STORM EMMA IN WEXFORD

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MEM Conference Athlone
22nd November 2018
STORM EMMA IN WEXFORD

1. Irish Snow Weather Events
2. Coordination
3. Transport Issues
4. Communications
5. Learning
6. Conclusion
1. IRISH SNOW WEATHER EVENTS
**IRISH SNOW WEATHER EVENTS**

<table>
<thead>
<tr>
<th>Station</th>
<th>Greatest Depth of Snow (cm) 1961 to 2011</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belmullet</td>
<td>17</td>
<td>24/01/1958</td>
</tr>
<tr>
<td>Birr *</td>
<td>13</td>
<td>10/01/1982</td>
</tr>
<tr>
<td>Casement Aerodrome</td>
<td>45</td>
<td>31/12/1962</td>
</tr>
<tr>
<td>Claremorris</td>
<td>20</td>
<td>27/01/1984</td>
</tr>
<tr>
<td>Clones *</td>
<td>25</td>
<td>15/02/1973</td>
</tr>
<tr>
<td>Cork Airport</td>
<td>26</td>
<td>20/02/1978</td>
</tr>
<tr>
<td>Dublin Airport</td>
<td>25</td>
<td>12/01/1982</td>
</tr>
<tr>
<td>Kilkenny *</td>
<td>18</td>
<td>27/02/1962</td>
</tr>
<tr>
<td>Malin Head</td>
<td>38</td>
<td>19/01/1958</td>
</tr>
<tr>
<td>Mullingar</td>
<td>15</td>
<td>08/03/1951</td>
</tr>
<tr>
<td>Roches Point</td>
<td>10</td>
<td>27/02/1962</td>
</tr>
<tr>
<td>Rosslare *</td>
<td>18</td>
<td>18/01/1985</td>
</tr>
<tr>
<td>Shannon Airport</td>
<td>6</td>
<td>11/02/1978</td>
</tr>
<tr>
<td>Valentia</td>
<td>12</td>
<td>22/01/1958</td>
</tr>
</tbody>
</table>


*Snowfall in Ireland, Aidan Murphy, MET ÉIREANN, NOVEMBER 2012*
*Snowfall in Ireland, Aidan Murphy, MET ÉIREANN, NOVEMBER 2012*
IRISH SNOW WEATHER EVENTS

Winter 2000/2001

August 23, 2000

December 29, 2000
IRISH SNOW WEATHER EVENTS

Ireland was almost completely covered by snow and ice on Christmas Day 2010, one of the coldest days ever recorded.

Winter 2010/2011
# Irish Snow Weather Events

## Table 2.1. Observed and projected changes for temperature variables.

<table>
<thead>
<tr>
<th>Climate Variable</th>
<th>Observed Changes</th>
<th>Scientific Confidence</th>
<th>Projected Changes</th>
<th>Confidence Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air temperature</td>
<td>Temperatures increased by 0.7°C since 1890, i.e. an average of 0.06°C per decade. The increase was 0.4°C during the period 1980–2008, i.e. equivalent to 0.14°C per decade.</td>
<td>High</td>
<td>1–3°C to 2100, compared to the 1961–2000 average.</td>
<td>Medium (depends on scenario), medium for extremes</td>
</tr>
<tr>
<td></td>
<td>All seasons are warmer but more so in winter.</td>
<td></td>
<td>Continued nighttime heating.</td>
<td>Medium</td>
</tr>
<tr>
<td>Heat waves</td>
<td>Only one station recorded a significant increase in the heat wave duration index.</td>
<td>High</td>
<td>Increased frequency of heat waves.</td>
<td>Medium</td>
</tr>
<tr>
<td>Cold snaps/ frost days/ nights</td>
<td>Less frost; trend of decreasing frost nights and decrease in duration. 14 to 88% decrease in number (median of 30–40%).</td>
<td>High</td>
<td>Decreased frequency.</td>
<td>Medium</td>
</tr>
</tbody>
</table>
IRISH SNOW WEATHER EVENTS

Ireland not adapted to big snow

1. The built environment
2. Transport, utility and communications networks
3. State services
4. Citizens
IRISH SNOW WEATHER EVENTS

