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U.S. Department of Transportation
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March 10, 2023

RE: DOCKET NO. FAA-2021-0419; SAFETY MANAGEMENT SYSTEMS NOTICE OF PROPOSED RULEMAKING

Submitted by mail and email

Dear Sir:

I am writing regarding the requirement of a Safety Management System (SMS) of all commercial flight operators, as proposed in the above-referenced Notice of Proposed Rulemaking (hereafter, the NPRM). I strongly oppose the application of this mandate to a class of carriers known by the FAA as "single-pilot operators."

I own and operate Southwest Safaris, a small single-pilot operation that specializes in Part 135 air charter and air tour excursions. I have been in business since 1974. I am an ATP pilot, flight/ground instructor, and A&P/IA. I am very familiar with single-pilot operations, as I have owned, managed, and piloted a single-pilot operation for over forty-eight years.

The FAA uses the term, "single-pilot operator," to describe a flying business that is limited by its Operating Certificate to using the services of only one pilot. It turns out that this is a fairly broad category. It includes operators that utilize multiple pilots over a series of years as long as those businesses are legally limited to employing only one defined pilot at a time. It includes businesses that may have one or more owners and/or managers, as long as the "one specified pilot at a time" limitation is met. The owners and managers may be remotely located from the pilot, but they still qualify as "single-pilot operators." According to the FAA's figures in the NPRM, there are 594 Part 135 commercial air carriers that "use only one pilot-in-command." There are 694 other single-pilot flying services that operate under Part 91.147 with a Letter of Agreement.

My submitted letter of objection focuses on a subcategory of the FAA's "single-pilot operator" class. I will concentrate on a group of "*single-person operators*" who own, operate, manage, and pilot as essentially one individual under Part 135 or 91.147 (Letter of Agreement). In other words, I will be emphasizing the smallest of licensed flying services, where all functions are performed and/or overseen (in the case of maintenance) by only one person in the company, who has sole decision-making authority. I will call this kind of carrier a "single-person operator/operation" (SPO). I will contrast these businesses with the "multi-person operator/operation" (MPO), where there are multiple pilots and/or management personnel involved in the flying business. The FAA's NPRM does not address the unique realities of the single-person operator.

My reasons for objecting to the FAA's imposition of Safety Management Systems on single-person operators/operations, i.e., SPOs, follow.

First, the SMS requirement for single-person operations is based on a one-size-fits-all philosophy, which is contrary to common experience. SPOs are fundamentally different in design, management, and conduct than multi-person operations. In the former, one person makes all the decisions, conducts his own training, performs all operations, and reviews all results on a daily basis. The SPO is already conducting all the functions of the proposed SMS requirements, and doing so every day. In my opinion, requiring a SPO to document his decisions proactively and retroactively is a needless diversion of his attention, counter-productive, and compounds the difficulty of already complex operations. I will come back to this point again and again, from different perspectives. I believe that a mandatory SMS program for SPOs would accomplish very little, because this kind of pilot, by necessity, is up-to-date on methods, procedures, and field conditions that pertain to his unique operation, if he is current. If he is not current, he is already required by regulations to review all pertinent facts relating to each pending flight. Of even more relevance, he has the highest incentive never to make a mistake. He is forced by the size and nature of his flying service to "think forward and reflect backward." Memory is his best instructor, not paperwork. Slow learners do not survive as SPOs; competition and field trials weed them out. If a SPO cannot both anticipate evolving circumstances and learn from past experience, no amount of theoretically self-correcting paperwork is going to make any difference. The establishment of internalized personal operating standards, adoption of thorough maintenance procedures/documentation, and recognition of minimum acceptable weather conditions, essential for safe SPO operations, does not require a SMS.

Second, the SMS proposal for single-person operators is enormously complicated, difficult to implement, extremely time-consuming, and obstructive to operations without any proven safety-related returns. With respect to all single-pilot operations, but especially SPOs, the FAA presents no compelling arguments, experiments, or trials in evidence of the real-world effectiveness of the proposed SMS requirements.

The NPRM cites three papers in support of safety management systems. All three came out of the British Commonwealth, which nations have a shared philosophy of tightly controlling their aviation communities. None came from the United States, which is not surprising. By contrast, in this Country, it is still possible that the SMS program will simply not be accepted by small

businesses; Americans everywhere are skeptical of intrusive government micro-management. In any case, the outcomes of the research studies do not help the FAA's arguments. The first evaluation is inconclusive, the second questionable, and the third is irrelevant. There is no indication in the descriptions that any of the research projects even mentioned the overall category of single-pilot operators.

In 2019 Transport Canada Civil Aviation published an internally-generated report on the impact of SMS on aviation ten years after it was mandated for airlines and a broad class of other aviation operations. Although the "findings" of the Canadian agency generally supported the implementation of SMS, the FAA concluded that the results could not be proven to have anything to do with SMS initiatives. The NPRM comments that "a lack of objective data limited ability to show safety improvement directly attributable to SMS because of the difficulty in separating other effects that may also benefit safety." In other words, the FAA acknowledges that the study, "due to lack of objective data," had no long-term figures to justify the conclusion that the application of Safety Management Systems had specifically been responsible for a ten-year decrease in commercial aviation accidents. The FAA admits that other factors besides SMS could have explained the decline in Part 135 accidents, such as (my examples) improved on-line access to training, better maintenance/inventory/equipment practices, or less time flying during slow economic times.

The NPRM follows the above report with two studies in support of the FAA SMS proposal. The first study, also of dubious authority, published as a Griffith University (Queensland, Australia) doctoral thesis paper, was equally vague, subjective, and self-serving of government SMS interest. It seemed to arrive at predetermined conclusions. It studied a total of 7,625 audit findings for 2011-2014 from a population of only 117 operators. Amusingly, the FAA, itself, seems critical of its own "evidence" presented. According to the NPRM, "the determination of safety performance was not possible for this [small] sample population using a conventional accident rate metric due to the lack of availability of flight departure data." Nonetheless, undeterred by lack of hard evidence, the doctoral study subjectively concluded that "a decrease in findings for the last two years of the study were likely due to the improvements brought about by growing and maturing safety management systems." The FAA's qualifying remark (see above) notwithstanding, the FAA said that the author's conclusion only applied to a two-year period, not enough time to be of conclusive value. That is, the determinate data may have been "accidently prejudicial." Amazingly, the FAA relies on the summary opinion of the thesis despite the fact that there is neither objective science nor good statistics to support the closing judgment.

