

# US National Hot Air Balloon Championship



## OPERATIONS MANUAL AND COMPETITION RULES JULY 8 – 15, 2018



# ***Staff and Other Important Phone Numbers***

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## **Balloon Event Staff**

Event Director	Maury Sullivan	330.323.4455
Deputy Director	Jason Jones	913.338.2628
Safety Officer	Henry Rosenbaum	804.971.0704
Steward	Sam Parks	704.902.0124
Shreveport Liaison	Pat Harwell	318.925.2307
Chief Scoring Officer	Mike Gilligan	281.380.8204
Assistant Scoring Officer	Lynn Sullivan	330.323.4673
Weather Officer	Todd Fisher	330.697.3684
Logger Manager	Dottie Humbert	269.986.5842
Jury President	Gary Britton	414.333.5664
Jury Member	Ted Watts	814.795.7858
Chief Measuring Officers	Sheri Berry	269.207.2430
	Jim Dieball	414.731.0550
Measuring Team Volunteer Liaison	Chris Shelton	704.299.8150
Office Manager	Linda Gavigan	608.516.3689
Landowner Relations	Kelly Wells	318.349.9768
	Nick Kopka	318.349.4186

## **Shreveport-Bossier Sports Commission Staff**

Kelly Wells	Executive Director	318.349.9768
Sheila Norman	Director of Operations	318.517.1325
Que'Brelyn Douglas	Sports Sales Coordinator	318.780.8946
Teresa Micheels	Volunteer/Project Manager	318.518.5027
Ron Oswalt	Sponsorship / Partnerships Director	318.344.0819
Nick Kopka	Logistics Manager	318.349.4186
Mathew Hammock	Operations Assistant	870.866.1280

## **Emergency Numbers**

Lost Balloon Number	Linda Gavigan	608.516.3689
Emergency Services		911
Caddo Parish Sheriff		318.675.2170
AEP - American Electric Power		888.216.3523
SWEPCO	Scott McCloud	318.469.2293 or 318.673.3060

## **Hilton Garden Inn Shreveport**

318.686.0148



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# Event Organizer Welcome

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629 Spring St.  
Shreveport, LA 71101

tel: 318.222.9391  
fax: 318.222.0056  
shreveportbossiersports.com

A Division of the Shreveport-Bossier  
Convention and Tourist Bureau  
in partnership with the City of  
Shreveport, City of Bossier City,  
Caddo Parish Commission and  
Bossier Parish Police Jury.

Dear Red River Balloon Rally and U.S. Hot Air Balloon Pilots:

On behalf of the 2018 Red River Balloon Rally and U.S. Hot Air Balloon Championship Committee, the Shreveport-Bossier City community and the state of Louisiana, we would like to thank each of you for participating in the 52nd U.S. Hot Air Balloon Championship and 3<sup>rd</sup> Red River Balloon Rally. We are excited to be host to this year's event and celebrate the wonderful legacy that the Balloon Federation of America and many of you have been involved with for many of the last 52 years.

We look forward to this year's championship and crowning of the 2018 U.S. Hot Air Balloon Champion. We could not do this without the support of each of you, your time, talents and resources, along with the BFA family and the more than 30 sponsors who have contributed at various levels to make this championship week possible, along with the more than 600 community volunteers that volunteer their time and energies in making this year a success.

We have worked hard all year long to provide you with the best championship experience possible throughout the Shreveport-Bossier City community. We want you to know that we are proud to be hosting the "super bowl" of hot air ballooning. Crowning the U.S. Champion that will represent our amazing country at the world championships is one of the most admirable motivators for taking this event to the next level.

While you are here, enjoy the bountiful eateries throughout the two river cities, the dozens of attractions including our seven casinos and horse racing track, our museums, the new Shreveport Aquarium, ample retailers for your shopping pleasure or just the chance to relax and enjoy yourselves and all Shreveport-Bossier has to offer.

We are sure that your many opportunities to visit with our "locals" will show you that southern hospitality is one of our strongest assets for making you feel welcome and genuinely appreciated during your stay with us. May God bless you and be with you during your flights this week and the best of luck in the competition!

Laissez Les Bon Temps Rouler! (Let the Good Times Roll!)

Kelly Wells  
Executive Director

# Event Director Welcome

Welcome Pilots and Crew:



Welcome to Shreveport-Bossier and the 52<sup>nd</sup> US National Championship. The Shreveport-Bossier Sports Commission has done an outstanding job of organizing our final championship in this three-year visit. The community and competitors are sure to enjoy our visit. Please take the time this week to thank the many volunteers who have worked untold hours to make this championship and your stay in Shreveport a memorable one.

Pilots and crew will be provided lots of opportunities to enjoy the local food and casino scene as the only scheduled evening activities are on the weekend and only one-half of the field is committed each night. Our event kicks off on Sunday July 8 with an evening fun fly-in for \$10,000 in pole-grab prizes followed by a

balloon glow in DeSoto Parish.

The HACD will be having a Board meeting open to all in attendance. Check the pilot schedule for details as we encourage all to attend and let the Board know your thoughts and concerns on the direction of US and International competition.

Of course, no event can survive without the support of generous sponsors. If you get the opportunity to support our sponsors through your patronage or even just to say thanks, I'm confident they will appreciate it.

Welcome to the Shreveport Bossier City area and the 52<sup>nd</sup> US National Championship.

Maury Sullivan  
Event Director

# Mayor's Welcome

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OLLIE S. TYLER  
MAYOR

OFFICE OF THE MAYOR  
SHREVEPORT, LOUISIANA

May 2, 2018

POST OFFICE BOX 31109  
SHREVEPORT, LA 71130  
(318) 673-5050 / (318) 673-5099 (FAX)



Welcome to the City of Shreveport!

As Mayor of Shreveport, it is my pleasure to welcome you to our City on the occasion of the **U.S. National Hot Air Balloon Championship and Red River Balloon Rally**, held July 8-15, 2018. I bring greetings from the City of Shreveport and its proud citizens. I welcome the approximately forty (40) professional balloon pilots from all over the country to the beauty and the warm hospitality of our area. I am also pleased and thankful to the Shreveport-Bossier Sports Commission, a division of the Shreveport-Bossier Convention and Tourist Bureau, for planning this fun, family-oriented event, which includes such activities as a balloon glow, craft and food vendors, tethered balloon rides, and professional Christian and soft rock concerts.

We are confident that you will find our area a perfect setting for your championship. Backed by a tradition of proven hospitality and excellent facilities, we consider it a privilege to provide a stimulating and productive atmosphere for your activities. Our city of approximately 200,000 residents is blessed with the best of many worlds: a rich, progressive culture infused with a deep love of the South; a thriving arts community; the natural beauty of rivers and lakes, and some of the best food found anywhere in the nation.

We are honored to have you come and visit with us at this time, and we stand poised to help if you need any additional assistance. With an extended handshake, I hope that you will consider Shreveport your second home during this time.

Sincerely yours,

A handwritten signature in blue ink that reads "Ollie S. Tyler".

Ollie S. Tyler  
MAYOR



July 8, 2018

It is my pleasure to welcome the *U.S. National Hot Air Balloon Championship July 8-15, 2018*. We are excited that this championship event is being hosted once again in the Shreveport-Bossier Community.

We hope you will take some time to visit our city and experience our outstanding quality of life, including beautiful parks and open spaces, cultural events, and great restaurants. We welcome the opportunity for you to experience first-hand the warm, southern hospitality of Bossier City and thank you for choosing to share this special time with us. Come again!

