



An Roinn Tithíochta,  
Pleanála agus Rialtais Áitiúil  
Department of Housing,  
Planning and Local Government



# Severe Weather Events Response and Crisis Management

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Water Services Training Group

*'Delivering Water Services in an ever-changing Environment'*

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- Set the Scene
  - Irish Waters Approach to Incident Management
  - Irish Water Incident Management in Action
    - *Severe Weather – Storms & Snow*
    - *Severe Weather – Drought*
  - Next Steps

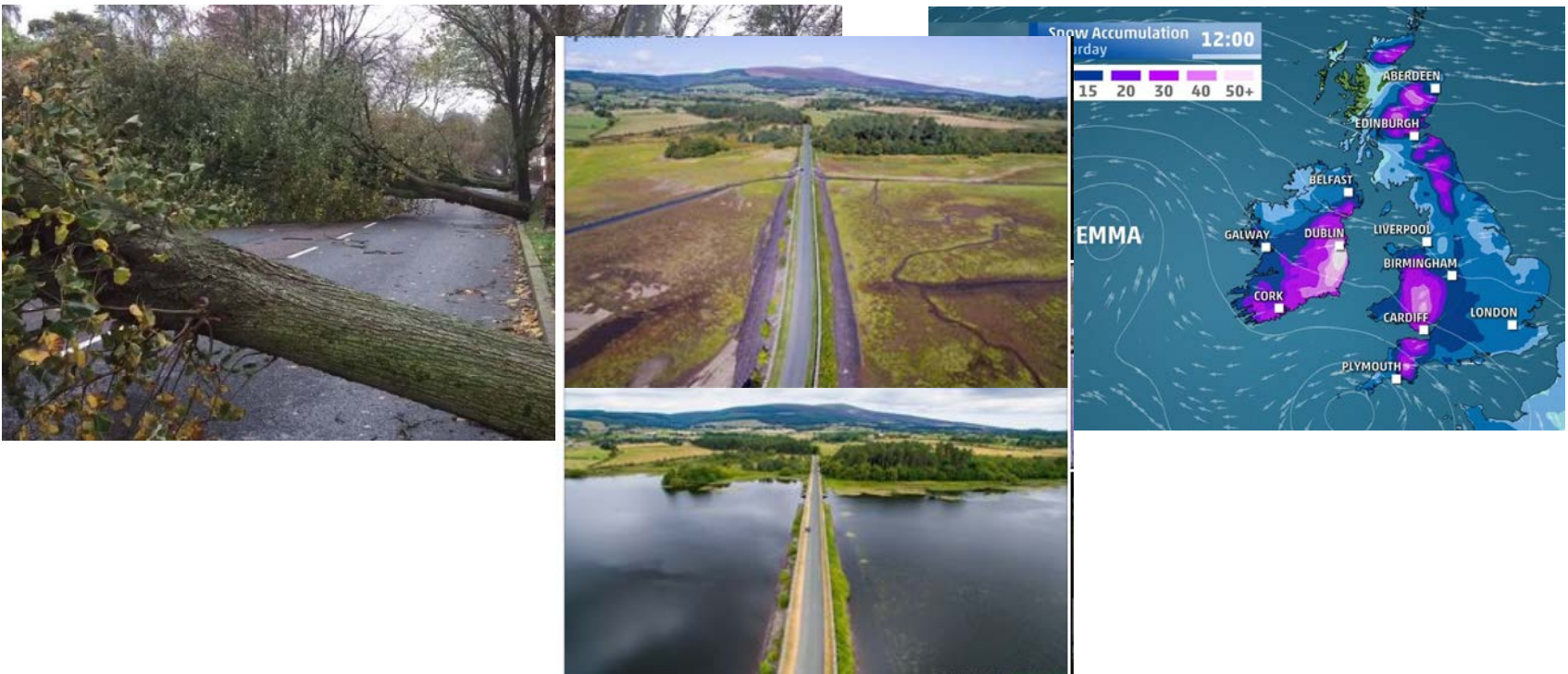
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# Set the Scene

# Set the Scene

## Climate Change

.....are weather patterns changing?



