

Shipping During Winter Storm Season: Challenges and Best Practices

Winter storms are inevitable. Supply chain failure is not. While the U.S. storm season routinely disrupts transportation networks, preparedness remains the single variable that changes the outcome—protecting both margins and customer satisfaction.

According to Federal Highway Administration data, over 70% of the nation's roads run through snowy regions where ice and snow significantly reduce traction and maneuverability. Not surprisingly, 21% of weather-related crashes occur during freezing precipitation, making winter a persistent operational risk for freight movement.



The financial stakes are just as critical. In the logistics sector, the cost of inaction is staggering: a single fierce storm week across the southern U.S. was estimated to cost the trucking industry nearly USD 8.3 billion in lost vehicle hours and redirected capacity. These aren't just delays; they are direct hits to the bottom line.

What makes today's winter storm season more complex is that historical patterns are no longer a reliable planning guide. NOAA data shows that since the 1990s, La Niña winters have become increasingly volatile, producing uneven regional impacts rather than predictable seasonal trends. For the 2025–2026 season, this variability is expected to bring wetter, colder conditions across northern corridors and drier conditions in the South—elevating risk across several critical freight lanes.

In this environment, successful logistics operations depend less on past experience and more on real-time visibility, adaptive routing, and proactive risk mitigation. The following sections focus on key over-the-road freight routes, commodities, and practical measures shippers and freight forwarders should prioritize to maintain control during the winter storm season.

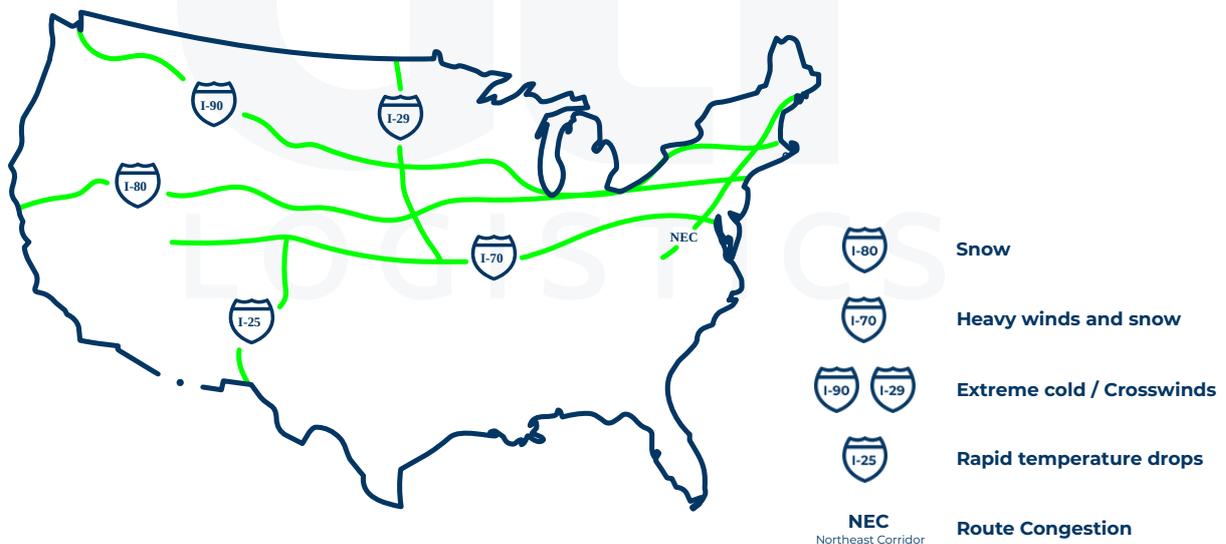
Where Winter Storm Risk Concentrates in the U.S.

In logistics, knowing where the winter storm is isn't enough. What matters is understanding how weather disrupts infrastructure, capacity, and decision-making in real time. Winter risk concentrates along freight corridors where geography, traffic density, and limited routing alternatives amplify even moderate weather events.

Several of the most critical U.S. over-the-road freight lanes cross regions exposed to snowstorms, high winds, freezing rain, and rapid temperature swings. Managing these corridors effectively requires:

- Continuous GPS tracking.
- Advance alternate-route planning.
- Realistic, weather-adjusted transit buffers.
- Insurance coverage aligned with climate risk — not reactive decisions after disruption.

