

GREAT **THE RENO** **BALLOON** **RACE**

OPERATIONS MANUAL

September 7-10, 2023

**Rancho San Rafael Park
Reno, NV**

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PURPOSE:

The Great Reno Balloon Race (GRBR) will be held September 7 - 10, 2023.

This manual is submitted as part of an application for a certificate of waiver under Title 14 of the Code of Federal Regulations (14 CFR) Part 91, Sections 91.119(b) and (c), 91.130 (a), (c), and (d) by and for The Great Reno Balloon Race.

Throughout this Operations Manual the masculine form is used as a standard. Wherever the masculine form is used, it is implied that the feminine form is included.

§ 91.119 (b) Minimum safe altitudes over a Congested Area. The waiver will allow officially registered balloons to operate at an altitude of no less than 500 feet above the highest obstacle within a 500-foot radius of the balloon within 5 statute miles of the designated launch field. Within 1,000 feet of the launch field, a flight is allowed at no less than 75 feet AGL from any open-air assembly of persons. Within 200 feet of the launch field, a flight is allowed down to the surface.

91.119 (c) Minimum safe altitudes over Other than Congested Areas. The waiver will allow flight over open water or sparsely populated areas no closer than 200 feet to any person, vessel, vehicle, or structure.

§ 91.130 (a), (c), (d) Operations in Class C airspace. Air Traffic Control has authorized operations in the Reno/Tahoe International (airport) Class C airspace without the required communication with the Air Traffic Control Tower during GRBR events. This Waiver and Authorization have been issued for aircraft and pilots that are officially registered in the GRBR and participating in any GRBR events.

RESPONSIBILITIES

LAUNCH COMMANDER: AARON DIERINGER

The Launch Commander functions as the overall director of flight operations for the event. He coordinates with the FAA and local agencies and has jurisdiction in all matters of flight safety. To ensure smooth operation of the event he will ascertain that all equipment is available for crowd control, communications, and flight operations. He will conduct all pilot briefings and after consultation with the Safety OFFICIAL and the Scoring OFFICIAL will select the task(s) to be flown.

CHIEF SAFETY OFFICIAL: BARRY VARISCHETTI

He must monitor all activities of the event to assure the event is conducted at the highest practical level of safety. He works directly with the Launch Commander to monitor all activities of the event to ensure it is conducted at the highest level of safety. Duties include attending the morning pilot briefing, briefing launch directors on routine and potential safety concerns for the day's operations, maintaining an open line of communication with the Launch Commander regarding any potential safety concerns, and in the event of a large-scale accident or mass casualty incident he will become a liaison between launch operations and the GRBR incident commander.

COMPETITION OFFICIAL: ALLEN ANDERSON

He must determine the ideal competition task for the winds forecast and conduct competitions in the safest manner possible.

CHIEF SCORING OFFICIAL: SHAWN WAGGONER

His duties are to ensure that each selected task is conducted fairly, and the results are accurately and completely recorded.

WEATHER OFFICIAL: DAN GUDGEL

His duties will focus on the local site weather conditions and the expected weather during the flight operations period. Other relevant data and observations will be presented. The weather OFFICIAL will maintain close coordination with Launch Commander and associated staff members.

FLIGHT DIRECTOR: KATIE GRIGGS

The Flight Director will oversee the event planning as it pertains to the flight operations, direct the launch staff' and will fill in for the Launch Commander or Chief Safety Official when necessary.

SCORING:

These individuals will assist the Chief Scoring OFFICIAL in conducting the assigned flight tasks at all goal locations.

LAUNCH DIRECTORS

These individuals function as assistant safety OFFICIALs whose primary duty is the safety of launch operations. They are identifiable to pilots by easily recognizable apparel worn during launch operations. Each pilot must receive permission to lift off from a launch director.

PILOT IN COMMAND:

All participating pilots are responsible for:

1. The safe operation of their aircraft both in the air and on the ground as it pertains to all applicable portions of 14 CFR, approved waiver, and general rules.
2. Briefing all flight and ground crewmembers as to their specific duties including safety, inflation and deflation, and all associated operations.
3. Obtaining and providing signed crewmember manifests.
4. Obtain all available weather-related information as defined in 14CFR91.103.
5. All operations shall be conducted in accordance with TC Data Sheet limitations, Approved flight manual limitations, and operating limitations.

FLIGHT CREWMEMBERS:

All event flight crewmembers must have received appropriate training concerning their duties relative to the event and must attend the event pilot and flight crewmember briefing before each event. These crewmembers must sign a statement that they have been briefed and that they are designated event flight crewmembers for the specific event for which the waiver was granted. All crewmembers, whether involved with flight or ground operations, will be responsible for inflation, deflation, safety, and other duties as designated and briefed by the pilot in command.

AIRCRAFT AND PILOT REGISTRATION:

All pilots participating in the event will complete all entry forms. These include the registration form, pilot agreement, and pilot acknowledgment forms.

Pilots participating in media day and regular competition flights must be registered by 01 June 2023. To be registered, the pilot should apply online at renoballoon.net. Pilots who have been approved to fly will be required to submit the following paperwork to GRBR before the event. To receive propane or any other form of compensation, pilots will be expected to pay an entry fee at registration.

