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NEWSLETTER

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SAFETYWIRE



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Hidden...in plain sight

(Source: Matt Johnson, USHST Spring 2026 Newsletter)

It's not Picasso, but it's a painting.

Let me paint an all too familiar picture for you. It is a sweltering summer day, the temperature is hovering in the mid-nineties, and the humidity is paralyzing. A cursory review of the TAF for the nearby Class B airport indicates that it should be a nice day weather-wise for all of your anticipated flights for your shift as a CFI, patrol pilot, or any type of operation for that matter. Just a few hours into your shift, you hear what you believe to be a crack of thunder that causes you to run outside your hangar only to visually verify what your ears told you; a pop-up thunderstorm has occupied the airspace just over your facility. You scurry to get your pre-flighted aircraft back into the hangar to avoid damage you don't want to explain to the boss. A few choice words are mumbled under your breath about another "blown forecast" by the local Weather Forecast Office (WFO) that issued the TAF for that nearby Class B Airport.

Memory Lane

For those that have forgotten all of the intricacies of a TAF, let's take a trip down memory lane for a quick review.

Several sources define the TAF or Terminal Aerodrome Forecast. Still, I'll choose to go with precisely what is published in the FAA's latest Aviation Weather Handbook, just published in December of 2022. The handbook describes the TAF as *"a concise statement of the expected meteorological conditions significant to aviation for a specified time period within 5 sm of the center of the airport's runway complex (terminal)". The handbook reminds us that "the TAFs use the same weather codes found in METARs."*

The TAFs are prepared by 123 different NWS Weather Forecast Offices (WFOs) for over 700 airports. These forecasts are valid for 24 or 30 hours and amended as required. They provide us with forecast details such as wind direction and speed, prevailing visibility, cloud coverage, ceiling height, and precipitation type. They are essential as they have many implications from a regulatory point of view, such as fuel loading and alternate airport requirements from the Instrument Flight Rules perspective.

Here is the one caveat that many pilots often don't realize or have forgotten if they ever did know. As outlined above, the TAF forecast coverage area is only 5 statute miles. Having to make a forecast for such a small area is incredibly difficult for meteorologists at the local weather forecast offices. TAFs are often referred to as "point forecasts," and for a good reason, they are just that; you can think of a TAF as a forecast that covers the area the size of a college campus.

Remember the familiar scenario of the storm that popped up and hadn't been published in the TAF for the "nearby" Class B? Just how "nearby" can be a crucial factor, even if rain (RA) or Thunderstorms (TSRA) are mentioned in the TAF it is still concentrated on that "point" area of the airport terminal area. If, and it often does, has "Vicinity" (VC) added, such as TSVC, the forecaster has now predicted the weather event to occur within another 5 SM area from that first 5SM area, so now you can think of it as a 10 SM radius from the center of the airport complex. Anyone that has been in aviation for any appreciable time knows that the difference between a MVFR ceiling, or even a low IFR ceiling, and a

clear blue sky can be just a matter of 10-15 miles at times (if not less). And this, my friends, is where much of the frustration and mumbling of comments about “blown forecast” come from. So, cut the forecasters some slack! They are not wrong nearly as often as you may think. The forecast maybe doesn’t reach your “nearby” area.

Mind reader?

Have you ever asked yourself, “What were they thinking when they put this TAF out?” Well, good news, you do have a way to understand what the forecaster was considering when they created the TAF.

The best “hidden gem” in weather forecast products is the Area Forecast Discussion (AFD); no, I am not talking about the draconian “Area Forecast” that retired in 2018 and was replaced by the Graphical Forecast for Aviation (GFA). The Area Forecast Discussion, also at times colloquially known as the “Aviation Forecast Discussion,” is written in plain English and allows forecasters to tell you how they quantified the certainty or uncertainty concerning the TAFs they issued.

