

Impact-Based Snow Squall Warnings



Snow Squall Warnings (SQWs) are brief (30-60 minutes) warnings issued for short duration intense bursts of snow & wind leading to whiteout visibility & possible flash freezes on roads.



Implementation Timeline

All NWS Weather Forecast Offices have implemented the use of Impact-Based Warning (IBW) Tags for SQWs for the Winter 2023-2024 season.



WEA Trigger

In the past, all SQWs triggered Wireless Emergency Alerts (WEAs), which are free notifications delivered to your mobile device.

Now, WEAs will be limited to only those high-impact SQWs with the Snow Squall Impact Tag of “Significant.”

Public perception is that the NWS over-alerts SQWs and overuses WEA. This change ensures WEA activation is reserved for high-impact events. The NWS has noted a need to issue SQWs at night without triggering WEA.

With this addition of IBW tags, the NWS is aiming to improve the public response to SQWs by providing machine-readable information and issuing WEA alerts only for snow squall events that pose a substantial threat to safe travel.

Snow Squall Warning Tags	Explanation
IMPACT TAG	
General (No Tag)	To be used frequently for snow squall conditions, but mitigating actions, combined with societal context, will reduce the threat to safe travel.
Significant*	Used only when snow squalls pose a substantial threat to safe travel, such that WEA is warranted to alert all devices in the path.
SOURCE TAG	
Radar Indicated	Evidence on radar and near storm environment is supportive, but snow squall conditions are not confirmed.
Observed	Snow squall conditions are confirmed by ASOS, spotter, webcam, law enforcement, emergency management, or other visibility observations.

*Up to 2 Impact-Based Warning Tags will be appended to the bottom of Snow Squall Warnings.
Category utilized for a Wireless Emergency Alert (WEA)



Example of Snow Squall Warnings with Impact-Based Warning Tags

Impact-based warnings contain hazard, source, and impact information, including machine-readable tags to communicate the source of the information and severity of the impact. On the right is a sample impact-based warning that would trigger a Wireless Emergency Alert.

Hazard, Source, and Impact Information



Each Snow Squall Warning (SQW) will contain individual lines that clearly state hazard, source, and impact

Tags

Tags will appear at the bottom of SQWs.



```
...A SNOW SQUALL WARNING REMAINS IN EFFECT UNTIL 630 PM EST...

At 540 PM EST, a dangerous snow squall was located near Owls
Head, moving east at 40 mph.

HAZARD...Flash freeze on roads and rapidly falling visibility
due to intense bursts of heavy snow and gusty winds.

SOURCE...Radar indicated.

IMPACT...Dangerous and life-threatening travel conditions are
expected to develop rapidly in the warning area.

Locations impacted include...
Chazy, Mooers, Altona

PRECAUTIONARY/PREPAREDNESS ACTIONS...
Slow Down! Rapid changes in visibility and road conditions are
expected with this dangerous snow squall. Be alert for sudden
whiteout conditions.
&&

LAT...LON 4467 7395 4479 7419 4489 7403 4500 7380
TIME...MOT...LOC 1815Z 259DEG 51KT 4512 7345 4501

SNOW SQUALL...RADAR INDICATED
SNOW SQUALL IMPACT...SIGNIFICANT
$$
```