For aircraft with standard airworthiness certificates:

1. Pilot certificate.
2. Pilot logbook showing flight currency per 14 CFR 61.57 applicable for the 7-10 September 2023 flight dates.
3. Pilot logbook showing current flight review per 14 CFR 61.56 (if not included in #2 above).
4. Aircraft registration certificate.
5. Aircraft airworthiness certificate.
6. Aircraft logbook showing annual/100 hr. inspection, or for experimental balloons the annual condition inspection, which will be current during the period of the event
7. Photo Identification. (Must be current).

If your aircraft has an experimental airworthiness certificate you will also need:

- a. The operating limitations issued with that experimental airworthiness certificate must be submitted as well as the certificate itself, original, (no copies).
- b. A program letter.

These documents will be reviewed by the FAA or their designee before the event. Any pilot or aircraft issue not corrected at the registration will prevent that pilot from participating in the event. Those

pilots wishing to participate in the Media Day flight must be fully registered before that flight. Any open pilot or aircraft issue must be resolved with the FAA and GRBR before the pilot briefing on Thursday morning.

FAA inspectors may inspect any aircraft at any time to determine airworthiness and/or pilot qualification. Compliance with Federal Aviation Regulations is the responsibility of the Pilot in Command of the aircraft. Aircraft must have on board current registration and airworthiness certificate, originals no copies, along with the flight manual approved for that aircraft.

Aircraft must not exceed the number of passengers designated by the operating limitations set forth by the manufacturer of said aircraft.

DAMAGE TO A BALLOON:

Any balloon sustaining damage to the extent of affecting its airworthiness (according to the applicable flight manual), is prohibited from participating or continuing in flight and must land at the first practicable opportunity. If a balloon is damaged during GRBR, it may be flown after damaged components are replaced or repaired and approved for return to service, subject to the approval of the Chief Safety OFFICIAL.

The Launch Commander or Chief Safety OFFICIAL will notify the FAA whenever there is an incident or accident involving a balloon participating in the event.

The Reno Flight Standards District Office (FSDO) will also investigate noncompliance with any Federal Aviation Regulations (FARs) and the certificate of waiver issued to the GRBR, in addition to accidents and incidents occurring in conjunction with the event.

PILOT:

Each pilot must hold the appropriate pilot certificate with Lighter-Than-Air Category and Free Balloon Class Rating. The minimum hours as PIC required for participation in the event is 100 hours.

CREWMEMBERS:

All crewmembers, whether involved with flight or ground operations, will be responsible for inflation, deflation, safety, and other duties as designated and briefed by the pilot in command.

Event crewmembers carried on board during the event must have been briefed by the pilot in command before the flight. Each event crewmember must sign the waiver form supplied by the pilot before launch. Each event crewmember must attest that they have attended the applicable briefing by the pilot in command. Only pilots and event flight crewmembers described in this manual may be carried onboard any balloon operating under the Waiver issued to the Event Organizers.

PILOT BRIEFINGS:

All pilots are required to sign a statement indicating that they have read and understood the provisions of the current event waiver and the Great Reno Balloon Race official rules before

registration. This acknowledgment form (See page 20) must be submitted and be on file with the organizer before the pilots' first event flight or registration will not be considered complete. Pilots who do not register will not be allowed to participate in the event.

Before each flight, all pilots must attend the flight briefing. The briefing will contain, but not be limited to the following information:

1. Pilot roll call (Daily Roll Call sign-in sheets must be signed by PIC.)
2. Meteorological synopsis, surface winds, and winds aloft
3. Air traffic and safety information
4. Details of prohibited zones and sensitive zones
5. Name of competitive task(s) (if called)
6. Task data & target closure times
7. Any variations or supplements to the published task/race rules
8. Emergency procedures on and off the field
9. Launch period
10. Launch area/sequence
11. Time check

EVENT DOCUMENTATION:

All relevant registration files, pilot registration information, flight crewmember waivers, etc. will be maintained by the Great Reno Balloon Race for at least 30 days after the event and will be made available to the FAA monitor upon request.

GROUND OPERATIONS

SPECTATOR AREAS:

The primary spectator area is located at the official launch site. Crowd control is initiated by controlled parking under the direction of the parking officials. Spectator pedestrian traffic will be routed toward the launch fields via a separate route than the incoming balloon chase vehicles and crew traffic. A designated "blanket area" will be identified by a barrier fence for the public to sit down and observe the activities without having to move for balloon operations. Official and balloon chase vehicles are parked in restricted areas. Local police and staff volunteers control traffic. Spectators will be allowed on foot, onto the launch fields at the beginning of the event, and throughout the waiver period. Temporary barriers will be used to secure spectators from potential low-level flight areas surrounding goals/targets.

As needed, announcements will be made throughout the event over the public-address system, advising the spectators of the requirements and dangers possible, while being on the field during various balloon operation phases.