The exact description of the AFD comes to us from a National Weather Service Directive (10-503), which says: *“The AFD is a semi-technical product primarily used as a means to explain the scientific rationale behind a forecast and to summarize watches, warnings and/or advisories in effect. This highly visible product is used to convey forecast and watch/warning/advisory information primarily to federal agencies, weather sensitive officials, and the media”*.

All WFOs issue the AFD at least twice daily, and they do not contain a product expiration time. AFDs consist of two primary sections: a **narrative description** of forecast information and **reasoning**, and they also include a summary of public, marine, and fire weather outlook/watch/warning/advisory issuances. So, it contains more than just aviation-related weather concerns. The specific “aviation” section is likely the how and why of the product earning the title of “Aviation Forecast Discussion.”

In the official directive put out to the WFO meteorologist, they are advised that the discussion should emphasize significant aspects of the forecast, such as Identification of the most significant hydrometeorological weather affecting the geographical area of responsibility during the 7-day forecast period, Identification of the forecast problem(s)-of-the-day and explanation of their solution(s); An indication of forecast team confidence and probabilistic guidance on weather possibilities not found in other products; Reasoning behind watch/warning/advisory issuance; Differences in model guidance and an indication as to which model appears the most correct and why; reasoning for varying significantly from automated model output guidance products; reasons for significant changes from the previous forecast; Expected timing of events such as beginning or ending of precipitation and **degree of uncertainty**; and a brief review of the synoptic situation.

That is a lot! But, of most importance is that it is, in fact, a glimpse into the mind of the forecaster and the whys of how they came up with the TAF.

Pot of Gold

The AFD is worth its weight in gold. So many things can be listed and described in it that don't meet the criteria to be published in the TAF. TAFs require a certain degree of probability before something like thunderstorms can be included. This is where the AFD can forewarn us of the potential for those meteorological events that have uncertain probability both in their timing and location.

Here is an excellent example of being able to directly read the “why” of how a TAF was generated and gives us a good look at a complicated weather picture:

In this example, the forecaster tells us they went with VCTS and VCSH while keeping VFR ceilings. Considering that the thunderstorm complex described in this AFD may “weaken,” the possibility certainly exists that the VCTS and VCSH in the TAF would appear to be a “bust” if they never arrived. Still, in reality, the AFD would have told you they may, in fact, not arrive.

Forecast begins with IFR to MVFR visibilities in smoke and haze. Gradual improvement to VFR is possible as winds arrive with cleaner air.

Clusters of showers and thunderstorms make for a complicated forecast. Model guidance being variable, surface obs, satellite and radar can be useful in determining path and location of convection. It appears that the thunderstorm complex to the west may weaken and/or drop southeast this evening as it approaches our TAF sites. Went with VCTS and VCSH while keeping ceilings VFR. Direct impacts to TAF sites including wind gusts and lower ceilings will be contained in amendments as the convection moves closer. More of the same is expected for Friday as additional convection develops in the humid and unstable weather regime.

OUTLOOK...Thunderstorms possible at times Friday night through Monday.

In another example, a forecaster was brutally honest in this AFD. Smoke from recent Canadian wildfires made the forecast extremely difficult. The Forecaster even mentioned that confidence was “low” due to a lack of model agreement and “forecaster skill/experience with such dense and widespread smoke and haze.”

