

20 YEARS OF VIDEOS FROM THE FIELD: USING THE POWER OF VIDEO TO SUPPORT PUBLIC AVALANCHE FORECASTS

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ABSTRACT: In the winter of 2006–2007, riding the earliest wave of YouTube and armed with gear that would embarrass us now, forecasters at the Gallatin National Forest Avalanche Center (GNFAC) posted 16 short videos about snowpack conditions. Those videos drew 26,419 views. Last season, 134 videos drew 6.1 million views across three platforms, in a state of one million people. This large increase in viewership reflects the success of our combination of message, format, and platform in connecting us to a broad audience.

Public avalanche forecasters face a hard problem: translate complex, consequential snowpack information into decisions that keep people alive. Written forecasts reach the converted, users who already know about our products. Video reaches everyone else. Last season, our videos were watched five times more than our written forecasts were read. It is not uncommon to meet backcountry users who have digested our video content and carry a working sense of current conditions but have never read an avalanche forecast, and in some cases don't know one exists. Social media algorithms do what opt-in forecast distribution cannot: they find the audience before the audience finds us.

That expanded reach multiplies across everything we post. When we issue an Avalanche Warning, a larger following means the message travels farther and faster. The educational value also extends well beyond our forecast area and traditional readership. We've seen especially strong engagement among snowmobilers, a group the avalanche industry has historically struggled to connect with.

Over the past 20 years, we've continuously adapted our approach as technology evolved and viewer habits shifted. The goal, efficiently creating engaging videos that warn, inform, and entertain, has never changed. The methods change constantly (e.g., shifting from horizontal to vertical video, increasing the use of "b-roll", or shifting our messaging to focus on advice for the coming days rather than simply reciting current conditions).

This paper traces that evolution at GNFAC and draws lessons for forecasters and educators ready to use video as a core communication tool. We'll share what we got wrong, what we got right, and how integrating short-form video can expand your reach and turn a forecast into something people actually remember.

KEYWORDS: Avalanche Communication, Social Media, Video Production, Public Outreach.

1. INTRODUCTION

Videos recorded in the field and posted to social media platforms have become an integral part of how the Gallatin National Forest Avalanche Center (GNFAC) spreads public safety messages. These videos drive traffic to our forecast products, increase the reach of other timely outreach (e.g., Avalanche Warnings), as well as directly inform viewers about current backcountry conditions.

2. PROGRAM HISTORY

In the winter of 2006–2007, forecasters at the GNFAC began recording short videos about avalanche conditions and posting them to YouTube. Over that first winter season, forecasters posted 16 videos about snowpack conditions. They were viewed 26,419 times. For context, the GNFAC avalanche advisory was read or heard approximately 304,000 times that winter (approximately 11x more times than the videos were viewed).

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These initial videos were generally 1-2 minutes long with a single forecaster speaking to the camera while standing in a snowpit and showing stability tests and the snowpack's layers or standing in front of an avalanche.

In the following years, GNFAC forecasters created more videos each season (Figure 1). Initially, we posted videos solely on YouTube and linked them from the forecast webpage. In the 2011-2012 season, we began attaching video thumbnails to our emailed advisory, making them more accessible. In 2016, we started posting videos to Instagram. Because Instagram initially allowed a maximum video duration of 60 seconds, forecasters reduced the length of videos to fit into that constraint. In 2019, we began posting videos to Facebook. In 2023, we began shooting our videos predominantly in vertical (portrait) orientation, which allowed them to be posted to YouTube Shorts and be better viewed on a smartphone.

Last season, across all social media platforms, the GNFAC posted 134 videos that had a collective 6.1 million views. This is approximately 5x more than our written avalanche forecasts were viewed.

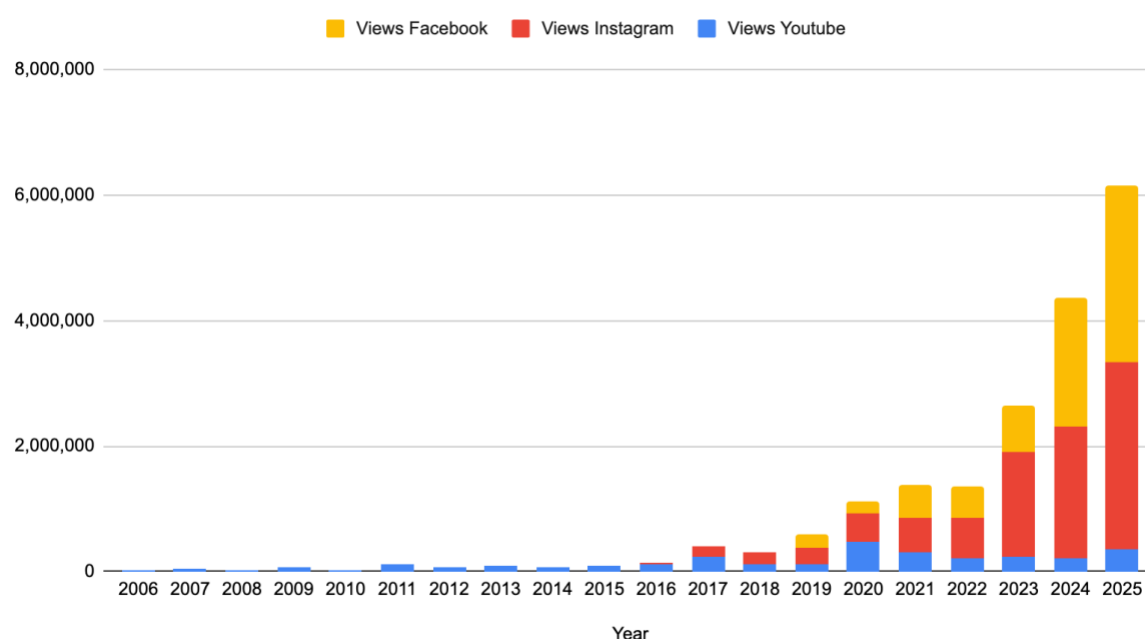


Figure 1. Video views per year across Youtube, Facebook, and Instagram during the winter seasons of 2006-2025.