The second case study cited in the NPRM is no better. It involved scheduled air carriers, not charter flying services, let alone single-pilot operators. Therefore, it has no place in the NPRM. Undeterred, the FAA incorporates misleading language to justify the study's presence. To quote the FAA: "The study concluded that the empirical evidence indicates that SMSs improve the safety performance of [all] commercial aviation operations." The FAA is using confusing language to manipulate the reader. "Commercial aviation operations" include full-blown airlines, large charter operations, single-pilot, and single-person operations. The study did not involve any of the latter three categories, only airlines. The FAA is saying, erroneously, that the conclusion of the study applies not only to the smaller group (airlines), but to the broader, much

more diversified group, as well. The logical error is twofold. First, group "A" is different from group "B;" the two are unrelated. Second, even if "A" benefits from SMS, it does not necessarily follow that "B" will benefit from SMS, even if "A" and "B" were related. Airline operations have nothing to do with on-demand flying services in terms of schedule, operation, maintenance, or management. The fact that the former may benefit from SMSs, does not incontestably mean that the latter will. The FAA's "grand conclusion" from the study is logically flawed; there is no obvious assurance that it is true.

I argue that the "empirical evidence" submitted in the FAA's NPRM to justify imposition of SMS programs on single-pilot operators in general, and SPOs in particular, is far from sufficient, nor is it convincing. The FAA's "evidence" provides no meaningful "statistical confidence factor" in support of the agency's theoretical operations evaluations and conclusions. In "the report" and in the two case studies as presented in the NPRM, accident/incident "cause and cure" are only hypothetically connected, remedies are distant and illusive, and SMS benefits are impossible to prove based on existing data. The end goal of questionable safety improvement has not been shown to justify the certain difficulty of the proposed administrative means.

Third, the NPRM makes unfounded fundamental assumptions about SPO operations, which undermine the integrity of the SMS's supposed benefits. Contrary to the basic tenant of the NPRM, variables are harder to control in a small business than in a large. The SPO's world is not static. An SPO's challenges are often unpredictable. The combined owner-manager-sole-pilot-operator can forecast one thing on paper but find that he has to do something else in the field based on evolving circumstances. SPOs do not operate "according to schedule" or narrowly defined business plans. Every situation is different. Paper projections cannot possibly anticipate every real-world circumstance. What-if-armchair-thinking is a useful and necessary training exercise, but it will likely be overridden by actual split-second decisions based on constantly changing realities that the SPO has to deal with on many levels. Every decision that the SPO makes is enormously interactive, in large part because he has no backup team. For this operator in the field, paper strategies, no matter how carefully conceived, can quickly go out the window. The safety of SPO operations largely depends on the SPO's agility and flexibility. It is impossible for a large governmental agency making static observations to grasp and predict the dynamic world of the SPO. Nor can a governmental agency force a SPO to predict his own world with any degree of meaningful specificity. The clash of cultures between these incompatible, scaled, operational modalities (big-picture forecasting versus micro-management) will likely produce frustration and futility.

Fourth, the NPRM does not adequately take into account other realities of a very small business. A SPO is a sole-decision-making-person (with maybe one or two office assistants for accounting, flight-following, advertising, etc. Paperwork has to be kept to a minimum because of the large volume of tasks the individual proprietor is required to perform. The SPO relies on FAA regulations and, in the case of Part 135 air carriers, very detailed Operations Specifications (which establish allowable dos and don'ts of service) to provide his real-world SMS. All authority and accountability rest on the shoulders of one individual, so the need for "communication between authorities" and "clarifications of understanding" is eliminated.

For SPOs, a SMS will never take the place of constant vigilance, awareness of overload, and a general safety-minded mentality, nor will a SMS help to supplement or enhance those qualities. A SPO, as a general rule, equates safety with simplicity. Therefore, a SPO will constantly be "kicking against the goad" of a SMS, because the thought process is too complex and restrictive for his operating environment. The SPO's emphasis will always be on flexibility, resourcefulness, and immediate correction, not vague, predictive, remedial matrices for situations SPOs have no intention of ever encountering or repeating.

Fifth, imposition of a SMS for single-person operators is impractical. It is redundant to ask a SPO pilot to brief himself on what he already knows to be the case. If he is not willing to face the facts as they obviously exist, no SMS will substitute for good decision-making.

Sixth, the maintenance requirements for a single-person operator can be effectively managed without a formalized SMS program. I manage two single-engine aircraft. My maintenance control consists of having four spreadsheets per plane. The first provides the current aircraft status, giving me an overview of all required inspections and when they are due. The second gives a breakdown of all likely and/or repetitive maintenance functions, when they were last accomplished, and when they are likely to be repeated. The third gives a list of all major aircraft components, their time in service, and when they are due for overhaul. The fourth is a list of all current Airworthiness Directives as they apply to each aircraft and the status of the ADs per plane. I also have a white board hanging next to my desk in the hangar which reminds me of upcoming inspections and component overhauls, itemized for each plane. As a single-person operator, I already have a complete, proactive, and retrospective analysis of my maintenance operations. A formal maintenance SMS will just get in the way.

Seventh, with respect to SPOs, the NPRM confuses form and function. Size, alone, does not limit operational oversight. In fact, regarding SPOs, the relationship between limited resources and quality of output is actually strengthened. SPOs must recognize from the outset the need for respect for regulations and the philosophy behind them. A SPO cannot "pass the buck" of responsibility to someone else. Besides, it is far easier and more profitable for the SPO to comply with what has been proven to work, than to experiment with risky practices. Had the several operators cited by innuendo in the FAA's NPRM for dangerous and reckless operations followed FAA regulations and Ops Specs in the first place, few (if any) of the accidents cited would have occurred.