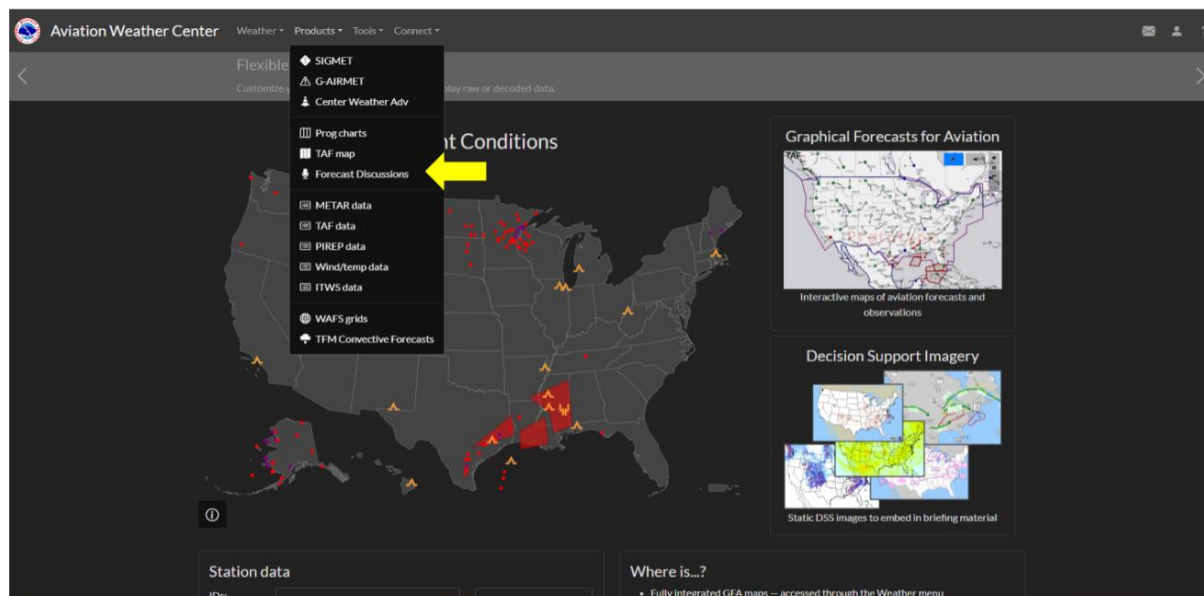
Smoke and haze will continue to reduce visibilities. Will keep 2SM IFR and 3SM MVFR visibilities tonight since these less than ideal conditions may persist longer than had been expected. Models signal improving conditions after 12z as winds increase a bit out of the south but there is low confidence in this scenario due to a lack of model agreement and forecaster skill/experience with such dense and widespread smoke and haze. Otherwise keeping forecast dry for now since showers forming to the west tonight may fall apart Thursday morning as they encounter unfavorable conditions in the lower atmosphere.

OUTLOOK...Thunderstorms possible at times Thursday night through Sunday.

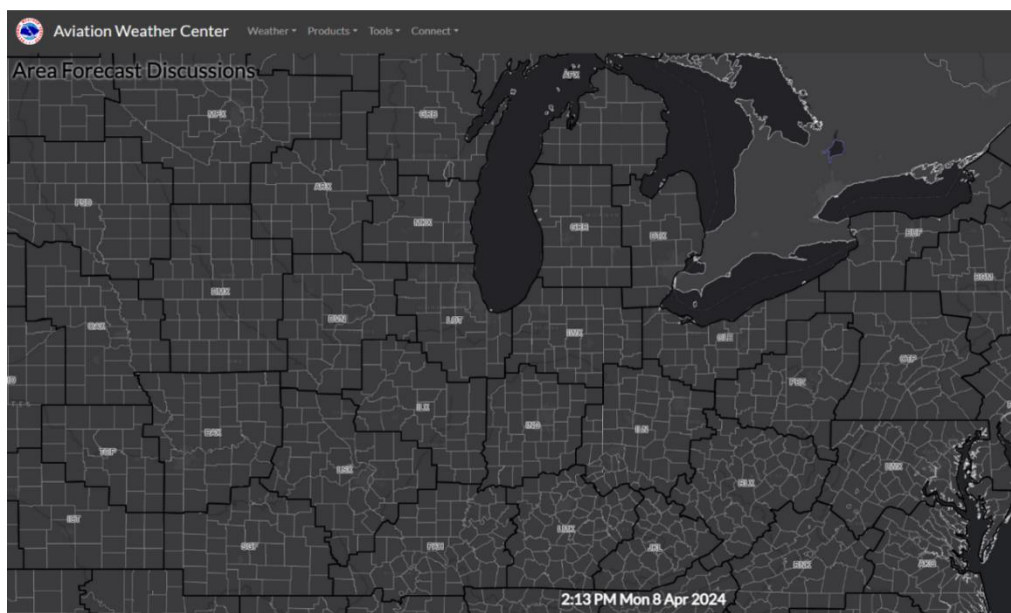
O' AFD where art thou?

