

## 2024 Michigan Challenge Organized Balloon Competition Manual

This manual has been prepared as part of the application for the issuance of a Certificate of Waiver with attachments and special provisions for a Manned Free Balloon Competition on June 28, 29, and 30, 2024. The competition and main launch field will be located at the Freshman Campus of Howell Public Schools, 1200 Grand River Ave, Howell, MI.

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## SECTION I.

### **Purpose:**

This manual is submitted as part of an application for a waiver of Title 14 of the Code of the Federal Regulations (14 CFR) part 91, sections 91.119(b) and 91.119(c) by the Howell Area Chamber of Commerce for the Michigan Challenge Balloonfest. Specifically, the waiver will allow officially registered balloons to operate from the surface to approximately **7070' AGL (8000' MSL)** and over a congested area at an altitude of no less than 500 feet above the highest obstacle within a 500 foot radius of the balloon enroute to a target within a 10 nautical mile radius of the designated launch field or goal. It will also allow for officially registered balloons to operate at 75 feet AGL over spectators and to set goals and/or targets at a minimum distance of 200 feet from physical barriers provided for spectator control. The waiver will also allow officially registered balloons to operate over a non-congested area at an altitude of no less than 200 feet above the highest obstacle within a 200 foot radius of the balloon enroute to a target within a 10 nautical mile radius of the designated launch field or goal, provided that the operation is conducted without hazard to persons or property on the surface.

No waiver is requested nor is a waiver required by 14 CFR for any mass ascensions or pilot chosen launches.

## SECTION II.

### **Responsibilities and Procedures:**

#### Duties of Personnel

1. **Competition Director (Balloonmeister):** **Phil Clinger**  
FAA Liaison, Flight Task Planning, Pilot Briefings, Coordinate flight decision with Safety and Weather Officers, Event Documentation.
2. **Chief Safety Officer:** **Donna Fox**  
Monitor flight operations, Advise Event Director, Review / Withdrawal Sanction Flight, crowd control, Assistant FAA Liaison.
3. **Committee Chair:** **Jake Andrews**  
Organization / Coordination of entire event.
4. **Chief Scoring Officer:** **James Smith**  
Compile scores and report.
5. **Chief of Measuring Teams** **Patty Cramer**  
Coordinate measuring teams for target locations.
6. **Weather Officer:** **Allen Yost**  
Research all pertinent weather information, report weather conditions at Pilot Briefings.

7. **Assistant Weather Officer:** **Joe Sullivan**  
Research all pertinent weather information, report weather conditions at Pilot Briefings.
8. **Landowner Relations:** **Marvin Tenbrink**  
Support to maintain relationships with local landowners and support any issues related to landowners during the event dates.

#### Registration and Airworthiness Determination

Balloons flown at the event must have current certificates of registration and airworthiness, or in place of the latter, an equivalent document from the Federal Aviation Administration. Chapter 3 of the BFA simplified competition rules cover procedures for balloons damaged or otherwise made un-airworthy during the event. Throughout the event the Safety Officer, or his designees, and appropriate FAA personnel will be consulted as necessary.

#### Pilot and Event Flight Crewmembers

Each pilot must hold the appropriate pilot certificate with Lighter-Than-Air Category and Free Balloon Class Rating. Each pilot must show evidence of current Flight Review (14 CFR part 61, section 61.56) and must also show evidence of currency per section 61.57. Minimum hours as PIC per the organizers specified time (50hrs) must also be shown.

Event flight crewmembers carried on board a balloon during the event must have been briefed / trained regarding their duties relative to the event by the PIC. Each event flight crewmember must sign the statement supplied by event organizer. Each flight crewmember must attest that they have been briefed and that they are designated event flight crew members for the purpose of the specific event for which the waiver was granted. The maximum number of event flight crewmember(s) that may be carried in each balloon during any flight will be two (2) for balloons less than 105,000ft<sup>3</sup> and three (3) for balloons 105,000ft<sup>3</sup> or larger. During competition, the event flight crewmembers should be kept to a minimum.

#### Pilot Briefing Procedures

All pilots are required to sign a statement indicating that they have read and understand the provisions of the waiver prior to any competitive flight.

Before each flight all pilots must attend the flight briefing. Chapter 8 of the BFA simplified competition rules provides details of all briefings.

#### Event Documentation

All relevant registration files, task data sheets, pilot registration information, etc. will be maintained by the organizers for at least 60 days after the event and will be made available to the FAA monitor upon request. Competition maps and task sheets can be made available to the FAA monitor at the time of the briefing.

## SECTION III.

### **Ground Operations:**

#### Clear Areas

Clear areas are established at each target site and these areas are kept clear of spectators. Scoring officials will police any scoring area to keep unauthorized persons out. In the Minimum Altitude Diagram, this is referred to as the "Target Area."

#### Spectator Areas

The only target zone designated for public viewing is located at the main launch site - Freshman Campus of Howell Public Schools. Crowd control is initiated by physical barriers around the launch site and target areas are controlled by the event Officials. Official and balloon recovery vehicles are parked in restricted areas. Traffic is controlled by the local law enforcement departments as required. Use of existing and temporary barriers secure spectators from potential low-level flight areas surrounding targets. The barriers are constructed by a combination of metal fence posts with plastic material between posts and wooden barricades.

