MARCH MEGA THAW: FORECASTING CASE STUDY DURING A PROLONGED EARLY SPRING HEAT EVENT IN UTAH, 2025–26

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ABSTRACT: The 2025–26 winter in Utah produced a complex snowpack shaped by persistent weak layers, multiple rain-on-snow events, extended high-pressure periods, and record low snowfall. Persistent slab was a forecasted avalanche problem for over one hundred consecutive days, from December 2, 2025 to March 14, 2026. Entering mid-March, the snowpack still held intact persistent weak layers, while surface conditions varied widely by elevation and aspect. From March 14–30, Utah experienced a prolonged period of record or near-record warmth. Salt Lake City reached 27°C (80°F) on March 19, the earliest reading in recorded history, and set a new March record high of 27°C (81°F). Few mountain locations saw a meaningful overnight refreeze during this period. As free water moved deeper into the snowpack, avalanche danger oscillated repeatedly between MODERATE and CONSIDERABLE, with wet loose, wet slab, and glide avalanches as the primary concerns. Forecasters faced elevated uncertainty about the timing, distribution, and destructive potential of wet slab releases, particularly in terrain containing older persistent weak layers. This case study examines the meteorological setup of this historic heat event, the avalanche cycle that followed, and the differences between public and operational forecasting perspectives during this complex, prolonged wet cycle. Unlike prior short-lived warming events, the sustained nature of this period reduced the reliability of standard assumptions such as overnight refreezes and predictable daily stability trends, requiring continual reassessment of danger ratings, travel advice, and public messaging. This event illustrates how prolonged warm periods can rapidly shift avalanche problems and challenge traditional spring forecasting frameworks in intermountain and continental snow climates.

KEYWORDS: wet slab avalanches, persistent weak layers, spring warming event, avalanche forecasting, snow climatology, Utah

1. INTRODUCTION

Spring in the Wasatch typically follows a familiar rhythm: cold nights, warm days, and a snowpack that oscillates between refreeze and softening. Forecasters rely on this cycle to anticipate when surfaces will be supportable, when wet loose activity will begin, and how much margin an overnight refreeze provides before danger rises again. From March 14–30, 2026, that rhythm broke down.

Following a brief cold front on March 14, the Wasatch transitioned within days into sustained record and near-record warmth. Salt Lake City recorded its earliest 27°C (80°F) day on March 19, followed by a new March record high of 27°C (81°F). By March 21, the snowpack had gone 96 hours without a subfreezing temperature, and by March 29, forecasters had tracked just a single meaningful refreeze in twelve days. Unlike a typical two- to three-day warm spell, this event denied the snowpack the nightly reset that spring forecasting depends on.

The timing compounded the hazard. The warmth arrived on a snowpack shaped by a winter of record-low snowfall, multiple rain-on-snow events, and a persistent weak layer (PWL) problem that had remained in the public forecast for over 100 consecutive days, from December 2, 2025 through March 14, 2026. This layer was responsible for four avalanche fatalities in mid-February and had just been dropped as an active problem when the heat arrived. Forecasters spent the following weeks watching for meltwater to reactivate it. This convergence of a structurally complex snowpack and sustained warmth created conditions that, in the words of one forecaster, were “unprecedented … no one has seen these conditions before.”

The result was a prolonged, forecast-challenging wet avalanche cycle. Danger repeatedly oscillated between MODERATE and CONSIDERABLE for more than two weeks, with wet loose, wet slab, and glide avalanches as the dominant problems. The Utah Avalanche Center issued a Special Avalanche Bulletin on March 19, reflecting concern over the timing, distribution, and destructive potential of wet slab avalanches. These concerns materialized in an unprecedented glide avalanche in Cardiff Fork

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and multiple large, human- and explosive-triggered wet slabs in both backcountry and resort terrain.

This paper examines the March 2026 heat event as a case study in forecasting under conditions that departed from standard spring assumptions. We describe the snowpack and season leading into mid-March, detail the meteorological setup and breakdown of overnight refreeze, and document the resulting avalanche cycle. We then examine the forecasting challenges the event posed from both public (Utah Avalanche Center) and operational (Alta Ski Area) perspectives, before discussing broader implications for spring forecasting in intermountain and continental snow climates.