Hopefully, I have convinced you just how beneficial the AFD can be for your flight operations. The AFD is my #1 go-to at the beginning of every self-weather-brief. But don't take my word for it; use it yourself to see how helpful it is.

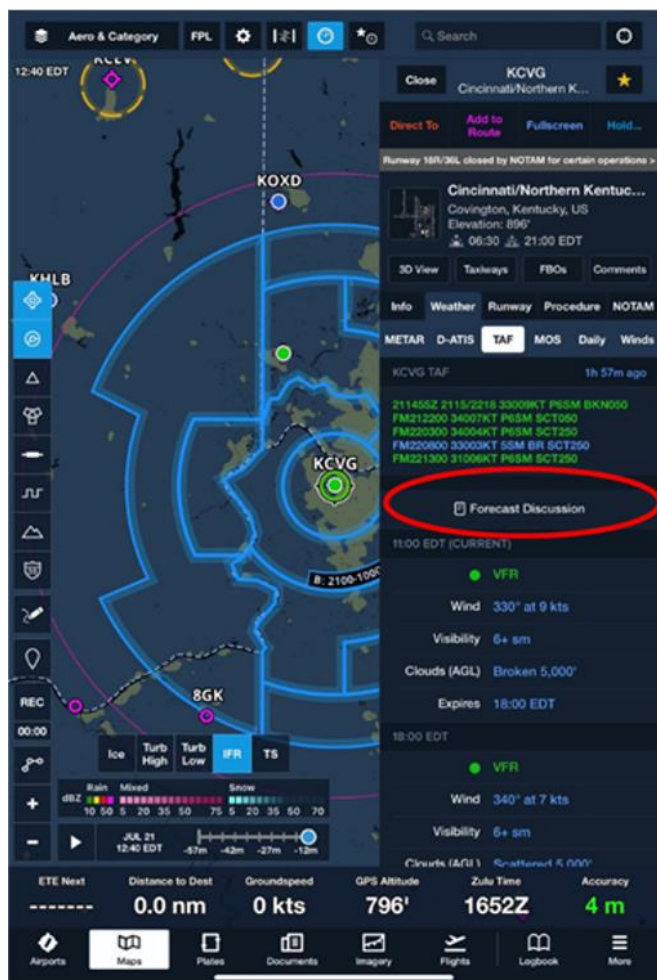
The AFD is "hidden in plain sight"; you just need to know where to go! It is available on www.aviationweather.gov simply by clicking on "Products," and then down to "Forecast Discussion."



From here, you simply click on the WFO that covers your area and issues the TAFs for your region.



Additionally, many heavyweight aviation apps, including my favorite, ForeFlight, include the Forecast Discussion – you just have to know where to look! Simply tap on the airport, then weather>TAF, and look for “Forecast Discussion.”



ForeFlight includes a nice feature in their Forecast Discussions, where hazardous weather items such as thunderstorms and fog are highlighted in red to get your attention.

Prettier Picture?

Now that you have a new tool to put in your weather decision-making toolbox, I hope that you will find the AFD beneficial to your flight operations and help you with those mumblings about forecast busts!



NBAA: Q1 Review Shows Need for Stabilized Approaches- Resource details 15 incidents and 25 accidents involving business aircraft in first quarter (Source: Kerry Lynch, AIN, June 2, 2026)



Photo: Mark Wagner

NBAA's recently released "Business Aviation Accident and Incident Analysis" for the first quarter highlights a need to focus on stabilized approaches, the association said. The analysis examined 15 incidents and 25 accidents that occurred in the first three months of the year in the U.S. and Caribbean.