Key problems

1. Roads blocked
2. Communications
3. Water frozen
4. Power off
5. Homeless
2. COORDINATION
<table>
<thead>
<tr>
<th>Friday 23\textsuperscript{rd} Feb</th>
<th>Saturday 24\textsuperscript{th} Feb</th>
<th>Sunday 25\textsuperscript{th} Feb</th>
<th>Monday 26\textsuperscript{th} Feb</th>
<th>Tuesday 27\textsuperscript{th} Feb</th>
<th>Wednesday 28\textsuperscript{th} Feb</th>
<th>Thursday 1\textsuperscript{st} Mar</th>
<th>Friday 2\textsuperscript{nd} Mar</th>
<th>Saturday 3\textsuperscript{rd} Mar</th>
<th>Sunday 4\textsuperscript{th} mar</th>
<th>Monday 5\textsuperscript{th} Mar</th>
<th>Tuesday 6\textsuperscript{th} Mar</th>
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</thead>
<tbody>
<tr>
<td>WARNING</td>
<td>MET ÉIREANN SNOW ICE CRITERIA</td>
<td></td>
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<tr>
<td>RED</td>
<td>Significant falls of snow likely to cause accumulations of 8 cm or greater below 250 m above sea level. Slippery paths and roads due to accumulation of ice on untreated surfaces; situation likely to worsen.</td>
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<tr>
<td>ORANGE</td>
<td>Significant falls of snow likely to cause accumulations of 3 cm or greater below 250m AMSL. Slippery paths and roads due to accumulation of ice on untreated surfaces; situation stable.</td>
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<tr>
<td>YELLOW</td>
<td>Scattered snow showers giving accumulations of less than 3 cm below 250m AMSL. Slippery paths and roads due to accumulation of ice on untreated surfaces; situation improving.</td>
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<tr>
<td>GREEN</td>
<td>No snow, or some snow showers possible, mainly above 250m altitude.</td>
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</table>
WEEKEND 24-26th February 2018

- National Emergency Coordination Group (NECG) advise LA’s exceptionally cold weather between -5 and -10°C
- Level of LA preparedness requested by LGMA
- CFO contacted all heads of section and PRA
- CFO advice to LA Management Team:
  - Arrange meeting on Monday to:
    - Consider activating SWP
    - Consider requesting DOD assistance
    - Consider homeless
    - Set up communications team
MONDAY 26th FEB

• **WX CMT#1 4pm**
  • Roads (how much grit/salt available)
  • Housing (Contact and home homeless)
  • Water (bottles, IBC’s, tankers)
  • Communications (to and from the public)
  • AGS attended

• **Weather advisory**
  • Snow 5-10cm due
  • North south divide
TUESDAY 27th FEB

• CFO radio interview
• WX CMT#2 4pm
  • RTE attend meeting for the news
  • SWP activated
  • Flooding risk considered
  • WCC section updates
  • AGS attended again
WEDNESDAY 28th FEB

- Red and Orange warnings
- CFO requests DOD assistance
- SERSG meeting
- WX CMT#3 4pm
  - Roads
  - Housing
  - Fire – standby tomorrow 3pm
- WCC offices to close from today
THURSDAY 1\textsuperscript{st} MARCH

- Red warning for all
- Blizzard conditions expected
- Port to shut 2pm
- VOXPRO limited
- WX CMT\#4 10:30
  - DOD in attendance
  - HSE conf call
- WX CMT\#5 14:00
- Fire crews on standby 15:00
THURSDAY 1st MARCH
THURSDAY 1\textsuperscript{st} MARCH

Bunclody
1xpump, WT, jeep
Crew of 9/9

Enniscorthy
2xpump, HP, Jeep
Crew of 14/14

New Ross
2xpump, WT, Jeep
Crew of 14/14

Gorey
2xpump, ET, jeep
Crew of 13/14

Wexford
2xpump, ET, WT and jeep
Crew of 13/15

Fire Service staffing:
53 F/F
10 JO’s
6 SFO’s
THURSDAY 1st MARCH

• Both crews invited for standby 3pm Thursday until noon Friday
• If not available don’t respond from home
• S/O’s to consider crew welfare
• F/F arrange own bedding
• Standard payment rates offered
• Snow chains and socks available
THURSDAY 1st MARCH
THURSDAY 1st MARCH