2. BACKGROUND

Utah's Wasatch Range sits within an intermountain snow climate, a transitional zone between the maritime snowpacks of the Pacific coast and the shallow, faceted continental snowpacks of the Rocky Mountain interior (McClung and Schaerer, 2006).

2.1 General Season and Snowpack Overview

Winter 2025–26 was a season of extremes: an exceptionally wet October raised early expectations, but Utah went on to experience one of its driest winters on record, with much precipitation falling as rain at mid and lower elevations. Snow cover was shallow and limited to north-facing upper- and mid-elevation terrain. Alta reached 254 cm (100 in) at the snow stake by mid-February and peaked at 297 cm (117 in) in March, before the heat event stripped snow from lower elevations.

Early season rain events, including a Christmas Eve rain crust and a second crust around New Year's, created widespread but non-reactive crust layers that complicated travel without driving avalanche danger. An early January storm delivered 46–61 cm (18–24 in) of snow with roughly 3.2 cm (1.25 in) SWE, after which skies remained clear for several weeks. From January 9 through mid-February, the central Wasatch received only about 30 cm (12 in) of intermittent snowfall, and the surface snow became weak and faceted, forming the "Dry January Layer." Danger dropped to LOW during this period. A modest storm on February 11–12 brought 25–30 cm (10–12 in) of snow, improving riding conditions but exposing instability, with numerous human- and remotely-triggered avalanches on the newly buried facet layer.

That instability escalated sharply beginning February 16, when the Utah Avalanche Center issued an Avalanche Watch ahead of a series of powerful storms, then an Avalanche Warning on February 18 as conditions became very dangerous. By that day, the mountains had received approximately 61 cm (24 in) of snow with 5.1 cm (2 in) SWE, and storm totals approached 79 cm (31 in) at the Spruces weather station. The storm buried the Dry January Layer, and from February 18–22 nearly 50 avalanches were reported failing on it. Four fatalities occurred in five days, three in the Salt Lake region and one in the northern Provo region, marking the most consequential period of the season and the origin of the persistent weak layer problem that would remain active in the forecast for weeks.

The next significant event arrived in the second half of March, under a record-breaking heat dome, and by late month, low- and mid-elevation terrain, especially solar aspects, resembled early June rather than late March. At 2,680 m (8,800 ft), the Alta Guard station remained above freezing nearly continuously from March 17 through April 1, with only a brief dip below freezing on the night of March 26. This heat event arrived directly on top of a snowpack still structured by the Dry January Layer and the February persistent weak layer problem.

2.2 Resort vs. Backcountry Divergence

Alta received the same storms and snowfall as the broader range, including the early January storm that allowed more terrain to open. Across Alta's frequently skied core terrain, frequent explosive mitigation and skier compaction likely disrupted the connectivity of developing weak layers in terrain that remained open through the early season.

East Greeley and much of Alta's east-side upper-elevation terrain stayed closed for the first five weeks due to low snowfall. It opened briefly on January 11, but poor coverage and rocky entrances led to closure days later, leaving skier traffic largely absent through late January and early February. Without skiing or explosive mitigation to disrupt the developing structure, the Dry January Layer above the CERC layer formed an almost uniformly faceted pack in this terrain; forecasters pushed to reopen it once mid-February snowfall provided enough coverage. East Greeley was open February 13–15 before the February 16 storm brought 12 cm (4.72 in) SWE, then reopened February 22 after a heli bombing mission. Mitigation during the February 18 storm cycle saw avalanches failing on the Dry January Layer within resort terrain as well.

On February 25, a warm storm dropped 5 cm (2 in) SWE with 2.5 cm (1 in) of rain at Alta's base, with two more storms the first week of March, including 81 cm (32 in) on March 6. Explosives triggered storm and wind slab avalanches, and East Greeley reopened March 7 until the warm up arrived a week later.