Eighth, the "Scalability" section of the NPRM (Section V.F) is hollow and illogical for single-person small businesses. The Agency's "allowances" for small businesses' needs and practices are totally insufficient protection for SPOs. This is because the concept of "scalability" does not relieve the SPO from the burden of constantly redefining his ever-changing business model; from submitting to himself self-evident assurances of commitment to safety; from listing every possible physical or cognitive operation that might involve risk; nor from documenting self-generated safety procedures he has already mentally recorded. The FAA's "scalable allowances" provide no reprieve from requirements for the SPO to review mental self-monologues and update them on a regular basis either digitally or on paper. Nor does "scalability" relieve the SPO from having to share narrowly-applicable, proprietary, safety concepts with larger, not-operationally-aligned competitors and document the transfer of information at great cost of time -- time which

will be taken from other, more relevant, safety-related activities. The logic of an externally imposed, obstructive, obsessive, SMS cognitive process arguably makes no sense for single-person operations. The SMS thoughts-management program destroys an already finely-tuned mind-set that has to quickly adapt to complex, on-the-spot, ever-changing circumstances without any assistance from management personnel. The SMS program reprioritizes one's personal micro-operational decisions from the specific present to the vague future, and such pre-decisions are likely to be less than optimal. In short, the SMS program forces a set of big systems operating logic onto a small systems business model for which complex decision matrices are completely inappropriate.

Section V.C.5, "Documentation and Recordkeeping," of the NPRM says that "The documentation and records keeping requirements, like the rest of part 5, are designed to be scalable and flexible to accommodate a wide variety of business models and sizes." The actual wording of the proposed SMS rule, however, makes a mockery of this statement with respect to single-person operations. Nowhere is there relief for the smallest of operators from the burden of compliance. The SPO is still responsible to implement a full SMS program. To accomplish this, he would first have to develop an all-encompassing safety risk management policy, in which the SPO "organization" would have to document its overall commitment to safety and safety policy. To this end, the SPO would be required to implement (1) a safety risk management program, including a system description which would have to identify all the aviation operations that could possibly be affected by risk, an enormous and complicated undertaking just by itself; (2) a safety assurance program; (3) a safety promotion program; (4) a recordkeeping and documentation system; (5) a communications system with its one-person self and nonexistent "interfacing organizations;" and (6) a large dedicated file management system to store all the records. In fact, no amount of "scalability" can possibly lessen the weight of this administrative encumbrance on the back of a single-pilot/single-person operator. His business will be managerially "safety-crippled" before he can even take off.

The FAA appears to be callously indifferent to this reality. In section VII.B.4, "Projected Reporting, Recordkeeping, and Other Compliance Requirements," the FAA says, "Recordkeeping and reporting requirements, like the rest of part 5, are scalable . . . As a result, entities could potentially accomplish the recordkeeping and reporting requirements through the use of existing personnel rather than require additional professional skills." As far as the SPO goes, the FAA is hereby acknowledging that it is dumping the entire load of SMS management onto one person. As I have argued before, the unintended consequence will be to compromise the safety of the SPO's actual flight and maintenance duties. The FAA actually admits the potential destructive economic impact on SPOs by going on to say: "Although the proposed requirements are scalable to fit the size or complexity of the organization, any adverse impacts of compliance costs could disproportionately fall on small entities." Then the FAA adds insult to injury by blithely commenting that they do not care: "Like large entities, [however] small entities will likely pass the costs on in the form of price increases." This implies that the added workload of SMS on the SPO should not matter, because the operator will just increase his fares to cover his additional administrative responsibilities, as though the SPO has either the extra time for SMS management or the market elasticity in which to raise prices. The insinuated conclusion is that the FAA does not need to concern itself about the serious immediate damage that SMS will cause the SPOs' operations nor about the likely long-term demise of same. This attitude

flies in the face of Congressional concern for small business and the positive contribution these enterprises make to the economy of the Nation.

In summary, for SPOs, "scalability" provides no effective alternative means of lessening the burden of SMS compliance; so, scalability is a meaningless concept for them. The full brunt of SMS regulation will fall on SPOs, with no assurance of improved safety and no likelihood of consequential business survival. The application of "scalability" is merely "political and administrative cover" to get around obvious serious objections to SMS by small businesses.

Nineth, for all the above reasons, a mandatory SMS program for single-person operators is simply unnecessary, impractical, and harmful. It just gets in the way of the self-imposed preflight, postflight, and managerial briefing that every SPO conducts as a matter of course. A short sticky note placed on the instrument panel the night before a flight, or on a bulletin board after a trip, or on the front of a maintenance logbook serves very well as a safety reminder for SPOs in most instances. For SPOs, a good ongoing training program is far more important than speculative, detached, theoretical "planning" for unplannable circumstances.

Tenth, the NPRM does not take into account the FAA's own deficient role in accident prevention. Had the FAA directed its POIs and PMIs to conduct on-site inspections of operators in general over the last ten years -- in other words, had the FAA actually gone out and talked with small operators about the safety of their operations during the years under investigation -- the accidents cited in the NPRM might well have been avoided. Especially with respect to SPOs, it is generally recognized that the FAA is trying to substitute adherence to SMs procedures for the FAA's duty to get out in the field and see what operators are doing. The SMS program for SPOs has less to do with safety and more to do with justifying the fact that, since COVID, the FAA is mostly "working from home." Today, SPOs have very little hands-on guidance. This is especially true for Alaska and rural states. The SMS program will not fix this systemic shortcoming.

Eleventh, the requirement for SMS of single-person operators is contrary to existing FAA regulation. Part 135 specifically exempts SPOs from having to create an operation manual (OM). The SMS program is an obvious attempt by the FAA to get around this exemption, by demanding the same de facto level of documentation of operations by other means no less burdensome. By allowing the existing OM exemption, the FAA has already admitted that one size does not fit all, contrary to the basic tenet of the NPRM.

Twelfth, the SMS program for single-person operators might actually backfire on the FAA. A mandatory SMS program could theoretically increase the accident rate for SPOs, because it could easily distract a SPO from normal important duties. While trying to make real-world decisions, the SPO will likely give priority to covering his actions with his required SMS paperwork instead of making the tough, spur-of-the-moment determinations necessary for safety from moment to moment and day to day. No SMS can possibly be a substitute for real-world experience documented in the SPO's mindset.