3. MOTIVATIONS FOR USING VIDEO

When the GNFAC began recording videos, the explicit goal was to supplement the forecast by "captur[ing] a scene, snowpit, avalanche or accident in a way that words or still photos could not" (Chabot, 2007). When videos were first posted to social media platforms, the primary goal was to drive traffic to the written forecast.

While these goals remain, over time the main goal of producing videos has become to directly communicate relevant avalanche information to viewers. This appears to be working. Every season we encounter countless backcountry users who have digested our video content and carry a working sense of current conditions but have never read an avalanche forecast and, in some cases, don't know a forecast exists.

Our videos have also brought us a larger following and viewership on social media platforms. Due to social media algorithms, this expanded reach multiplies across everything we post. Social media algorithms allow us to reach users that have not "opted in" by intentionally subscribing to a forecast product. When we issue an Avalanche Warning, a larger following means the message travels farther and faster. This has motivated us to produce as much interesting, engaging content as possible, to continue to expand the reach of our most important messages.

4. VIDEO CONTENT

Initially, videos were solely field reports, describing the snowpack in a snowpit or at an avalanche site. Over time, we've shifted from simply describing current conditions to interpreting those conditions and explaining trends, focusing on what avalanche information will be most useful to the viewer in the coming days (using current conditions to support future-focused messages). This is a critical shift, as users

cannot act on the advice in our field videos sooner than the next day, since they are published in the afternoon, at the end of a field day.

In the early years, videos were primarily recorded in one continuous take and posted with minimal editing. As video editing software became easier to use and forecasters became more comfortable with the techniques, the amount of editing increased. This made the recording processes less stressful, easier, and quicker, by reducing the need to have one single seamless take in the field.

In the last several years, we have also increased use of “b-roll” (additional shots that help visually demonstrate relevant weather, snowpack conditions, safe travel, or add visual interest). These clips make videos more engaging, making it easier for viewers to viscerally understand the conditions we are discussing, and allowing us to visually demonstrate our suggested travel advice. This can be particularly useful when the travel advice is to “have fun while avoiding steep slopes.” A short clip of a skier/rider having fun on a low-angle slope powerfully drives home that message. Using b-roll has also solved difficulties related to filming in adverse conditions. Instead of recording a video on a windy ridgeline and struggling to get intelligible audio, we can now find a place out of the wind to record the audio and use edited clips of drifting snow to provide a more dramatic visual.

5. BARRIERS TO VIDEO PRODUCTION

Additional workload is a chief concern cited by other avalanche centers who do not emphasize video content in forecast products or on social media. While this is a fair concern, the additional workload decreases over time as you become used to recording and editing videos. Initial attempts at video production will take much longer and produce less polished results, but committing to publishing a video after almost every field day will lead to quick improvement, and the time commitment will drop drastically.

In addition, the necessity of scripting videos while out in the field can improve your written avalanche forecasts. Instead of operating on mental autopilot while doing fieldwork, you are forced to think about the message you want to share in your video. This pays dividends when writing your next forecast, and leads to a more refined message, because you’ve been actively synthesizing and refining ideas before you sit down to produce it.

Another challenge is overcoming personal or staff resistance to recording videos. Most people do not become avalanche workers because they want to be social media influencers or are very comfortable in front of a camera. It can be intimidating to put yourself out there in a new medium you’re not comfortable with. The most persuasive way to overcome this hesitancy is talking to users and continually seeing the impact videos have on the public. In order to see this impact, you admittedly must already be producing videos - we hope our encouragement will get you to start and continue for long enough to start seeing the results.

We can only offer anecdotal evidence of the value of producing videos, but all forecasters involved in video production over the last 20 years at the GNFA strongly believe videos have significant benefits for public risk communication.

6. CONCLUSIONS

We cannot overstate how deeply we believe in the power of video to support the public safety mission of avalanche centers. Twenty years of producing videos in support of the avalanche forecast has shown us how valuable they are to the recreating public. Primarily, videos directly inform the public about avalanche conditions, but they also increase the reach of our other messaging and drive traffic to our written forecast.

Our videos have evolved substantially since 2007 and we are excited to see how video production and dissemination evolve during the next 20 years. We keep looking for tweaks that improve their effectiveness. They are an ever-evolving work in progress. Each year we search for small changes that won’t disrupt our work flow and that improve the quality of our messaging and watchability of our videos.

If your avalanche program is not currently using video, it’s time to start. If you are already producing videos, consider how you can step up your game. Whether that is by increasing frequency or improving content quality, or both. Consistency is key. If you publish videos frequently, the public knows they can count on them and will seek out your content regularly. Additionally, the more videos you produce, the quicker your comfort, quality, and efficiency will increase.

REFERENCES

Chabot, D.: Annual Report 2006-2007, Gallatin National Forest Avalanche Center, 50 pp, 2007