Consider these “Red Routes” in your proactive planning:



1. The Cross-Country Arteries (East–West):

- **I-80**: Widely recognized as one of the most difficult winter trucking routes. Segments through Wyoming, Nebraska, and Pennsylvania are notorious for blowing snow and black ice, often leading to temporary closures and extended shutdowns.
- **I-70**: A key artery running through Kansas and Colorado that becomes particularly challenging due to snow accumulation, wind exposure, and steep mountainous terrain in its western sections.

2. The Midwest & Great Lakes (The Ice & Snow Core)

- **Northern Corridors (I-90 & I-29):** Connecting the Dakotas, Iowa, Minnesota, and Wisconsin, these routes face extreme cold and strong crosswinds, increasing the likelihood of safety restrictions for commercial vehicles.
- **The Rust Belt & Lake Effect:** Routes linking Illinois, Indiana, Ohio, Michigan, and Pennsylvania carry high freight volumes year-round. In winter, aging infrastructure combines with lake-effect snow, which can accumulate rapidly, severely reducing visibility and, in extreme cases, creating whiteout conditions that force sudden rerouting.

3. The Mountain & Western Corridors

- **I-25:** Running through Colorado and northern New Mexico, this corridor is frequently affected by rapid temperature drops and high winds, leading to chain requirements, speed restrictions, and transit delays.
- **Cascades & Northern Rockies:** These pass-through routes face persistent snow and ice accumulation, often resulting in vehicle restrictions and very limited alternate routing options.

4. The Southern Trap (Rain & Flooding)

In contrast to northern regions, freight lanes in the Lower Mississippi and Tennessee Valleys are more vulnerable to winter rain systems. Flooding in these areas disrupts key inland corridors, forcing detours and increasing congestion on already saturated alternate routes.

5. The Northeast Bottleneck (Density Meets Winter Risk)

The Pennsylvania–New York–New Jersey corridor is one of the most freight-dense regions in the U.S., linking ports, rail hubs, and last-mile distribution networks. Winter storms here rarely cause long closures, but even minor snow or freezing rain events can trigger severe congestion, missed delivery windows, and downstream disruption far beyond the region.

In high-risk corridors like these, the difference between disruption and control often comes down to who is watching the freight—and how early they act. Working with a logistics partner that delivers early warnings on road closures, real-time shipment monitoring, and active support in critical zones can significantly reduce exposure during winter storms.

At GLT Logistics, visibility and responsiveness define how freight keeps moving when conditions deteriorate. Our teams monitor shipments 24/7, anticipate weather-driven inflection points, and intervene before delays turn into losses.

What Are the Main Disruptions During Winter Storm Season?

Recent winter storms have pushed spot rates as much as 10% above year-ago levels.

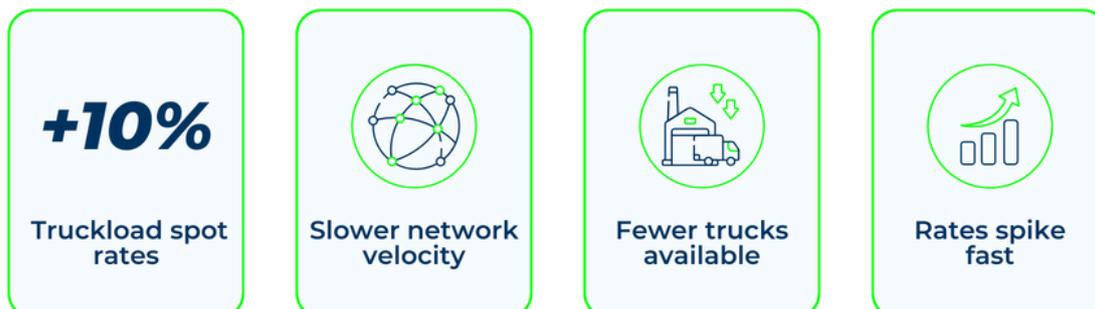
1. Dangerous Conditions and Safety Risks



The most immediate impact is physical. Ice, accumulated snow, and sub-zero temperatures create hazardous conditions that go far beyond simple traction loss. This isn't just about slower driving—it's about complete stoppages. Severe storms frequently render interstates impassable, forcing Departments of Transportation (DOTs) to implement hard closures.