DESIGNATED SPECTATOR AREA (75' MINIMUM FLIGHT) 14 CFR 91.119(b) is waived to allow flight over, but no closer than 75 feet to persons in the designated spectator area(s) which are under the direct control of the Great Reno Balloon Race. (See the area marked in yellow on the map at the end of this document)

Regarding the 75-foot rule, the balloon must have attained a state of altitude equilibrium at this 75-foot minimum altitude and not be descending below 75 feet while crossing over the designated spectator area(s). In addition, landings into the designated spectator area(s) are not allowed without authorization. This rule is in effect while the waiver is in effect, whether any spectators are present in the area(s).

LANDING IN A DESIGNATED SPECTATOR AREA:

Landing in a designated spectator area will only be allowed with specific permission. The pilot must call on the aircraft radio (123.75) to request permission to land. Permission will only be granted if the area requested can be secured by Launch Staff and there is enough Launch Staff available to assist in the landing procedure. Driving on the grass in the designated spectator area is not allowed, you will be required to carry all equipment out of the grassy areas.

CROWD CONTROL REQUIREMENTS:

GRBR Rangers, Washoe County Parks Department, UNR ROTC, and Reno Police Department will provide crowd control. At and around the Rancho San Rafael Park property, the GRBR Aeronauts will provide additional crowd control with personnel and appropriate barricades and signage.

EMERGENCY PROCEDURES:

In the event of an emergency, either on the field or off please call 911. If you have an emergency on the field, locate a launch director, or send a crew person to the stage to alert the Launch Commander. All launch and safety personnel have radios, with communication to Emergency Services Director (ESD), Sheriff's Department, REMSA, and RPD, and can get you the appropriate help. In the event of an emergency, depending on the severity, the ESD will take charge. The ESD will contact the appropriate emergency responders and direct them.

GRBR Rangers will be patrolling the field/park and will be first responders to emergencies/incidents quickly. If the Reno Fire Department is needed, the RPD sergeant can request their presence via the Emergency Dispatch system. Sheriffs or RPD will assess the situation and contact the appropriate emergency response team as to the location of the emergency and the appropriate gate to be used to get the safety vehicles onto the field nearest the emergency.

Emergency Medical Technicians (EMTs) are available on Rancho San Rafael Park during launches, stationed near the stage on the South side of the park.

During the event, a site plan map will be posted on the launch official's trailer, with entrances onto the field, locations of fencing, emergency access lanes, first aid facilities, stage, vendors, toilets, trash containers, and generators.

In the event of an emergency where medical attention is needed, please clear the area, and assist in keeping spectators back so that the emergency personnel can get to the area.

Emergency Response Plan will be initiated at the discretion of the Launch Commander and Chief Safety OFFICIAL/Emergency Service Director.

Each morning all Emergency Service personnel will attend a morning briefing covering operation issues.

DECLARED EMERGENCY PROCEDURES:

If you have an emergency or you must make an emergency landing in an unauthorized location, you must report the emergency to the GRBR Staff through the emergency phone number immediately. The FAA will investigate the emergency. You will be required to meet with the FAA directly after the emergency. You must provide them with a written statement of the emergency. This will become a part of your permanent record and will be considered an occurrence unless deemed necessary to upgrade to an incident or accident. Once you declare an emergency, your flight must be terminated.

LANDOWNER RELATIONS/NOTIFICATION:

All pilots must obtain permission for landing and launches if private property is involved. Landowners may request that their property be indicated on the official map as prohibited zones or sensitive zones.

DRONE OPERATIONS

AREA OF OPERATIONS

The Drones will have specific areas that they are flown in. The Drone flight area will be marked on the map, if the balloons come within 100' of the drone area, all drones will land immediately. Drone flying will not begin again until there are no balloons within 100' of the specified drone flight area.

Drones will operate during Glow Show, Dawn Patrol, and Mass Ascension.

FLIGHT OPERATIONS

AREA OF OPERATIONS:

The operations will occur within a 5-mile radius of the launch field located at Rancho San Rafael Park in Reno, Nevada as indicated on the official map. Final takeoffs and landings may occur beyond these boundaries. Headquarters for the event will be located at the park.

TYPE OF OPERATIONS:

Non- Competitive

Super Glow Show: Events where up to 50 balloons inflate and static display. Balloons put on a coordinated light show to music early in the morning before dawn.

Dawn Patrol: 6 to 8 balloons inflate and launch before sunrise while putting on a coordinated light show first on the ground and then in the air all in the dark skies.

Mass Ascensions: Each morning shortly after sunrise 70 to 100 balloons will launch with the coordinated efforts of the Launch Directors. No balloons may launch without permission from a launch director.

Tether balloons: Balloons with three point tie offs will tether on the launch field after the Mass Ascension. Tether balloons will operate in Field 1 and 2.

Rising Stars: These are static display balloons. They inflate and interact with the crowds giving out trading cards.

Competition

Competitive events as specified in the Application for Certificate of Waiver or Authorization will be called by the Launch Commander and the Chief Safety OFFICIAL after consultation with competition officials and the FAA representative (if available). The event will be appropriate considering the anticipated direction of flight, weather conditions at hand, and forecasted to develop during the anticipated flight times. The tasks will be selected from the list of Task in this document. More than one task may be called for a single flight.

