UNITED STATES OF AMERICA
CIVIL AERONAUTICS BOARD
WASHINGTON, D. C.

Civil Air Regulations Amendment 60-11
Effective: September 11, 1958
Adopted: August 7, 1958

AIR TRAFFIC RULES

VFR WEATHER MINIMUMS

Minimum weather conditions for operation under the visual flight rules are contained in Part 60 of the Civil Air Regulations.

Civil Air Regulations Draft Release No. 57-27, dated December 10, 1957, contained several proposed amendments, one of which advocated certain increases in the minimum VFR weather criteria. This amendment introduces the terms "basic" and "special" VFR flight but leaves unchanged the existing VFR weather minimums with the exception of the one-half-mile rule for VFR flights which is eliminated. Of the other proposals in this draft release, final rules on cruising altitudes were adopted by the Board on June 6, 1958, final rules on the height of the control floor are imminent, and further action on the instrument take-off and landing minimums has been deferred pending additional study. All of these proposals were based on the comments received in response to Civil Air Regulations Draft Release No. 57-11, dated May 23, 1957, and the discussions at the Air Traffic Rules Conference held in Washington, D. C., in June 1957.

The proposal concerning minimum weather conditions for VFR flight contained essentially four elements: (1) an increase in the ceiling and visibility minimums to 1,500 feet and 5 miles for uncontrolled flight in the control zone of a designated high density airport; (2) the prescription of one mile as the irreducible visibility minimum for all VFR flight; (3) the introduction and use of the terms "basic" and "special" VFR weather minimums; and (4) the increase to 5 miles of the visibility minimums for acrobatic flight.

Fundamentally, the objective in the proposal on VFR minimums was to determine if the chances of collision between aircraft operating under the see and be seen concept would be reduced if these minimums were raised.

In substance, the proposals and the supporting explanation were as follows: It was contended on the one hand that the currently prescribed minimums do not account for the considerable increase in the speeds of aircraft. Increasing the VFR minimums, it was maintained, would insure greater visibility during VFR operations which would enhance the pilot's ability to avoid a collision. This would have the collateral effect of requiring more aircraft to be operated under instrument flight rules which would result in separation being provided by air traffic control in a greater number of operations and, accordingly, would reduce the collision potential.

On the other hand, the view was expressed, particularly by the general aviation segment, that an over-all increase of the minimum VFR weather criteria would unnecessarily and unduly restrict a vast amount of flight activity. It was contended that the absence of an IFR capability on the part of a large number of pilots and/or airplanes coupled with the number of times that the weather conditions would be below the proposed minimums for VFR flight would seriously limit the utility of the airplane.

The principle of "see and be seen" in the air traffic rules of Part 60 dealt principally with the meteorological conditions which affect a pilot's ability to observe and avoid other aircraft. These conditions are expressed in terms of visibility and distance from clouds minimums. For some time, however, it had become increasingly apparent that speed and terminal traffic congestion conditions directly affect a pilot's ability to observe and avoid other aircraft and, accordingly, had to be considered in addition to weather conditions in the continued development of the air traffic rules.

Accordingly, it was proposed that the ceiling and visibility minimums for uncontrolled flight in the control zone of a designated high density airport be increased to 1,500 feet ceiling and 5 miles visibility.

It was also proposed to amend §§ 60.30 and 60.31 to provide for certain "basic VFR" weather minimums in the former and "special VFR" weather minimums in the latter section. It was expected that this arrangement, coupled with the chart set forth therein, would make clear which rules apply in a given operational circumstance. The term "basic VFR" weather conditions refers to those minimum weather conditions required for VFR flight below which all airplanes must be operated in accordance with the instrument flight rules. There is one exception to these basic minimums and it concerns VFR flight operations in control zones. While control zones ordinarily have basic minimums of 1,000 feet ceiling and 3 miles visibility, these minimums can be reduced provided a special clearance is obtained

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from air traffic control. This special exception is designed to permit VFR aircraft to transit to or from uncontrolled airspace where the minimum visibility is one mile. This one exception to the basic VFR minimums is referred to as "special VFR." The minimum weather conditions for "special VFR" flight currently require that the flight remain clear of clouds and that the visibility be at least one mile, except that the visibility may be one-half mile if the restriction to visibility is due to a local surface restriction such as smoke, dust, or blowing snow or sand, and if all turns after take-off and prior to landing and all flights beyond one mile from the airport boundary can be accomplished above or outside the area so restricted.

It was proposed to delete the one-half-mile provision since any flight operation conducted in visibility conditions of less than one mile was considered to be unsafe unless the pilot is able to maintain the attitude and direction of the aircraft by reference to instruments.

Finally, it was proposed to increase the flight visibility value from 3 miles to 5 miles for acrobatic flight in § 60.16 (c) to provide pilots with additional opportunity to see and avoid other aircraft.