The consequence: Assets are effectively frozen in place, often with no viable detour options. This increases accident risk and turns on-time deliveries into indefinite delays.

2. Capacity Crunch and Rate Volatility



Severe weather introduces immediate friction into the supply chain. Ice and snow reduce network velocity, meaning trucks take longer to complete routes and become available for the next load. At the same time, hazardous conditions push carriers to restrict lanes in order to protect drivers and equipment.

This is often where the financial impact becomes visible. As efficiency drops, capacity tightens, and rates rise. According to [ACT Research](#), winter storms have recently pushed truckload spot rates up to 10% above year-ago levels, making weather a primary driver of short-term pricing volatility.

At GLT Logistics, capacity stability is not seasonal—it's structural. We operate with a wide network of trusted carrier partners that provides both geographic coverage and commodity-specific expertise. This network allows us to secure reliable capacity in volatile conditions and execute on what we quote, while aligning each shipment with carriers experienced in the requirements of the freight they move.

3. The Ripple Effect on Terminals and Production



Even when a truck arrives on time, limited dock staffing can trigger significant unloading delays. These bottlenecks quickly cascade upstream—slowing production due to material shortages and disrupting inventory flows precisely when reliability matters most.

At GLT Logistics, visibility and responsiveness define how freight keeps moving when conditions deteriorate. Our teams monitor shipments 24/7, anticipate weather-driven inflection points, and intervene before delays turn into losses.

The Most Common Winter-Related Cost Overruns — and How to Reduce Exposure



Winter disruptions don't just delay freight; they introduce cost overruns that can quickly erode margins if they're not anticipated. The most common winter-related expenses tend to fall into the following areas:

- **Delays and Detention Costs:** Road closures and severe weather slowdowns frequently lead to missed delivery appointments, triggering detention and demurrage charges that often exceed \$50 per hour, depending on contract and market conditions. To mitigate this risk, build realistic transit buffers, plan alternate routing in advance, and align delivery windows with weather-adjusted ETAs rather than ideal conditions.
- **Weather-Related Cargo Damage:** Freezing temperatures, moisture exposure, and extreme temperature swings significantly increase the risk of spoilage for perishables, as well as corrosion or packaging damage for industrial goods—often resulting in higher claims and increased insurance exposure. However, risk levels vary widely by commodity, and generic protection strategies frequently fall short. For shipments that don't require a full refrigerated truck, thermal blankets and bubble liners can help retain heat during short transits. However, more sensitive commodities demand specialized handling, tighter controls, and experienced oversight to prevent damage.

Here's how to protect the most vulnerable freight:

1. Pharmaceuticals: For biologicals and vaccines, the critical safety range is 36°F to 46°F. The risk isn't limited to linehaul transit—it often occurs at the loading dock. A pallet exposed to 14°F for just 15 minutes during loading can experience surface freezing that compromises the entire lot.

To mitigate this type of exposure risk, Continuous Run is one of the safest winter operating modes because it prioritizes temperature stability over fuel efficiency, maintaining constant airflow and preventing localized freezing during cold-weather transit—especially during stops, dock exposure, and inspections. This is why working

with a logistics partner experienced in reefer operations matters. Winter pharma moves require more than temperature settings; they demand operational judgment.

 36°F- 46°F critical range	 Dock exposure = highest risk	 Minutes can compromise full lots
---	--	--

Continuous Run → Stable airflow & temperature control

2. Industrial Chemicals: While many industrial chemicals typically move at ambient temperature, winter conditions introduce freeze risk. Water-based paints and adhesives are particularly vulnerable to freezing. When an emulsion freezes, ice crystals disrupt the chemical suspension. Once thawed, the product does not recover, resulting in a lumpy, unusable consistency commonly referred to as the “Cottage Cheese Effect.”