Sincerely,

A handwritten signature in black ink that reads "Lorenz Walker". The signature is written in a cursive, flowing style.

Lorenz Walker  
Mayor

# ***Pilot Schedule***

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## **Sunday, July 8, 2018 (SR 06:15; SS 8:25)**

1:00 – 3:00 PM Early hotel room check in available for DeSoto Championship participants, Hilton Garden Inn, Shreveport

### **DeSoto Parish Championship**

***All may attend but only first twenty registered for this event receive the comp room for Sunday and Monday, gift card and free practice propane***

5:00 – 5:30 PM Pilots and crew arrive C E “Rusty” Williams (DeSoto Parish) Airport, 40 minutes south on HWY 171  
5:00 – 7:00 PM FAA check in  
6:00 PM Pilot and crew meal, 4H Building  
7:00 PM Pilot and FAA Waiver briefing  
7:15 PM Pilot Prize Flight Briefing, 4H Building  
7:30 – 8:25 PM Pole Grab and \$10,000 Prize Flight – Fly-in to airport and ring toss  
8:30 – 9:30 PM Balloon Glow: DeSoto Parish airport  
10:15 – 11:15 PM Propane refueling, Louisiana State Fairgrounds, Hearne Ave Exit US 20 (2631 / 9383)

## **Monday, July 9, 2018 (SR 06:15; SS 8:25)**

5:45 – 6:00 AM Pilot Flight Briefing for optional practice flight (FAA Waivered), HGI Orchid Ballroom  
6:30 – 9:30 AM Optional practice flight  
8:30 – 9:30 AM Propane refueling (\$40/fill, cash only for non-DeSoto participants), Louisiana State Fairgrounds  
3:00 – 6:00 PM Preliminary Pilot Registration, Hilton Garden Inn (HGI), HGI Rose Ballroom. Pilots flying ‘official’ practice flight must register, get competition maps, review and sign FAA Waiver acknowledgement form. Pilots will still be required to attend full Pilot Registration on Tuesday afternoon for FAA credential exam.

## **Tuesday, July 10, 2018 (SR 06:16; SS 8:25) *All event provided rooms available for check in***

5:00 AM Coffee and refreshments available, HGI  
5:45 – 6:00 AM Pilot Flight Briefing for optional practice flight (FAA Waivered), HGI Orchid Ballroom  
6:30 – 9:30 AM Optional practice flight  
8:30 – 9:30 AM Propane refueling (\$40/fill, cash only for non-DeSoto participants), Louisiana State Fairgrounds  
11:00 – 12:30 PM HACD General Membership meeting, state of the Division, Tacomania, 641 East Kings Hwy, 3236 / 9384  
1:00 – 4:00 PM Pilot Registration, HGI Rose Ballroom  
2:00 – 4:00 PM Rookie Orientation, BFA Declaration App, Dakota 10 Logger and review and discussion of complex tasks, pilot Q & A - all welcome, non-mandatory, HGI Orchid Ballroom  
4:30 – 5:30 PM General Briefing, HGI Orchid Ballroom  
6:30 – 9:00 PM Welcome party, Margaritaville Casino, Paradise Theatre, 777 Margaritaville Way, Bossier City

## **Wednesday, July 11, 2018 (SR 06:16; SS 8:25)**

5:00 AM Coffee and donuts available, HGI  
5:40 AM Briefing doors open,  
5:45 AM Competitive Pilot Flight Briefing: HGI Orchid Ballroom  
6:30 – 9:30 AM Competition Flight 1  
9:00 – 10:30 AM Debriefing - return of unused markers, Loggers, and FRF to HGI Lobby  
9:00 – 10:30 AM Propane refueling, Louisiana State Fairgrounds  
11:30 AM–12:30 PM Non-mandatory Task Debriefing – strategies for the morning’s tasks discussed by Nick Donner, Orchid Ballroom

**Thursday, July 12, 2018 (SR 06:17; SS 8:24)**

5:00 AM Coffee and donuts available, HGI  
 5:40 AM Briefing doors open,  
 5:45 AM Competitive Pilot Flight Briefing: HGI Orchid Ballroom  
 6:30 – 9:30 AM Competition Flight 2  
 9:00 – 10:30 AM Debriefing - return of unused markers, Loggers, and FRF to HGI Lobby  
 9:00 – 10:30 AM Propane refueling, Louisiana State Fairgrounds  
 11:30 AM–12:30 PM Non-mandatory Task Debriefing – strategies for the morning's tasks discussed by Al Nels, Orchid Ballroom

**Thursday, July 12, 2018 (SR 06:17; SS 8:24)****Greenwood, LA Glow**

*Five pilot glow at Boothill Speedway. Those selected will be excused from either Friday or Saturday LSUS Glow*

6:00 - 6:30 PM Pilots arrive  
 6:30 – 7:30 PM Pilot Meal  
 7:30 PM Pilot Glow Briefing  
 8:45 – 9:15 PM Balloon Glow  
 10:00 – 11:00 PM Propane refueling, Louisiana State Fairgrounds

**Friday, July 13, 2018 (SR 06:18; SS 8:24)**

5:00 AM Coffee and donuts available, HGI  
 5:40 AM Briefing doors open,  
 5:45 AM Competitive Pilot Flight Briefing: HGI Orchid Ballroom  
 6:30 – 9:00 AM Competition Flight 3  
 9:00 – 10:30 AM Debriefing: return of unused markers, Loggers, and FRF to HGI Lobby  
 9:00 – 10:30 AM Propane refueling, Louisiana State Fairgrounds  
 11:30 – 12:30 PM Non-mandatory Task Debriefing – strategies for the morning's tasks discussed by Andy Baird, Orchid Ballroom

**Friday Evening Non-Competitive Activities, LSU Campus, 1 University Place 3408 / 8838**

6:00 - 6:30 PM Pilots arrive LSUS. Enter at E Kings Hwy and University PI (N entrance)  
 6:30 – 7:30 PM Pilot Dinner, Baptist Collegiate Ministry, 1 University PI, LSUS Campus all pilots  
 7:15 – 7:30 PM Fly out of American Flag with National Anthem  
 8:00 PM Glow Briefing: All pilots, Baptist Collegiate Ministry  
 8:30 – 9:15 PM Balloon Glow  
 9:30 PM Fireworks  
 9:30 – 10:30 PM Propane refueling, Louisiana State Fairgrounds

**Saturday, July 14, 2018 (SR 06:18; SS 8:24)**

5:00 AM Coffee and donuts available, LSUS  
 5:40 AM Briefing doors open,  
 5:45 AM Competitive Pilot Flight Briefing: HGI Orchid Ballroom  
 6:30 – 9:30 AM Competition Flight 4: includes LSUS Fly-In or Fly-Out  
 9:00 – 10:30 AM Debriefing: return of unused markers, Loggers, and FRF to HGI Lobby  
 9:00 – 10:30 AM Propane refueling, Louisiana State Fairgrounds  
 11:30 – 12:30 PM Non-mandatory Task Debriefing – strategies for the morning's tasks discussed by TBD, Orchid Ballroom

**Saturday Evening Non-Competitive Activities, LSU Campus, 1 University Place 3408 / 8838**

6:00 - 6:30 PM Pilots arrive LSUS. Enter at E Kings Hwy and University PI (N entrance)  
 6:30 – 7:30 PM Pilot Dinner, Baptist Collegiate Ministry, 1 University PI, LSUS Campus all pilots  
 7:15 – 7:30 PM Fly out of American Flag with National Anthem  
 8:00 PM Pilot Glow Briefing: All pilots, Baptist Collegiate Ministry  
 8:30 – 9:15 PM Balloon Glow  
 9:30 PM Fireworks  
 9:30 – 10:30 PM Propane refueling, Louisiana State Fairgrounds