COMMUNICATIONS REQUIREMENTS:

The Launch Commander will establish a central control point at the main announcer's platform, from which he representative will direct the event and be immediately available for those periods for coordination with the FAA Representative. In the event of cancellation of the task, airborne participants will be notified by a predetermined means, as specified at the pilot briefing.

AIR TRAFFIC NOTIFICATION:

The Launch Commander and/or Chief Safety OFFICIAL will ensure that notification is made to the Lockheed Martin Flight Services Automated Flight Services Station (AFSS) of the date, time, place, areas, altitudes, nature of the activity, and duration of the operation and request that a Notice to Airman (Notam) be issued. Such notice shall be accomplished by providing the Lockheed Martin Flight Services Station (AFSS) with a copy of the Certificate of Waiver or Authorization, if requested, at least 48 hours before the event and no more than 72 hours before the event. Notification to the AFSS should be made at 877-487-6867 or FAX 928-772-4390.

ALTITUDES:

The waiver provides that registered balloons will be allowed to make approaches to the goals/targets within the designated areas. Balloons making these approaches will be permitted to fly at no less than **75 feet AGL** 1,000 feet away from the center of the target. The balloons must have attained level flight at no less than **75 feet AGL** and must not be descending before entering the 1,000-foot radius circle around the target. For the target(s) within Rancho San Rafael Park, announcements over the public address system will advise spectators of the possibilities of both low-flying balloons over the area and markers being dropped in the area.

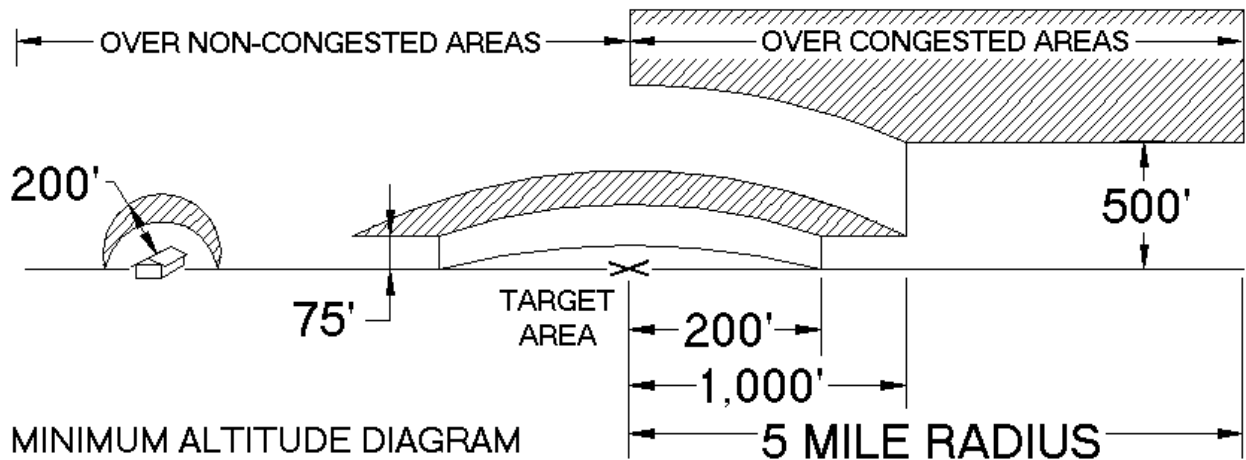


DIAGRAM 1: MINIMUM ALTITUDE FOR TARGETS OUTSIDE OF RANCHO SAN RAFAEL PARK

WEATHER REQUIREMENTS:

The basic requirements will be VFR per 14 CFR 91.155. The event is not authorized if visibility is less than 3 miles, or the ceiling is less than 2,000 ft. AGL at the time of intended launch. The launch will not be started if the surface winds are greater than 8 MPH. It is the responsibility of Safety/Weather Officials to consult with the FSS concerning the meteorological outlook. However, immediate local conditions will determine on-site operations rather than sole reliance on FSS information. The decision for flight is the sole responsibility of the Pilot in Command and the decision of whether to halt the event is the sole responsibility of the Launch Commander after consultation with appropriate safety officials.

GENERAL RULES

Requirements to attend

1. **Only registered pilots** may fly in the event. Only alternate pilots who have submitted their paperwork and been approved to fly in the event are allowed.
2. All aircraft must be equipped with an **operational aircraft radio**.
3. Pilots are required to **carry a minimum of one and one-half hours of fuel on board** for each flight. Low fuel will not be accepted as grounds for a declaration of an emergency and landing in any of the sensitive or prohibited zones.
4. **No Smoking is permitted on the launch field or refueling area.**

Pilot Briefings

5. All registered **pilots must attend the morning preflight briefings**.
6. Rules are subject to change or alteration by the Officials due to changes in flight conditions, weather conditions, and other considerations. **Any changes will be announced at the pilot briefing.**

Launch Procedures

7. **All balloons must be launched by a Launch Director.** The Launch Director will collect the flight crewmember waiver card(s) and validate the pilot's launch just before lift-off. Pilots launching without validation will not be covered by the waiver and will be penalized.
8. Unless otherwise directed by officials, **balloons may launch only from their assigned launch site.**
9. Launch Directors will launch **only those balloons that are at equilibrium** and ready for immediate take-off. Therefore, after the pilot's launch is validated, you will have a reasonable amount of time to launch. If you do not get off the ground within the allowed time, your launch will be invalidated, and you will be asked to deflate.
10. Due to congestion on the field, and in the interest of safety, **all balloons must be tied off during inflation. No moving balloons** across the field. Balloons must be tied off unless ready to launch or put down.