3. METEOROLOGICAL SETUP OF THE MARCH HEAT EVENT

The 2025–26 season delivered historically low snowfall to Utah's central Wasatch. Alta's seasonal snowfall averages 1,389 cm (547 in), with roughly 950 cm (374 in) typically falling by March 1; the 2025–26 season had produced only 547.5 cm (215.5 in) by that date. Snow height (HS) on March 1, 2026 stood at 216 cm (85 in), well below the statistical historical mean of 287 cm (113 in). Snow water equivalent (SWE) was closer to normal, with 68 cm recorded versus a typical 79 cm, while average snow density ran higher than usual at 12.43%, compared to Alta's seasonal average of 8.35%, attributable to higher-than-average winter temperatures.

A heat dome formed over the Great Basin and Desert Southwest in early March 2026, driven by an unusually high-amplitude ridge of high pressure large and persistent enough to break March temperature records across more than a dozen states; meteorologists described it as one of the most spatially expansive heat waves in U.S. history. Salt Lake City recorded its earliest 27°C (80°F) on March 19, a temperature normally expected more than a month later around April 29. Two Alta-area stations anchor the meteorological record: Collins Study Plot at 2,945 m (9,662 ft) and Top of Collins at 3,183 m (10,443 ft).

The common Utah March pattern is clear nights during high pressure with radiational cooling overnight and a refreeze of the spring isothermal snowpack. During this event, the air aloft stayed warm enough that this reset largely failed at Alta's elevations, consistent with Collins Study Plot and Top of Collins data showing ten-plus consecutive nights without a sub-freezing low.

Temperatures dropped for two brief intervals, March 22–23 and again March 26–27, as a dry cold front dipped south out of Canada, pushing into northern Utah for 24 to 48 hours before the ridge regained amplitude and warming resumed. These correlate with two brief drops in the hazard rating from Considerable to Moderate on March 23–24 and again on March 28–29 (Figure 2).

3.1 Temperature Records

At Collins Study Plot (2,945 m), daily highs during the event climbed steadily from 12.8°C (55°F) on March 17 to a peak of 18.9°C (66°F) on March 25, the warmest reading in the March 14–April 1 record at this station. Another record was set at Alta's base, 2,600 m (8,530 ft), with a high of 21.1°C (70°F) on the afternoon of March 20.

3.2 Overnight Refreeze (or Lack Thereof)

Collins Study Plot (2,945 m) recorded ten consecutive nights, March 17 through March 26, with overnight lows at or above 0°C, the longest stretch without a sub-freezing low during this period. The only meaningful refreeze in that window came March 26–27, when the low dropped to −2.8°C (27°F), before rewarming pushed lows back above freezing through March 30.

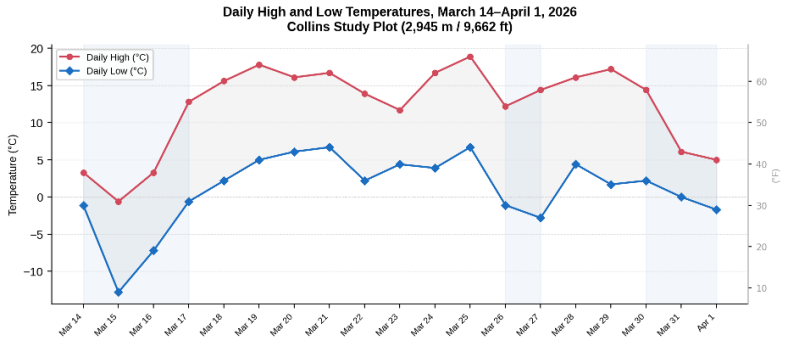


Figure 1: Daily high and low temperatures, March 14–April 1, 2026, Collins Study Plot (2,945 m / 9,662 ft).

4. AVALANCHE CYCLE ANALYSIS (MARCH 14–30)

4.1 Timeline of Danger Rating Oscillation

Avalanche danger did not follow the smooth, one-directional trend typical of a short spring warm-up. Instead, it oscillated repeatedly between MODERATE and CONSIDERABLE across more than two weeks, with only brief drops to LOW when cold fronts interrupted the warming trend.