**It is Clear.....Something is changing**

# Set the Scene

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What does this mean for the Water Industry?

Its about:

**Planning**

**Agility**

**Responsiveness**

**PREPAREDNESS**

**Are there Knock On Consequences?**

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## Irish Waters Approach to 'Incident' Management

# Incident Management

- In place for January'14.
- Governance Process
- Developed in conjunction with a Suite of Procedures.
- First 'tested' in Storm Darwin
- Post Event Review
- Annually Tested
- Major review planned Q4'18.

|   |               |   |
|---|---------------|---|
| Irish Water Incident Management Framework | Revision: 1.0 | Approved by: Neil Lenehan<br>Effective Date: 23/12/2016 |
| H3QE-80P-024-FRW-01                       |               | INCIDENT MANAGEMENT FRAMEWORK                           |

Irish Water |

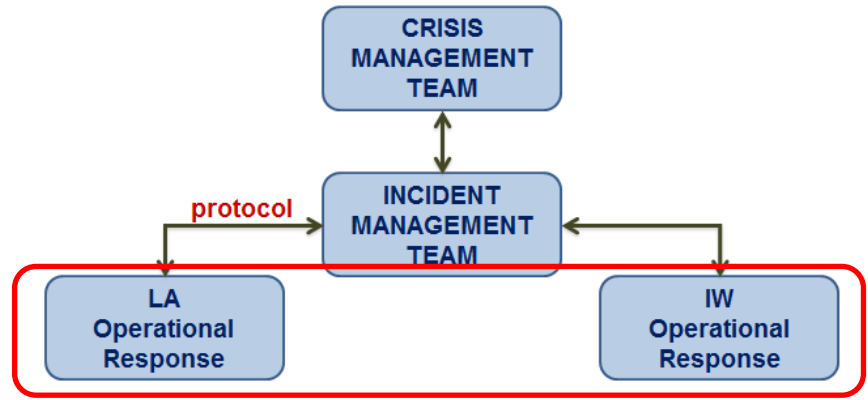
## INCIDENT MANAGEMENT FRAMEWORK

**Revision History**

| Revision Number | Description of Change | Author(s)                        | Approved by         | Date of approval |
|-----------------|-----------------------|----------------------------------|---------------------|------------------|
| 1.0             | [Initial Draft]       | [Avril Dunne]                    | [Andrew Cartwright] | 06/11/2016       |
|                 | Final Draft           | Avril Dunne<br>Andrew Cartwright | [Neil Lenehan]      |                  |

1 | Irish Water

# Incident Management Response



|                                  |   |  |
|----------------------------------|---|--|
| <b>Crisis Management Team</b>    | Provides high-level direction for response and the interface with external stakeholders.              | Long-term (> week) 'strategy'              |
| <b>Incident Management Team</b>  | Coordinates the incident response and provides the link between the operational team and the CMT.     | Medium-term ( up to 5 days) 'coordination' |
| <b>Operational Response Team</b> | Managing the immediate response to the incident and implementing the Business Process Recovery Plans. | Short-term (up to 2 day) 'delivery'        |