Flying

11. **All balloons must not exceed 300 feet per minute ascent or descent** rate in any area of flight congestion.
12. Any balloon boxing back to the field, must maintain a height of no less than 200 ft AGL while balloons are still in launch mode on the field. A penalty will be assessed for balloons flying below 200 ft over the launch field before all balloons are launched. **No landing back on the field until all balloons are launched** (Launch Commander will announce over the radio if the field is open to land)
13. **Lower and downwind balloons have the right of way.**
14. All balloons are to be **down by 10:30 a.m.** local time daily.
15. If the event is canceled after the launch has begun, a recall notice will be issued on the aircraft radio (123.75) and the public-address system.
16. **Reckless flying will result in penalties or possible removal** from the event.
17. **All FARs that are not waived for the event must be observed.** Penalties for breaking these laws will be enforced.

Landings

18. **No moving balloons** across the field. Balloons must be tied off unless ready to launch or put down. (See rule #10)
19. **No landing or ground contact within 200 ft. of the target.** Ground contact includes anything on or attached to the ground.
20. **Intermediate landings** to exchange passengers and/or change out fuel tanks are allowed. However, pilots who move their balloon during an intermediate landing, or sit on the ground to improve their position or otherwise gain a competitive advantage will receive no score.
21. There will be **no venting of raw propane** on the launch field at any time.

Refueling

22. All participating pilots will be provided **one refueling per day.** Dawn patrol pilots will be allowed additional refueling. Glow show pilots must bring adequate fuel to Glow and successfully complete their flight.
23. **Pilots or Crew with a BFA refueling card only** in the propane refueling station. No one is allowed to assist in propane refueling without the proper training.
24. **No Smoking is permitted on the launch field or refueling area.**

Competition

25. **Only official markers may be dropped, none from higher than 500 feet AGL.** Streamers must be completely unfurled. Any marker found to be altered, knotted, or in any conditions other than when it was presented to the pilot at the initial briefing may be declared damaged or unusable. If in the opinion of the Chief Scoring OFFICIAL, the marker was changed to give an unfair advantage, it will not be scored.
26. **Do not touch or move markers.** Only race officials may do so.

Glow show, Dawn Patrol, Banner flying

27. Proof of activities will be required for compensation for these activities. These activities will be based on a cost sharing formula.
 - a. Glow show tickets must be collected by a launch director during the glow.
 - b. Dawn Patrol tickets will be issued each morning at the dawn patrol briefing.
 - c. Banner flying, please have a crew member take a picture of your balloon with banner on it and text it to the remind number listed on your badge.

TASK: As listed in the BFA Simplified Competition Rules 2020

CHAPTER 15 - TASKS

PILOT DECLARED GOAL (PDG)

Competitors will attempt to achieve a mark or valid track point close to a goal selected and declared by him.

Task Data:

- a) Method of declaration (also see 12.3).
- b) Number of goals permitted.
- c) Goals available for declaration.
- d) Minimum and maximum distances of goal(s) from CLP or ILP as per TDS.
- e) Minimum distance of goal from any subsequent goals or targets, if applicable.

The result is the distance from the mark or closest valid track point to the nearest valid declared goal. Smallest result is best.

JUDGE DECLARED GOAL (JDG)

Competitors will attempt to achieve a mark or valid track point close to a set goal.

Task Data:

- a) Position of set goal/target.

Result is distance from the mark or closest valid track point to the target, if displayed, or goal. Smallest result is best.

HESITATION WALTZ (HWZ) Competitors will attempt to achieve a mark or valid track point close to one of several set goals.

Task Data:

- a) Position of various set goals/targets.

The result is distance from the mark or closest valid track point to the nearest target, if displayed, or goal. Smallest result is best.

FLY IN (FIN)

Competitors find their own launch areas and attempt to achieve a mark or valid track point close to a set goal or target.

Task Data:

- a) Position of set of goal/target.

The result is the distance from the mark or closest valid track point to the target, if displayed, or goal. Smallest result is best.

FLY ON (FON)

Competitors will attempt to achieve a mark or valid track point close to a goal selected and declared by them during flight.

Task Data:

- a) Method of declaration (also see 12.3b) Number of goals permitted.
- b) Goals available for declaration.
- c) Declaration point requirement.
- d) Minimum and maximum distances between declaration point and declared goal(s).
- e) Minimum and maximum distances of declared goal(s) from any other targets noted on TDS.

The result is the distance from the mark or closest valid track point to the nearest valid declared goal. Smallest result is best.

Procedures governing the declaration methods are in Rule 12.

HARE AND HOUNDS (HNN)

Competitors will follow a hare balloon and attempt to achieve a mark or valid track point close to a target displayed by the hare no more than two meters upwind of the basket after landing.