The first sub-freezing night in ten days (March 26 into 27) briefly dropped danger to LOW before it rose again to MODERATE, where it held through the close of daily forecasting on March 29, even as forecasters noted only a single meaningful refreeze in the preceding twelve days. This pattern, danger climbing during multi-day warm stretches and never fully resetting for more than a day or two, distinguishes this event from the shorter, single-cycle warm-ups that spring forecasting assumptions are typically built around.

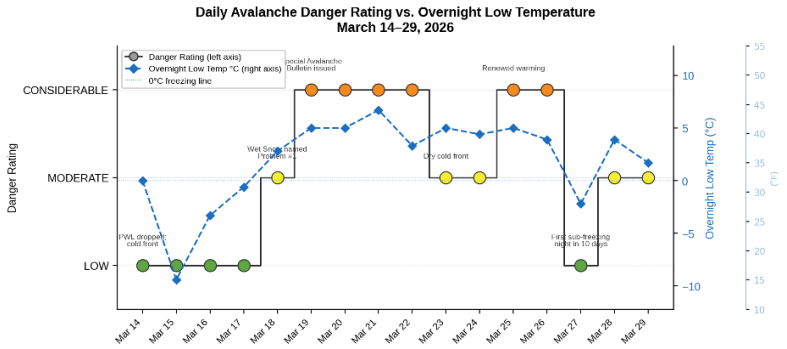


Figure 2: Daily avalanche danger rating vs. overnight low temperature, March 14–29, 2026, Collins Study Plot (2,945 m / 9,662 ft).

4.2 Avalanche Problem Types

Three problems dominated the period: wet loose, wet slab, and glide avalanches, each with different levels of predictability.

Wet loose avalanches were the most frequent problem of the period and, under typical spring conditions, the most predictable, consistently described by forecasters as the “most common” and “easiest to trigger” concern. Under normal circumstances, these avalanches initiate near the surface once daytime warming breaks down an overnight crust and behave as a gradual, progressive failure. The extended lack of overnight refreeze altered that character: without a supportable crust to fail through first, wet loose activity in some locations shifted toward more immediate, full-depth slope failure, producing avalanches with greater destructive potential than normal. At Alta, a ski patroller triggered a destructive wet loose avalanche (D1.5) on west-facing terrain near 3,050 m (10,000 ft) that entrained snow partially consolidated by skier compaction, a sign the lack of refreeze allowed the failure to step down into denser, previously trafficked snow. Snowbird observed a comparable pattern nearby.

Wet slab avalanches carried far more uncertainty and destructive potential, with forecasters repeatedly noting the difficulty of predicting timing and location and describing slides that “can break widely without clear warning signs.” Meltwater pooling on buried crusts, notably the crust-facet layer formed over the December holidays (the CERC layer), weakened bonds and produced slides roughly 1 m (3 ft) or more deep, directly linking this problem back to the season’s persistent weak layer structure.

Glide avalanches remained the least predictable, described by forecasters as “nearly impossible to predict” and “almost always natural.” Known glide terrain, including Stairs Gulch, Broads Fork, Mill B South, and the Porter Slabs, was flagged in nearly every forecast during the event.

4.3 Notable Avalanche Events in the Backcountry

See Table 1 for full details. The most significant backcountry release was a glide avalanche on High Ivory in Cardiff Fork (BCC) on March 21, over 0.9 m (3 ft) deep and several hundred meters wide, running on rock slabs and described by observers as unlike anything previously seen in that terrain. It followed an earlier glide release on Blue Ice in Broads Fork on March 13, showing glide activity was already active before the heat event began. Wet loose activity was reported regularly on sun-exposed aspects throughout the event, including a cornice-triggered slide near Pioneer Peak.

Notably, explicit wet slab releases on legacy persistent weak layers, particularly the facets above the CERC layer, were best documented in resort terrain rather than in backcountry observations, a gap discussed further in Section 6.

