met Éireann. Additionally, no rainfall was recorded for a number of weather stations during the first 2 weeks in April. There has been some rainfall throughout the country last week, the overall Long-Term Average (LTA) for the month of April is average.

The dry Winter period has had a particular impact on our lake sources which typically recharge over the Winter time to support the lower rainfall rates and higher water demands expected in Summer. Typically, lake levels are at their peak in March/April and reduce throughout Summer. However, the severe lack of rainfall during the normal recharge period in autumn and winter of 2024/2025

has resulted in many lakes and river sources across the country being well below their normal flows and water levels for this time of the year.

Uisce Éireann will continue to monitor the situation at a national level as the summer progresses, however, there are critical concerns with regard to three sources which are at their lowest levels ever recorded for this time namely; Lough Bane, Lough Colmcille, and Lough Owel.

As we go into the drier and warmer late spring / early summer period it is predicted the water levels at these sources will further reduce. To reduce demand and limit any potential impact on the environment I consider it necessary to introduce a Water Conservation Order to prohibit certain categories of water usage across these three supplies, namely Kells/Oldcastle (County Meath), Milford (County Donegal), and Mullingar (County Westmeath). This Order should, given the data currently available to us, be effective for six weeks from the date it is made and should apply to all the supplies listed in Table 1 and outlined in the map in Appendix 1, Appendix 2 and Appendix 3. This Order will assist Uisce Éireann to appropriately manage water supplies in the affected areas and to attempt to control the rate at which the lake levels are being depleted until there is sufficient rainfall to replenish them. Taking action now allows Uisce Éireann to avail of options that are unlikely to be available to us later if conditions further deteriorate in future weeks.

UÉ will continue to monitor the prevailing conditions, and it may be necessary to extend the specified period further to the initial six weeks and/or extend the Order to cover more supplies.

**The technical justification for the proposed Water Conservation Order is that we have experienced dry weather in the North West, Eastern and Midlands Regions over a prolonged period, evidencing a critical decrease in raw water availability at Lough Bane (Kells/Oldcastle, County Meath), Lough Colmcille (Milford, County Donegal), and Lough Owel (Mullingar, County Westmeath). If left unchecked, this will result in a risk of failure of the water supply networks in Kells/Oldcastle, Milford, and Mullingar over the coming months. This has given rise to the opinion that there is or is likely to be a serious deficiency of water available for distribution in these areas.**

**Uisce Éireann must be especially cognisant of the risk to water supplies in late spring / summer due to the current prolonged period of dry weather with further dry weather forecasted. We must prudently manage that risk by conserving and reducing water consumption now to ensure continuity**

**of supply. Uisce Éireann must therefore take a precautionary approach in formulating the proposed Water Conservation Order. In considering the proposed Water Conservation Order and its duration, Uisce Éireann must and has considered the potential hardship to and economic impacts on domestic and commercial water users.**

## 2.1. Evidence of Drought/Extreme Weather

Rainfall levels have been significantly below average over the 2024/2025 autumn and winter months in the North West, Eastern and Midlands Regions. March 2025 has been dry everywhere, with below average rainfall. The Met Éireann Monthly Forecast predicts that precipitation is likely to be below average over the coming weeks across all regions. Whilst precipitation in the North West, Eastern and Midlands parts of the country might experience nearer to normal levels in the coming weeks, due to the prolonged dry spell over the past months, it may take many weeks to replenish the water sources in these areas.

### 2.1.1. Met Éireann Data

Met Éireann Data published to the end of March 2025, highlights significantly lower than normal rainfall across parts of the country. Figures 1 to 6, below, demonstrate the monthly rainfall data compared to the Long-Term Average for each month for the weather gauges at Roches Point, Johnstown Castle, Phoenix Park, Mullingar, Malin Head and Athenry respectively.

#### Roches Point

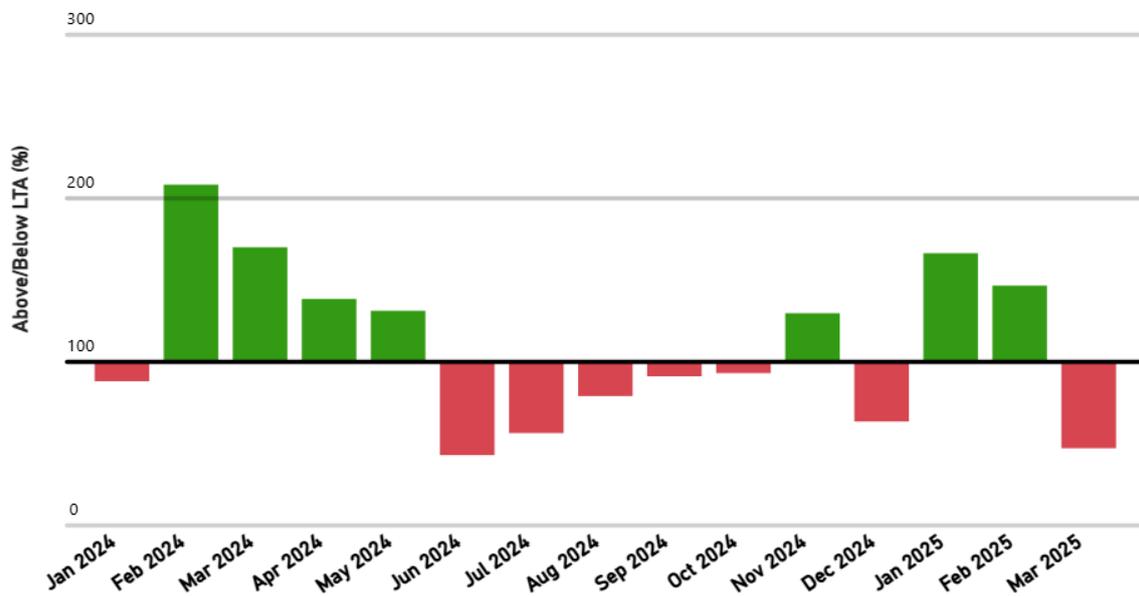


Figure 1 - Monthly Rainfall from Met Éireann's Roches Point Weather Station, as a Percentage (%) of the Long Term Average for Each Month, between January 2024 and March 2025.

## Johnstown Castle

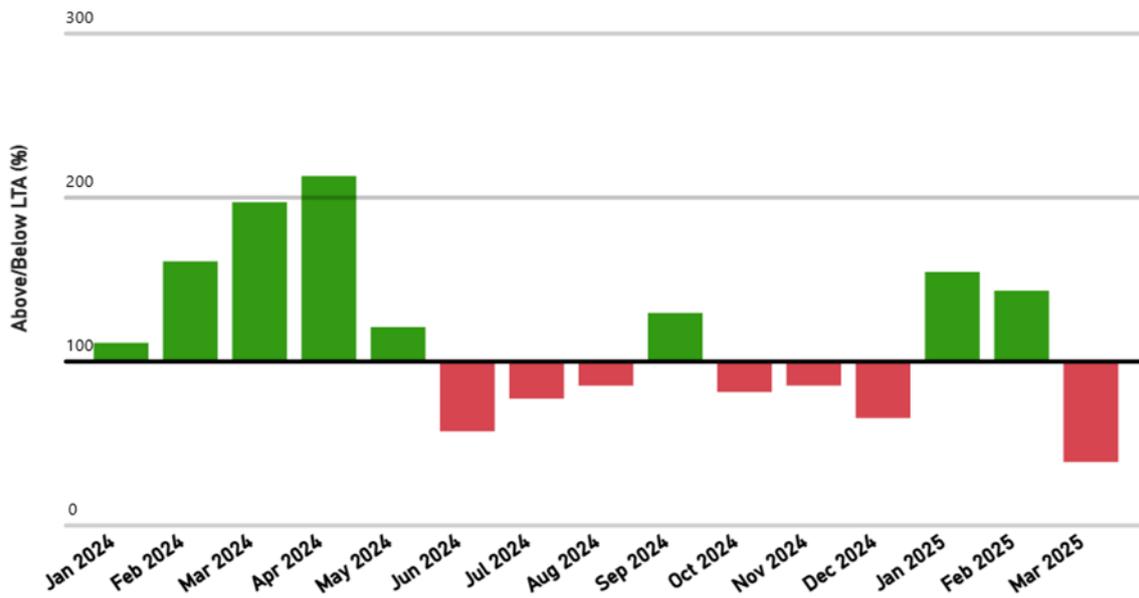


Figure 2 - Monthly Rainfall from Met Éireann's Johnstown Castle 2 Weather Station, as a Percentage (%) of the Long Term Average for Each Month, between January 2024 and March 2025.

## Phoenix Park

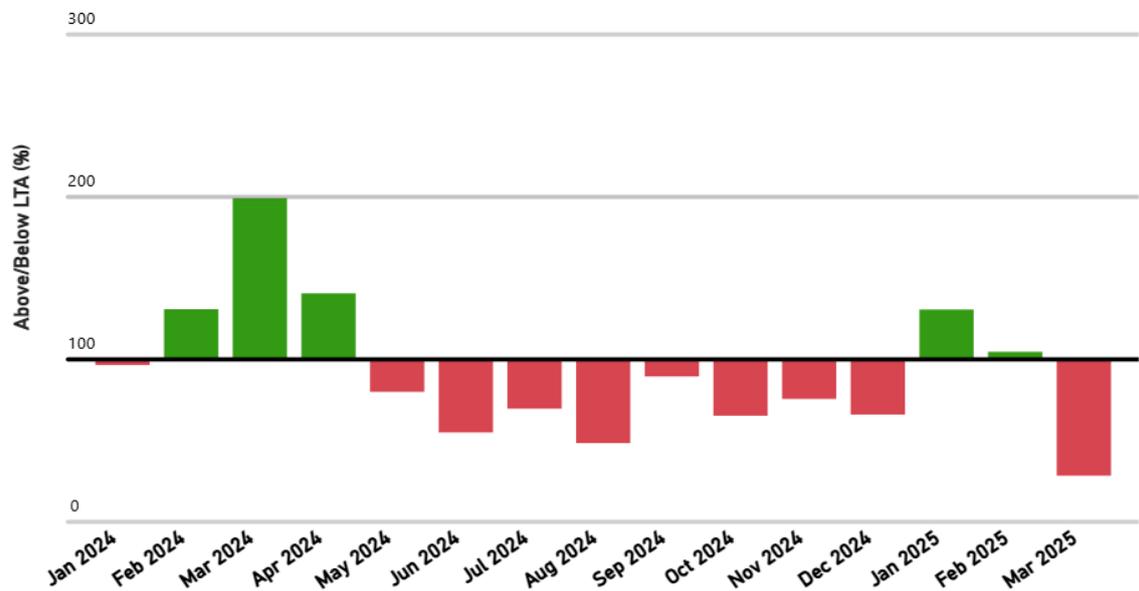


Figure 3 - Monthly Rainfall from Met Éireann's Phoenix Park Weather Station, as a Percentage (%) of the Long Term Average for Each Month, between January 2024 and March 2025.