# Continuous Improvement

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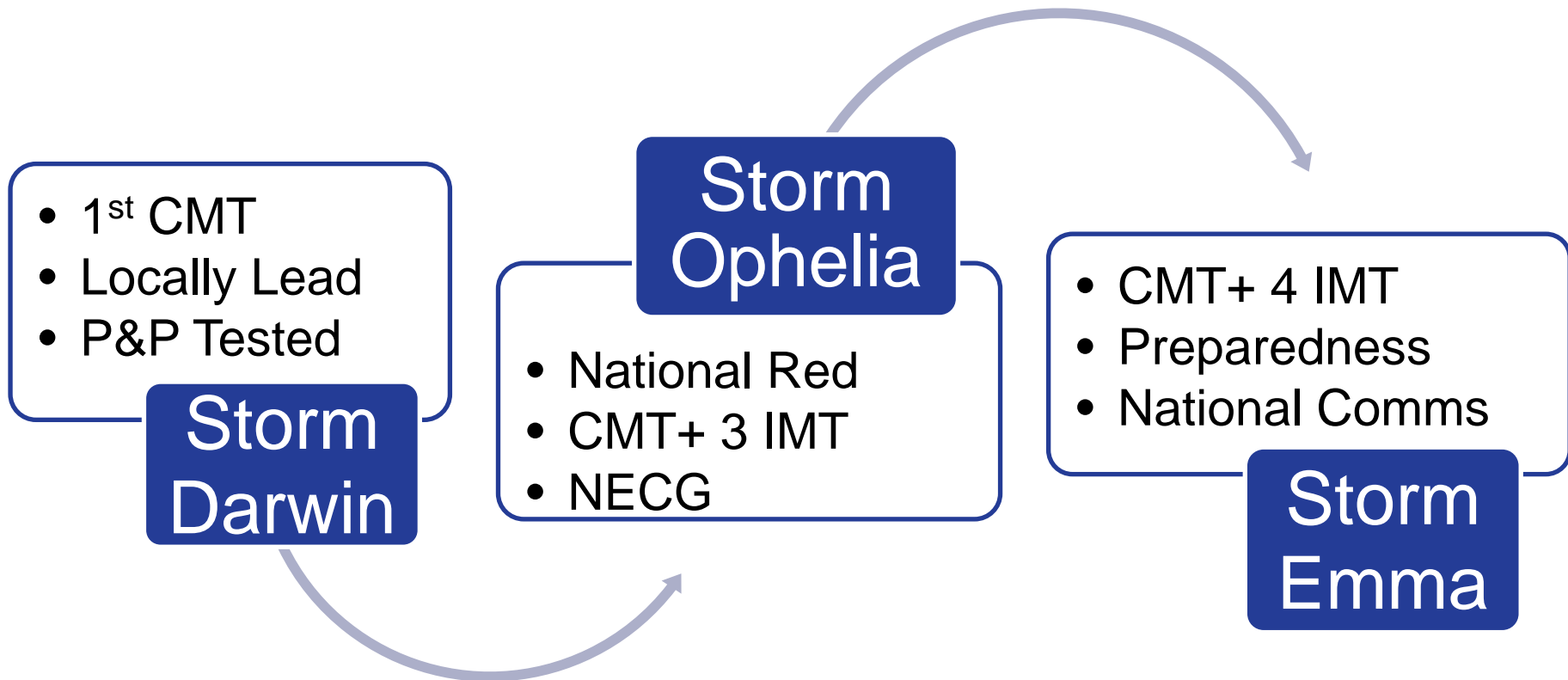
- Post Incident Reviews
- Training & Awareness
- Incident Exercises

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# Irish Water Incident Management in Action

*‘Storms & Snow’*

# Storm Events



# Storm Preparedness – Lessons Learned

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- Mobilise on Advanced Warning (*Met Eireann*)
- Cross Function Severe Weather Action Plan
- Movement of Staff & Supply Chain to Key Infrastructure
- Alternative Water Supply provision
- Backup Electrical Provision
- Leverage all Communication Channels

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# Irish Water Incident Management in Action