Task Data:

- a) Description of hare balloon.
- b) Intended flight duration of hare balloon.

The result is the distance from the mark or closest valid track point to the target. Smallest result is best.

Variation from intended flight duration of the hare shall not be grounds for complaint.

The hare may deflate after landing and may be removed from the field.

The hare balloon may display a banner hanging below his basket. No competitor shall display any banner hanging below the basket during this task.

WATERSHIP DOWN (WSD)

Competitors will fly to the launch point of a hare balloon, follow the hare, and attempt to achieve a mark or valid track point close to a target displayed by the hare no more than two meters upwind of the basket after landing.

Task Data:

- a) Description of hare balloon.
- b) Location of the launch point of the hare balloon.
- c) Set take-off time of the hare balloon.
- d) Intended flight duration of the hare balloon.
- e) Minimum and maximum distances of ILP from hare launch point, if applicable.

The result is the distance from the mark or closest valid track point to the target. Smallest result is best.

If the hare balloon does not take off within five minutes after the set time then this task is considered cancelled.

Variation from the intended flight duration of the hare shall not be grounds for complaint.

The hare may deflate after landing and may be removed from the field.

The hare may display a banner hanging below his basket. No competitor shall display any banner hanging below the basket during this task.

GORDON BENNETT MEMORIAL (GBM)

Competitors will attempt to achieve a mark or closest valid track point within a scoring area(s) close to a set goal.

Task Data:

- a) Position of goal/target.
- b) Description of scoring area(s).

The result is the distance from the mark or closest valid track point to the target, if displayed, or goal. Smallest result is best.

CALCULATED RATE OF APPROACH TASK (CRT)

Competitors will attempt to achieve a mark within a valid scoring area close to a set goal. The scoring area(s) will have unique times of validity.

Task Data:

- a) Position of goal/target.
- b) Description of scoring area(s) and their validity times.

The result is the distance from the mark to the target. Smallest result is best.

A competitor who does not achieve a mark (marker on the ground) inside a scoring area during the time of validity will not achieve a result.

RACE TO AN AREA (RTA)

Competitors will attempt to achieve a mark or valid track point, as specified in the task data in the shortest time within a scoring area(s) or airspace(s).

Task Data:

- a) Arrangements for timing.
- b) Description of Scoring Area(s).

The result is the elapsed time from the initial timing point to the mark or first valid track point. Shortest time is best.

Timing ends at the moment the marker is released, falling, or on the ground as seen by the officials, or at the moment of the first valid track point in the scoring area if track points only was set.

ELBOW (ELB)

Competitors will attempt to achieve the greatest change of direction in flight.

Task Data: (If no markers are used).

- a) Description of point "A".
- b) Description of point "B".
- c) Description of point "C".

The result is 180 degrees minus the angle ABC. Greatest result is best.

LAND RUN (LRN)

Competitors will attempt to achieve the greatest area of a triangle ABC.

Task Data:

- a) Location of point "A"
- b) Method of determining point "B"
- c) Method of determining point "C"
- d) Description of scoring area(s).

The result is the area of triangle ABC. Greatest result is best.

MINIMUM DISTANCE (MDT)

Competitors will attempt to achieve a mark or valid track point close to the common reference point, after flying a minimum set time or distance.

- a) Task Data:
- b) Arrangements of timing.
- c) Minimum set time or distance.
- d) Reference point.

The result is the distance from the mark or closest valid track point to the reference point. Smallest 2D result is best.

The scoring position is the mark or best track point after the minimum time or distance has elapsed. Otherwise the scoring position will be the landing position, provided that the balloon has been seen by an official to be still airborne after the minimum time.

SHORTEST FLIGHT (SFL)

Competitors will attempt to achieve a mark or valid track point within a set scoring area(s) close to the common reference point.

Task Data:

- a) Description of scoring area(s).
- b) Reference point.

The result is the distance from the mark or best valid track point to the reference point. Smallest 2D result is best.

MINIMUM DISTANCE DOUBLE DROP (MDD)

Competitors will attempt to achieve two marks or valid track points close together in different scoring areas.

Task Data:

- a) Description of the scoring areas.

The result is the distance between the marks or track points. Smallest 2D result is best.

Competitors will not achieve a result, unless they have valid track points or marks in different scoring areas as per the TDS.

MAXIMUM DISTANCE TIME (XDT)

Competitors will attempt to achieve a mark or valid track point far away from the common reference point, within a maximum set time.

Task Data:

- b) Maximum set time.
- c) Arrangements for timing.
- d) Reference point.

The result is the distance from the mark or furthest valid track point to the reference point. Greatest 2D result is best.

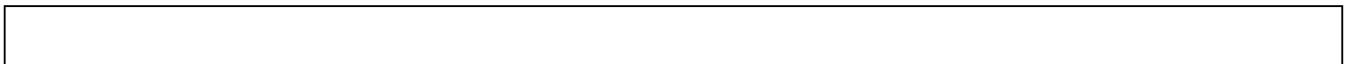
MAXIMUM DISTANCE (XDI)

Competitors will attempt to achieve a mark or valid track point within a set scoring area(s) far away from the common reference point.