## Mullingar

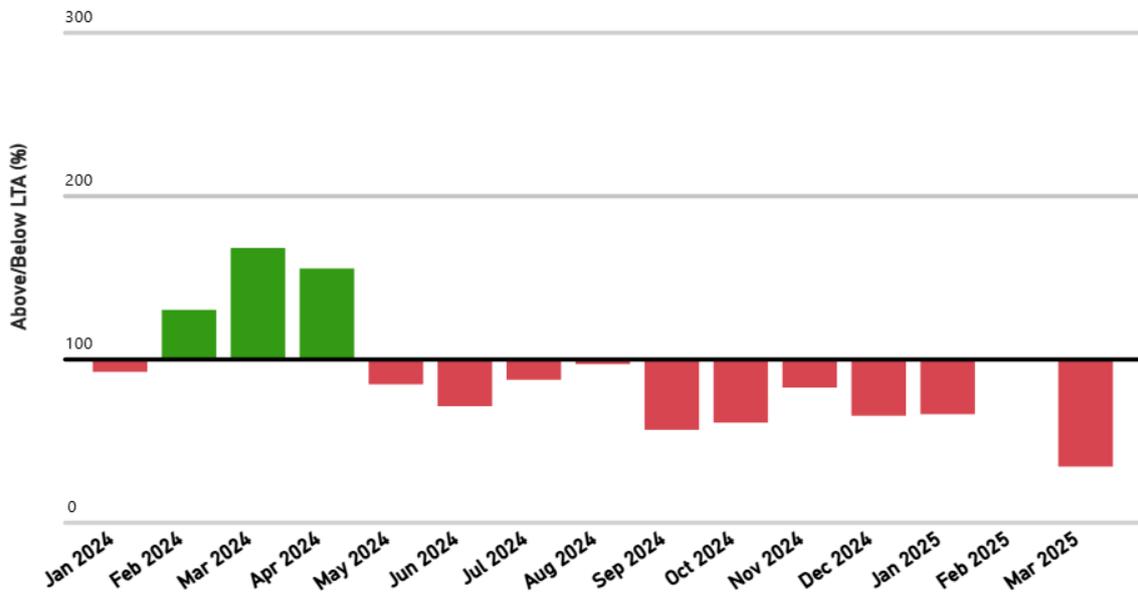


Figure 4 - Monthly Rainfall from Met Éireann's Mullingar Weather Station, as a Percentage (%) of the Long Term Average for Each Month, between January 2024 and March 2025.

## Malin Head

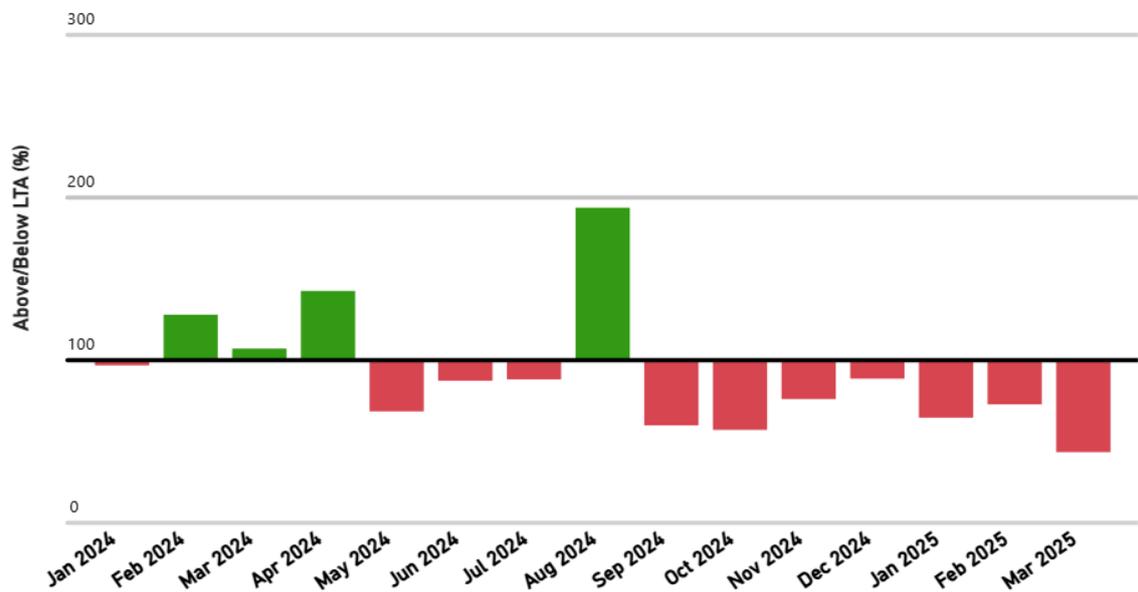


Figure 5 - Monthly Rainfall from Met Éireann's Malin Head Weather Station, as a Percentage (%) of the Long Term Average for Each Month, between January 2024 and March 2025.

## Athenry

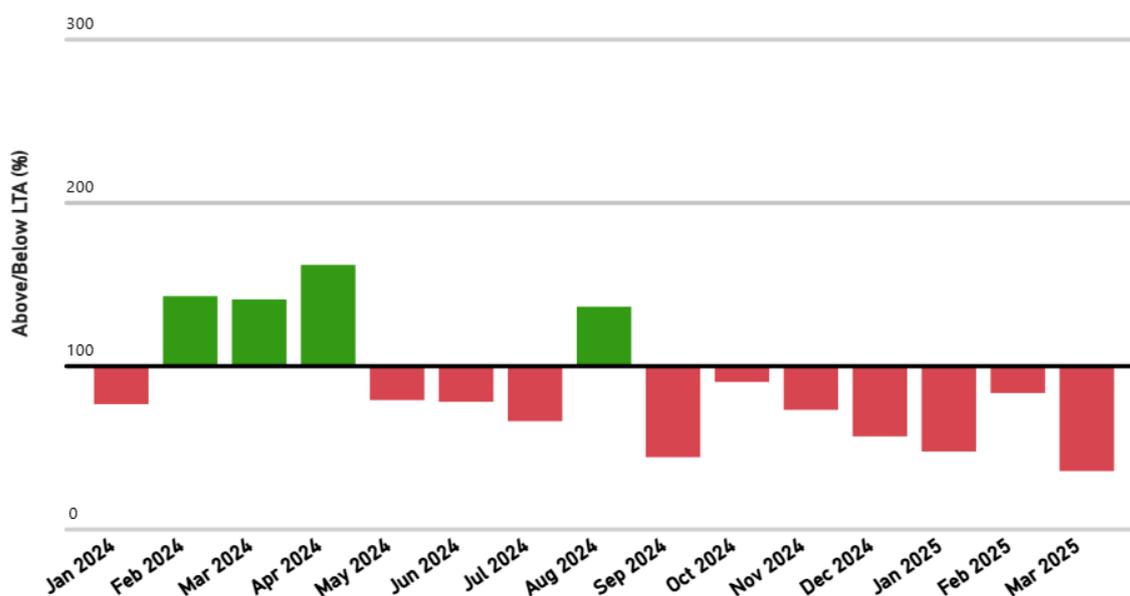


Figure 6 - Monthly Rainfall from Met Éireann's Athenry Weather Station, as a Percentage (%) of the Long Term Average for Each Month, between January 2024 and March 2025.

Based on this data, it can be determined that:

- The majority of Ireland has experienced drier than average conditions since May 2024.
- Some regions have experienced short periods of heavier than normal rainfall due to a series of storms and anomalies.
  - The Northern Regions of Ireland (depicted using Malin Head and Athenry weather stations – Figure 5 and Figure 6 respectively) saw a short increase in rainfall in August 2024.
  - The Eastern Coast (depicted using the Phoenix Park weather station – Figure 3) saw an increase in rainfall in January and February 2025.
  - Both regions have experienced drier than average conditions since.
- All regions across Ireland experienced dry conditions in March 2025, consistent with March 2025 being the warmest on record for Europe, and anomalies experienced across Europe.
- The Midlands (depicted using Met Éireann's Mullingar Station – Figure 4) has been drier than average since May 2024.
- The Southern and South-East Coasts of Ireland (Depicted using Roches Point and Johnstown Castle – Figure 1 and Figure 2 respectively) experienced largely standard seasonal variation of rainfall, albeit with a slightly drier than normal winter period.

With this reduced rainfall, there could potentially be a range of difficulties across our national water supplies, even without an increase in demand. These issues

could include: issues with water availability, difficulty in getting water into treatment facilities, difficulty in treating water due to changes in raw water characteristics leading to potential water quality issues, and insufficient supply to meet increasing demand. It is considered likely that this issue will only be exacerbated once the summer months come around, when demand and supply side pressures are expected to worsen.

## 2.1.2.Drought Indicators

Uisce Éireann has developed [Appendix E Drought](#) Planning under the [National Water Resources Plan Framework Plan](#) (NWRP). Appendix E of this plan outlines drought indicators that Uisce Éireann uses to track current weather conditions in relation to drought. Using these indicators, we identify triggers for action as we enter drought periods and develop potential actions that can be used to maintain water supply (where possible) during these conditions.

Uisce Éireann's indicator uses the Standardized Precipitation Index (SPI) method, advocated by the World Meteorological Organisation. This indicator has been developed for representative sites across the country and is produced monthly by Met Éireann. It compares precipitation to long-term historical precipitation data for the specific period of the year.