**Sunday, July 15, 2018 (SR 06:19; SS 8:23)**

5:00 AM Coffee and donuts available, HGI Orchid Ballroom  
5:40 AM Briefing doors open,  
5:45 AM Competitive Pilot Flight Briefing: HGI Orchid Ballroom  
6:30 – 9:30 AM Competition Flight 5, includes LSUS Fly-In or Fly-Out  
8:30 – 9:30 AM Debriefing: return of sponsor banners, unused markers, Loggers, and FRF  
9:00 – 10:30 AM Propane refueling, Louisiana State Fairgrounds  
  
12:30 PM Awards Brunch, HGI Ballroom

**Important Location Addresses and Phone Numbers**

**Hilton Garden Inn (1948 / 9080)**

5971 Financial Plaza, Shreveport

Phone: (318) 686-0148

**Louisiana State Fairgrounds (2631 / 9383)**

3701 Hudson Ave. (Exit US20 at Hearne Ave)

Shreveport, LA 71109

**Boothill Speedway (0854 / 9122)**

9144 Daytona Drive

Greenwood, LA 71033

**C E “Rusty” Williams (DeSoto Parish) Airport  
(2790 / 4777)**

211 Independent Ave, Grand Cane, LA 71032

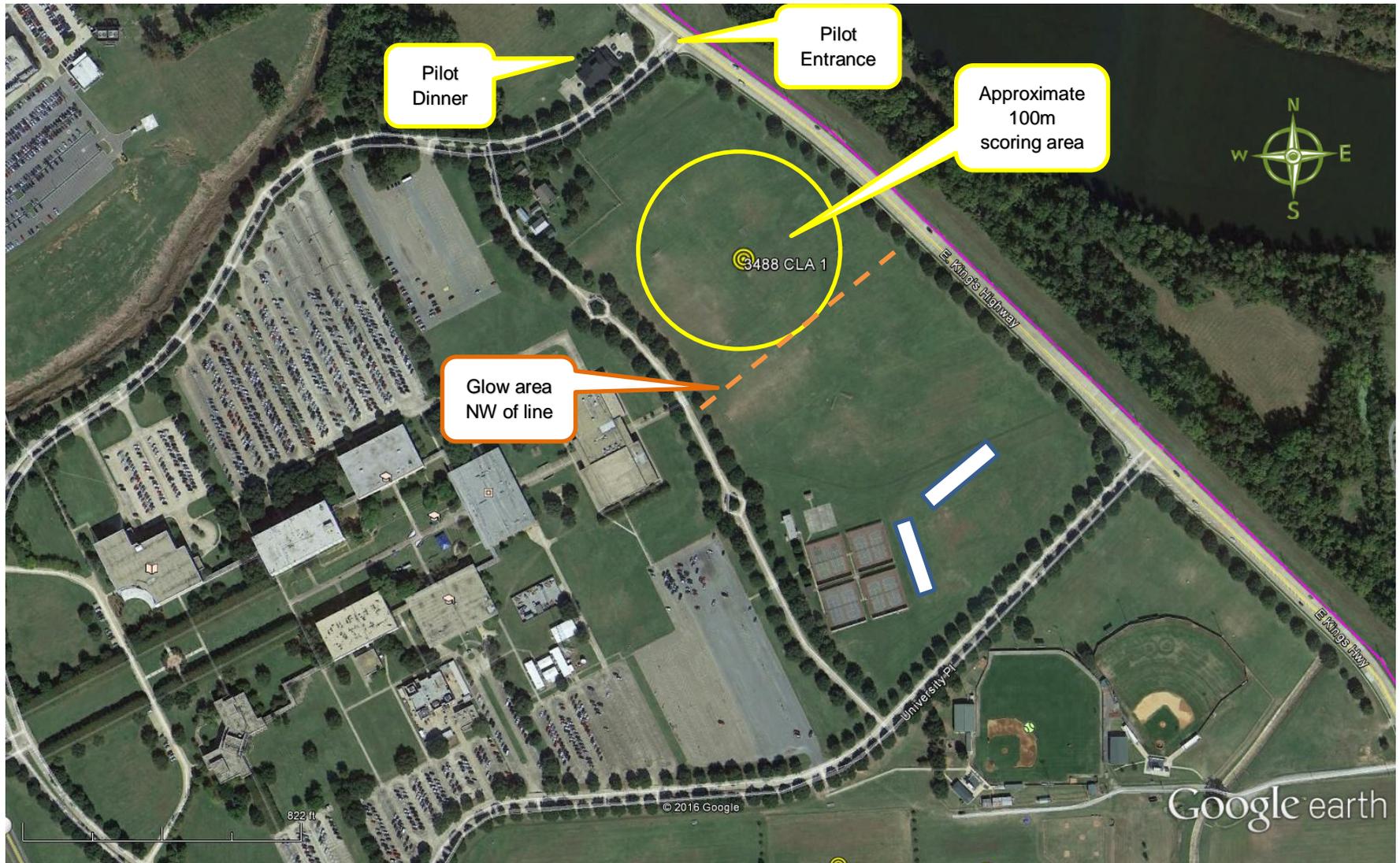
Phone: (318) 871-8900

**LSUS Campus, CLP (3408 / 8838)**

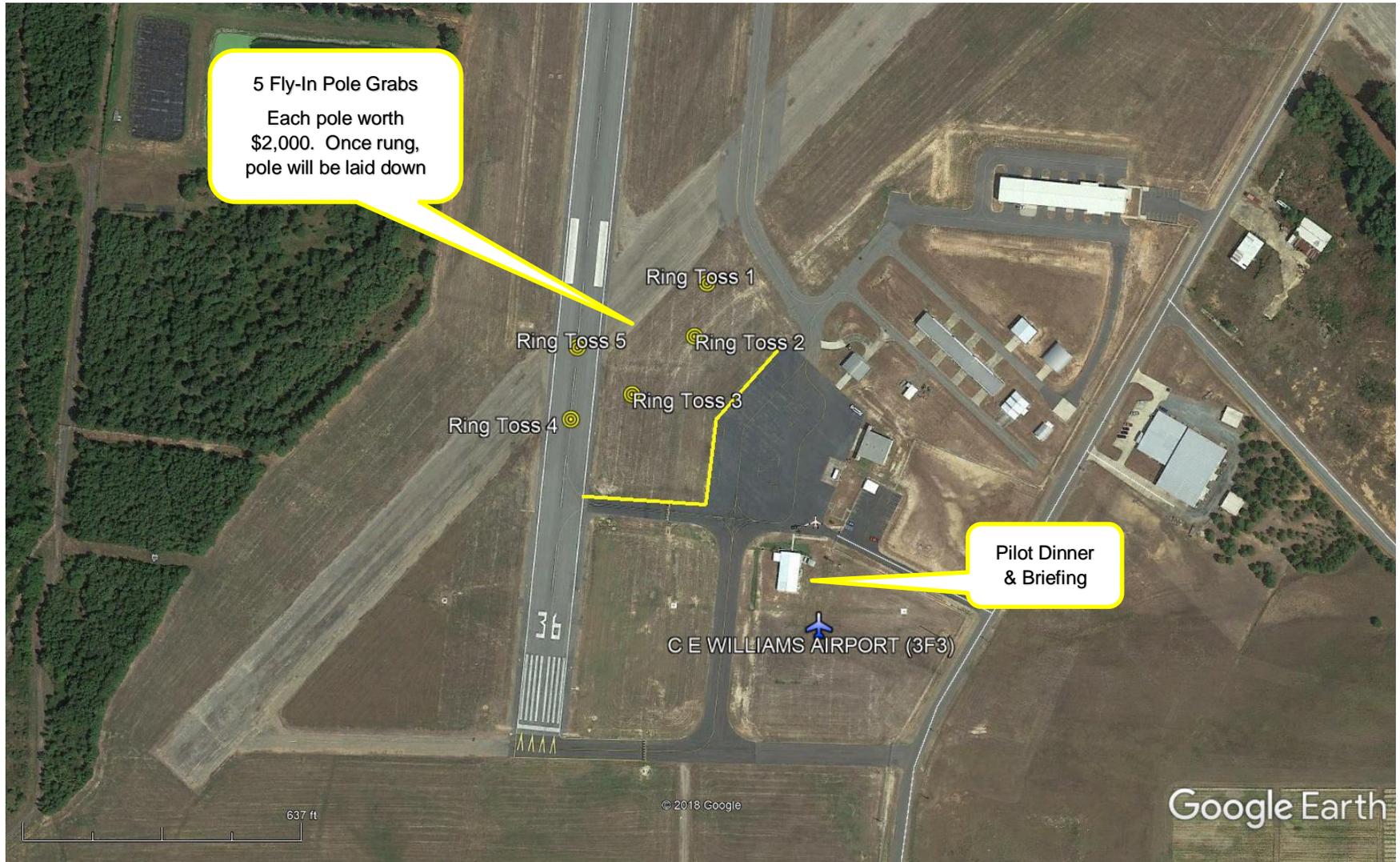
1 University Place



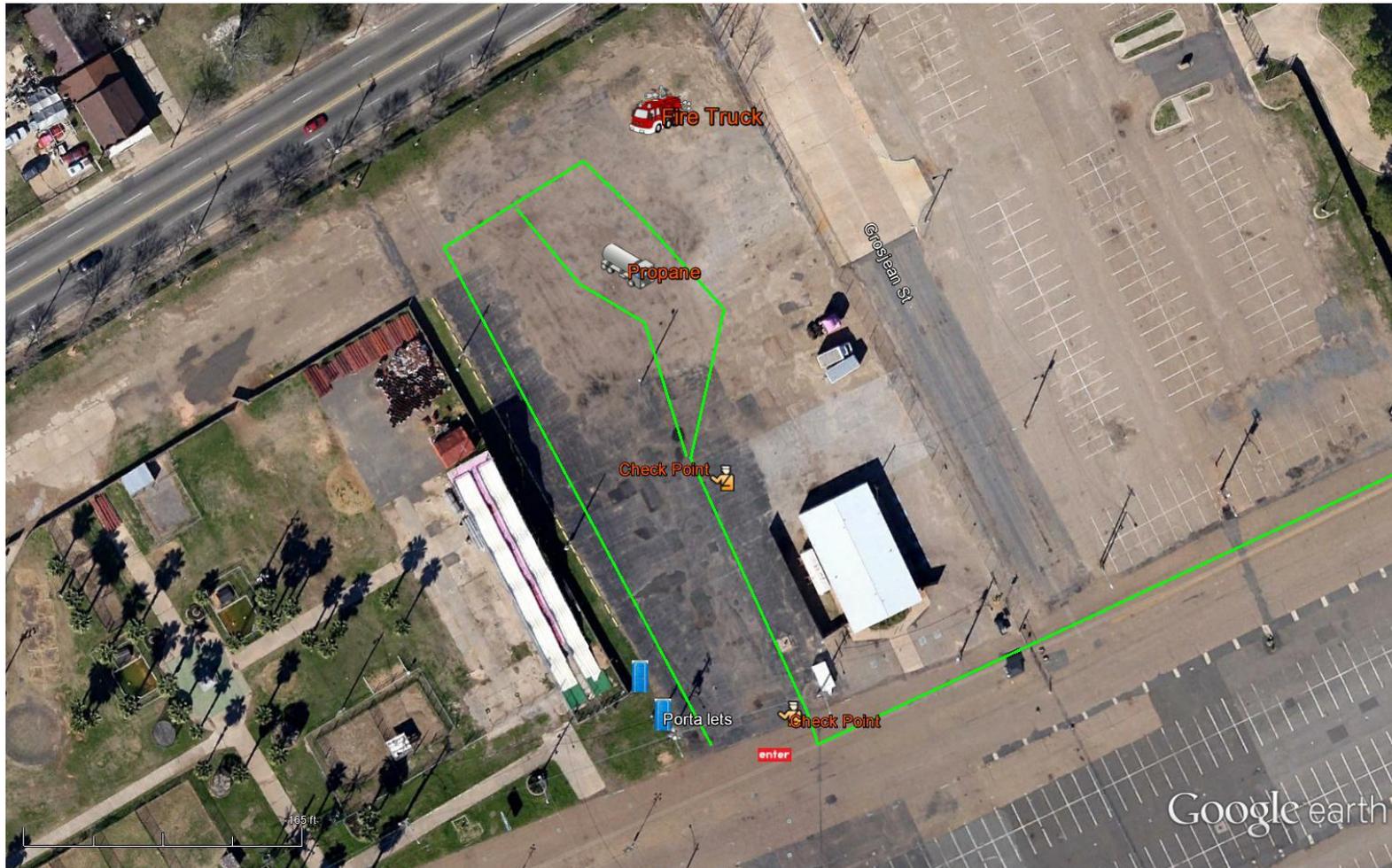
# Aerial View – LSUS Campus, CLA 1



# ***Aerial View – C E “Rusty” Williams Airport (3F3)***



# Propane Refueling Station – LA State Fairgrounds



- Volunteers will man the two check points to check pilots in and review critical safety rules: no smoking, radios, strikers; only 2 crew/balloon and all baskets must be removed from trailers
- Refueling will have adapters to refuel 8-10 balloons
- O'Neil Gas will have personnel on site to control refueling
- Refueling site has adequate lighting for evening refueling

# ***Propane Refueling Procedures***

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**Refueling phone number: Kevin Whitten 318.471.4486**