Seven of the accidents involved business jets, including a fatal accident in Bangor, Maine. Another 10 involved business turboprops, including fatal accidents in Haiti, Louisiana, and Colorado. In addition, eight involved turbine helicopters with fatal accidents in Arizona and Hawaii.

The analysis looks at common themes for industry safety managers and experts to consider. "While investigations into many of these events are ongoing and probable causes have yet to be determined, the data already points to the need for strict adherence to stabilized approach criteria, as well as heightened vigilance and enhanced ground control procedures in the airport ramp and runway environments," said Mark Larsen, NBAA director of safety and flight operations. Other common elements that surfaced include runway excursions, landing gear events, and environmental hazards such as terrain and poor weather.

"NBAA encourages members to review this analysis closely, and for safety managers and training coordinators to incorporate these real-world operational challenges into recurrent training scenarios and upcoming safety reviews," he said.

Human Factors: Inside 3 Business Aircraft Accidents

(Source: Business Aviation INSIDER, May/June 2026)

Despite constant industry efforts to improve safety, accident investigations typically reveal familiar and shared causal factors that could offer lessons and potentially save lives.



With very rare exception, the human at the controls is a key factor in every aviation mishap. All-too-common elements such as fatigue, job pressures, “get-there-itis” and task saturation conspire to quickly turn challenging situations into fatal accidents, as seen in the following reports from the NTSB and firsthand insights from qualified industry professionals.



A Hawker 900XP departed controlled flight over Westwater, UT, during post-maintenance stall testing – 2 fatalities.

NTSB Probable Cause: “The flight crew’s decision to conduct a post-maintenance stall test in an area of icing conditions, which resulted in wing contamination that significantly decreased the airplane’s critical angle of attack [at which the wing stalls]. Also causal was the airplane manufacturer’s lack of training and experience requirements for the flight crew to safely conduct the stall test...”

Such post-maintenance tests are required in Hawker 125-series jets following removal of the leading edge TKS deicing panels from the wing to facilitate corrosion inspections, as handling qualities may be negatively affected after reinstallation.

Andrew Day, vice chair of the NBAA Safety Committee and chief operating officer for WYVERN, noted the accident flight crew opted to conduct the required test as they repositioned the aircraft to Seattle, WA. “They may have felt this was just a routine check to complete,” he said. “And the current flight manual implies that pilots qualified for normal operations are also qualified to conduct those stall tests.”

However, the potential dangers from such tests are generally known throughout that pilot community. Day recalled his first experience with the issue years ago as CEO of a Part 135 charter operation. “One of my favorite captains refused to perform the post-maintenance check,” he said. “He told me, ‘I love my job, but I’m not trained and qualified to do this. It is vastly unsafe.’ And I realized he was absolutely right to do so.”

That led Day to pursue his type-rating in the series so that he would be available to perform those checks, relieving line pilots of that task. “We had what I would consider a pretty robust safety system in place,” he added. “I thought we were doing all the right things, but here was a situation that exposed our operation and our pilots to real danger, despite being in full compliance with the regs.”

Those risks were reaffirmed by a second accident over Michigan in October 2025, which claimed the lives of the three persons onboard. The NTSB noted the pilots of the Hawker 800XP had been provided with a list of experienced pilots to perform the test, but opted to conduct the check themselves “after being unable to coordinate the stall test flight with a test pilot.”

These accidents led the NTSB to call on the FAA to establish mandatory specialized, high-experience pilot training for post-maintenance stall tests. They also urged the manufacturer to revise flight manuals to address the potential for severe and unexpected stall behaviors.

In another urgent safety recommendation to NBAA, the Board asked the association to “inform its members about the circumstances of these accidents and the safety issues identified.” Day noted those actions have already yielded results.