Table 1. Backcountry avalanche activity, March 14–April 1, 2026.

Date	Location	Type	Trigger	Size	Asp.	Elevation	SWAG	Notes
Mar 13	Blue Ice, Broads Fork	Glide	Natural	D2	NE	3,139 m (10,300 ft)	G-N	Predated event; glide already active
Mar 18–19	East-facing slopes	Wet loose	Natural	D1	E	—	WL-N	Steep, rocky terrain
Mar 21	High Ivory, Cardiff Fork	Glide	Natural	D2.5	E	3,170 m (10,400 ft)	G-N	Most significant BC release; ran on rock slabs
Mar 23	White Pine Canyon	Wet loose	Natural	D1-D2	—	—	WL-N	—
Mar 26	Pioneer Peak, Brighton BC	Wet loose	Cornice fall	D1.5	NW	2,987 m (9,800 ft)	WL-N (cornice)	Date estimated
Mar 27	Red Top Mountain	Wet loose	Natural	D1-1.5	SW	3,261 m (10,700 ft)	WL-N	—
Mar 28	Upper Red Pine, LCC	Wet loose	Natural	D1–D2	SW	3,261 m (10,700 ft)	WL-N-D1–D2	Small to large

4.4 Notable Avalanche Events in the Resort

See Table 2 for full details. Notable in-resort avalanche activity began several days after the first backcountry glide releases. The first inbounds avalanche occurred on March 20 at Alta, as base temperatures reached a record 21.1°C (70°F): a ski patroller triggered a destructive (D1.5) wet loose avalanche entraining consolidated, skier-compacted snow. Wet slab activity followed on March 24, when Snowbird recorded two separate releases. The most significant resort release occurred the following day, when East Greeley at Alta avalanched naturally as a wet slab on an old-snow bed surface, on a NNE aspect at 3,094 m (10,150 ft), in terrain that was closed at the time, believed to have failed on the facets above the Christmas Eve Rain Crust.

Table 2. Resort avalanche activity, March 14–April 1, 2026.

Date	Time	Resort	Type	Trigger	D-size	Asp.	Elevation	SWAG	Notes
Mar 20	Early PM	Alta	Wet loose	Ski patrol	D1.5	W	3,048 m (10,000 ft)	WL-AS-D1.5	Entrained skier-compacted snow; record 21.1°C (70°F) high
Mar 20	14:30	Solitude	Wet slab	Explosive	D2.5	E	3,018 m (9,900 ft)	WS-AE-D2.5-O	Permanently closed terrain, hand charges
Mar 20	15:00	Solitude	Wet loose	Explosive	D2.5	E	3,048 m (10,000 ft)	WL-AB-D2.5-O	Closed hike accessed resort terrain, RACS
Mar 24	12:00	Snowbird	Wet loose	Skier	D2	W/NW	3,200 m (10,500 ft)	WL-ASu-D2	No skier involvement
Mar 24	19:00	Snowbird	Wet slab	Snowcat	D2	W/NW	3,200 m (10,500 ft)	WS-AK-D2	No skier involvement
Mar 25	12:30	Alta	Wet slab	Natural	D2.5 (R3)	NNE	3,094 m (10,150 ft)	WS-N-R3-D2.5-O	East Greeley; failed on CERC layer

Note: SWAG trigger subcodes follow the Type–Trigger–R-size–D-size–Bed Surface convention (American Avalanche Association, SWAG 4th ed., 2022).

5. FORECASTING CHALLENGES AND DECISION-MAKING

5.1 Public Forecasting Perspective

The public forecast entered this event already carrying significant uncertainty. Forecasters had just dropped the persistent weak layer as an active problem on March 14, days before the heat arrived. Layered onto that was wet snow, a problem type forecasters struggle to predict with confidence, and wet slab avalanches in particular (Guy and Peitzsch, 2023), which can fail with little visible warning and vary widely in timing and location. Research on backcountry user perception has found that persistent

slab and wet slab problems are already associated with higher perceived uncertainty than other avalanche problems (Latosuo et al., 2024), meaning this event stacked two uncertainty-heavy conditions together.