If you are going to be delayed for any reason, you must contact Kevin Whitten so that he can make appropriate plans with the individuals working propane. Failure to contact Kevin (318-471.4486) may result in your inability to get propane. We may well assume you did not fly and have no need for propane. Please help us ensure that you have propane for your next flight.

If for any reason you decide not fly a particular flight, please call Henry Rosenbaum at 804.971.0704. Please proceed directly to propane after your flight and save the after-flight celebration for the hotel parking lot.

Using I 20 to the LA State Fairgrounds take Hearne Ave Exit to Kings Hwy. Propane refueling is located behind (north side) of the baseball stadium.

## **When refueling, please follow these guidelines:**

1. Have your refueling adapters hooked up prior to entering the fueling area. After completing refueling, leave the area to complete the covering of your balloon and any other housekeeping that may be required.
2. No more than two from each balloon crew may be in the refueling station area. Persons involved in refueling must be experienced in refueling propane tanks.
3. Pilots are responsible for proper filling of tanks.
4. Disarm strikers and remove from basket.
5. Leave cell phones in the chase vehicle.
6. No nylon jackets in the refueling area.
7. Only tanks used in flight will be refueled.
8. Pilot lights in campers, chase commanders, etc., must be turned off.
9. All vehicles must be turned off. Leave keys in the ignition or on the dashboard in case emergency personnel need to move it.
10. No persons are permitted inside the balloon basket or vehicle passenger compartment during refueling.
11. No refueling of tanks in enclosed trailers or vans.
12. Absolutely no smoking in the area.