Thirteenth, the FAA's analysis of the costs and impacts associated with SMS programs for all single-pilot operators is woefully callous and dismissive of the harm that will be caused. The

burdens of creating and managing an SMS program will put many single-pilot operators out of business. The FAA makes no direct reference to that possibility nor to the costs that the associated communities will suffer due to loss of service, revenue, jobs, and collateral investment. The FAA simply makes a very confusing comment in Table 3 that the "benefits [of not including SPOs would be] lower [because their exclusion from the program] would not mitigate risks identified in 5 part 135 and 91.147 accidents." In other words, the FAA is saying that if there is any benefit at all to single-pilot operators being in the SMS program, they should be included regardless of how many are put of business. The FAA's remedy is much worse than the mild affliction it is trying to cure.

I refer again to Table 3 in the Summary section (V11.A.4). The Table shows that there are a total of 594 Part 135 "single-pilot operators" in this country. According to "Alternative 2" in the referenced Summary section, the annualized cost to these operators for implementing the SMS program collectively will amount to $3,440,000 per year. Quoting from the first paragraph of the Regulatory Impact Analysis section of the NPRM, "The costs represent the value of resources needed for regulated entities to develop and implement a safety management system." This means that the annual cost to each such operator would be a staggering $5,724. Over ten years, that would come to $57,240. Over the twenty-some year average lifespan of a single-pilot operation, that would rise to $114,480! The SMS program is a crippling unfunded mandate for any small business entity.

In the real world, as the FAA is fully aware, economic considerations directly impact safety of operations. The cost of SMS implementation has to come from somewhere. The economic impact on the smallest of commercial flying services will be directly felt in maintenance, training, and equipment cutbacks. I fear that the Law of Unintended Consequences will rear its ugly head. Thus, contrary to the FAA's conclusion, I project that the resulting practical outcome of the SMS program for single-pilot operators in general, but especially for SPOs, will be negative; safety will take a backseat to paperwork management.

Fourteenth, imposition of SMS requirements on the smallest of businesses serves to unfairly favor the expansion of large flying services. Large businesses benefit from economy of scale unavailable to SPOs, who cannot handle the additional administrative costs of a SMS. The existence of SMS mandates becomes a competitive weapon favoring multi-pilot operations. The SMS program in essence recreates the big-government/big-business alliance that was so prevalent during the COVID years. I fear that the FAA is about to codify that dreadful experience.

Fifteenth, the FAA fails to draw a connection between the five evidentiary accidents, on which the agency bases its "need for action," and single-person operators. The SMS initiative for single-person operations cannot be justified on the basis of the FAA's evaluation of three inappropriate and nonapplicable accident records highlighted in the NPRM in Section V.A.1 (Part 135 Operators). Beyond these, the FAA cites only one additional aviator-caused accident (see Section V.G.2) that "might" have been prevented by an SMS program. However, that accident involved a multi-pilot operation and turbine-powered seaplanes, far different kinds of flights than pertain to tiny single-person operators. The fifth accident mentioned involved a maintenance-related mishap for presumably a multi-pilot, multi-person (the NPRM does not

specify to the contrary) helicopter sightseeing flying service, so neither does it directly and incontestably apply to SPOs. In fact, no attempt was made by the FAA anywhere in the NPRM to talk about the overall accident rate of single-person operators. The FAA presents no statistical evidence to show that there is reason to make any changes in the way that class of aviators should make their operating decisions. The real-world accident descriptions in the NPRM (in contrast to the "controlled" hypothetical illustrations presented later on in the NPRM) present no solid evidence that an SMS program would have prevented any of the accidents involving single-person carriers. In all such cases, the pilots concerned were obviously fully aware of the risks they were taking in operating their flights the way they did. Certainly, "communications issues," which underlie the rationale for the entire SMS initiative, were not the problem in the cited accidents of small businesses.

In reality example #1 (CEN18FA215), the PIC was operating his aircraft at a low altitude over a river. The pilot, it appears, flew into a set of low-strung power lines. The accident description leaves out a critical piece of information. Did the accident involve a fixed-wing aircraft or a rotorcraft? With regards to the application of a SMS program, it makes a big difference.

First, I will assume that the accident involved an airplane. The accident description does not say that the plane was flying over a canyon, so we can presume that it was not. The only way for the accident to have occurred would have been for the pilot to be flying lower than 500 feet above persons and structures, which the pilot would have known to be in violation of Part 135. FAR 135.203(a)(1) says that "Except when necessary for takeoff and landing, no person may operate under VFR [in] an airplane (1) During the day, *below 500 feet above the surface* or less than 500 feet horizontally from any obstacle; …" (emphasis added). The accident would have involved a significant violation of one or more of the FARs, including careless and reckless operation. The existence of an SMS program would have had no effect on the outcome of this flight. In support of the SMS initiative, the FAA says: "Specifically, the [operator's] risk control measures [of his SMS] might have established a minimum altitude above known or presumed obstructions." Assuming the mishap involved a plane, this remark would demonstrate a shocking lack of knowledge by those who drafted the NPRM of basic Part 135 rules. Based on the fixed-wing interpretation of the accident, the SMS program for the broad class of single-pilot operators would simply amount to obstructive double-regulation. There is, however, an alternative explanation for the crash.

The second possibility assumes a very different regulatory situation, where the accident might have involved a helicopter. In that situation, the regulations change drastically. FAR 135.203(a)(2) says that "Except when necessary for takeoff and landing, no person may operate a helicopter over a congested area at an altitude *less than 300 feet above the surface*" (emphasis added). This regulation gives the helicopter pilot an open invitation to fly low over a river, even below 300 feet AGL on a commercial flight, where it is highly likely that the helicopter will run into wires. I do not intend to argue the merits of the helicopter exemption compared to the fixed-wing rule, but the FAA is fully aware of the double standard regarding helicopters and refuses to address it. The solution to the problem is not to implement a complicated SMS program for all single-person fixed-wing operators, but to tighten the rotorcraft regulation so that at least commercial helicopter flights carrying sight-seeing passengers have to abide by the same rules as airplanes. To use the FAA's own logic presented in the NPRM, the same standard of safety rules

should apply to all classes of aircraft/operation. What is good for the goose should be good for the gander. Moreover, with regard to helicopters, the SMS program the FAA proposes would currently be self-defeating. Any safety-related improvement achieved by applying SMS requirements to helicopters would be negated by the FAA continuing to grant them permission to fly in an arguably careless and reckless manner in the first place. The FAA's policies lack consistency.