*‘Drought’*

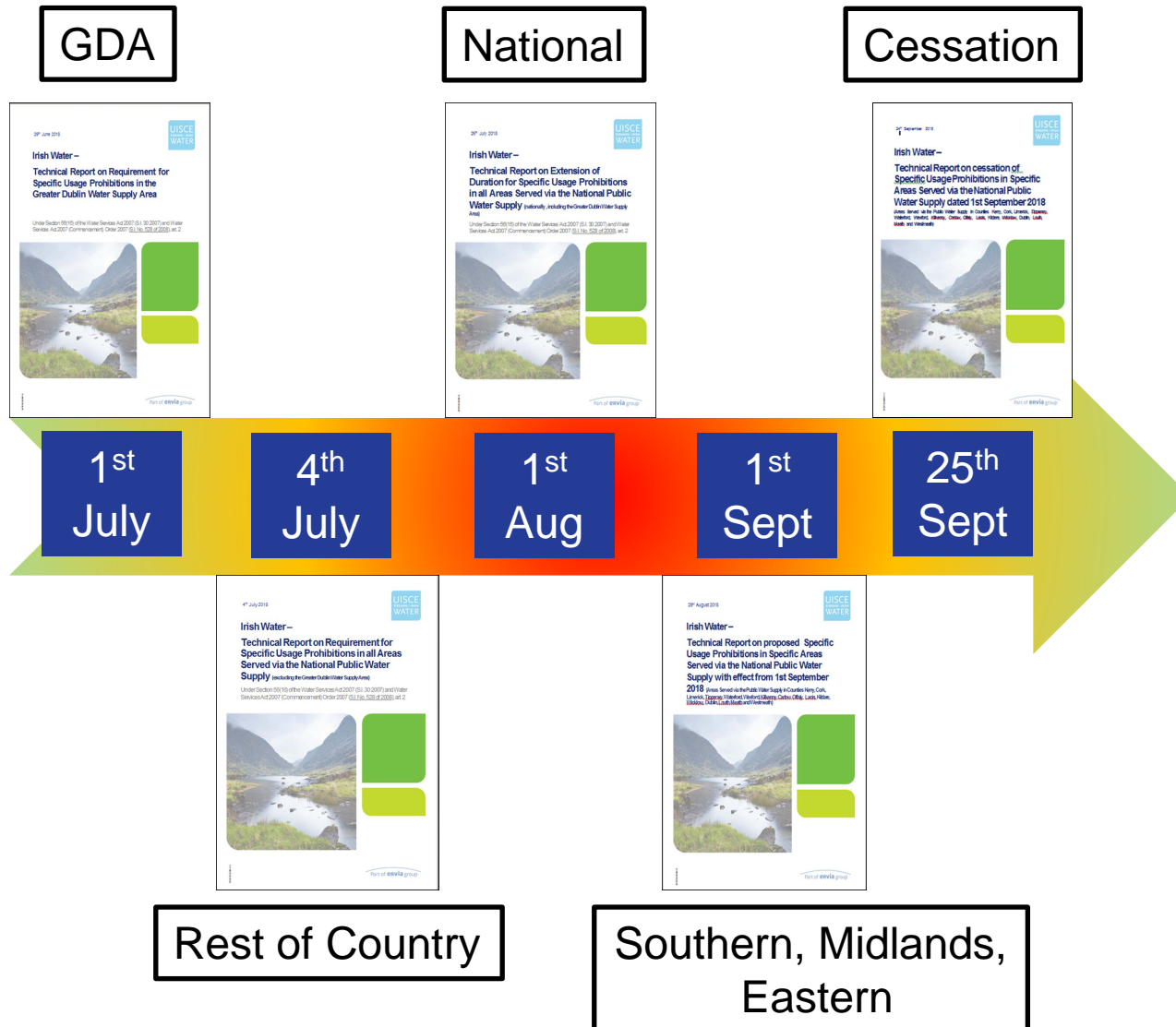
# Drought - Overview

- CMT in place from 3<sup>rd</sup> July-27<sup>th</sup> Sept.
- Monitoring all Water and Wastewater supplies daily
- Additional surveying of sources across the country, hydrometric stations, low flow interventions
- Operational Efforts: networks changes, supply and pressure management, tankering water
- Demand Management: Water Conservation Order, conservation campaign, advice and information