Competitive goals / targets set outside of the primary launch area in remote areas attract few, if any, spectators beyond those involved in the event (officials and crews). Scoring / measuring officials control these areas as determined by the conditions, and will isolate the area surrounding the goal / target from any unauthorized personnel.

#### Crowd Control Requirements

Crowd control will be provided by local law enforcement or officials of the balloon event under the direction of the Safety Officer as required.

#### Landowner Relations / Notification

Positive landowner relations are vital to the continuance of sanctioned events. There is an ongoing effort by all involved persons to maintain good landowner relations for the event. Additionally, as per Rule 9.2 pilots must obtain permission for launch from private property; and per Rule 10.5 minimize disturbing landowners. Landowners may request that their property be indicated on the competition map as a Prohibited Zone as per Rule 7.3.

## SECTION IV.

### **Flight Operations:**

#### Area of Operations

The operations will occur in a 10 nautical mile radius of the main launch field located at Freshman Campus of Howell Public Schools as indicated on the official

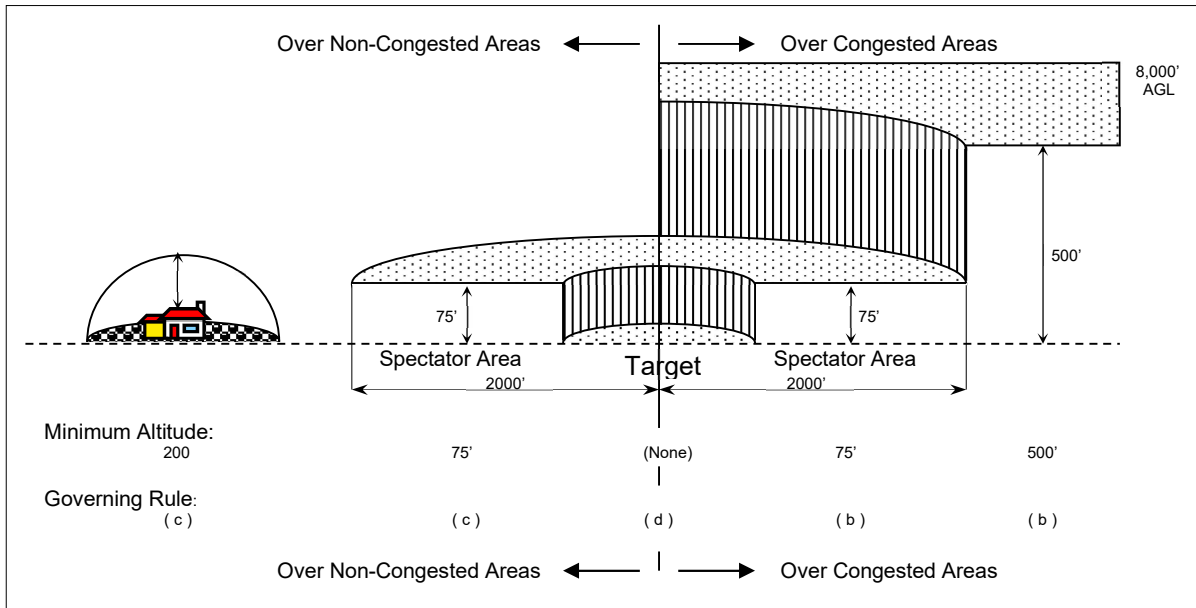
competition map. Final landings may occur beyond these boundaries, but no pilot-chosen take-offs or mass ascensions will exceed these boundaries. Headquarters for the event will be located at the Freshman Campus of Howell Public Schools.

Types of Operation

The event will consist of single and multiple tasks as called by the Director after consulting with other approved competition officials, as appropriate, considering the conditions at hand and forecast to develop during the anticipated flight times.

The tasks may include any of those listed in the Chapter 15 of the BFA Simplified competition rule book.

Minimum Altitude Diagram



Altitudes

The waiver provides that registered balloons will be allowed to make approaches to targets / goals within the designated areas. Balloons making these approaches will be permitted to fly over the designated spectator areas at an altitude of not less than 75 feet AGL. The balloons must have attained a state of altitude equilibrium at this 75 feet minimum altitude and not be descending while passing over the designated spectator areas. It is felt that this altitude is sufficient to allow for unusual circumstances with an adequate margin of safety for spectators.

In order to provide the highest possible level of safety for spectators, the scoring officials will cause scoring / measuring persons to be positioned among the spectators to allow crowds to be shifted as necessary and to provide warning regarding any markers that may be dropped in the spectator areas. Announcements

over the public address systems will also advise the spectators of the possibilities of both low flying balloons over the area and of markers being dropped in this area.

#### Weather Requirements

Flight operations will be conducted during the period from published Sunrise to Sunset, with the Visual Flight Rules (VFR) and weather conditions as specified in section 91.155. Maximum demonstrated surface winds will be ten (10) knots or less.

The decision for flight is the sole responsibility of the Pilot and the decision of whether to hold a task is the sole responsibility of the Competition Director after consultation with the safety and weather officials.

#### Communications Requirement

Primarily by required pilot briefing, however, supplementary information is also given on local radio stations, public address system, and via mobile phone SMS. Most pilots also carry either FM or aircraft radios and some communication by radio is also possible.

#### Air Traffic Coordination

A NOTAM will be requested from Flight Service advising of air traffic of numerous balloons in the Howell area at varying altitudes from June 28 through 30, 2024 during the three hours immediately after sunrise and three hours prior to sunset.