In any case, regardless of how the accident happened, it is evident that example #1 does not pertain to single-person operators. The FAA includes the following statement at the end of its accident evaluation: "In a small organization the operator [i.e., management] could communicate the [SMS] control (5.93) [decisions] to others in the organization face-to-face, via email, or other methods that the company regularly uses to communicate with its employees." This remark clearly implies that the accident cited above, in whatever form, occurred to a single-pilot, multi-person operation (MPO). The accident, therefore, whether fixed-wing or helicopter, has no relevance to SPOs, because communication for that class of operation would not have been an issue. Therefore, the accident should not be used to build a case against SPOs. The FAA implies, incorrectly, that the only single-person-operation solution for supposed safety improvement is inclusion of SPOs in a mandatory SMS program for all. In that eventuality, remedy would be unrelated to causal factors.

In reality example #2 (ANC18LA046), the accident was triggered by a single-pilot operator's decision to take off from an unsuitable airstrip in unfavorable wind conditions. This sounds like an Alaskan operation, where the FAA informally acknowledges that a "different set of de facto operating rules apply." We are not told in the NPRM, however, critical information that would confirm accident location. This is an important and perhaps deliberate omission. The FAA knows, and tacitly concurs, that taking chances is de rigueur in Alaska. Operating rules are much tighter in The Lower 48, so it is not fair to critique operations in the contiguous states on the basis of "permissible accidents" in the backcountry of the far north. Regardless, we can assume that the accident plane was underpowered for the existing environment, that the takeoff surface was undoubtedly very soft, and that the operator either knew or should have known these to be the case. The difficulty of a successful lift-off would have been obvious from observations made at time of departure. In fact, the single-pilot would have been fully aware of the chances he was taking even before he ever left home base, because the pilot was almost certainly flying a predetermined route that he had sold to his clients. It would have been clear to a single-pilot/single-person operator that the flight would require perfect, but unlikely, field conditions, which impediments would have needed to be compensated for by calling on the extra power/performance of a STOL plane. The FARs already require a high degree of preflight planning. An SMS program will not force a single-pilot/single-person operator to come to an obvious conclusion. Any pilot/operator in a bush-flying business (assuming Alaska) would have already known the limitations of his chosen "airstrip;" the chance of excessive winds; and the need for a very-high-performance airplane. The single-pilot, and especially the single-person operator, does not need an SMS to remind him of the risks he is facing or the possible alternative actions he could take; he lives with all this knowledge on a daily basis. Therefore, contrary to the FAA's conclusion, a SMS program, even if implemented, would have been ineffective in preventing the accident cited.

At the end of reality example #2, the FAA repeats a confusing statement also made at the conclusion of example #1. The agency says, "Similar to the previous example, the operator [i.e., management] could communicate (5.93) the [SMS] control [decisions] to others in the organization face-to-face, via email, or other methods that the company regularly uses to communicate with its employees." Again, this comment implies that the accident involved a single-pilot, multi-person business (MPO), so it is irrelevant to the single-person operator. This deficiency of argument needs to be recognized because of the prejudicial impact on the smallest of flying services where communication between pilot and management is not a problem by definition.

In reality example #3, a pilot flying in Alaska made a bad decision to reverse course in a deep valley by turning towards terrain that was "higher-than-expected, while trying to avoid poor visibility conditions." The FAA includes this write-up in a series of accident reports that were to include only single-pilot operations. However, this was, in fact, a multi-person business (MPO) involving, presumably, a Director of Operations (DO). We know this because, in the last sentence of the description, the FAA says, "Similar to other examples, the operator [DO] could [have] communicate[d] the control [of accident-avoidance measures] to others in the organization [namely, to the pilot] face-to-face, via email, or [by] other methods that the company regularly uses to communicate with its employees." This analysis of the need for SMS obviously does not apply to single-person operations (where communications, once more, is not an issue), so the accident is, yet again, irrelevant to the FAA's argument for SMS application to the smallest of flying services. In any case, basic pilot mountain-flying training would have averted the accident in the first place. Specialized operational training would normally predate creation of a SMS program, being unquestionably essential to the safe conduct of business, whereas the value of SMS is debatable. That is, proper flight training for known existing conditions is even more basic than the supposed need for SMS in hypothetical situations. In the present case, the FAA is trying to get ahead of its own regulations, putting the cure (SMS) before the disease (lack of training/situational awareness). The logical necessity for SMS fails in this situation, both specifically -- because lack of mountain-flying training was the root cause of the accident, not communication procedures -- and generally, because SPOs, as I have said so often, have no need for a self-communication system (e.g., face-to-face discussions with mirrors or self-addressed return emails). For SPOs, training and situational analysis are basic keys to safety.

In reality example #4, the June 25, 2015 accident occurred, yet again, in Alaska, in the vicinity of Ketchikan. It involved a single-engine, turbine-powered, float-equipped airplane, operated by a multi-pilot, Part 135, air tour business of considerable experience. The pilot of the air tour apparently got caught in the bottom of a fjord, in mountainous terrain, and in a bad storm. It appears that, due to poor visibility, the pilot prematurely identified his location in the mouth of the canyon and turned too soon to the west, climbing under IFR conditions into a ridge.

I personally followed the accident-reporting process from the day the mishap happened to the issuance of the NTSB final report. I came up with a list of 20 issues, any one of which, had it been properly addressed, could have prevented the accident. As a SPO, I constantly use my analysis of this accident to make sure I don't get caught in the same kind of trap. The problems associated with "unexpected weather" and implementation of escape tactics are germane to all

levels of flying services, but the particulars leading up to example #4, again, as in the previous examples, apply neither specifically nor generally to single-person operations.

The accident was an obvious tragedy on all levels. And there is much to be learned from it. However, in context of my current objections to the SMS program as relates to all single-person operations, the accident has little relevance. The Ketchikan accident happened primarily because, according to the NPRM, "management did not hold themselves accountable for conducting safe operations and fostered a company culture that condoned operating in weather conditions with inadequate visibility for visual flight." Such managerial indifference is about as bad as it gets.