## **Emergency Procedures.**

In the event of a fire during refueling. It is recommended to leave your keys in your vehicle prior to starting to refuel -- in the ignition or on the dash.

Fire is not involving your balloon system:

1. Stop all refueling operations.
2. Shut all valves, including liquid and vapor.
3. Leave your equipment connected.
4. Confirm with propane operator the "Emergency Shut Off" on propane vehicle is activated.
5. Leave the refueling area and report to check-in location.
6. Do Not attempt to remove your vehicle from the refueling area.
7. Stand by for further instruction from Public Safety Officials.

Fire involving your balloon systems:

1. Shut all valves, including liquid and vapor, if conditions will allow.
2. Notify propane operator of fire.
3. Confirm with propane operator the "Emergency Shut Off" on propane vehicle is activated.
4. Report all injuries to Public Safety Officials if not injuries are not noticeable.

## **Refueling Hours**

Day Flights	9:00 – 10:30 AM	LA State Fairgrounds, 3000 Pershing Blvd
Weekend Glows	9:30 – 10:30 PM	LA State Fairgrounds, 3000 Pershing Blvd
Sunday/Thursday Evening	10:00 – 11:00 PM	LA State Fairgrounds, 3000 Pershing Blvd

# Participating Pilots

- Indicates rookie status

Banner No.	Name		City	ST
1	Petrehn	Johnny	Missouri City	TX
2	Zvada	Joe	McAllen	TX
3	Donner	Chase	Atlanta	GA
4	Donner	Nick	Louisville	KY
5	Heartsill	Rhett	Ft. Worth	TX
6	Armstrong	Scott	Urbandale	IA
7	Baker	William	Tyler	TX
8	Heavin	Gary	Gatesville	TX
9	Egerton	Drew	Statesville	NC
10	Wright	Jonathan	Las Vegas	NV
11	Raya	Shawn	Dexter	MI
12	Rubin	Jeremy	Ankeny	IA
13	Nels	Al	Beavercreek	OH
14	Isley	Todd	Carlisle	IA
15	Petrehn	Paul	Rio Rancho	NM
16	Nels	Andrew	Smyrna	GA
17*	Foelske	Aaron	Channahon	IL
18*	Clair	Leroy	Carlisle	IA
19	Craig	Brad	Carlisle	IA
20	Wong	Dale	Rancho Cucamonga	CA
21	Liberti	Daniel	Box Elder	SD
22	Fenster	Matthew	Bellevue	NE
23	Heartsill	Joe	San Angelo	TX
24	Wilkinson	Steve	Palm Desert	CA
25	Kimball	Jayson	Napa	CA
26	Heavin	Brandon	Gatesville	TX
27	Keller	Kelli	LaQuinta	CA
28	Christian	Bret	Indianola	IA
29	Bussey	Bill	Longview	TX
30	Draughn	Ken	Burlington	NC
31	Gauthier	Guy	Henderson	TX
32	Baird	Andrew	Dexter	MI
33	Cass	Gary	Yuma	AZ
34	Kent	Karen	Port Allen	LA
35	Magee	Kim	Swisher	IA
36	Hackett	Myia	Walla Walla	WA
37	Jones	Steve	Belton	TX
38*	Gordon	Edward	Austin	TX
39*	Wilkinson	Justin	Bermuda Dunes	CA
40*	Broker	Bill	Plano	TX

# Prize Fund

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The available prize fund of \$30,000 is broken down as follows:

## \$10,000: DeSoto Parish Championship pole grabs

**C E Williams Airport:** five poles set up with payout up to \$10,000 with \$2,000 per pole available. As a pole is rung, it will be laid down signaling pilots what poles are still available for the cash grab.

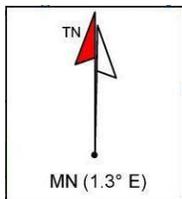
## \$20,000: US National Competitors

1st	\$ 3,000
2nd	2,500
3rd	2,000
4th	1,500
5th	1,000
6th	700
7th	600
8th	500
9th	400
10th	300
11th-40th	250
	<hr/>
	\$20,000

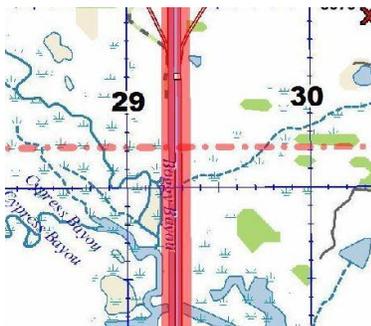
# Map Legend

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Magnetic declination (variation) is 1.3° and is shown on the competition map as follows:



Red Roads (see Rule 7.3.3.1) and power lines are indicated on the competition map as depicted here:



# Recall Information

## **Remind**

The US Nationals will be using the messaging tool **Remind** to keep pilots, crew, officials and local volunteers informed on important developments regarding the championship. Designed for teachers, students and parents it is also available to non-profit groups for non-commercial use. **You should subscribe by text as this will be used for pre-and in-flight emergency communications.** In order to avoid excessive communication with local volunteers and other unnecessary contacts the system will be divided into two principal groups with messaging defined below.

**Championship Pilots, Jury, Steward, Event Director, Deputy Director, Chief Measurer, Chief Scoring Officer:** this group used for publication of scores in accordance with Rule 14.3 and will serve as the start of time limits. In accordance with Rule II.18 the hours between 10:00 PM and 8:00 AM will be treated as “rest hours” and are to be respected by staff and pilots alike. Possible task or target changes based on TDS information from briefing.

**All Pilots, Crew, Staff, Volunteers, Organizer, FAA, SHV/Rapcon:** pibals, any emergency communication including release for flight or flight cancellation, schedule changes

## ***Communicate the Presence of Power Lines!***

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In a continued effort to improve safety in ballooning, the BFA is implementing a new initiative to implement at the landing phase of flight. This new ground crew communication gesture will be universally recognized by pilots



of other types of aircraft as it fits into the FAA, Navy, ICAO-‘Int’l-AIM’ use of hand signals for reference and communication.

Alert pilots of a hidden powerlines using the new hand signaling procedure. The arm bent over the top of one’s head will now be recognized as the universal indicator of a power/phone line. The other arm is used to get the pilot’s attention and to point to the hazard. The pilot could even communicate back with the same gesture to crew that the warning was received. Please spread the word on this new safety initiative as it could no doubt prevent an accident in our ballooning community. Thanks to Mike Hance who first brought this idea to the BFA and balloon events in Texas.

# BFA Declarations App

This is a screen shot of the App developed specifically for use by the BFA/HACD for competition. It is free and can be downloaded to both iOS and Android devices. It is capable of recording declarations for PDG's and FON's.

Pilots or their crew may make the declarations by entering the Task # and Easting and Northing coordinates. Altitude need not be entered unless required by the TDS. Declarations can be changed at any time by typing over the last valid declaration. Declarations are automatically timestamped and sent to scoring staff identified through the "Recipient List" built through your contact list. Declaration #2 and #3 will not be used unless the TDS allows more than one declaration on the referenced task.