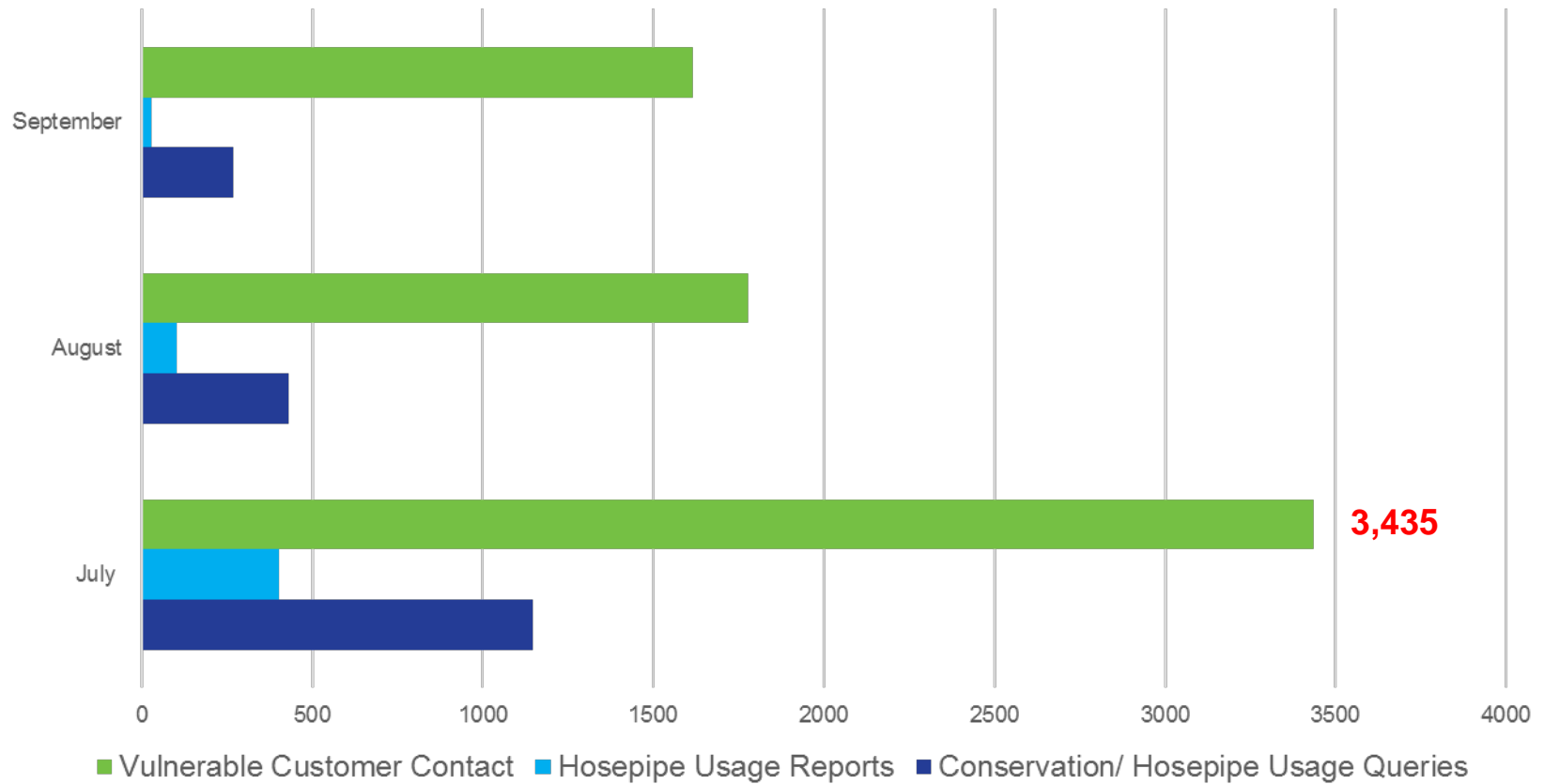
Prepared By: Production Planning and Demand Management  
Date Created: 13.07.18