“We’ve seen many operators say they won’t approach their line staff [to perform post-maintenance stall testing], but rather find specially qualified crews,” he said. “They want to do it right, even if it means a canceled trip. But the truth is [these flights are] probably still happening every day, despite the best intentions.”



A Mitsubishi MU-2B-40 Solitaire crashed near Copake, NY, while maneuvering following a missed approach – 6 fatalities.

From the NTSB preliminary report: “At 1157:52, the pilot advised the controller that he was on a missed approach and when queried by the controller about his intentions, he responded that he would take vectors for another approach ... At 1202:40, the controller instructed the pilot to cross PUCBY at 4,000 ft msl and cleared him for the RNAV (GPS) Runway 3 approach at 1B1, which the pilot acknowledged. About 1 minute later, the controller advised the pilot of a low altitude alert, and to check his altitude immediately, with no response from the pilot.”

The NTSB further noted that, based on recorded security camera video, a low overcast cloud layer was present at the time of the accident. That likely added more stress to an already challenging situation, said NBAA Safety Committee member Norman “DQ” Dequier, vice president of flight operations at Aviation Performance Solutions.

“These are really complex scenarios,” he said. “There’s a lot of turning, altitude changes, power and airspeed changes going on. That’s an awful lot for a single pilot to keep up with in that environment and it becomes a lot more difficult for that single pilot to be doing all the actions required, particularly with the performance of modern aircraft.”

Modern avionics and autopilots “can be a fantastic second pilot,” Dequier continued. “But things can come at you so fast and you can very quickly become task saturated. If you’re pushing buttons every 15 seconds, it’s taking up so much of your time that it’s difficult to keep up with everything else.”

Dequier recommended pilots look at this situation as a reminder of the importance of their authority as pilot-in-command. “We do have latitude as pilots to build in more time,” he said. “Tell ATC you’re reducing power and climbing out at a shallower angle to minimize the possibility of disorientation, especially when in a turn, or that you need a delaying vector. Advise them you need a longer approach corridor to help you get caught up again.

“It’s difficult sometimes to make that decision when you’re already feeling like everything is coming at you fast,” he added. “We’re so used to doing things quickly. We even pride ourselves on our ability to keep up with it all. I think sometimes we don’t think enough about, ‘how can I slow this down?’”



An Epic E1000 turboprop single impacted terrain while approaching Steamboat Springs Airport (SBS) shortly after midnight – 4 fatalities.

From the NTSB preliminary report: “The waypoints in the data were consistent with the RNAV Z RWY 32 approach. The minimum descent altitude for the approach is 9,100 ft. msl. The last recorded altitude for the airplane was 8,221 ft. msl ... The RNAV Z 32 approach plate lists that the approach, both the circling and straight-in to Runway 32, is not authorized at night. Additionally, the approach plate lists “Visual Segment – Obstacles.”

This accident occurred approximately six hours after the aircraft departed Nashville, with a stop in Kansas City along the way. “The chain of events that led to this outcome likely began before the airplane ever left the ground,” said Gregory Feith, former senior NTSB air safety investigator. “You must consider preflight planning and the pilot’s experience.

“And, why Steamboat?” he continued. “It’s a small airport with a 4,400-foot runway. If you’re landing at midnight, why not divert to [Yampa Valley Regional Airport in] Hayden? It’s a 20-minute drive. Was fatigue a factor? They may have wanted to get there and to be as close as possible.”

Attention on this accident has focused on the approach to Runway 32, which is not approved at night. Feith noted the aircraft’s Garmin G1000 NXi panel would have alerted the pilot to the non-certified approach, but would still have provided guidance in an advisory capacity.

“It doesn’t give you vertical guidance,” he added, “but it will project a three-degree flight path to the runway in, again, an advisory-only mode. And it could draw that line right through a mountain.”