That uncertainty was compounded by a lack of confirming backcountry avalanche activity. For roughly the first five days of the warming trend, danger climbed from LOW to CONSIDERABLE without significant avalanche results to confirm or deny the forecast's central concern. Access itself limited the data available, as lower elevations and solar aspects, the terrain of greatest concern, became increasingly difficult to travel through as coverage deteriorated. This pattern held through much of the event, as the clearest documented wet slab releases came from resort activity rather than backcountry observation, a gap that may reflect either successful avoidance of that terrain or reduced backcountry travel and reporting.

Forecasters used the tools available to elevate concern, issuing a Special Avalanche Bulletin on March 19 to flag wet slab potential while field evidence remained thin, consistent with forecasters' belief that communicating uncertainty increases public trust: roughly 70 percent of surveyed backcountry users report increased trust when forecasts include an explicit statement of uncertainty magnitude, with only about 5 percent reporting decreased trust (Latosuo et al., 2024), though higher perceived uncertainty also makes users rate forecasts as somewhat less useful for trip planning.

The oscillating danger rating added a further challenge: a rising-easing-rising pattern over more than two weeks is harder to communicate than the single clear peak spring messaging is usually built around. This event also arrived at the end of an already demanding season, leading to both forecaster and user fatigue from a hundred-day persistent weak layer problem, competing not only with genuine snowpack uncertainty but with a diminished audience appetite.

5.2 Operational Forecasting Perspective

Within Alta Ski Area, forecasters intentionally operated with wider margins for this event, communicated early to both avalanche workers and ski area management to set expectations for closures that would be more frequent and lengthier than normal.

Initially, conditions during the warmup allowed for typical spring closure times, but as the heat wave set in, that routine was no longer effective. As one forecaster wrote on March 20, "We have definitely left the status quo mindset, and we are not merely spring diurnal." The chosen mindset for that day was assessment. With minimal overnight surface freezing, popular secondary terrain was not kept open for any length of time, and day-long closures of important core terrain became common. It was anticipated that the immature snowpack would eventually evolve into something more substantial; this occurred, but at a much slower rate than typical.

As for mitigation, forecasters chose not to engage heavily with the wet snow problem, relying on conservative closures and refraining from explosive testing during the height of warming, hoping to keep snow in place with over a month remaining in the season. This left the team waiting for an indicator event in ski area compacted terrain. The snowcat-triggered wet slab at Snowbird on the evening of March 24 was the information they had been waiting for, and it drove a high-alert mindset the following day, when nearly all avalanche terrain was closed by day's end.

Following the freeze on the night of March 26, a handful of starting zones were tested with 2 kg air blasts, RACs, and Avalauncher rounds on March 27 and 28, with no results, testing driven by past experience of explosive-triggered wet slabs following a refreeze after prolonged warming. By the end of the event, there was general agreement that measurable Class 1 avalanche data paled in comparison to the work and concern the staff had given this problem.

6. DISCUSSION

This event shows that the assumptions spring forecasting relies on in intermountain climates are patterns built from experience, not fixed rules. Spring forecasting in the Wasatch is normally built around a two- to three-day rhythm of warming, softening, and overnight refreeze, with danger ratings calibrated to that cycle. This event broke that pattern not because of record peak temperatures alone, but because of how long it lasted: ten or more consecutive nights without a sub-freezing low removed the mechanism the whole framework depends on. This suggests existing protocols assume an upper limit on how long a warm event will last, an assumption that may not hold as sustained warm periods become more common.

Both perspectives in Section 5 describe standard tools not just failing to help, but at times pointing in the wrong direction. The forecasting team had to consciously shift from a spring diurnal mindset to an as-

sessment mindset: with a totally unconsolidated snowpack that explosive use alone could not fix, forecasters had to significantly alter core terrain openings. Experience built up over years of typical spring behavior had to be actively recognized and set aside before better decisions could be made.