No SMS can correct for flagrant disregard of safety. Management probably held their "detached" attitudes because their company had come out of hard times early in the flying season and so the Dir of Ops was likely more concerned about the bottom line than safety at the immediate time of the accident. It is likely, too, that because the DO was not personally piloting the DH-6 aircraft, he probably had a lax attitude. Both explanations for launching could, theoretically, apply to SPOs while their planes are snugly stored in a hangar, safely removed from the elements, but the decisions by SPOs to actually fly are self-correcting once out in the field.

A SPO will go through hard times, just like the multi-person operator, but there is this difference: the SPO is dealing with his own money. He is not going to risk a $1.5 Mil. aircraft on a $1500 flight in marginal weather. It makes no sense based on risk/return analysis. On the other hand, the non-aircraft-owner pilot might well decide to fly (as in the present instance), using his "superior" skills, in order to earn a paycheck. Peer pressure by other pilots in the flight-of-five over Misty Fjords would also have been an obvious possibility. The FAA fails to notice that neither of these factors would be present in single-person operations. In fact, the conclusion from the accident is just the opposite for the SPO.

The circumstances of the Director of Operations' erroneous decision to launch the above flight actually work strongly in favor of the safety of single-person operations. The SPO is on board every flight; it is his neck that is on the line if he has an accident. For him, there is no amount of revenue he could earn on a flight that would compensate him for an accident. I have observed that a SPO, facing inclement/dangerous weather, will be the first to cancel a trip, even before his passengers.

There are two other issues to the Ketchikan accident that the FAA did not address, which would have very likely prevented the accident without a cumbersome SMS program. First, had the FAA's Primary Operations Inspector (POI) for the air tour operator gone to Ketchikan and talked first person with the pilots and management on a regular basis, the NPRM's post-accident observations of deficiencies would have been immediately apparent before the mishap. The POI could have observed operations over several days, knowing that the operator was, of necessity, routinely flying in marginal weather in that particular location, famous for its rapidly-changing weather and poor visibility (wherefore the name, "Misty Fjords"). From what I have put together from reading countless reports and watching on-screen videos, this FAA surveillance did not happen.

Second, had management insisted on every pilot having his own personal hand-held GPS, as a backup to a very sophisticated but somewhat complicated onboard GPS system, with preprogrammed emergency waypoints entered, the accident might also have been avoided. In a high-stress situation, having immediate access to a preplanned, personal escape strategy might have saved many lives. I have a similar backup system on board my air tour planes. Management could well have afforded to give a GPS to every pilot for well under the yearly cost of a SMS program today. For financial reasons, however, a SMS program will now make a simple solution like this a practical impossibility in the future, because of diversion of revenues towards administrative costs associated with SMS implementation and management.

In short, the Ketchikan accident has little relevance to a single-person operation, but the NPRM is highly prejudicial in the way it presents the occurrence. The general lessons apply to all operators, but the FAA's generalized "cure" does not.

Reality example #5 is interesting. It involves maintenance. An air tour helicopter went down off the coast of Hawaii because of the in-flight failure of the engine-to-transmission drive shaft. The NTSB determined that the probable cause was improper maintenance. No certified A&P mechanic had recently been present to supervise the helicopter maintenance and there was no logbook signature to certify completion of a 100-hour/annual inspection. Also, several required component inspections were overdue.

The above accident involves violation of so many FARs that time and space do not allow for detailed analysis. This flagrant disregard for regulations was undoubtedly not the first of its kind for the operator. The accident almost certainly involved a multi-pilot, multi-person operation (MPO), because a SPO would have been far more careful with his own equipment. As previously illustrated, SPOs already have maintenance status boards/spreadsheets that are readily available to pilot and mechanics. The SPO would have been aware of the operating deficiencies long before the accident, because of his direct control of the business. In any case, no amount of SMS preparation is going to prevent deliberate abuse of regulations.

Undeterred, commenting on accident #5, the FAA obtusely and inappropriately concludes that "The evidence [that would be] created through [a] SMS would help the FAA to identify safety-deficient organizations more effectively." This all-too-abbreviated conclusion reveals a deeper FAA intent. The SMS program is really an attempt by the FAA to prioritize management of flying businesses in general on the basis of "demonstrated need." The problem is that the FAA does not want to spend more than minimum time or money overseeing small businesses. The FAA's cryptic "code talk" just quoted is basically an admission that the FAA is presently not conducting field investigations of many small operators; that the agency intends to limit such field trips even more in the future; and that FAA personnel believe they can work "more efficiently" micro-managing single-pilot operations by means of SMS without leaving home or office. The errant policy and the already apparent results thereof speak for themselves.

In summary of my observations of the five accidents cited by the FAA, 60% of them inappropriately involve Alaskan operations, not flights in The Lower 48; 100% incorporate multi-person businesses (MPOs), not SPOs; and each indites operators who appear to have

attitude problems that could have been detected and addressed by adequate FAA field surveillance. I submit that these are exceptional accidents that the FAA cites, not the norm; the FAA presents no convincing evidence to indicate otherwise. Quoting from Section III, we only have the FAA's "assurance" that, from 2015 to 2019, an unidentified total of 39 fatal accidents (35 under Part 135 and 4 under Part 91.147) have been pinpointed that "could have been mitigated had those operators implemented an SMS." My analysis of the five "showcase accidents" presented in the NPRM makes disturbing revelations to the contrary. The FAA's wording should have read, "*might possibly* have been mitigated . . .".

Moreover, the FAA admits in various places throughout the NPRM that there is no certainty of outcome for the SMS program. For example, in Section VII.A.4, "Summary" [of Regulatory Impact Analysis"], the FAA says, "However, the breakeven analysis is limited for providing insight on the relationship of benefits and costs because net benefits will also depend on the magnitude of mitigation costs, [both of] which have not been be quantified, *due to lack of data"* [for the whole SMS proposal] (emphasis added). This is a stunning admission, buried deep within the NPRM. For all these reasons, the actual accident-based case the FAA makes for applying SMS mandates to single-person operations is completely unsubstantiated and "underwhelming."