SPI is a normalised index representing the probability of occurrence of an observed rainfall amount when compared with data for a long-term reference period, at a given location. Negative SPI values represent a rainfall deficit, moving towards drought, whereas positive SPI values indicate rainfall surplus. The larger the negative SPI values, the more serious the measured event is.

SPI is produced for 1, 3, 6, 9 and 12 month (denoted SPI 1, 3, 6, 9, 12 respectively) accumulations. The Uisce Éireann's Drought Planning Appendix E proposes the following definitions, for drought stages rated to SPI.

- SPI 1 focuses on the short-term precipitation conditions over the past month; it rapidly reflects the immediate dryness that is relevant to soil moisture and irrigation needs. A negative SPI 1 value means that at that location, for the previous month, there has been less rainfall than normal, when compared to the same month when all historical rainfall records are considered. The lower the value (-1, -2, -3) the drier the conditions. A single month of dry weather would only impact some of our sources, such as shallow springs or rivers where levels drop very quickly when there is no rain (predominantly flashy upland catchments).

- SPI 3 considers the past three months of precipitation. It provides a seasonal perspective that is relevant for agricultural planning and short-term water availability. A negative SPI 3 value means that for the previous three months at that location, there has been less rainfall than normal, when compared to the same three months when all historical rainfall records are considered. The lower the value (-1, -2, -3) the drier the conditions. Three months of dry weather would have an impact on the majority of our water sources, including rivers, lakes and some groundwater abstractions.
- SPI 6 analyses the last six months and offers a medium-term view relevant to streamflow and reservoir levels. A negative SPI 6 value means that at that location, for the previous six months, there has been less rainfall than normal when compared to the same six months when all historical rainfall records are considered. The lower the value (-1, -2, -3) the drier the conditions. Six months of dry weather would have an impact on all of our water sources, including rivers, lakes, reservoirs, impoundments and groundwater abstractions. A negative SPI 6 usually occurs when a dry summer follows a dry spring.
- SPI 9 measures precipitation anomalies over a nine-month timescale, which is particularly useful for assessing seasonal to medium-term droughts that may impact agriculture, water resources, and reservoir levels. A negative SPI 9 value indicates drier-than-normal conditions, while a positive value indicates wetter-than-normal conditions.
- SPI 12 analyses the precipitation over the last twelve months, providing a long-term perspective on precipitation patterns and highlights the inability to replenish sources like major water storage and long-term ecological conditions. A negative SPI 12 value means that at that location, for the previous twelve months, there has been less rainfall than normal when compared to the historical record. Continuous negative SPI 12 highlights the inability of water sources to replenish to their required/natural state.

A zero represents a near-normal precipitation rate. Negative scores are categorised as mildly dry (0 to -0.99), moderately dry (-1.0 to -1.49), severely dry (-1.5 to -1.99) and extremely dry (-2.0 to below) with increasing negative values signifying more severe droughts, all in relation to historical precipitation rates in the location they are measured. Conversely, positive scores indicate mildly wet (0 to 0.99), moderately wet (1.0 to 1.49), very wet (1.5 to 1.99), and extremely wet (2.0 and above) precipitation conditions.

### Standardized Precipitation Index Values: March 2025\*\*

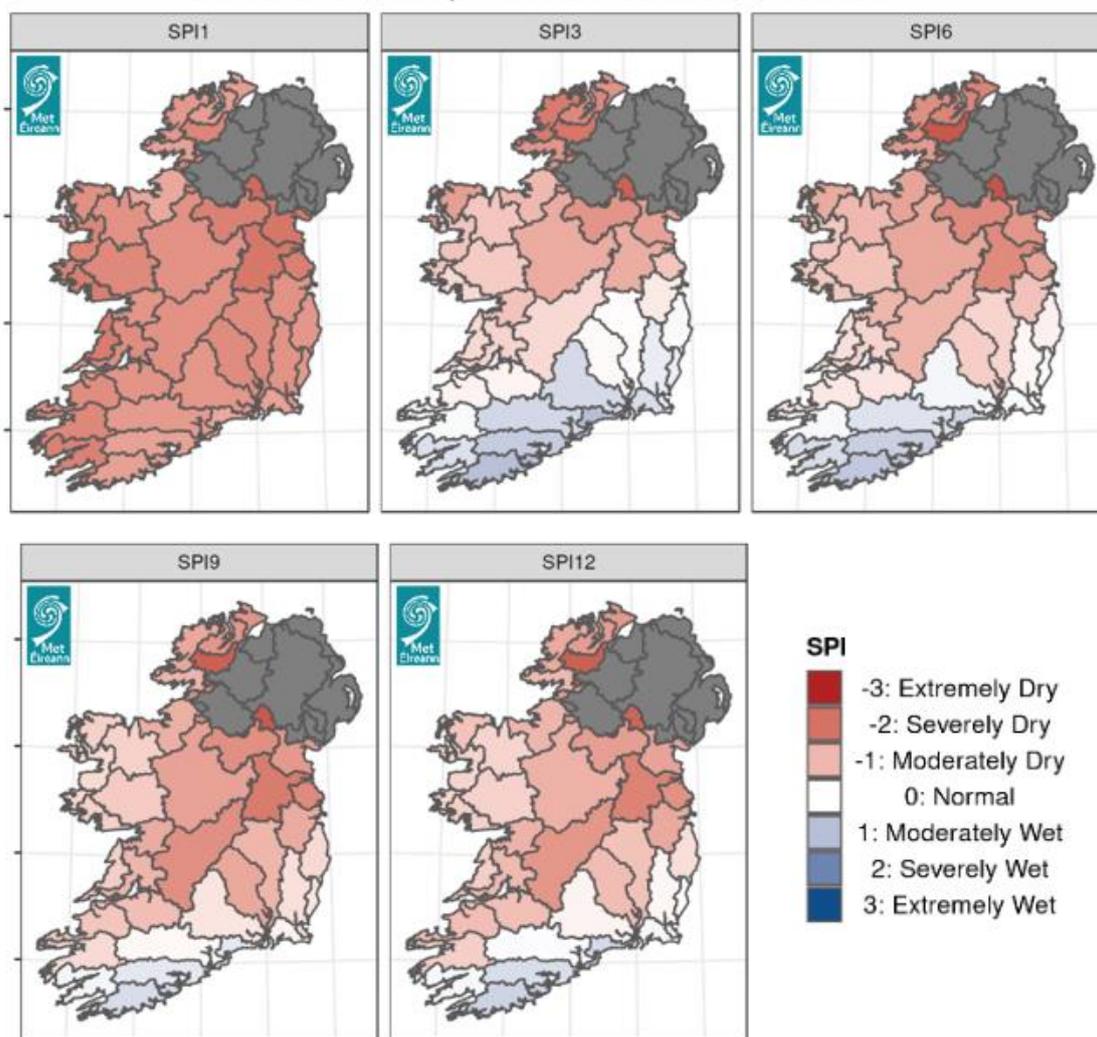


Figure 7 SPI Index Value maps for Ireland as of March 2025

Figure 7 above shows SPI index values maps for Ireland for March 2025 indicating that there are numerous areas with below average rainfall over the last 1, 3, 6, 9 and 12 months in North West, Midlands and Eastern Regions. The SPI 1 map shows 'Severely Dry' values across the country, and 'Extremely Dry' values in several locations.

**Summary: On review of Met Éireann forecasts, and drought indicators up to the end of April 2025, developed as part of Appendix E Drought Planning of the NWRP, evidence of significant continued low rainfall compared to historical norms have been identified in the North West, Midlands and Eastern Regions of the country.**

## 2.2. Supply Side Pressures

Uisce Éireann abstracts raw water from over 1,200 individual water sources, including lakes, rivers, streams, springs and groundwater aquifers. All of these sources are reliant on sufficient rainfall for recharge. In warm weather, water is consumed by plant transpiration (take-up for growth) and evaporation from open surfaces. Our data shows that this combination, along with lack of rainfall and continuous daily abstractions, has significantly depleted Lough Bane, Lough Colmcille, and Lough Owel. Most of our sources, surface water and groundwater sources, are below their normal levels / flows for this time of the year.

### 2.2.1. Surface Water and Groundwater Supplies

Some of Uisce Éireann's surface water and groundwater supplies are currently under pressure due to the lack of rainfall. The data and analysis detailed below provides context to these issues.

Figure 8 to 1010 provide an overview of monthly daily mean River Flows, Lake and Turlough Levels and Groundwater Levels and Spring Flow based on data from EPA/ OPW hydrometric stations as published in [EPA's Hydrology Bulletin March 2025](#).

- Figure 8 provides monthly daily mean river flows for indicator stations expressed as a percentage of the respective long-term average (LTA) and classed relative to an analysis of historic March monthly means. The figure shows that of the 138 monitoring points, 19 river flow gauges are within the 'Normal' LTA, 85 flow gauges are 'Below Normal' and 34 flow gauges are 'Particularly Low'.
- Figure 9 provides overview of Lakes and Turlough Levels across the country in March 2025, as monthly averages relative to historical monthly average levels, expressed as a percentage of the long-term average (LTA). Of the 32 lake levels, 15 were 'Normal', 13 were 'Below Normal' and four were 'Particularly Low.' The four turlough stations were similar, with one 'Normal', one 'Below Normal' and two 'Particularly Low.' All lake and turlough levels were below the LTA.

- Figure 1010 provides an overview of Groundwater Levels and Springs Flow in March 2025, relative to historic monthly groundwater levels. Of the 34 representative borehole sites for groundwater measure, 3 are 'Above Normal,' while 18 are 'Normal' and 13 are 'Below Normal.' There are four spring flows being monitored; one is 'Normal,' one is 'Below Normal,' and two are 'Particularly Low.'