Operational work

- 2 x false alarms
- 1 x car fire
- 2 x domestic fires
FRIDAY 2ND MARCH
FRIDAY 2ND MARCH
FRIDAY 2nd MARCH
FRIDAY 2\textsuperscript{nd} MARCH
FRIDAY 2\textsuperscript{ND} MARCH
FRIDAY 2\textsuperscript{ND} MARCH
FRIDAY 2\textsuperscript{nd} MARCH

\begin{itemize}
  \item WXCMT\#6 10:30
    \begin{itemize}
      \item Huge challenges countywide
      \item Roads only national N11 and N80 partially open
      \item Water off in the south of the county
      \item ESB - Blackwater without power
      \item DOD 6x6 high axle truck
      \item Clarified to farmers – covered by IPB insurance for helping clear public roads
    \end{itemize}
  \item LCG teleconference at 2pm
    \begin{itemize}
      \item 3 PRA’s decide not to activate MEP
    \end{itemize}
\end{itemize}
FRIDAY 2\textsuperscript{ND} MARCH

- WXCMT\#7 14:30
  - Roads clearing key work, make critical infrastructure accessible
  - Most regional roads passable
  - 3 homeless refusing service
  - More villages lose water connection
  - VOXPRO down due to low staffing numbers
  - Power outages reported countywide
  - Fire service request close snow-plough support
FRIDAY 2ND MARCH

CMT – County Hall

MEM Facilitator

CMT Chair

Wexford
Gorey
Enniscorthy
New Ross
Bunclody

FIRE

RSFO

NECC Dublin

Fire stations

Wexford
Gorey
Enniscorthy
New Ross
Bunclody
3. TRANSPORT ISSUES
FRIDAY 2ND MARCH

Operational work

- Chaotic day – limited service
- Only 4 x 4 jeeps mobile
- Fire appliances limited to towns
- Multiple ambulance assists
- Some Eastern Regional Control Centre called, others via local ambulance officer
- Some S/O’s Rostered jeep cover
- Transporting key staff
- Standby extended
- New Ross domestic fire
FRIDAY 2\textsuperscript{ND} MARCH
FRIDAY 2ND MARCH

14:06 DOMESTIC FIRE, ST MARTINS PARK, BALLYCULLANE, NEW ROSS ALL PERSONS OUT, BACK BOILER ON FIRE. TERRACED HOUSE.

14:08 RSFO AND S/O MAKES CALLS FOR SNOWPLOUGH. 2 X SNOWPLOUGHS 25KM AWAY IN WELLINGTONBRIDGE, BOTH PLOUGHS WILL GO TO MEET FIRE ENGINES.

14:14 CREW MANAGE TO GO MOBILE. S/O GOES AHEAD IN JEEP PATHFINDING. A1 HAS CHAINS, A2 HAS FLAILS. DRIVING SLOW OUT OF TOWN.

14:29 HOUSE GOING WELL SPREADING INTO NEXT HOUSE. ETA REQUESTED.

00:23 AFTER INITIAL CALL
FRIDAY 2ND MARCH

15:15 BOTH APPLIANCES STUCK OUTSIDE TOWN. S/O 2KM AHEAD IN JEEP.

15:35 LOCAL FARMERS TOW FIRE ENGINES 2KM TO S/O JEEP JUST OUTSIDE TOWN

16:00 TRACTORS NOW GETTING STUCK IN HEAVY DRIFTS

16:15 WX14A1 PHONES ERCC TO REPORT BOTH APPLIANCES STUCK WITH NO RADIO COMMS.

16:29 SNOWPLOUGH ON WAY TO FREE APPLIANCES ETA 30MINS. FIRE HAS SPREAD TO ADJACENT HOUSE.

02:26 AFTER INITIAL CALL
Who will rescue the rescuers here?

S/O wants to continue, are they safe to continue?

What’s the benefit?
FRIDAY 2ND MARCH

16:45 CREWS SEE SNOWPLOUGHS IN DISTANCE.

17:00 ONE SNOWPLOUGH CLEARING A TRACK. OTHER SNOWPLOUGH BEGINS TOWING A1 TO FIRE

17:14 BOTH APPLIANCES IN ATTENDANCE

03:08 AFTER INITIAL CALL
FRIDAY 2ND MARCH

16:45 CREWS SEE SNOWPLOUGHS IN DISTANCE.

17:00 ONE SNOWPLOUGH CLEARING A TRACK. OTHER SNOWPLOUGH BEGINS TOWING A1 TO FIRE

17:14 BOTH APPLIANCES IN ATTENDANCE

DUG INTO SNOW TO FIND HYDRANT. HOUSE OF FIRE ORIGIN BURNT OUT. NEIGHBOURING HOUSE PARTIAL DAMAGE. STOPPED FURTHER FIRE SPREAD.