[NOTE: Garmin has since issued Service Alert 26027 addressing possible risks involving use of advisory vertical guidance (+V) on non-precision approaches on its avionics. It noted, “Misinterpretation of advisory vertical guidance and/or failure to monitor barometric altitude while flying a non-precision instrument approach may result in an unintentional descent below published altitude restrictions including the Minimum Descent Altitude (MDA).”]

While the NTSB’s probable cause findings were not released and available at the time this article was written, Feith said the accident highlights the risks of single-pilot IFR flying. “It’s really the hardest flying out there,” he added. “You are the navigator, you’re the communicator, you’re the operator of the aircraft. Your workload goes right through the ceiling.

“In this case, the pilot had his son and two others back there,” Feith continued. “As pilots, we do not like to fail. We have a highly capable, \$4.5 million airplane to use to travel from Point A to B. We don’t like going to Point C. And so now you have that self-induced pressure to accomplish the mission, which can push pilots to rationalize, justify or even basically ignore good aeronautical decision-making.”

NBAA Spotlight on Safety Compendium

Introduced at last year’s NBAA Business Aviation Convention & Exhibition (NBAA-BACE), the new NBAA Spotlight on Safety Accident Compendium examines lessons learned from recent business aircraft accidents, analyzing these events and providing guidance for accident avoidance based on NTSB data and the board’s proven methodology of finding data-driven solutions to improve safety by identifying key factors that often contribute to aircraft accidents.

[Review additional aircraft accident analysis articles at nbaa.org/spotlight.](https://nbaa.org/spotlight)



SAFETY MANAGER'S CORNER

Safety Management Systems (SMS) Training



PRISM is taking our Safety Management Systems (SMS) Course on the road!

Who Should Attend?

This training course is targeted for personnel at all levels involved in the day to day development, implementation, execution, management, oversight, and evaluation of a Safety Management System operation.

Course Objectives

- Describe the 4 Components and the 12 Elements of the ICAO Framework which closely align with CFR Part 5.
- Become familiar with characteristics of an effective and “just” safety culture.
- Use and apply the Safety Risk Management process.
- Describe what Change Management is concerned with according to SMS.
- Become familiar with Safety Performance Indicators (SPI)
- Describe how to implement an Internal Evaluation Program (IEP) and where to find appropriate checklists
- Become familiar with Root Cause analysis.



When and Where?

Our next course is going to be **September 15th through the 16th in Dallas, TX.**

Please reach out to Brandon Heath (brandon.heath@argus.aero) for more information and/or to register for the course.

Quote of the Month

The start is what stops most people.

BY: Don Shula



Motivation. Intimidation. Complication. Distraction. These and many, many more in addition. Things in the way number countless, all conspiring and coagulating in a barrier building scheme and seeking prevention of success. OK maybe that's a bit much but hopefully you get the point: getting stuff going isn't all that easy. Keeping it going is perhaps even harder. Numerous proverbs and clichés speak of this theme: every thousand mile journey begins with a single step, etc. Many things are worth doing, and getting started is usually the hardest part because it implies commitment and once committed we don't want to fail. In the end the journey is worth the cost; changing and improving rarely comes easy but it's the only path upward. Whatever that thing is, if you know it will make you or your organization better, then make the start and don't stop.

CHICKEN WINGS

CHICKEN WINGS®

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UPCOMING COURSES

Jul 27-29, 2026—PROS Course
IOSA Conformance Auditor Training (ICAT)
Virtual

Jul 30-31, 2026—PROS Course
Risk-Based IOSA Training
Virtual

Sept 15-16, 2026 -PRISM
SMS Training Course
Dallas, TX

Sept 22-24, 2026—PROS Course
Airline Safety Management System (ASMS)
Virtual

Sept 28-Oct 2, 2026—PROS Course
Aviation Auditor Training (AAT)
Virtual

Go to [Upcoming Training Classes](#) to register.



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