The screenshot shows the BFA Declarations and Marks app interface. At the top, there's a status bar with location, 56° temperature, 4G LTE signal, 99% battery, and 9:13 AM. The app title is "BFA Declarations and Marks" with a "Start BT" button. Below are input fields for "Pilot #:" and "Task #:". A "Clear All" button is on the left. The main form has three rows for "Decl #1:", "Decl #2:", and "Decl #3:". Each row has three columns: "Easting:" (yellow background), "Northing:" (yellow background), and "Alt:" (pink background). A "Send This Declaration" button is below the form. A yellow box displays "Time: 09:13:52" and "Zone: 14 713025/3650721 Alt: 577 ft". A "GPS ready." button is below that. At the bottom, there's a "View Recipient List" button. Callouts provide additional information: one explains the coordinate input rules, another notes the time and position fix, and a third lists recipient names and phone numbers.

May be entered as 3-digit (goal list), 4- or 5-digit target number. If 'Northing' is blank, it implies the declaration is a pre-approved goal or hard target. If entering a PDG/FON by coordinate, use 4/4 rule in Easting and Northing box: xxxx/yyyy.

App screen view with satellite reception. Note activation of time and position fix.

Mike Gilligan 281.380.8204  
Lynn Sullivan 330.323.4673

## Cell Phone Coverage

The automatic time-stamp addresses the issue of not having good cell coverage. The message is queued up in the sender's phone until there is cell coverage. Then any pending messages are sent. The only important time is the one automatically placed in the message by the App. And that's the reason there's a checksum included in the message.

The App makes use of the phone's GPS which is a high drain on the battery. An older battery would suffer even more. Pilots may want to consider using a portable battery charger -- \$5 to \$15 at Walmart: [Walmart Charger](#).

# Approved Goal List

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The goal list on the following pages includes a combination of road intersections displayed on the competition map as well as intersections existing that are not displayed on the map (#421). The goal list also includes earth-bound landmarks easily identified during flight such as cul-de-sacs (Goal #403), football (Goal #202) and soccer field centers, etc. Below are examples of non-traditional goals included in the Approved Goal List.

Competitors are also able to declare any coordinate on the map as a goal provided it is not in conflict with Rule II.12.2.



Goal #202  
Google Earth view



Goal #421  
Google Earth view



Goal #403  
Google Earth view

# ***Approved Goal List - all zone 15S***

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The goal list is provided for the convenience of the pilot. No further updates to this list will be provided and the competitor uses this list at their own risk. Any error contained in the list will not be grounds for protest.

<b>Goal #</b>	<b>Easting</b>	<b>Northing</b>	<b>Description</b>
101	428687	3592703	Oakley Dr and St Vincent Ave
102	427978	3593294	Tulane Ave and Bair Dr
103	428524	3593595	Dickson St and Dowdell St
104	427508	3594104	Kings Hwy and Mansfield Rd
105	430193	3593892	Center of 50-yard line CE Bird HS Stadium
106	434214	3592933	E Preston Ave and Champion Lake east park entrance
107	434598	3593653	Clyde Fant Pkwy Service Rd and Knight St
128	430106	3600509	23/5 runway and 32/14 runway at DTN
129	428684	3600105	Burt St and Simonds Dr
130	428167	3600245	Hawn Ave and FreeState Blvd
132	428022	3600974	W Algonquin Trail and Navaho Trail
134	428124	3601292	Island St and Motes Island St
136	431048	3602774	W Viking Dr and first intersection North
144	429606	3604880	George Rd and farm service rd
145	431111	3605919	River Bluff Blvd and N Beach Dr
201	426467	3594043	James St and Missouri Ave
202	425673	3593942	50 yard line Fair Park High School
203	424919	3594687	Cathrine St and Hassett Ave
204	424432	3593325	Center of northern goal post (under cross bar) at Jewella Park
205	423483	3594039	Woodland Way and Curtis Ln
206	423632	3593657	Chamberlain Dr and Iberville Dr
207	423475	3593181	Bullen St and Curtis Ln
208	422925	3592990	Greenwood Rd (79) and Marston Ave
209	422414	3592968	Greenwood Rd (79) and Westwood park Dr (center of grass triangle)

210	420272	3593532	Jefferson Paige Rd (PR 18) and Parkwood Dr
211	420261	3592843	land O Trees and Parkwood Dr
212	419003	3592504	Bill Cockrell Metro Park off Pines Rd pitchers mound southern most baseball field
213	418657	3593079	Sonhaven Dr and Pines Rd
215	417417	3594160	Venus Dr and Twilight Ln
216	417240	3594271	Virgo Dr and Gemini Dr
217	416918	3594266	E St and Cross Dr
218	416854	3593837	A St and Pinecrest Blvd (center of blvd)
219	416149	3592604	Vail St and Treat Dr
220	415860	3594123	Jefferson Paige Rd (Par Rd 18) and Jon Dr
221	414979	3593554	Brick St and Paige Ln
222	414668	3593767	Iron St and Dawson Rd
223	414658	3594572	Jefferson Paige Rd (Par Rd 18) and Par Rd 145
224	413635	3594226	Par Rd 18 and Alma Rd
225	413081	3594103	Jefferson Paige Rd (Par Rd 18) and Burton Rd
226	427089	3597358	Shreveport Blanchard Hwy (173) and Ford St
227	426410	3597637	Shreveport Blanchard HWY and service rd (tower 260m S)
228	427017	3599636	Forum Dr and N Hearn Ave (3094)
229	426763	3599839	Forum Dr and Corporate Dr
230	425347	3599499	N Regional Rd and Water Treatment Plant entrance
231	424615	3600760	Hersey D Wilson Dr and Russell Rd
232	423394	3600549	Kelsey St and linear St
233	423805	3601389	Willie Mays St and Legardy St
234	423477	3601797	Freddie St and Caldwell St
235	423712	3602520	Green Oaks High School, Hawkins St and Legardy St - center of northernmost goal post
236	423001	3602206	Thomas E Howard Dr and Audrey Ln
237	423093	3601774	Avacado Dr - center of cul-de-sac north end
238	423153	3601389	Willie Mays St and Avacado Dr
239	422180	3601197	Willis St and David Raines Rd
240	422190	3602075	Pouncey Ln and David Raines Rd
241	421357	3601760	Woolbert St - center of cul-de-sac east end
242	421082	3601460	Marjorie St (east leg) and Shreveport Blanchard Hwy (173)

243	420634	3602181	Merlin Cir - center of grass area cul-de-sac
244	420354	3602406	Shreveport Blanchard Hwy (173) and N Industry Rd
245	419748	3602058	N Industry Loop and Plant entrance
246	419537	3602942	Shreveport Blanchard Hwy (173) and Plant entrance
247	418895	3603268	Shreveport Blanchard Hwy (173) and Windwood Estates Dr
248	418700	3603380	Bostwick Rd and Shreveport Blanchard Hwy (173)
249	418393	3603016	Bostwick Rd and center of double RR tracks
250	416726	3601867	Bostwick Rd and Honey Creek Ln
251	415921	3601886	Bostwick Rd and Pleasant Grove Dr
252	415300	3601896	Bostwick Rd and Bar G Ln (north leg)
253	414901	3601902	Bostwick Rd and N Lakeshore Rd
254	414917	3602555	Deer Trail and N Lakeshore Dr
255	414770	3603172	Farm service Rd and N Lakeshore Rd
256	416968	3605682	Sandra St and Juliette St
257	418197	3605518	Pine Hill Rd and Glenn Rd
258	419510	3605497	Pine Hill Rd and Linda Ln
259	420623	3605482	Pine Hill Rd and Roy Rd
260	421260	3605474	Pine Hill Rd and Winchester Dr
261	422396	3605461	Pine Hill Rd and Atwood Rd
262	423403	3605086	Pine Hill Rd and N Pines Dr
263	424008	3605059	Pine Hill Rd and Saxon Pl
264	425101	3604973	Rainsville Rd and N Market St (Rt 1)
300	419501	3591845	Private Rd and Wildwood Dr
301	419508	3591386	Reese Rd and Greenwood Blvd
302	419355	3589995	5 Oaks Dr and Raspberry Ln
303	417962	3591674	Hermosa and Crosswind Dr
304	418326	3591852	Tierra Dr and Madera Dr
305	417617	3592415	Santa Monica Blvd and Santa Monica Cir
306	416950	3592285	Calderwood Dr and Anne Lovelace Dr
307	416296	3592084	Calderwood Dr and Treat Dr
308	415876	3591501	White Tail and McMichael Ave
309	414356	3590774	Scott St and Greenway Ave