Task Data:

- a) Description of scoring area(s).
- b) Reference point.

The result is the distance from the mark or valid track point to the common reference point. Greatest 2D distance is best.



MAXIMUM DISTANCE DOUBLE DROP (XDD)

Competitors will attempt to achieve two marks or valid track points far apart in the scoring area(s).

Task Data:

- a) Description of Scoring Area(s).

The result is the distance between the marks or farthest valid track points. Greatest 2D result is best.

ANGLE TASK (ANG)

Competitors will attempt to achieve the greatest change of direction from a set direction. The change of direction is the angle between the set direction and line "A-B".

Task Data:

- b) Description of points "A" and "B".
- c) Set direction (degrees).
- d) Minimum and maximum distances from "A" to "B".

The result is the angle between the set direction and the line "A-B". Greatest result is best.

LEAST TIME TASK (LTT) (for events with logger scoring)

Competitors will attempt to fly across a given scoring area in the least amount of time.

Task Data:

- a) Boundaries of scoring area.

Result is elapsed time to cross the scoring area, measured from initial point of entry to exit point of scoring area. Least time is best.

MOST TIME TASK (MTT) (for events with logger scoring)

Competitors will attempt to fly across a given scoring area in the most amount of time (slowest speed).

Task Data:

- a) Boundaries of scoring area.

Result is elapsed time to cross the scoring area, measured from initial point of entry to exit point of scoring area. Greatest amount of time is best.

SCORING

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Only those markers landing within the scoring area will be retrieved by the scorers. All others are the responsibility of the pilot/crew.

In case of a tie, when multiple tasks are being cumulated, the pilot with the closest accumulated distances will be declared the winner. If an MXDD task is called it will be the farthest distance for the results of this task. If there is still a tie, the pilot with the shortest single distance will be declared the winner. Further criteria, if needed, will be selected by the Chief Scoring OFFICIAL.

Daily and cumulative scores will be posted on the "Watch Me Fly" website and at the officials' trailer next to the pilot briefing area or in a location announced at the pilot briefing. Provisional results will be posted for one hour before being declared official results for the day. Competition pilots have that hour to review their results and ask for clarification and/or file a protest. ***After the scores are posted for one hour, they will be considered official and will not be changed.***

PENALTIES

Penalties will be assessed for violations up to and including disqualification for one task or the entire event at the Chief Scoring OFFICIAL's discretion. Penalties can be assessed for, but are not limited to the following infractions:

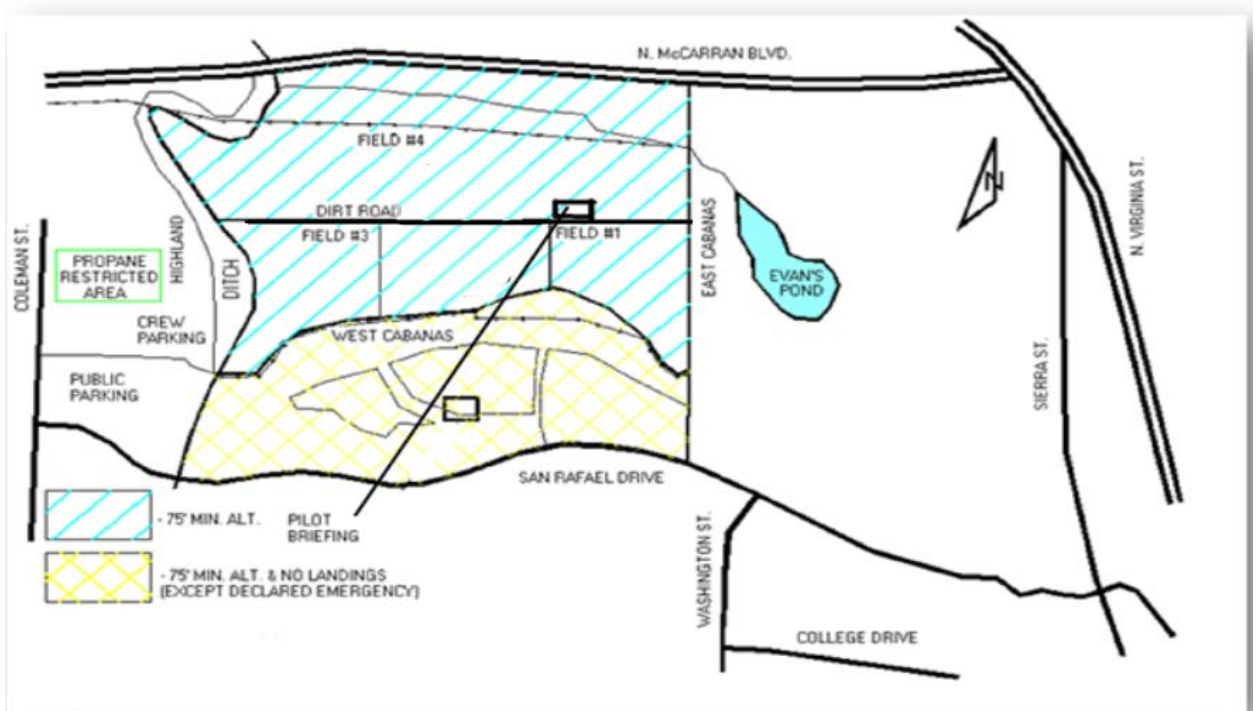
1. Unregistered pilot flying the balloon
2. Violation of race rules
3. Violation of 14 CFR regulations
4. Violation of the event waiver, Operations Manual, or Supplemental Conditions
5. Obstructing any target
6. Piloting a balloon that is in un-airworthy condition
7. Flying in a careless or reckless or unsafe manner.
8. Launching from an area not so designated
9. Carrying unauthorized passengers
10. Un-sportsmanlike conduct
11. Launching without direction from a GRBR launch director.