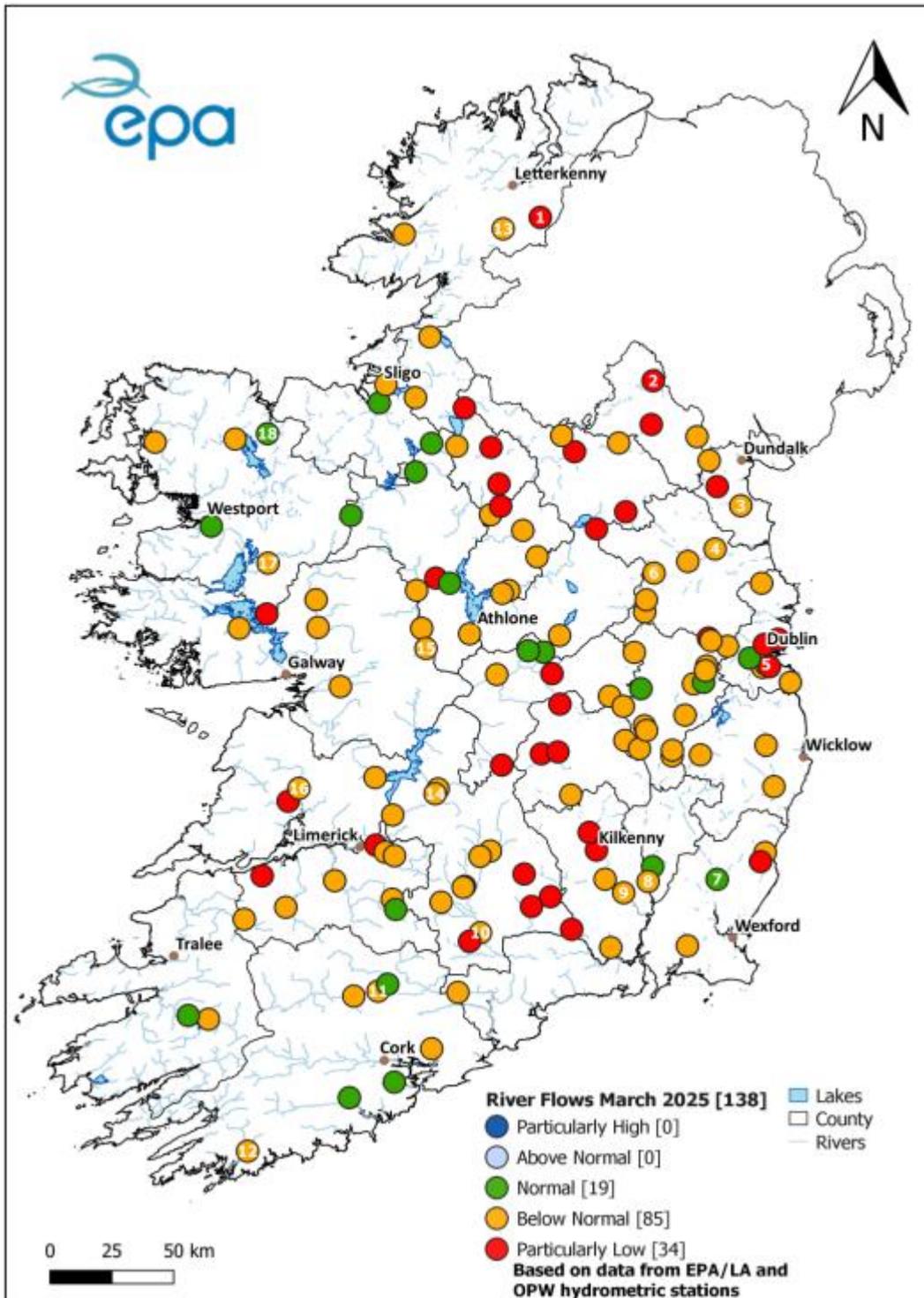


Figure 8 - River Flows as of March 2025

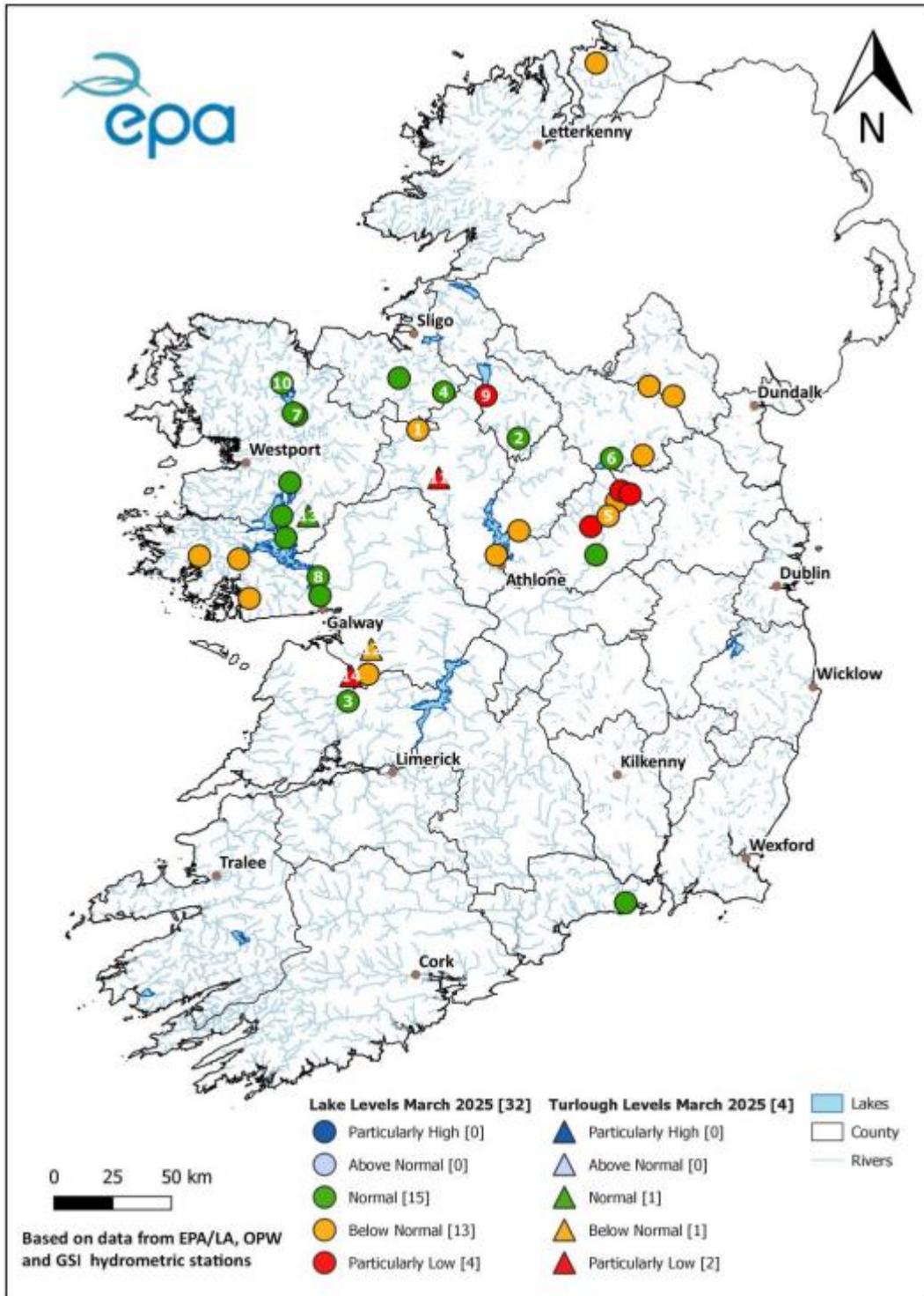


Figure 9 - Lake Levels and Turlough Levels as of March 2025

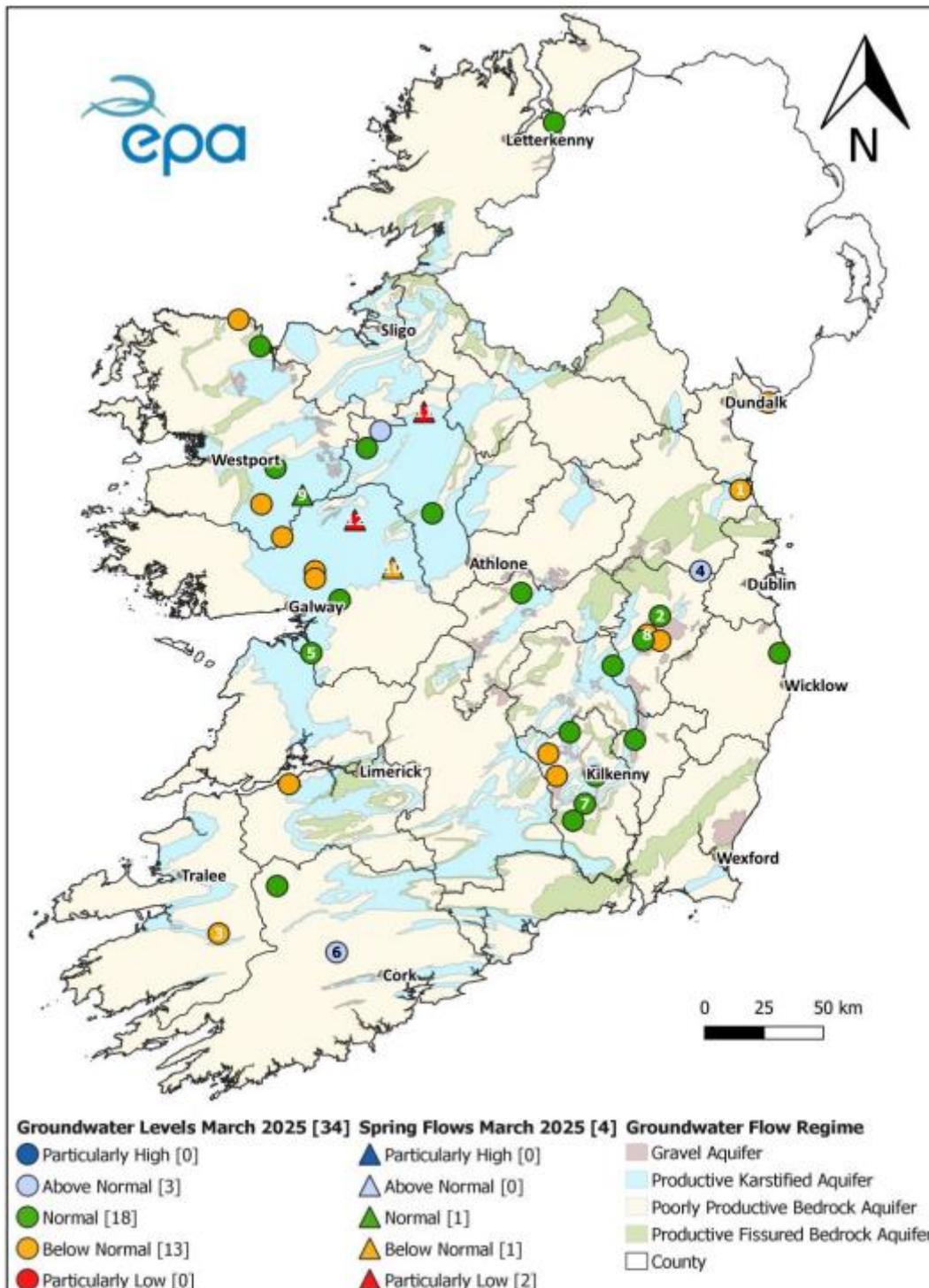


Figure 10 - Groundwater Levels and Spring Flows as of March 2025

In summary, our data shows that the water supplies sources (both surface water and groundwater) are showing early stages of drought which can further deteriorate with the prolonged dry periods over the coming late spring and summer months, due to the following:

- Low precipitation is affecting groundwater and surface water recharge rates.
- For groundwater supplies, as these water sources are slow to recover, effects of the current drought or near drought conditions may impact these sources for longer, potentially up to a 12 month period.
- Many water bodies support multiple pressures (both abstractions & discharges), including those for agricultural and other purposes such that a focus on individual water schemes within particular regions does not address the holistic environment of the waterbody.
- Lower flowrates in rivers and longer residence times in lakes imposes increased environmental stress on water bodies, impacting the assimilative capacity of these water bodies to cope with wastewater and other discharges, with increased risks to the aquatic environment and ecology.

At present Uisce Éireann is tracking operational performance in Kells/Oldcastle, Milford, and Mullingar in the context of drought indicators. As of the 25<sup>th</sup> of April the lake levels at Lough Bane, Lough Colmcille and Lough Owel are at their lowest levels recorded for this time of the year. The lake levels are being continuously monitored by Uisce Éireann's Operations staff.

Given the duration of the dry spell it will take a significant period of time for water levels at our sources to return to normal even if weather patterns return to normal. There is therefore a significant risk to supply if we continue to experience dry weather through the late spring and early summer. Therefore, it is essential that Uisce Éireann takes a prudent approach at present in order to conserve supplies and ensure that we are able to maintain supplies throughout the summer and autumn period.

I am aware that in order for a prohibition order to be made, Uisce Éireann must form the opinion that a serious deficiency of water available for distribution exists or is likely to exist. In my view, and on the basis of my experience and the data detailed in this report, it is clear that these criteria have been met for the Kells/Oldcastle, Milford, and Mullingar supplies.

**Summary: On review of EPA / OPW hydrometric stations as published in EPA's Hydrology Bulletin in March 2025, evidence of low water levels at our surface water and groundwater sources has been identified in the Northwest and East of the country. Given the prolonged nature of the dry spell, significant rainfall will be required for our raw water sources to recover. These factors indicate a serious deficiency of raw water availability which has impacted water supplies in the area and is likely to further impact the areas going forward.**

## 2.3. Kells/Oldcastle Regional Water Supply (Lough Bane)

### 2.3.1. Background

The Kells-Oldcastle Regional Water Supply is supplied from two water treatment plants, Clavin's Bridge Water Treatment Plant (which sources its water from the River Blackwater) and Lough Bane Water Treatment Plan (which sources its water from Lough Bane). The Kells-Oldcastle Regional Water Supply supplies water to nearby locations such as Kells, Oldcastle, Crossakeel, Carlanstown with a population of approximately 12,000 people.

Lough Bane is situated on the Meath-Westmeath border within the Boyne catchment, approximately 10km south of Oldcastle, Co. Meath. It is a complex groundwater fed lake, and flows out to the River Deel (Boyne). Additionally, it is one of three lakes, along with Lough Glass and Lough Glass North, to make up the Lough Bane and Lough Glass Special Area of Conservation. This system of lakes is situated in a shallow valley that occurs at the headwaters of the River Deel, with the main outflow at the south-east end of Lough Bane.

### 2.3.2. Lough Bane Lake Levels Analysis

Figure 11 below shows a comparison of daily average lake levels during 2024 and 2025, within known percentile ranges for all available years of data (explained in Table 2 below), since 2016.

Table 2. Lake level percentile bands.

Percentile Level	Explanation
Above Normal	30%tile < Daily Average Level < 10%tile
Normal	70%tile < Daily Average Level < 30%tile
Below Normal	95%tile < Daily Average Level < 70%tile
Particularly Low	Daily Average Level < 95%tile

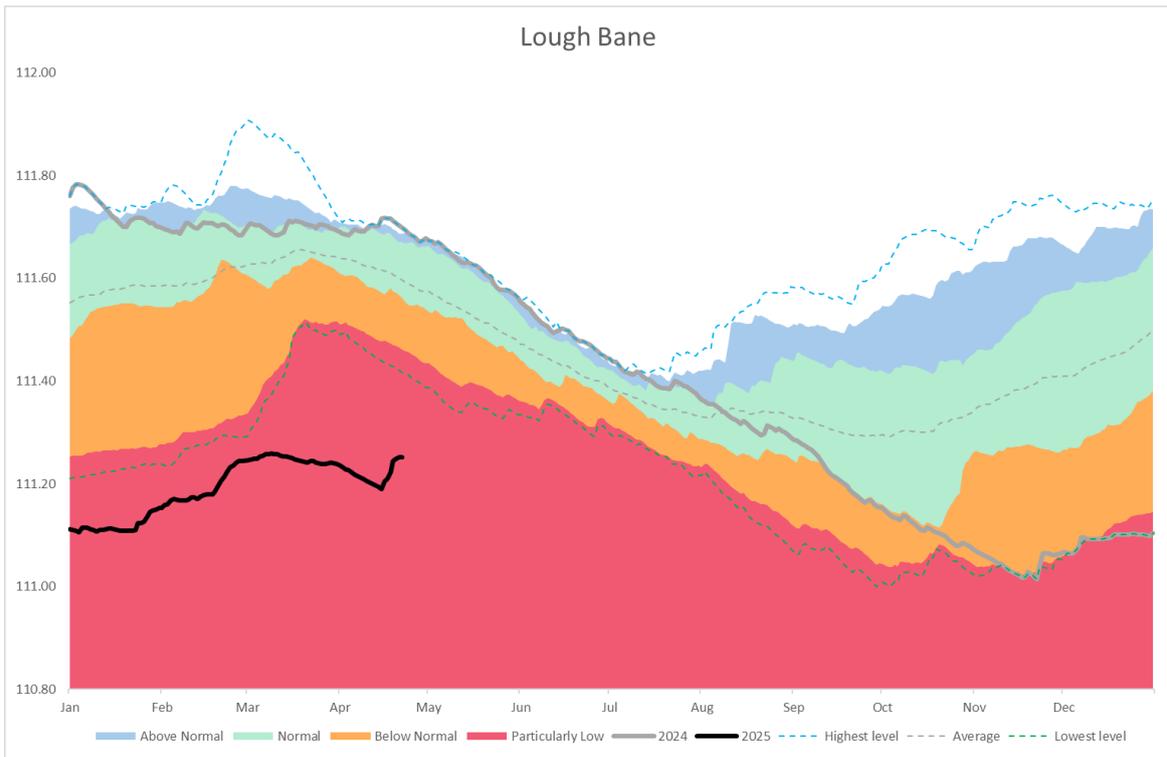


Figure 11 Lake levels (mOD) at Lough Bane during 2024 and 2025 compared to level percentiles for all available data (since 2016).

Figure 11 demonstrates that 2025 lake levels at Lough Bane are lower than previously recorded at this time of year and it is expected based on the typical trend for this time of year that water levels will now start to decrease for the summer period.

This is caused by the lack of rainfall in the area since May 2024 as shown in Figure 4 - Monthly Rainfall for Met Éireann's Mullingar Weather Station, Section 2.1.1 Met Eireann Data.

As Lough Bane is primarily fed through rainfall and groundwater, it takes a longer time to replenish itself, and is very sensitive to repeated drawdowns.

Thus, Lough Bane needs both additional rainfall and a reduction in water demand in order for lake levels to recover.

### 2.3.3. Actions Taken by Uisce Éireann to address Supply Demand Balance in Kells/Oldcastle

Uisce Éireann is closely monitoring the demand and Lough Bane lake levels and has taken a number of steps to reduce demand and supplement Lough Bane from nearby supplies to allow for lake levels to recharge:

- Monitoring of lake levels at Lough Bane on daily basis.

#### Press Releases

- 25<sup>th</sup> April 2025 – Uisce Éireann is appealing to customers supplied by the Kells/Oldcastle Water Supply to conserve water to protect the supply.

#### Website and Social Media Campaigns

- All press releases relating to conservation campaigns at Kells/Oldcastle were published on water.ie on same date as issued to media

**Summary: There is evidence of decreased raw water availability from Lough Bane due to lack of rainfall over the past months in the area and there is a high risk that there will be a serious deficiency of water available for distribution if left unchecked. The effectiveness of the previous Water Conservation Orders introduced by Uisce Éireann in 2018, 2020 and 2022 in reducing demand and securing water supplies has been shown. It is now of extreme importance to take steps to suppress water demand for non-essential purposes across the Kells/Oldcastle area to allow water levels in Lough Bane recover and to ensure we can maintain supplies throughout late spring, summer and autumn.**

## 2.4. Milford Regional Water Supply (Lough Colmcille)

### 2.4.1. Background

Milford is a town and townland in County Donegal, located approximately 15km north of Letterkenny which obtains its supply from Milford Water Treatment Plant. Milford Water Treatment Plant also supplies water to nearby locations such as Carrowkeel, and Ramelton, providing for approximately 6,000 customers. Lough Colmcille is the source for Milford Water Treatment Plant. Lough Colmcille is a natural rain-fed lake, located in a mountain hollow approximately 1.5km east of Milford town.