310	413808	3589332	Atkinson Dr and W Park Rd
311	415387	3589193	RR and W Bert Kuhns Industrial Loop
312	415438	3588626	Winderweedle Rd and Flournoy Lucas Rd
313	416998	3589286	Glen Leaf Rd and Glenleaf Rd
314	417338	3588592	El Rancho Rd and center of double private drive
315	417801	3588991	Quinn Church Rd and Broadacres Rd
316	419723	3589051	Buncombe Rd and Winder Dr
317	419906	3588499	Winder Rd cul de sac center
318	422071	3588455	Denny Dr and Meriwether Rd
319	422763	3587546	parkdale Dr and Meriwether Rd
320	420599	3587780	Tehnology Dr and Campus Dr
321	419636	3587782	Quail Ridge Blvd and Cardigan Way
322	418318	3587558	Scott St and Roosevelt Dr
323	417472	3587205	Flournoy Lucas Rd and Buncombe Rd (southern intersection)
324	420059	3586123	Flournoy Lucas and Newcastle Dr
325	420880	3586809	Campus Dr and Allison
326	422099	3585912	Cedar Creek Dr and Bushnell Ln
327	423142	3585883	Pitchers Mound (West baseball field) - Southwood Sr High School
328	421320	3585318	W Bert Kuhns Industrial Loop and Dawn Ridge Dr
329	419249	3585710	N loop intersection of parking lot for Teleperformance
330	415571	3586510	Ash St and Pepperwood St
331	415353	3586281	Patrick Ln and Woolworth Rd (Par Rd 7)
332	414777	3586624	Par Rd 124 and Al Bouldad Dr
333	413639	3586645	Shirley Francis Rd (Par Rd 124) and Audobon Meadows Dr
334	413151	3586651	Shirley Francis Rd (Par Rd 124) and Oak Creek Tr
335	413736	3585054	Brossette Rd and Lutz Rd
336	413732	3584800	Whispering Pines and Lutz Rd
337	415349	3585167	Buncombe Rd and Woolworth Rd (Par Rd 7)
338	415329	3583111	Fielder Farm Rd and Woolworth Rd (Par Rd 7)
339	420697	3582929	Colquitt Rd (525) and Chandler Rd
340	421620	3582740	Cul de sac at south end of Driftwood Cir
341	421984	3583652	Colquitt Rd (525) and Ardis Taylor Dr

342	426590	3584046	Flournoy Lucas Rd and Kingston Rd
343	426589	3583710	Willow Dr and Kingston Rd
344	426579	3583015	Williamson Way and Kingston Rd
345	427125	3583701	Willow Dr and Overlook Dr
346	425638	3581242	Riding Club Ln and Old Carriage Trail
347	425048	3581251	Riding Club Ln and Colt Trail
348	423440	3581237	Stage Coach Rd and Bonanza Trail
349	423435	3580794	Lance Ln and Bonanza Trail
350	423136	3581254	Stage Coach Rd and Railroad
351	422811	3581301	Stage Coach Rd and Drag Strip rd
352	420935	3580937	Fountainbleau Rd and Provence PI
353	420424	3581163	cul de sac at west end of Mirableau PI
354	418682	3581424	Dorchester Cir and Cardiff Dr
355	418486	3580617	Manchester Ct T intersection
356	417657	3581407	Thistle Ln and McElroy Dr
357	417439	3580475	Grawood Dr and McElroy Dr
358	415315	3581556	Rosewood Oak Drive and Woolworth Rd ( Par Rd 7)
359	415307	3581129	Woolworth Oaks Dr and Woolworth Rd (Par Rd 7)
360	415295	3580354	Maiden Rd and Woolworth Rd (Par Rd 7)
361	418518	3579020	Chanticleer Dr and Pilgrimage Way
362	418896	3579016	Chanticleer Dr and Keith Rd (Par Rd 143)
363	418902	3579421	Brentwood Dr and Keith Rd (Par Rd 143)
364	419441	3579617	Branchwood Dr and Tucson St
401	431333	3590589	Pierremont PI and Fern Ave (N bound lane)
402	431313	3590237	Fern Loop and Fern Ave (N bound lane)
403	431844	3590220	Fern Loop Rd - center of cul-de-sac
404	432029	3590507	Sand Beach Blvd and St Luke United Methodist Church entrance
405	432524	3590114	Gator Dr and Roma Dr
406	432862	3590438	Captain Shreve High School, Gator Ave and E Kings Hwy, center of 50 yard line, N end of complex
407	433972	3589923	Park Dr and E Bert Kouns Industrial Loop (526)
408	434582	3591029	Dixie Garden Loop and Dixie Garden Dr
409	436756	3592531	CenturyLink Center Drive campus intersection

410	436846	3591888	Reeves Marline Dr and CenturyLink Center Dr
411	437299	3590895	Sunflower Rd and Rosemont Pl
413	437969	3590893	Grayson Dr and Radbrook Cir Radbrook Cir (center of cul-de-sac)
414	438520	3589949	Tributary Ct center of cul-de-sac
415	439482	3589290	Sligo Rd (612) and Pampus Ln
416	435506	3586661	Bagley Rd and Clearbrooke Dr
417	434618	3586640	Stratmore Dr and Stratmore Cir
418	434459	3586210	McIntosh Dr and Pippen Dr
419	433988	3585875	Azalea Dr and Chimes Dr
420	433210	3586582	Baccarat Dr and Calliope Ln
421	433417	3585475	T intersection at NW corner of The Oaks of Louisiana off of E Flournoy Lucas Rd
423	432429	3585359	Creek Hollow and Prestonwood Dr
424	432107	3585432	Shenandoah Dr and Stonebriar Cir
425	432239	3584926	E Flournoy Lucas Rd (523) and Acadianana Pl Blvd
426	430637	3585510	Jonathon Clay Dr and Ellerbe Rd (523)
427	427806	3583481	Tony Dr and Debra Joy Ln
428	429009	3584023	Flourney Lucas Rd and Stevens Rd
429	429924	3584011	Flournoy Lucas Rd and Labonne Terre Dr
430	430541	3584010	E Flournoy Lucas Rd and Wallace Lake Rd (N leg)
431	431293	3584090	E Flournoy Lucas Rd and Railroad
432	431777	3584412	E Flournoy Lucas Rd and Ellerbe Rd
433	432462	3583550	Ellerbe Rd and Ellerbe Church Rd
434	433023	3584156	Belle Winds Ct and Railsback Ridge Dr
435	434079	3584337	E Rochel Dr and Mazant St
436	433529	3584192	Millbank Cir center of cul-de-sac
437	437538	3582763	Railroad and Leonard Rd
438	434042	3582058	Ellerbe Rd and Bob White Ln
439	433491	3582706	Ellerbe Rd and Waterford Dr
440	432914	3583184	Railsback St and Railsback Ridge Dr
441	432207	3583037	Trailridge Dr and Overcross St
442	432133	3582546	Commander Dr and Winged Foot Dr
443	430534	3582407	Mayo Rd and Wallace Lake Rd