The extended period of elevated danger without much confirming avalanche activity also tested how well uncertainty messaging holds up over time. The March 19 Special Avalanche Bulletin raised public attention ahead of, rather than in response to, field evidence, consistent with Latosuo et al. (2024), who found that communicating uncertainty increases public trust even as it makes forecasts feel less useful for trip planning. That research looks at uncertainty in general, not uncertainty sustained over two or more weeks on top of a season already worn down by a hundred-day persistent weak layer problem. It is possible the trust benefits seen in shorter events fade when uncertainty drags on this long, a question this event raises but does not answer.

The resort/backcountry observation gap raised in Section 5 is worth examining further. It is difficult to say whether it reflects the avalanche problem itself or a lack of information: reduced access, thinning traffic, and fewer observations to draw on. User behavior may have compounded the gap, as travelers were fatigued after a long season and conditions, worsened by valley temperatures in the high 20s to low 30s °C (80s°F), likely reduced use. Strongly worded bulletins may also have kept people out of the terrain in question, leaving much of the forecast unverified by field activity.

Finally, this event did not happen in isolation. It followed one of the driest winters on record in Utah, landed on a snowpack already plagued by a persistent weak layer, and set new temperature records across more than a dozen states. This fits with earlier concerns about how Utah's snowpack behavior is shifting under a warmer baseline (Decker and Froyland, 2016), and suggests the gap documented here is not a one-time concern but a preview of something forecasters in intermountain and continental snow climates will need a real plan for.

6.1 Limitations

This case study has a few limitations, beyond the resort/backcountry observation gap discussed above. The meteorological analysis relies mainly on two Alta-area stations, which gives strong resolution at those elevations but limits confidence that the no-refreeze pattern held evenly elsewhere. Some events, including the cornice-triggered wet loose slide near Pioneer Peak, have estimated rather than confirmed dates, and the discussion of trust and uncertainty draws on prior published survey research rather than data collected here. As with any single case study, these findings are illustrative rather than generalizable.

7. CONCLUSIONS

This period was an outlier in multiple ways: record-breaking temperatures, record-low snowfall, multiple persistent weak layers reactivating unusually late in the season, and an unmatched midseason stretch without sub-freezing temperatures. Forecasters could not rely on the pattern-matched decision-making that comes with more familiar hazards. Wet slab releases failing on the CERC layer and Dry January Layer put forecasters in uncharted territory on multiple fronts at once. As Reardon et al. (2014) note, wet slab avalanches are "poorly understood," and large cycles are relatively rare compared to dry slab cycles, resembling the low-probability, high-consequence framing Statham et al. (2010) use for deep slab problems, leaving forecasters with little precedent to draw on.

That lack of precedent called for a different approach than a typical wet slab cycle. As risk management expert Gordon Graham (2021) emphasizes in public safety training, high-risk, low-frequency events call for wider margins and slower decision-making. In practice, that meant favoring passive closures over explosive testing during the height of instability, and holding those closures for the full duration of the event, trusting the decision was still justified even when little avalanche activity confirmed it day to day. Clear, early communication with staff helped that patience hold up; understanding was earned through consistent messaging rather than assumed. This event also warrants considering whether explosive testing during warming periods should play a larger role, rather than waiting for an unplanned trigger, like the snowcat-triggered release at Snowbird, to confirm a wet slab concern.

Historically, "weird" wet slab events like this one have tended to show up during low snow seasons, and this event fits that pattern. But if sustained warm periods become more common under a shifting climate, these events may become a regular part of spring forecasting. That raises questions worth carrying forward: how forecasters adapt protocols built for short warm-ups to events lasting weeks rather than days, how the knowledge gained here becomes precedent rather than something relearned from scratch, and what should be monitored, whether snowpack structure, station density, or backcountry reporting, to catch the next version of this event earlier.

This case study is offered as a starting point rather than a final answer. As sustained warm periods become a more regular feature of Utah's late winter and early spring climate, documenting what worked, what did not, and what remains uncertain in this event is a necessary first step toward building the standing protocols these events will require.

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