Sixteenth, the SMS proposal is ripe for "regulatory creep." The new regulation being put forth by the NPRM would be unlimited in size by virtue of its vagueness, opening the door to all sorts of "piggyback" add-ons. The SMS requirements for broad inclusivity, detailed application, and demonstrated effectiveness will ultimately extend far beyond the original stated intent of "voluntary" internal SMS programs and will go way beyond the compliance capabilities of single-pilot and/or single-person operators.

The "big slide" has already started. In Section III of the NPRM, the FAA says, "To date, SMS requirements have mainly focused on internal identification and mitigation of risk within an organization." Then comes the nose of the camel under the tent. "However, the FAA is [now upping the requirements by further] proposing to augment these requirements to encourage a more collaborative approach in which persons required to have an SMS share hazard information with each other and work together to identify and address hazards and safety issues." The expanded regulation would require all businesses, regardless of size, "to share hazard information with other organizations to enable a network of organizations working collaboratively to manage risk . . .". Such grand illusions are unworkable for SPOs.

Only big government could come up with proposals like this, which would immediately change the entire scope and character of both single-pilot and single-person operations. The mandate for "cooperative communication" would require a full-time employee dedicated to "communication" and "cooperation" alone. The overzealous sharing requirement by itself would put most small flying services out of business. Moreover, a federal agency cannot dictate the willing speech of a private individual, nor can it interfere with or impose business/contractual relationships. With respect to SPOs in particular, the proposed and projected SMS "augmented requirements" in toto are seen to be already highly unreasonable, with no assurance of any future regulatory constraint.

Seventeenth, the requirement for SMS documentation by small businesses flies in the face of the Paperwork Reduction Act. This Act "requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public." In its NPRM the FAA does not provide evidence of any proven benefit to SPOs for SMS mandates and dismisses the burdens thereof. The FAA simply and conveniently ignores the intent and substance of the Act, saying, in effect, that potential safety gains for all businesses, regardless of size, outweigh actual paperwork encumbrances. This administrative "sleight of hand" is totally transparent in the NPRM, does not fly well with SPOs, and is statutorily unacceptable justification for hardship.

Eighteenth, the proposed Safety Management System regulation for single-person operators constitutes massive agency overreach. There are far simpler and more effective ways to accomplish the same safety-enhancing goals. For SPOs, a simple check of "sticky notes" relating to a flight, viewed in the office a day or two or immediately before takeoff, would suffice. An ongoing review of accident studies involving all single-pilot/single-person operators would also be beneficial, but the FAA has put together no such database.

Nineteenth, despite insinuations by carefully-crafted FAA wording in the NPRM, there is no move in Congress to require SMS implementation for single-pilot flying services, let alone single-person operators. The reference to the Aircraft Certification Safety and Accountability Act (Pub. L. 116-260, 134 Stat. 2309) applies only to holders of both a Type Certificate (TC) and a Production Certificate (PC) issued under Part 21, as a result of a Boeing 737 Max accident. That Act has nothing to do with the flight operations of small businesses. The FAA is overreacting to a congressionally-mandated "need for action" that is irrelevant to SPOs.

Twentieth, the rules of IATA have little to do with either single-pilot or single-person operations in the United States. The FAA says in its NPRM opening "Summary" statement (paragraph one of the document) that the requirement for the SMS program is necessary in order to "more closely align the FAA's SMS requirements with ICAO Annex 19." In Section III, the FAA expands upon this argument in favor of SMS for all operators, saying, "With an SMS, a U.S. company would have an improved ability to operate internationally due to better alignment with ICAO standards and recommended practices." Furthermore, the FAA says, "a U.S. company without an SMS could even be barred from doing business in a country where the civil aviation authority requires them to have an SMS." The all-encompassing logic is too inclusive and misapplied, serving as a red herring. None of this necessarily pertains to single-pilot/single-person businesses.

These "justifications" ring hollow when applied to single-pilot/single-person operations that are specifically limited by their Operations Specifications to conducting flights solely within the USA and, in rare instances, Canada and Mexico. Tourism is international, but single-pilot/single-person operators in this Country are rarely flying internationally, unlike the situation in Europe. Those that do fly across our borders may need a SMS, but I doubt it because of the necessarily limited size and scope of operations; at most they may do short hops with limited passengers into Canada or Mexico. As for Europe, the European Union has its own problems; the United States does not need to import the EU's self-limiting regulatory constraints. Furthermore, I know of no single-pilot/single-person operation that is flying from this Country to Africa, Australia, or New Zealand. The size and scope of such operations generally already

preclude ICAO concerns. For these very small operators, the issue of "harmonization with international standards" is false argument.

Twenty-first, with respect to single-pilot operators in general, including single-person operators, the recommendations of the two Aviation Rulemaking Committees (ARCs) that the NPRM cites are largely inapplicable and misleading. The FAA says in its NPRM that it is acting on the advice and consent of two ARCs composed of "industry stakeholders," including "individual companies and associations representing operators, design and manufacturing organizations, repair stations, and training organizations." Notably missing is any mention of inclusion of single-pilot/single-person operators and/or small air tour businesses, both of which categories will be highly impacted by implementation of SMS requirements. The FAA is implying that it has the consent of these segments, whereas the opposite is the case. It is almost certain that the FAA never took the first-person testimony of single-pilot/single-person operators into account before drafting the agency's incredibly complicated NPRM. The FAA reported, but evidently ignored, that the first ARC "expressed concern regarding the potential impact of SMS requirements on small business." Moreover, the FAA also reported, and seemingly ignored, that the first ARC favored slow, phased-in implementation of the SMS program "based on the potential safety benefit, as well as industry experience and regulatory oversight readiness." In my opinion, all these concerns have not been adequately resolved. The FAA's NPRM is far too inclusive and its timeline for implementation is far too short to allow for phased-in experimentation and improvements.

Twenty-second, the FAA misinterprets its mandate to regulate safety by taking it to the extreme in the SMS program. As already discussed, the subject of SMS for single-pilot/single-person operators has not even been considered by Congress; it is an initiative solely concocted by the FAA.