19:02 MAV
01:30 CD

06:28 AFTER MAV
Fire crews battle 8ft drifts to get to blaze

By DAVID LOOBY

BATTLING 8ft snow drifts, 14 brave New Ross firemen, aided by a council crew, managed to get to Ballycullane on Friday where a woman’s house was destroyed and a neighbouring house was smoke damaged.

New Ross Firebrigade got a call to a house on fire in St Martin’s Park at 2.05 p.m. Fire Officer Cyril McGarr left in a four wheel drive vehicle followed by crews in two fire tenders which got stuck in 6ft snow drifts at Burkestown Cross, four miles from their destination.

Martin Shallow, General Services Supervisor, New Ross District, arrived on the scene, along with Paddy Moore and Pat Laffan, with loaders and dug the snow in front of the fire tenders.

Cyril said: ‘They rescued us. They dug for 100 metres, then towed us up as there was still 3ft of snow on the road before disconnecting and shifting the snow again. They dug tunnels and towed us all the way to Ballycullane.’

The Volvo FL fire tenders had snow chains on the back and ‘snow socks’ on the front and even still couldn’t make any headway.

A photo taken from inside the fire tender on route to Ballycullane last Friday.

25th MAY
SATURDAY 3rd MARCH

- WEATHER
  - Status orange from 06:00 Sat until 18:00
  - Report of rain to spread south and begin melt
  - Consider flooding
- Standby extended
- DOD 6x6 truck stuck
- 18,000 homes without ESB power
- National roads passable, now clearing secondary routes
SATURDAY 3RD MARCH

- National Ambulance Service
  - Severely limited capability
  - Dialysis patents
  - Medicines
  - Staff Transfers
  - Air Corps and Coastguard limited flying due to weather
- Assistance from Fire, CD, Army and Voluntaries
SATURDAY 3rd MARCH

Operational work

• 27 Ambulance assists
• Community assistance
  • transferring key staff
  • digging out vulnerable citizens
• 2 x Domestic fires
SUNDAY 4TH MARCH

- Regional roads beginning to open
- Power and water remains out in many areas
- Ongoing issues with emergency calls / patient transfers etc.. Fire assisting
- Taoiseach visits CMT
- Fire crews remain on standby at stations
5-8\textsuperscript{th} MARCH

- Fire crews finish standby 9am Monday 5\textsuperscript{th} March.
- Recovery phase
- Council offices reopen Tuesday 6\textsuperscript{th}
- Water and power slowly restored
- SWP de-activated Thursday 8\textsuperscript{th}
4. COMMUNICATIONS
In Wexford’s worst snowstorm since 1947, the Harbour froze, ambulances were stopped in their tracks, and thousands were left without water. Full report and pictures inside...
In Wexford’s worst
MEDIA

- Over the 4 days Friday to Monday
- 1,400+ calls to the emergency line
- 54,000 web page views (11,000 storm page)
- 8,000 views of map (released Sunday evening) over 1.5 days
- 543 new signups to map alerter
- 381 twitter sign ups
- 471,000 twitter views
CALL CENTRE

- Emergency number
- Encourage WCC members and public to use
- Call Centre Coordinator
- Mix of staff from different sections
- HSE interaction
- CSU
- Linkage with CMT
5. RECOMMENDATIONS
WHAT WENT WELL / COULD BE IMPROVED

- What went well
  - Daily all-in meetings
  - Call centre
  - Dedication of volunteering staff
  - Community spirit

- What could be improved?
  - Tasking of Voluntaries
  - Staff alert system
  - Teleconference facility
  - Use of call centre
RECOMMENDATIONS

• 1 – Rearranged location of call centre and additional support rooms required
• 2 – Fuelling protocol
• 3 – Off road 4 x 4 driver training
• 4 – Report from VOXPRO
• 5 - Community Resilience structures
• 6 – Emergency Accommodation Protocol
RECOMMENDATIONS

• 7 – List of contractors and rates to be drawn up
• 8 – High level priority route map to be updated
• 9 – Establish staff alert system
• 10 – WCC members update
• 11 – Emergency phone list to be updated
RECOMMENDATIONS

• 12 – Provide additional TETRA communications for council staff

• 13 – 4 point Response protocol with HSE/NAS/DOD/CD established in Storm to be used henceforth

• 14 – Map alerter to be used more often

• 15 – Severe weather staff volunteer list inclusive administration
6. CONCLUSION
6. CONCLUSION

1. Snow in Ireland relatively rare
2. Emma brought some severe challenges
3. How much do we need to invest?
Questions