Note: Any violation of the race waiver or FAR will be submitted to the FAA.

PROTESTS

The Protest Jury will consist of the Competition OFFICIAL, participating pilot(s), and Chief Scoring OFFICIAL. All protests will be made in writing to the Safety OFFICIAL or the Chief Scoring OFFICIAL within the provisional score period (see definition in Scoring section above). The protest must be accompanied by a \$100 cash protest fee at the time of submittal. The fee will be refunded if the Protest Jury upholds the protest; otherwise, the \$100 fee is forfeited.

Diagram 2: MINIMUM ALTITUDES OVER RANCHO SAN RAFAEL PARK



LOCAL AIRPORT INFORMATION

Reno/Tahoe International (RNO)

RENO, NV
Publicly Owned, Public Use
3.0 mi. SE of the city.
N39-29.95 W119-46.09
Mag Var: 16 deg E
Phone: 775-328-6400
Fax: 775-328-6510
www.renoairport.com
mmora@renoairport.com

Communication Freqs:

Unicom - 122.95
TWR - 118.7
GND - 121.9

Date: 12/17/22
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Operations Manual ###
The Great Reno Balloon Race

DEP - 126.3
CLNC DEL - 124.9
FSS- RENO 122.5 122.2
Approach Freqs: Reno:119.2; Reno:126.3.
WX Contact: ATIS 135.8 775-348-1550; ASOS 775-324-6659.
FSS: RENO 800-992-7433
Elevation: 4415 MSL
Hours: 24
Tower Hours: 24 hrs.
Fees: None
Charts: SAN FRANCISCO.
Traffic Pattern: Light Aircraft: 5212 MSL; Heavy Aircraft: 5412 MSL.

Reno/Stead (RTS\4SD)

RENO, NV
Publicly Owned, Public Use
10.0 mi. NW of the city.
N39-40.04 W119-52.57
Mag Var: 16 deg E
Phone: 775-328-6570
Fax: 775-677-1393
www.renoairport.com
spolak@renoairport.com

Communication Freqs:

Unicom - 122.7
CTAF - 122.7
FSS- RENO 122.5
Approach Freqs: Reno:126.3.
WX Contact: AWOS 135.175 775-677-0589.
FSS: RENO 800-992-7433
Elevation: 5050 MSL
Hours: daylight; night on req
Fees: None
Charts: SAN FRANCISCO.
Traffic Pattern: Light Aircraft: 5800 MSL; Heavy Aircraft: 6200 MSL; Multiengine Aircraft: 6000 MSL.

Spanish Springs (N86)

RENO, NV
Publicly Owned, Public Use
7.0 mi. N of the city.
N39-39.99 W119-43.39
Mag Var: 16 deg E
Phone: 775-772-8049
Fax: 775-425-4268
www.spanishspringsairport.org
n86aviation@msn.com
Communication Freqs:

Date: 12/17/22

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Operations Manual

The Great Reno Balloon Race

CTAF - 122.9

FSS- RENO 122.5 122.2

Approach Freqs:

FSS: RENO 800-992-7433

Elevation: 4600 MSL

Hours: 9 am to 6 pm

Fees: None

Charts: SAN FRANCISCO.

Traffic Pattern: Multiengine Aircraft: 5600 MSL; Light Aircraft: 5400

PILOT WAIVER ACKNOWLEDGEMENT STATEMENT

All pilots who register to participate in the 2023 GRBR will be required to submit and electronically signed statement that follows as part of the online registration process.



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AS A PARTICIPATING PILOT IN THE GREAT RENO BALLOON RACE I HAVE READ, UNDERSTAND, AND AGREE TO ABIDE BY THE 2023 OPERATIONS MANUAL, EMERGENCY RESPONSE PLAN, THE APPLICABLE CERTIFICATE OF WAIVER, ANY SPECIAL PROVISIONS, AND ALL OTHER RULES AND REGULATIONS PERTAINING TO THE EVENT. I ALSO UNDERSTAND THAT MY VIOLATION OF THE WAIVER AND/OR RULES MAY AFFECT MY STANDINGS IN THE EVENT AND/OR THE STATUS OF MY AIRMAN CERTIFICATE IN THE EVENT OF AN FAA RULING.

PRINT NAME

SIGNATURE

DATE

PILOTS, without a completed form on file before the event, you will not be able to participate in the event.