|                                  |                 |                        | 1       | 2         |
|----------------------------------|-----------------|------------------------|---------|-----------|
|                                  |                 |                        | July    |           |
| <b>Impact on Bathing Water</b>   |                 |                        |         |           |
|                                  | Local Authority | Water Treatment Plant  | 12      | 13        |
| EM                               | Dublin City     | Ringsend               |         |           |
| S                                | Clare           | Mountshannon           |         |           |
|                                  |                 |                        | No      | 1092 1092 |
|                                  |                 |                        | At Risk | 0 0       |
|                                  |                 |                        | Yes     | 2 2       |
| <b>Impact on D/S Abstraction</b> |                 |                        |         |           |
|                                  | Local Authority | Water Treatment Plant  | 12      | 13        |
| South                            | Carlow          | Rathvilly              |         |           |
|                                  |                 | Tinryland              |         |           |
|                                  |                 | Drinoleague            |         |           |
|                                  | Cork            | Bandon                 |         |           |
|                                  |                 | Glenville              |         |           |
|                                  |                 |                        | No      | 1089 1089 |
|                                  |                 |                        | At Risk | 5 5       |
|                                  |                 |                        | Yes     | 0 0       |
| <b>Impact on FPM / Shellfish</b> |                 |                        |         |           |
|                                  | Local Authority | Water Treatment Plant  | 12      | 13        |
| EM                               | Laois           | Ballyroan              |         |           |
| NW                               | Donegal         | Kilmacrennan           |         |           |
|                                  |                 |                        | No      | 1093 1092 |
|                                  |                 |                        | At Risk | 0 1       |
|                                  |                 |                        | Yes     | 1 1       |
| <b>Odour Issues</b>              |                 |                        |         |           |
|                                  | Local Authority | Water Treatment Plant  | 12      | 13        |
| EM / Midwest                     | Louth           | Drogheda               |         |           |
|                                  |                 | Ballivor               |         |           |
|                                  |                 | Trim                   |         |           |
| South                            | Carlow          | Ardattin No. 2 Agglom  |         |           |
|                                  | Clare           | Quin                   |         |           |
|                                  | Cork            | Cloyne                 |         |           |
|                                  |                 | Dromcollogher          |         |           |
|                                  | Limerick        | Kilmallock             |         |           |
|                                  |                 | Limerick City          |         |           |
|                                  | Tipperary       | Mullinahone            |         |           |
|                                  | Waterford       | Dungarvan              |         |           |
|                                  |                 | Crooke                 |         |           |
|                                  | Wexford         | Duncannon              |         |           |
|                                  |                 |                        | No      | 1094 1094 |
|                                  |                 |                        | Yes     | 13 13     |
| <b>Tankering</b>                 |                 |                        |         |           |
|                                  | Local Authority | Water Treatment Plant  | 12      | 13        |
| EM / NW                          | Galway          | Tuam                   |         |           |
|                                  | Mayo            | Claremorris            |         |           |
| EM                               | Louth           | Tinure Sewerage Scheme |         |           |
|                                  | Westmeath       | Tyrellspass            |         |           |
|                                  |                 |                        | No      | 1090 1090 |
|                                  |                 |                        | Yes     | 4 4       |