To address this exposure risk:

- Set reefers above the product’s freezing point to prevent solidification and separation.
- Preheat the trailer prior to loading to eliminate cold-soak risk.
- Minimize dwell time during cold-weather loading and unloading.
- Coordinate immediate unloading at destination to avoid temperature-related viscosity issues.
- Work with a logistics partner experienced in temperature-sensitive chemicals to reduce the risk of product separation, claims, and costly operational downtime.

 Ambient ≠ winter-safe	 Freeze causes separation	 Damage is irreversible
---	--	--

Temperature control + fast handling
reduce claims & downtime

3. Food & Beverage: Mitigation for these commodities must go beyond frozen versus non-frozen classifications. Liquids in glass or aluminum require strict temperature control and product-specific monitoring to prevent freeze-related rupture, while tropical produce demands strict temperature control well above freezing thresholds. Segmenting freight by temperature sensitivity, using passive thermal protection, and setting product-specific temperature alerts can prevent full-load rejections and cascading claims across mixed shipments.

 <p>Not just frozen vs fresh</p>	 <p>Liquids freeze & rupture</p>	 <p>Tropical produce needs higher setpoints</p>
--	--	---

Segmentation & temperature alerts
prevent rejections and claims

4. Machinery: For flatbed and open deck shipments, winter risk often comes from road treatments rather than temperature alone. Road salt and magnesium chloride used for de-icing are highly corrosive and can damage hydraulic systems, electrical connections, and exposed metal surfaces.

Standard tarps are often insufficient against fine salt spray. VCI (Volatile Corrosion Inhibitor) films or treated shrink wrap create a sealed chemical barrier for winter machinery moves.

 <p>De-icing chemicals cause corrosion</p>	 <p>Salt spray damages components</p>	 <p>Standard tarps aren't enough</p>
--	---	--

VCI films & treated wrap
reduce corrosion risk

At GLT Logistics, we provide customized recommendations for cargo protection accessories, based on the commodity, transit conditions, and exposure points. This process is led by specialists with deep, hands-on experience in each freight category, ensuring technical accuracy and execution that aligns with the real behavior of the cargo in winter conditions.

Winter storm season exposes the difference between reacting to disruption and planning for it. Routes, rates, and commodities behave differently under stress, and generic playbooks rarely hold when conditions deteriorate.

At GLT Logistics, we help our customers move beyond seasonal assumptions by analyzing their specific lanes, freight characteristics, and risk profiles—supported by a wide network of trusted partners. If winter weather is part of your operating reality, a tailored analysis of your routes and cargo can be the difference between absorbed disruption and measurable loss.

Contact us at request@goglt.com to evaluate your exposure and build a winter-ready transportation strategy!

Frequently Asked Questions About Shipping During Winter Storm Season

1. How do winter storms affect freight transportation in the U.S.?

Winter storms disrupt freight by reducing road capacity, triggering DOT closures, slowing transit times, and tightening available truck capacity. These conditions often lead to rate volatility, missed delivery windows, and increased risk of cargo damage—especially on high-traffic interstate corridors.

2. When is winter storm season in the United States?

Winter storm season typically runs from November through March, but its operational impact varies widely by region and year. Northern corridors and mountain passes often experience earlier and more prolonged disruptions, while southern regions may face winter-related flooding events. In recent years, climate variability has made storm timing less predictable, requiring continuous monitoring rather than calendar-based planning.

3. Which U.S. freight routes are most vulnerable during winter?

Major east–west corridors like I-80 and I-70, northern routes such as I-90, Great Lakes lanes affected by lake-effect snow, mountain passes in the Rockies and Cascades, and dense Northeast corridors are consistently exposed to winter-related disruptions.

4. What types of cargo are most at risk during winter shipping?

Pharmaceuticals, temperature-sensitive food and beverages, water-based industrial chemicals, and machinery shipped on flatbeds are among the most vulnerable. Each commodity faces different risks, from freezing and spoilage to corrosion and packaging failure.

5. Why does working with an experienced logistics partner matter in winter?

Winter freight moves require operational judgment beyond routing and rates. Experienced logistics partners provide real-time visibility, early disruption alerts, carrier networks with commodity expertise, and tailored protection strategies that reduce exposure before problems escalate.