### 2.4.2. Lough Colmcille Lake Levels Analysis

In order to get a better understanding of the situation at Lough Colmcille, a hydrological analysis was conducted. Figure 12 below shows a comparison of daily average lake levels during 2024 and 2025, within known percentile ranges for all available years of data (explained in Table 3 below), since 2008.

Table 3. Lake level percentile bands.

Percentile Level	Explanation
Above Normal	30%tile < Daily Average Level < 10%tile
Normal	70%tile < Daily Average Level < 30%tile
Below Normal	95%tile < Daily Average Level < 70%tile
Particularly Low	Daily Average Level < 95%tile

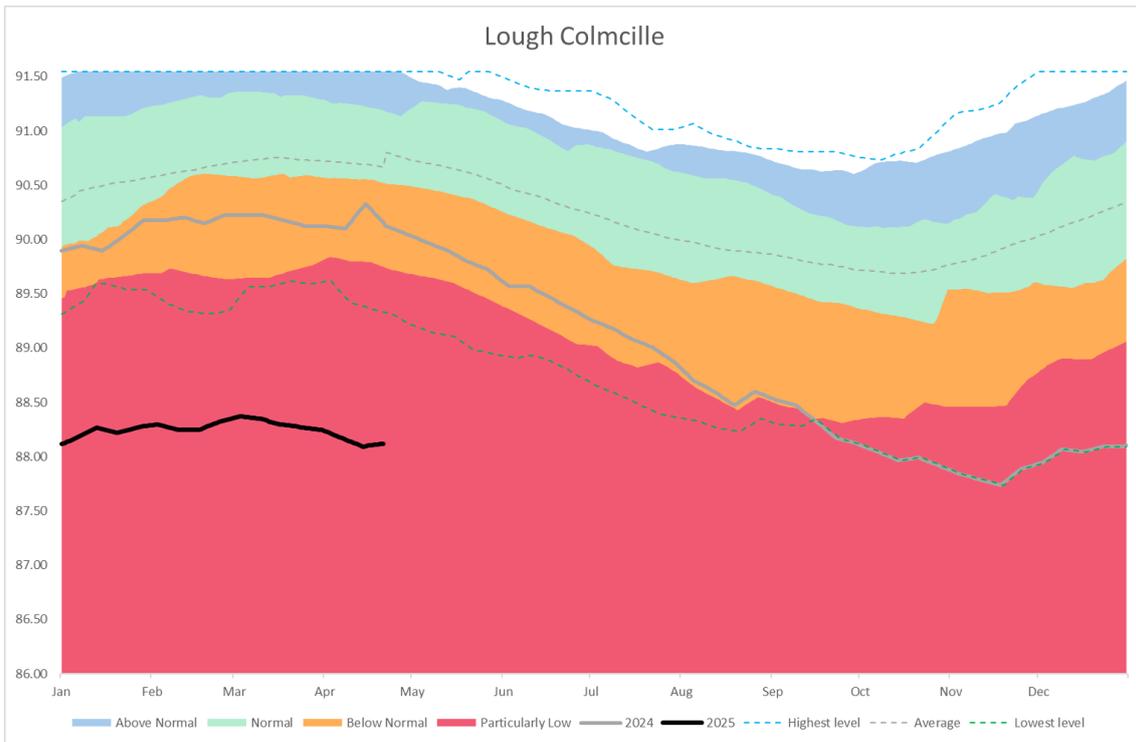


Figure 12. Lake levels (mOD) at Lough Colmcille during 2024 and 2025 compared to level percentiles for all available data (since 2008).

Figure 12 demonstrates that 2025 lake levels at Lough Colmcille are lower than previously recorded at this time of year. Furthermore, based on typical trends for this time of year, it is expected that water levels will now start to decrease further for the summer period.

The lake level decreases are likely caused by the lack of rainfall in the area over previous months, combined with an increase in demand from Milford Water Treatment Plant (also see 2.4.3. Actions Taken by Uisce Éireann to address Supply Demand Balance in Milford). This leads to a knock-on effect, where significant drawdown from 2024 has led to even lower lake levels in 2025. Lough Colmcille is a rain-fed source, it takes a longer time to replenish itself and is very sensitive to repeated drawdowns, it has a relatively small catchment and therefore it will take a significant amount of rainfall for levels to return to the normal percentile range. In short, Lough Colmcille needs both additional rainfall and a reduction in water demand in order for levels to recover.

### 2.4.3. Actions Taken by Uisce Éireann to address Supply Demand Balance in Milford

There has been a noticeable increase in water demand in Milford over the past couple of years as a result of growth in the area. Uisce Éireann is progressing a number of projects to increase supply to Milford and the greater Letterkenny area, however these projects will take a number of years to deliver.

Uisce Éireann is closely monitoring the water demand and Lough Colmcille lake levels and has taken a number of steps to reduce demand and supplement Milford from nearby supplies to allow for the lake levels to replenish:

- Monitoring of lake levels at Lough Colmcille on a daily basis.
- Active leakage reductions and finding and fixing critical leaks in the water network.
- Augmenting Milford Water Treatment Plant supply from nearby Water Treatment Plants to reduce abstraction from Lough Colmcille to allow for the lake to replenish.

#### Press Releases

- 2<sup>nd</sup> October 2024, A notice to customers in the Ramelton and Milford areas to conserve water.
- 15<sup>th</sup> November, 2024: Uisce Éireann appeals to customers in Ramelton and Milford to conserve water
- 1<sup>st</sup> April, 2025: Uisce Éireann appeals to customers in Ramelton and Milford to conserve water
- 10<sup>th</sup> April 2025, Uisce Éireann appeals to customers in Ramelton, Milford, and Kerrykeel to conserve water
- 16<sup>th</sup> April 2025, An appeal to customers in Ramelton, Milford, and Kerrykeel to conserve water over Easter
- 25<sup>th</sup> April 2025 – Uisce Éireann is appealing to customers supplied by the Ramelton, Milford, and Kerrykeel Water Supply to conserve water to protect the supply.

#### Media Interviews

- 15<sup>th</sup> November 2024, Uisce Eireann urges people to conserve water in Ramelton and Milford
- 11<sup>th</sup> April 2025, Highland Radio: Water restrictions may be necessary in Ramelton, Milford and Kerrykeel – Uisce Eireann

## Website and Social Media Campaigns

- All press releases relating to conservation at Ramleton/Milford/Kerrykeel were published on water.ie on same date as issued to media.

## Elected Representatives

- All press releases relating to water conservation appeals for customers served by Lough Colmcille were circulated to Donegal's Oireachtas members and councillors in the Letterkenny-Milford MD via the Local Representative Support Desk.

Despite Uisce Éireann's operational actions and communications campaigns, raw water availability at Lough Colmcille is decreasing with the lack of rainfall. Uisce Éireann must take all reasonable steps to ensure that we can conserve water to reduce risks to the public water supply and ensure that we can limit any potential impact on the environment.

**Summary: There is evidence of decreased raw water availability from Lough Colmcille due to lack of rainfall over the past months in the area. An extensive media campaign has been ongoing since October 2024, when the communication to conserve water was issued. The effectiveness of the previous Water Conservation Orders in 2018, 2020 and 2022 in reducing demand and securing water supplies has been shown. It is now of extreme importance to take steps to suppress water demand for non-essential purposes across Milford and protect this supply to allow water levels in Lough Colmcille recover and to ensure we can maintain supplies throughout late spring, summer and autumn time.**

## 2.5. Mullingar Regional Water Supply (Lough Owel)

### 2.5.1. Background

Mullingar is the county town of County Westmeath, located in the Midlands Region, and is the home of Portloman Water Treatment Plant. Aside from Mullingar town, Portloman Water Treatment Plant also supplies water to Ballynacarrigy, Moyvore, Ballymore, Moate, Rathowen, Streete, Rathconrath, Killucan, Coralstown, Kinnegad, Milltownpass, Tyrrellspass, Kilbeggan, Ballinagore, Gaybrook, Horseleap. Approximately 50,000 customers are being supplied by Mullingar Regional Water Supply.

Mullingar Regional Water Supply is supplied from Lough Owel, situated at the top of the River Brosna catchment which is part of the River Shannon. It is a rain and groundwater fed lake with a small catchment and a complex hydrology. This source is designated as Special Area of Conservation, meaning that consideration must be given to the conservation objectives which are under threat from abstraction.

Lough Owel is also the main source of supply for the Royal Canal. The Royal Canal was historically developed as navigation routes in the 19th century connecting the River Shannon to Dublin. Today the Royal Canal has been restored and developed as a public amenity and is of great significance to tourism and recreation in the Eastern and Midlands Region, as well as serving as wildlife corridors. The Royal Canal was originally designed with Lough Owel as its primary source of water, and its location and level are critical to its operation and viability.

### 2.5.2. Lough Owel Lake Levels Analysis

Figure 13 below shows a comparison of daily average lake levels during 2024 and 2025, within known percentile ranges for all available years of data (explained in Table 4 below), since 1979.

Table 4. Lake level percentile bands.