# Water Conservation Orders (1<sup>st</sup> July - 25<sup>th</sup> Sept)

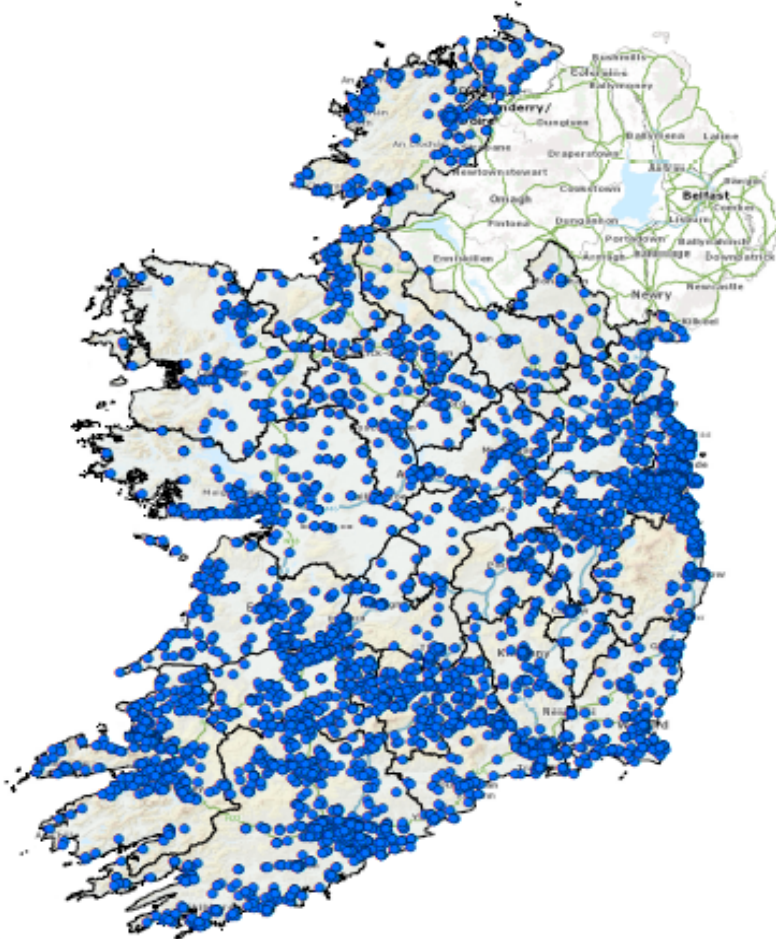


# Customer Contact Centre

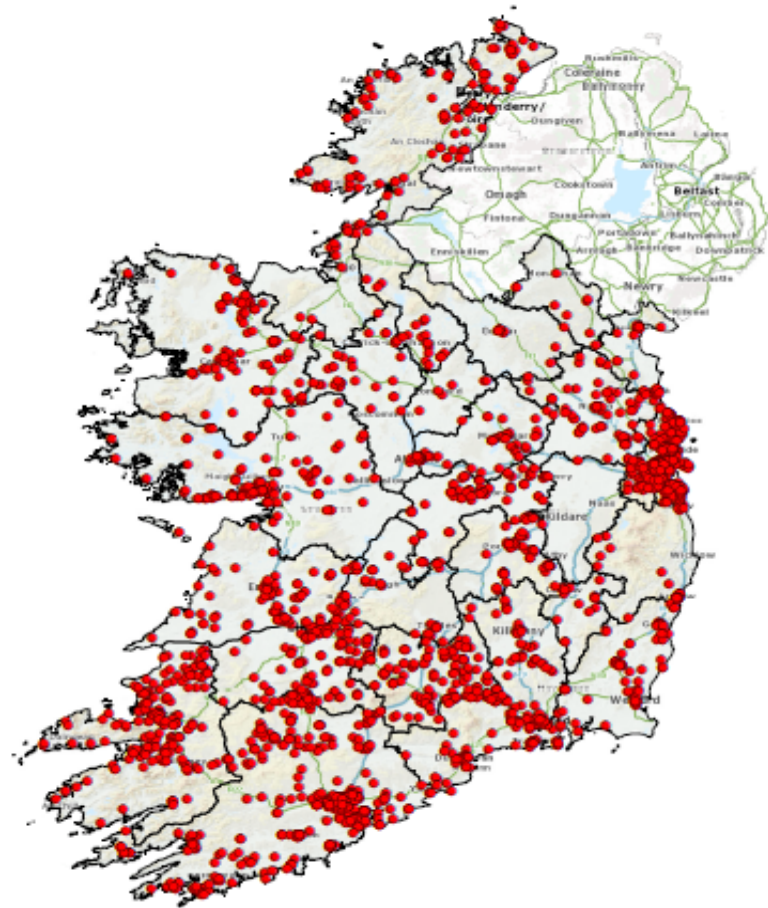




# Customer Initiated.....



**Leak Investigations**



**Leak Repairs**

## Drinking Water

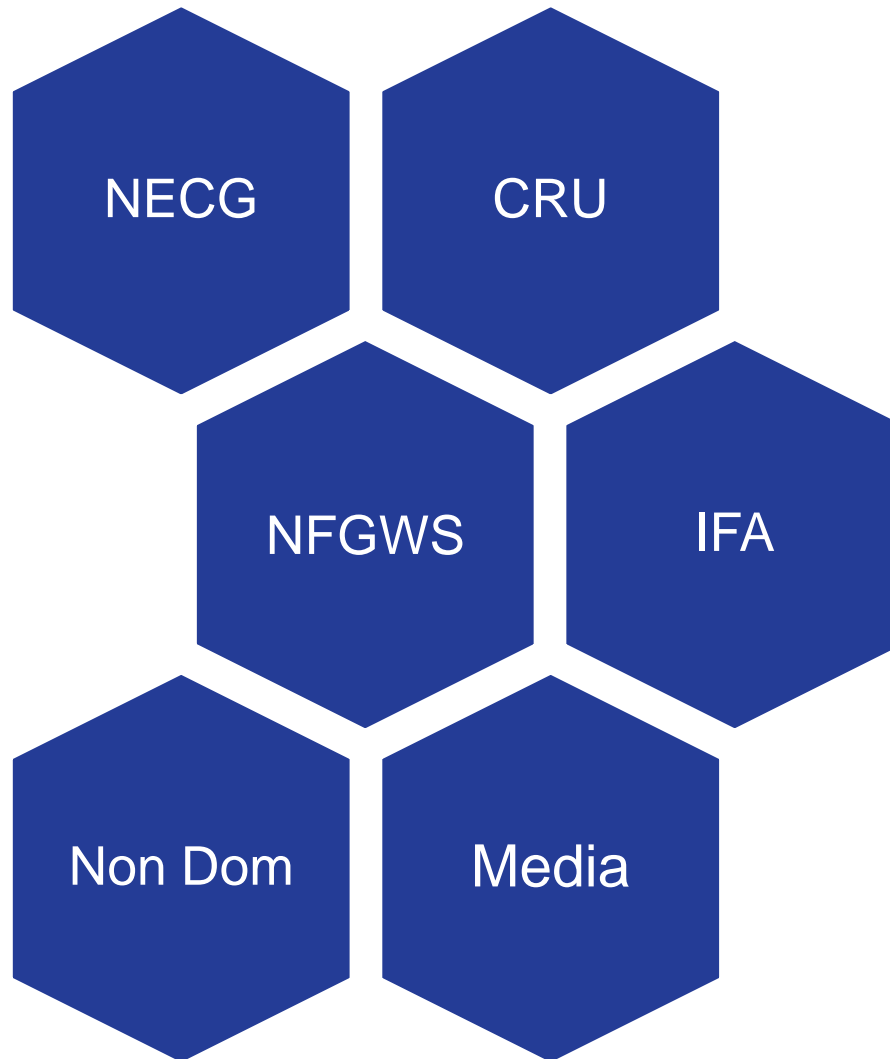
- No BWN issued due to Drought.
- Water Quality Challenges

## Waste Water

- Compromised Receiving Waters
- WWTP Tankering

# Communications Response

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# Next Steps

- Incident Management Framework Review
- Contingency Plans for Key Infrastructure
- Decision making - Telemetry data
- Complete PIR's because.....

**Operational Response Learning  
Improves Overall Business Preparedness**

# Next Steps – Severe Weather

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- National Severe Weather Management Process
- ESB Networks - ‘new’ Ways of Working
- MOU NI Water – Mutual Aid Agreement
- AWS Tenders
- Supply Chain Readiness
- Critical Sites – alternative Electricity Supplies

# Next Steps - Drought

- Close out the On-Going National Drought Actions
- Start Planning for next year now. – trackers, WoW, etc.
- Create a National Drought Management Action Plan aligned with the Water Resource model.
- Stakeholders Comms approach.

## On Going Drought Actions

- Complete Post Incident Review
- On-going Drought Management (Southern Region)
- Incident Management Framework Review [CMT]
- Key Stakeholders Debrief (NECG)
- ESB Engagement Liffey & Lee Catchments
- Pressure Management Oversight (Large Urban Areas)
- Customers Water Conservation Engagement
- Asset Planning:
  - *Critical GW Abstraction Assets*
  - *Critical SW Abstraction Assets*
  - *Critical Water Resources Conjunctive Planning*
  - *Critical WWTP Assets*
- Improve Telemetry access Nationally

# In Conclusion.....

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Irrespective of whether Climate Change is having an effect.....

Our National Capability has improved:

**Planning**

**Agility**

**Responsiveness**

**PREPAREDNESS**

**Addressing the National Consequences**



# Thank You

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Aurora  
TELECOM



Gas  
Networks  
Ireland

UISCE  
EIREANN | IRISH  
WATER