It was clear from the comment received on the draft release that the lines were drawn sharply on this highly controversial issue of appropriate VFR weather minimums. Briefly stated, the airmen from the professional segments of aviation concurred with the proposal, although some thought that it did not go far enough, while the non-professional segments vigorously opposed any increases in the VFR minimums. Reasons given in support of the respective positions were essentially as received in earlier considerations of the problem, and which are detailed above. Persuasive arguments were advanced by the general aviation segment that no case could be made for the proposition that accidents would be reduced materially if VFR weather minimums were increased since accident statistics clearly showed that mid-air collisions were occurring in relatively clear weather. The Board has confirmed this through an extensive analysis of its civil accident and near collision statistics. One finding is particularly telling: 98 percent of all mid-air collisions in the past 10 years have occurred in weather conditions exceeding 3 miles in visibility - the other 2 percent have occurred in visibility conditions of about 3 miles.

The position of the proponents of increased minimums, and the one pursued in the draft release, is, of course, valid. It is indisputable that some safety advantage would accrue were the minimums to be raised since fewer aircraft would be authorized to operate in given airspace and, accordingly, collision potential would be reduced.

The question which the Board must decide is how much safety will be increased by raising the VFR weather minimums and at what price to the users of the airspace. Based on the evidence available, the Board concludes and the Administrator agrees that the advantages to be gained by adopting the VFR weather minimums rules as proposed are not sufficient to justify the impairment of the public right of freedom of transit in air commerce through the navigable airspace of the United States. Accordingly, with the exception of the one-half-mile rule discussed below, established VFR weather minimums will not be changed. This conclusion should be construed only as a finding that under existing conditions raising the VFR minimums for acrobatic flight and in high density areas will not materially assist in the separation of traffic in VFR conditions under the see and be seen principle. It does not mean that other measures should not be taken to give greater effect to this principle.

It is considered that other rules in being or under consideration will materially reduce the chances of mid-air collision. Among these are the limitations on air speed and communication requirements in the high density airport regulations; the inauguration of all-weather positive control routes at higher altitudes where high speeds reduce the time to see and avoid other aircraft; the simplification of the cruising altitude rules which give greater assurance of separation between cruising IFR and VFR traffic; the increased conspicuity of aircraft by use of high intensity lights and highly luminescent paints; the use of standard pressure altimeter settings at the higher altitudes; the establishment of uniform traffic patterns for all airports; and the extension of speed control to require all aircraft operating in excess of certain speeds to be flown in positive control airspace or in other airspace suitable for such operation.

One other point bears emphasis in explaining the Board's position on VFR minimums. As mentioned, the accident and near-miss records available to the Board indicate clearly that decreased visibility has not been a significant factor in mid-air collisions. For this reason, the Board is compelled to reject a proposal which would increase minimum visibilities in such a manner as to affect all aircraft equally. However, the Board is cognizant of the logical relationship between air speed and minimum visibility. It is no accident that the proponents for increased minimum visibility are typically those who operate faster aircraft, whereas persons who have expressed strong disagreement with such proposals are typically operators of slower aircraft. Rather than pursue an arbitrary increase in visibility minimums on the basis proposed in the draft release, the Board has under consideration an amendment of the air traffic rules which would relate visibility minimums to the air speed of the aircraft. Such a proposal gives promise of avoiding the principal adverse effects of high-speed

aircraft operations under conditions of low visibility without imposing onerous restrictions on operations in which justification for such restriction has not been found to exist.

In reconsidering the provision which allows VFR flight in one-half-mile visibility, the Board has carefully evaluated the original purpose of the provision. It was intended that the one-half-mile exception would provide flexibility to VFR flight operations so that when the weather conditions were generally good, but the visibility was restricted because of some local conditions, aircraft could depart and arrive at an airport VFR. It was generally contemplated, however, that in local weather conditions of such reduced visibility only pilots having the ability to fly on basic instruments would attempt such operations.

The Board has deleted this one-half-mile exception because this provision is an air traffic rule of Part 60, which is applicable to all pilots, and the flexibility inherent in the rule can be exercised by each and every pilot. While there are many pilots who could utilize this flexibility safely because they have the ability to conduct flight without reference to the ground, there is a much greater number of pilots who might be induced to attempt such flight who do not have the ability to fly on instruments. Therefore, the flexibility provided by the rule might unwittingly induce operations by pilots not capable of safe flight in such reduced visibility. In addition, the Civil Aeronautics Board has already established by regulation the principle that in uncontrolled airspace, a minimum of one-mile visibility is necessary in order that a VFR pilot may properly control the attitude and flight path of his aircraft by visual reference to the ground, and that he may be able to avoid collision with terrain or other surface obstacles. The fact that a VFR pilot may be operating in a control zone, rather than in uncontrolled airspace, does not justify a departure from the basic principle that one-mile visibility is needed to operate an aircraft safely without reference to instruments.

Comment on the revision in format in §§ 60.30 and 60.31 to provide for certain "basic VFR" in the former and "special VFR" in the latter was almost universally favorable and the Board considers it advisable to amend the sections as proposed in order to give a clear presentation of the specific rules which apply in a given operational circumstance. This particular format has been used successfully by the Department of Transport in prescribing the Canadian air traffic rules and in part by the military services in promulgating military air regulations. It is also utilized in the ANC air traffic control manual of the Civil Aeronautics Administration.