Percentile Level	Explanation
Above Normal	30%tile < Daily Average Level < 10%tile
Normal	70%tile < Daily Average Level < 30%tile
Below Normal	95%tile < Daily Average Level < 70%tile
Particularly Low	Daily Average Level < 95%tile

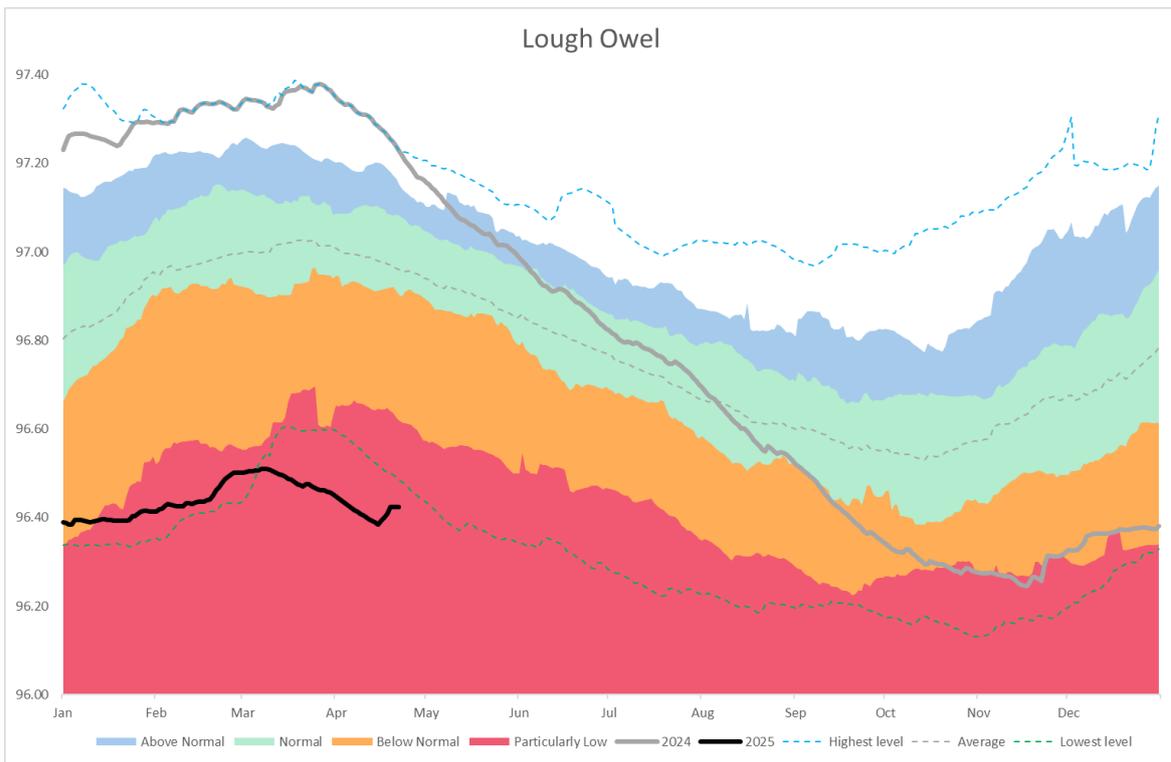


Figure 13 - Lake levels (mOD) at Lough Owel during 2024 and 2025 compared to level percentiles for all available data (since 1979).

Figure 13 demonstrates that 2025 levels at Lough Owel are lower than previously recorded at this time of year and it is expected, based on the typical trend for this time of year, that water levels will now start to decrease for the summer period.

This is caused by the lack of rainfall in the area over previous months, especially since May 2024 as previously shown in Figure 4 - Monthly Rainfall for Met Éireann's Mullingar Weather Station, Section 2.1.1 Met Eireann Data. As Lough Owel is a rain and groundwater fed source, it takes a longer time to replenish, and is very sensitive to repeated drawdowns. This leads to a knock-on effect, where significant drawdown from 2024 leads into even lower lake levels in 2025.

Thus, Lough Owel needs both additional rainfall and a reduction in water demand in order for levels to recover.

### **2.5.3. Actions Taken by Uisce Éireann to address Supply Demand Balance in Mullingar**

Uisce Éireann is closely monitoring the demand in Mullingar and Lough Owel lake levels and has taken a number of steps to reduce demand to allow for Lough Owel to replenish:

- Monitoring of lake levels at Lough Owel on daily basis.
- Active leakage reductions and finding and fixing critical leaks in the water network.
- Working closely with Waterways Ireland to reduce demand from Lough Owel for navigation in the Royal Canal.

#### **Press Releases**

- 12<sup>th</sup> November 2024, People asked to conserve water as Lough Owel water levels drop
- 15<sup>th</sup> April 2025, Uisce Éireann is appealing to customers in Mullingar and surrounding areas to conserve water to help safeguard supply
- 25<sup>th</sup> April 2025 – Uisce Éireann is appealing to customers supplied by the Mullingar Water Supply to conserve water to protect the supply.

#### **Media Interviews**

- 15<sup>th</sup> April 2025, Midlands 103 radio, Uisce Eireann Customers Urge To Conserve Water In Midlands Town

#### **Website and Social Media Campaigns**

- All press releases relating to conservation at Mullingar were published on water.ie on same date as issued to media

#### **Elected Representatives:**

- All press releases relating to water conservation appeals for customers served by Lough Owel were circulated to all Westmeath Oireachtas members and councillors via the Local Representative Support Desk. Proactive outreach was undertaken to Oireachtas Members and Westmeath County Council Cathaoirleach.

Despite Uisce Éireann's operational actions and communications campaigns, raw water availability at Lough Owel is decreasing with the lack of rainfall. Uisce Éireann must take all reasonable steps to ensure that we can conserve water to reduce risks to the public water supply and ensure that we can limit any potential impact on the environment.

**Summary: There is evidence of decreased raw water availability from Lough Owel due to lack of rainfall over the past months in the area. An extensive media campaign has been ongoing since November 2024, when the first water conservation notice was issued. The effectiveness of the previous Water Conservation Orders in 2018, 2020 and 2022 in reducing demand and securing water supplies has been shown. It is now of extreme importance to take steps to suppress water demand for non-essential purposes across Mullingar and protect this supply to allow water levels in Lough Owel recover and to ensure we can maintain supplies throughout lake spring, summer and autumn time.**

### 3. Outlook for the Month Ahead

The latest Met Éireann 4-week outlook for Ireland (issued 18<sup>th</sup> April) notes that above average temperatures and lower than average rainfall conditions are predicted for Week 1 (21<sup>st</sup> – 28<sup>th</sup> Apr) and Week 2 (28<sup>th</sup> Apr – 5<sup>th</sup> May). There is a less clear signal for Week 3 (5<sup>th</sup> – 12<sup>th</sup> May) but temperatures are likely to continue to be above average and rainfall likely be nearer or above average. Week 4 (12<sup>th</sup> – 19<sup>th</sup> May) is indicated to be more unsettled with above average rainfall predicted but temperatures likely to stay above average.

Due to the severely dry winter and early spring we have experienced across large parts of the country, several water supply sources have not refilled/ recharged as they would normally during the typical wet period. Based on this, lake sources such as Lough Bane, Colmcille, and Owel, are likely to enter the drier summer period with levels starting significantly lower than normal for this time of year.

Based on the latest Met Éireann monthly outlook, rainfall conditions could return to normal and even above normal in the weeks ahead during the late spring. However, it is not likely that this predicted rainfall amount would be sufficient to put these lake sources in a notably better position as we move into the early summer period when they would historically experience an increased drop in levels from drier/warmer weather.

**Summary: The weather and climatic outlook would suggest that rainfall conditions could return to normal and even above normal in the weeks ahead during the late spring. However, it is not likely that this predicted rainfall amount would be sufficient to put these lake sources in a notably better position as we move into the early summer period when they would historically experience an increased drop in levels from drier/warmer weather.**

## 4. Additional Actions Required

In an effort to prevent or contain the extent of outages over the next weeks and months, Uisce Éireann proposes to exercise its powers under Section 56(16) of the Water Supply Act 2007 (as amended), to make an order prohibiting certain water usage to cover the affected areas of Kells / Oldcastle (County Meath), Milford (County Donegal), and Mullingar (County Westmeath). The aim of such an order is to suppress demand – thus saving water – through the prohibition of certain non-essential activities for a specified period. It is proposed that the Order made under section 56(16) should provide for the prohibition of the following uses of water:

Use of water drawn through a hosepipe or similar apparatus for the purpose of:

- I. watering a garden
- II. cleaning a private motor-vehicle using a domestic hosepipe
- III. cleaning a private leisure boat
- IV. filling or maintaining a domestic swimming or paddling pool (except when using hand held containers filled directly from a tap)
- V. filling or maintaining a domestic pond (excluding fish ponds)
- VI. filling or maintaining an ornamental fountain (with the exception of such use for commercial purposes)
- VII. filling or replenishing an artificial pond, lake or similar application.

These are identical to the prohibitions that were introduced in 2018, 2020 and 2022. In 2018, 2020 and 2022 such prohibitions, along with further water restrictions, were shown to moderate water demand from a peak of 15% above normal levels back to normal levels. The specific use prohibitions involve the prohibition of certain non-essential customer use and will help to ensure that all customers receive continuity of water supply over this difficult period, as far as possible.

These measures apply to both domestic and non-domestic users equally and are a more equitable and controlled way of suppressing demand compared to wide scale outages that tend to disproportionately impact certain areas of the network, or vulnerable users who have difficulty sourcing water.

It is my opinion that the proposed Order should be effective from the date it is made initially for a period of six weeks. The six week duration is reflective of the current condition of the sources, where the lake levels at Lough Bane, Lough Colmcille, and Lough Owel are at the lower extremes of historical conditions for this time of year, and the weather outlook which is to remain settled or dry for the

next two weeks. Even after this period if there is a return to average rainfall conditions, it will take a considerable period for some sources to replenish. On that basis it may be necessary to extend the duration of the proposed Order (or extend the scope of the proposed Order to additional parts of the country).

In order to enforce these powers, as per section 56(17) of the Water Services Act 2007 (as amended), Uisce Éireann must give public notice of its intention to make an order, and specify the period for which the order will remain in force, by publishing an advertisement in a newspaper and causing notification of the proposed Order to be broadcast on radio or television. Section 56(16) does not specify any notice period. Having regard to this, a reasonable notice period will be given. The notice period will give consideration to the extent and/or likelihood of the drought problem, the restriction of non-essential activities, and the fact that unless this action is taken and demand is not reduced, it is inevitable that there will continue to be a likelihood of serious deficiencies of water available for distribution, and potential widespread supply failure and large outages.

Continuous monitoring of the situation will be undertaken by Uisce Éireann, to ensure the specific use prohibitions order is only enforced for as long as is necessary.

## 5. Conclusion and Recommendation

At present (25<sup>th</sup> April 2025) the European Drought Observatory classifies the entire Irish territory as under early warning of agricultural drought, with over 95% of the country already at the second of their three drought classes: “Warning”. This classification is likely linked to the significantly below average rainfall recorded in the country through Autumn and Winter 2024/2025, especially in the North-West, East and Midlands. The situation has worsened in early-spring 2025 with below average rainfall recorded across the country in the month of March, putting raw water supplies under significant stress.

Three of these sources in particular have reached a critical stage, namely: Lough Bane (Kells/Oldcastle supply, Co Meath), Lough Colmille (Milford supply, Co Donegal), and Lough Owel (Mullingar supply, Co Westmeath). There is a high risk such that there is likely to be a serious deficiency of water available for distribution water at these locations if left unchecked.