In self-defense of this anticipated criticism, the FAA quotes 49 U.S.C. 44701(d)(1)(A) (the Act), which says "When prescribing a regulation or standard under [49 U.S.C. chapter 447], the Administrator shall consider the duty of an air carrier to provide service with the highest possible degree of safety in the public interest."

I argue that SPOs are already meeting this standard of delivery of service. More importantly, I submit that the FAA misinterprets the statute's wording twice over. First, "highest possible degree of safety" does not mean "hypothetical level of perfect performance;" it means "provide the safest available transportation possible under the circumstances." SPOs already meet this standard. Second, the phrase, "in the public interest," does not mean "in the public interest *most narrowly construed*" or "in the public interest *without regard for administrative burden*." Safety, performance, and administrative workload must all be balanced together to achieve what is "in the *greatest, overall,* public interest." The framers of the quoted Act intended for the phrase in question to be broadly interpreted, taking into account what the public wants, what is theoretically possible, what is immediately doable, what is managerially feasible, and what is affordable by society, collectively considered. At the very least, the Agency's interpretation of the Act fails the test of reasonableness with respect to the smallest of businesses and the regions they serve. It is never "in the public interest" to unilaterally and arbitrarily destroy a whole segment of industry that is constructively meeting the needs of "the public" while doing no harm.

It appears that the FAA, in the name of artificial safety-related concerns, is heading towards exercising total control over free enterprise/commercial aviation rather than allowing reasonable individual expression of business operations.

Twenty-third, the FAA does not (yet) have the authority by Act of Congress to implement a proactive regulatory initiative for Part 135 and 91.147 operators. The Airline Safety and Federal Aviation Administration Extension Act of 2010 only mandated that the FAA conduct rulemaking to require Part 121 operators to implement SMS. The Act said nothing about operators certified under Part 135 and 91.147. Additionally, the Aircraft Certification, Safety, and Accountability Act of 2020 only required manufacturers that hold both a TC and a PC to have SMS programs.

It is blatantly false, then, for the FAA to say, under Section II of the NPRM, titled "Authority for This Rulemaking," that the Agency has "clear Congressional support for SMS" as the phrase might be applied to nonscheduled air carriers. Furthermore, Congress has never changed the charter of the FAA to include hypothetical safety-related issues; the FAA is only charged with addressing real problems. Despite stretching Congressional wording to the limits of credibility, the FAA has no explicit authority to start regulating "proactively" instead of just "reactively," for then the Agency would be out of Congressional control. The FAA has not pointed to a single place in the above cited Acts where Congress even uses such controversial vocabulary (i.e., "proactive regulation,") let alone regulation policies based thereon, in relation to small businesses, because the activities of micro-enterprises cannot be precisely defined, anticipated, or controlled. In its own words, "The FAA is proposing to use its [sole] discretion . . . to proactively extend SMS requirements to Part 119 certificate holders . . . and LOA holders . . .". The FAA is, thus, acting outside of the law with its proposed NPRM for all air carriers, at least until Congress clearly instructs it to proceed. Regardless, in my opinion, if Congress does so instruct, it is highly probable that it will exclude single-pilot/single-person operations from the SMS mandate for all of the reasons cited in this letter of objection.

Twenty-fourth, in conclusion, my recommendation to exclude single-pilot/single-person operators from SMS requirements is correct because these operators already satisfy all of the FAA's regulatory objectives. In Section V.A.1 of the NPRM the FAA says, in summary of the main philosophy behind the initiative, "SMS is necessary for safety of air transportation generally because anyone who engages in air transportation must understand the hazards associated with their operation, effectively assess the risks, and understand how to mitigate those risks." I have painstakingly addressed each of these concerns in the operations of combined single-pilot/single-person businesses, documenting how they meet and exceed the goals of each above-stated objective, plus many more.

The imposition of SMS for combined single-pilot/single-person operators is unrealistic, and the projected workload is unwarranted. The FAA makes the claim in the NPRM, Section V.A.1, that "Irrespective of whether an operator employs one pilot or a thousand, that company has the same responsibility to conduct safe operations." This may be true, but it is *not* true that both the very large and very small businesses achieve safety *in the same manner*. They can be equally proactive in very different ways as fit the type and nature of their operations. Extensive documentation may be required of the former, whereas an attitude of alertness to changing operational circumstances may be the safety-imperative for the latter. No SMS program is going

to save the pilot who insists on flying into deteriorating weather in order to achieve an operational objective. Nor will an SMS protect the operator who knowingly disregards sound maintenance practices. Most accidents happen to single-pilot operators of all kinds because the pilots assume that they are superior in skill to their peers, that they can make a one-time exception to the rules, and that accidents can't happen to them. No SMS will fix these mindsets. Only safety counseling will help a SPO. . . but, alas, the FAA no longer seems willing to perform that function.

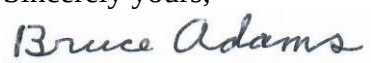
This leaves the SPO ultimately on his own, where he has always been, squarely facing reality and addressing it immediately. His responsibilities cannot be diminished, delegated, dismissed, or deferred, all of which means his ever-present vigilance and accountability. This reality fully meets the mandates of 49 U.S.C. 44701, which directs the Administrator to "carry out this chapter in a way that best tends to reduce or eliminate the possibility or recurrence of accidents in air transportation."

Ultimately, the FAA's SMS NPRM fails to pass the requirements of the Regulatory Flexibility Act (RFA). This Public Law, addressed in Section VII.B of the NPRM, "requires Federal agencies to consider the effects of the regulatory action on small business and other small entities and to minimize any significant economic impact." I have submitted abundant data, supporting information, and argument to document the inherent inadequacies and misapplication of the proposed SMS regulations for SPOs. Although the FAA will tend to come to a different summary conclusion regarding general *potential* applicability of SMS, based on regulatory self-interest, the *actual* facts that I have presented are indisputable with regards to single-person operations. In drawing up the NPRM, the FAA never considered either the existence of a single-person class of commercial operators nor the impact of the regulation on them both economically and managerially. Thus, the NPRM fails for not meeting significant statutory requirements of the RFA with respect to small business in general and SPOs in specific.

I thereby request that the FAA withdraw the category of "single-person operator" from the proposed Safety Management System initiative.

Thank you for your kind consideration.

Sincerely yours,



Bruce Adams