Interested persons have been afforded an opportunity to participate in the making of this amendment (22 F.R. 9868), and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, the Civil Aeronautics Board hereby amends Part 60 of the Civil Air Regulations (14 CFR Part 60, as amended) effective September 11, 1958.

1. By amending § 60.30 to read as follows:

60.30 Basic VFR minimum weather conditions. Except as provided in § 60.31 aircraft shall not be flown VFR in weather conditions below those specified herein.

(a) Clearance from clouds.

(1) In controlled airspace. Aircraft shall not be flown VFR less than 500 feet vertically under, 1,000 feet vertically over, and 2,000 feet horizontally from any cloud formation, except that in the continental control area, aircraft shall not be flown VFR less than 1,000 feet vertically and one mile horizontally from any cloud formation. Aircraft shall not be flown VFR within a control zone when the ceiling is less than 1,000 feet.

(2) Outside controlled airspace. When at an altitude of more than 700 feet above the surface, aircraft shall not be flown VFR less than 500 feet vertically under, 1,000 feet vertically over, and 2,000 feet horizontally from any cloud formation. When at an altitude of 700 feet or less above the surface, aircraft flown VFR shall be flown clear of clouds.

(b) Visibility within controlled airspace.

(1) Control zones. When the flight visibility is less than 3 miles, no person shall operate an aircraft VFR in flight within a control zone. When the ground visibility is less than 3 miles, no person shall take off or land an aircraft or enter the traffic pattern of an airport within a control zone.

(2) Control area. When the flight visibility is less than 3 miles, no person shall operate an aircraft VFR in flight within a control area.

(3) Continental control area. When the flight visibility is less than 5 miles, no person shall operate an aircraft VFR in flight within the continental control area.

(c) Flight visibility outside controlled airspace. No person shall operate an aircraft VFR in flight when the flight visibility is less than one mile. However, helicopters may be flown at or below 700 feet above the surface when the flight visibility is less than one mile, if operated at such reduced speed as to give the pilot of such helicopter adequate opportunity to see other air traffic or any other obstruction in time to avoid collision.

NOTE: The minimum weather conditions prescribed in this section for flight in controlled airspace are those within which a pilot is expected to be able to observe and avoid other air traffic. When operating in weather conditions equal to or above those specified herein, irrespective of the type of flight plan an aircraft may be operated under, i.e., IFR or VFR, the primary responsibility for the avoidance of collision rests with the pilot. It should be recognized that the criteria contained herein prescribe the "minimums" required for VFR flight. Good operating practice requires that regular or continued flight in near minimum weather conditions be avoided.

2. By amending § 60.31 to read as follows:

60.31 Special VFR minimum weather conditions in control zones. When a clearance is obtained from air traffic control, aircraft may be flown VFR within a control zone when the weather conditions are below the basic minimums specified in § 60.30 subject, however, to special weather minimums as follows:

(a) Visibility. When the flight visibility is less than one mile, no person shall operate an aircraft VFR, other than a helicopter, in flight within a control zone. When the ground visibility is less than one mile, no person shall take off or land an aircraft VFR, other than a helicopter, at an airport within a control zone.

(b) Clearance from clouds. No person shall operate an aircraft VFR in flight within a control zone unless clear of clouds.

NOTE: With respect to this section, an air traffic clearance obtained under these provisions does not constitute authority for the pilot to deviate from § 60.17 or any other applicable provision of the Civil Air Regulations.

(Sec. 205 (a), 52 Stat. 984; 49 U.S.C. 425 (a). Interpret or apply Sec. 601, 52 Stat. 1007, as amended; 49 U.S.C. 551)

By the Civil Aeronautics Board:

/s/ Phyllis T. Kaylor

Phyllis T. Kaylor
Acting Secretary

(SEAL)

BASIC VFR MINIMUMS

	VISIBILITY	DISTANCE FROM CLOUDS	
CONTROL ZONE	3 miles[1]	500 feet under[1] 1,000 feet over[1] 2,000 feet horizontally[1] and 1,000-foot ceiling	
CONTROL AREA	3 miles	500 feet under 1,000 feet over 2,000 feet horizontally	
CONTINENTAL CONTROL AREA	5 miles	1,000 feet under 1,000 feet over 1 mile horizontally	
		700 feet or BELOW	ABOVE 700 feet
OUTSIDE CONTROLLED AIRSPACE	1 mile[2]	clear of clouds	500 feet under 1,000 feet over 2,000 feet horizontally

1/ If traffic conditions permit, air traffic control will issue an air traffic clearance for flight within a control zone when the weather conditions are less than the above. However, no person shall operate an aircraft VFR, irrespective of any clearance, unless the visibility is one mile and the flight can remain clear of clouds.

2/ Helicopters are excepted from the one mile requirement when operated at or below 700 feet and at reduced airspeed. (see § 60.30.)