Met Éireann forecasts no significant rainfall over the next five days, across the country. Existing water sources are already under severe pressure with water levels continuing to fall. Uisce Éireann has carried out practical measures to reduce demand for water at these sites. Also, a large media campaign on water conservation is ongoing, in an effort to reduce demand voluntarily. However, the situation remains serious, and Uisce Éireann must take all reasonable steps to ensure that we can conserve water to reduce risks to the public water supply.

Given that;

- water levels at Lough Bane, Lough Colmille and Lough Owel are lower than previously recorded at this time of year and it is expected, based on the typical trend for this time of year, that water levels will now start to decrease for the summer period.
- it is considered that significant levels of rainfall over a prolonged period of time are required for these sources to recover,
- and, there is indication that an average amount of rain is forecast in the coming 4 weeks.

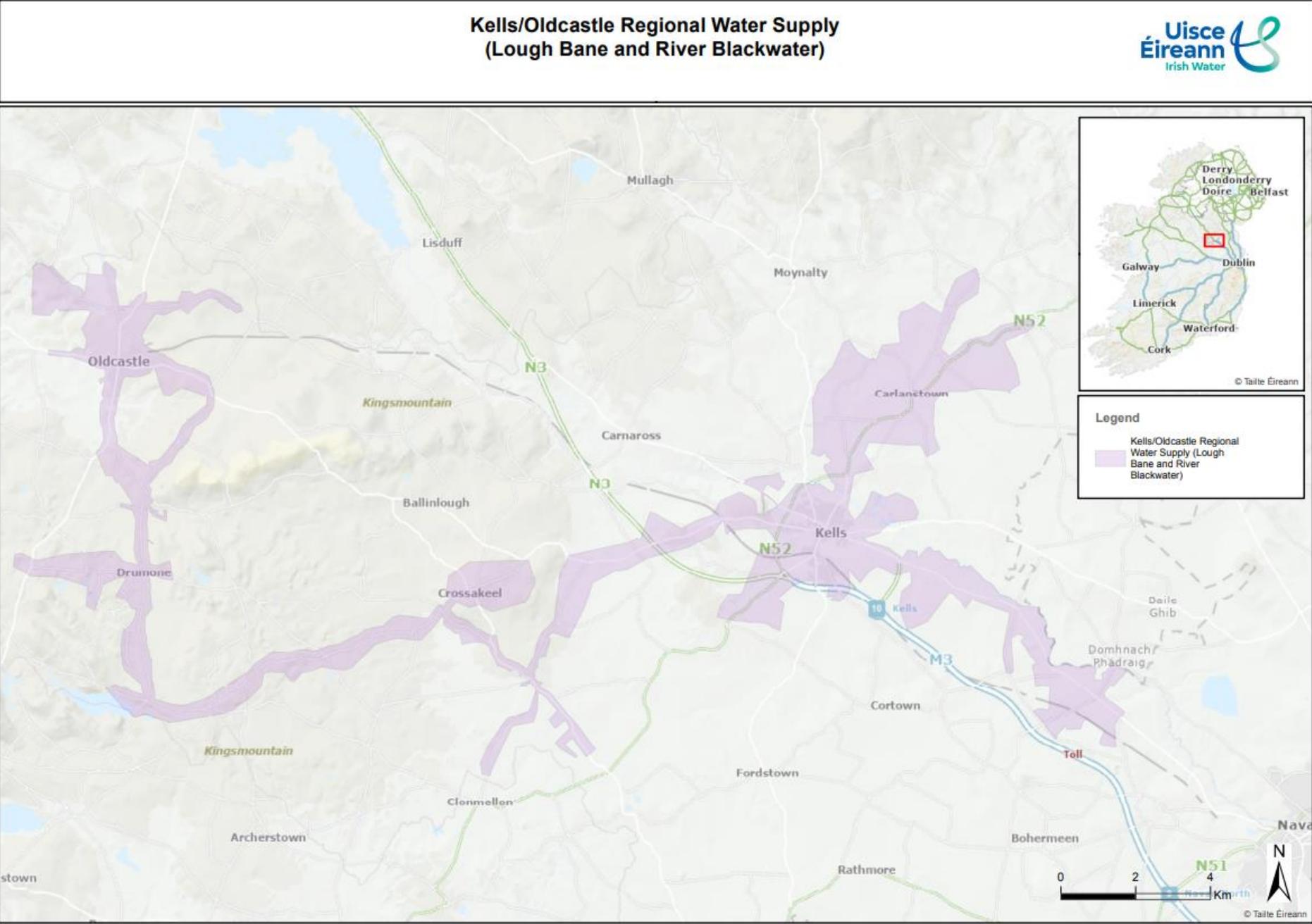
it is essential that a usage prohibition order is introduced now in Kells/Oldcastle supply, Co Meath; Milford supply, Co Donegal; and Mullingar supply, Co Westmeath to ensure that we can mitigate against the ongoing risk of failure in the public water supply later in the year.

It is proposed that the prohibition order should run for a period of six weeks from the date it is made so as to seek to allow raw water sources to recover. If it is possible to lift the proposed order (or lift the proposed order in certain areas of the Country) before the specified period expires, having regard to prevailing weather conditions, availability of water resources and reduction in demand, this will be done. Equally, it may be necessary to extend the specified period for the entire Country (or for specific areas of the Country) for a further period and/or to other water uses, should the prevailing conditions continue.

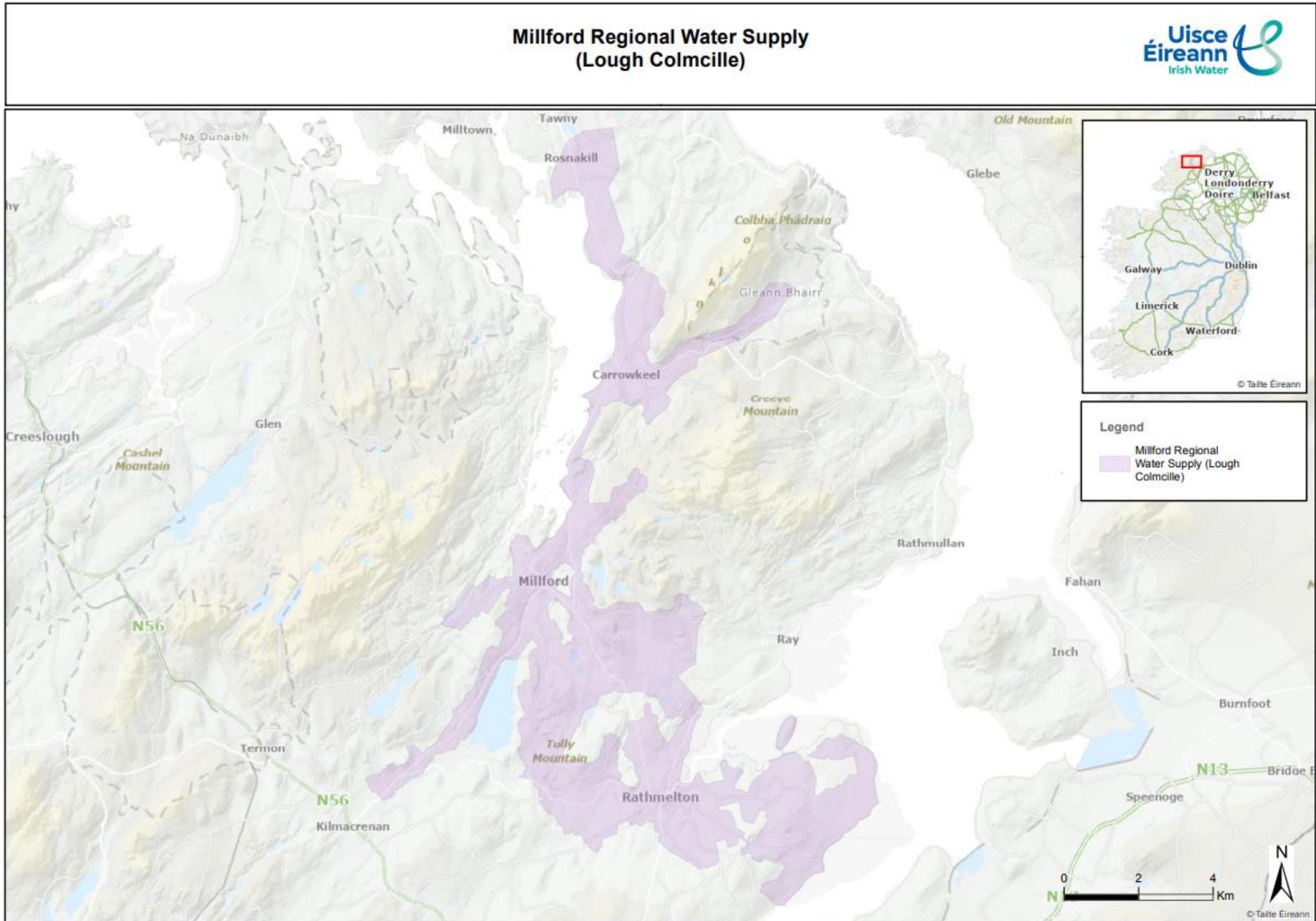
#### Recommendations:

- Seek board approval to immediately use powers under section 56(16) of the Water Services Act 2007 (as amended) to introduce  
An order to prohibit certain water usage in the Kells/Oldcastle (Co Meath, Milford (Co Donegal), and Mullingar (Co Westmeath) areas, for a six-week period as from when the order is made. The non-essential high water use activities to be the subject matter of the order are as specified in section 5 above.
- To develop and advertise all necessary advertisements and notifications under section 56(17).
- To stipulate that these prohibitions be maintained for a period of 6 weeks as from the date of the order and that it is a criminal offence under section 56(18) not to comply with an order served pursuant to section 56(16).
- To apply these prohibitions in the Kells/Oldcastle (Co Meath), Milford (Co Donegal), and Mullingar (Co Westmeath) areas.

# Appendix 1 – Kells/Oldcastle Regional Supply Map



# Appendix 2 – Milford Regional Supply Map



# Appendix 3 – Mullingar Regional Supply Map