444	429958	3582424	Mayo Rd and Jade Cir
446	428828	3582427	Mayo Rd and General Chennault Ave
447	427858	3582630	Shattalon Dr and Tammy Ave
448	429811	3582017	Rustic Way Dr and Greenacres Rd
449	430528	3581640	Overton Brooks Rd (Par Rd 118) and Wallace Lake Rd (Par Rd 153)
450	430523	3581261	Giglio Dr and Wallace Lake Rd (Par Rd 153)
451	432852	3581591	Overton Brooks Rd (Par Rd 118) and Noris Ferry Rd (Par Rd 155)
452	433793	3581316	Remington Cir and Covington Cir
453	434538	3581416	Ellerbe Rd and Overton Brooks Rd
454	434834	3581026	Ellerbe Rd and Leonard Rd
455	434751	3580717	Cope Dr and Misty Cir
456	433962	3580708	Gatewood Cir and Long lake Dr
457	435408	3580272	Elerbee RD and Forest Creek Dr
458	439161	3581123	Railroad and Harris Island Rd
459	438845	3579976	Jeter Rd and Robson Rd (Par 116)
460	432837	3580006	Southern Loop and Noris Ferry (Par Rd 155)
461	431800	3580165	Southern Loop and Provenance Pl Blvd
462	430512	3580035	Southern Loop and Southern Loop (Par Rd 153)

# Hard Targets

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The following list of hard targets will not be updated throughout the event. Competitors should note that these may change once reviewed by on-site event staff and new targets may be added and used during the event. This list is provided for the convenience of the pilot. No further updates to this list will be provided and the competitor uses this list at their own risk. Any error contained in the list will not be grounds for protest.

**\*Competitors should note that some of these targets are within 200 meters of power lines depicted on the competition map. Declaring any such target as a competitor goal would be in violation of Rule II.12.2**

Target #	Easting	Northing	Description
1293	412581	3593775	BASEBALL FIELD
1403	414664	3603333	WESTLAKE BAPTIST CHURCH, N LAKESHORE DR
1495	414805	3595053	3390 JOLLY NAPIER RD - E SIDE OF ROAD CUT FIELD
14951	414597	3595271	3310 JOLLY NAPIER RD
1503	415805	3603337	1210 PLEASANT GROVE RD
1584	415150	3584079	WALNUT HILLS ELEMENTARY / MIDDLE SCHOOL, 9360 WOOLWORTH RD (PAR RD 7)
1587*	415500	3587612	SEALLY INDUSTRIAL LOOP, 7699 W BERT KOUNS INDUSTRIAL LOOP
1591	415882	3591040	WESTVIEW CHRISTIAN CHURCH
1605	416681	3605391	BLANCHARD ELEMENTARY SCHOOL, BLANCHARD ELEMENTARY SCHOOL, 402 BIRCH AVE
1674	416873	3574031	JOHN HAY, 11780 STOER RD
1677	416355	3577317	11433 SPARKS DAVIS RD
1703	417550	3603553	TATER PATCH PRIVATE GRASS AIR STRIP, 5985 SHREVEPORT-BLANCHARD HWY
1774	417278	3574994	FIRST BAPTISH CHURCH OF KEITHVILLE, 6295 WILLIAMS RD, KEITHVILLE
1791	417750	3591050	SHREVEPORT POLICE ACADEMY
1802	418911	3602823	6173 Windwood Estates Dr
1803	418743	3603100	Winwood Estates, open field due W of T intersection
1874	418986	3574905	5901 WILLIAMS RD, KEITHVILLE
1878	418659	3578737	RICKEY BRADFORD, 5913 SUNSET TRACE DR KEITHVILLE, LA 71047
1880*	418092	3580278	HEART OF HOPE MINISTERIES
18801*	418915	3580904	HEART OF HOPE WOMENS SANCTUARY, HEART OF HOPE WAY
1883	418384	3583314	6280 CHANDLER RD
1885	418099	3585044	MOBILE HOME PARK EAST SIDE
1887	418395	3587359	6239 SCOTT ST

1888	418065	3588659	EVANGEL CHRISTIAN ACADAMY
1980*	419115	3580708	GRAWOOD BAPTIST CHURCH BASEBALL FIELD, 5841 COLQUITT RD
1985*	419151	3585430	TELEPERFORMANCE
1989	419697	3589592	FIRE STATION 13
19891	419673	3589990	TURNER MIDDLE SCHOOL
1990	419427	3590144	HUNTINGTON HIGH SCHOOL, 6801 RASPBERRY LN
19901	419542	3590084	HUNTINGTON HIGH SCHOOL, 6801 RASPBERRY LN, CENTER OF TRACK/FOOTBALL FIELD
2002	420745	3602388	OPEN LOT AT NW CORNER OF SUBDIVISION
2073	420276	3573940	12389 PAR RD 3, KEITHVILLE,
2077*	420760	3577552	PAUL BISON 5287 KEITHVILLE-SPRINGRIDGE RD, KEITHVILLE
2080	420507	3580853	5370 HAYWOOD DR, KEITHVILLE
2089	420099	3589598	SHREVEPORT COMMUNITY CHURCH FOOTBALL FIELD
2181	421079	3581600	10921 Cornerstone Place, PERSONAL BASEBALL FIELD
2184	421314	3584994	SANDMAN CIRCLE, CENTER OF CUL-DE-SAC
2188	421776	3588747	NEW LIFE ACADEMY - OPEN AREA EAST
2278	422240	3578553	KEITHVILLE ELEMENTARY/MIDDLE SCHOOL - 12201 MANSFIELD RD
2283	422728	3583374	SUMMERFIELD ELEMENTARY SCHOOL, 3131 ARDIS TAYLOR DR
2287*	422719	3587904	BRIGHT STAR BAPTIST CHURCH BALL FIELD NW OF CHURCH
2383-CLA 4	423287	3583223	OLD AT&T SOUTH
23831	423716	3583997	OLD AT&T
2384	423537	3584703	JOHN CALVIN PRESBYTERIAN CHURCH, 3030 COLQUITT RD
2385	423847	3585093	SUMMER GROVE ELEMENTARY SCHOOL, 2955 W BERT KOUNS INDUSTRIAL LOOP
2386	423244	3586259	SOUTHWOOD HIGH SCHOOL
2404	424729	3604948	LIGHT HILL BAPTIST CHURCH
2478	424737	3578529	BLUEBIRD HILL AIRPORT, 3131 ARDIS TAYLOR DR
2479*-CLA 7	424747	3579210	BLUEBIRD HILL AIRPORT, 3131 ARDIS TAYLOR DR
2484	424289	3584767	OPEN LOT NW OF N SOUTHLAND PARK DR
2576*	425448	3576651	L. GLEN PICKETT 187 MCDANIEL DR, STONEWALL
2582	425565	3582497	BURGUNDY RIDGE
2583	425794	3583768	CHRIST UNITED METHODIST CHURCH, 1204 CRABAPPLE DR
2584	425252	3584981	RIDGEWOOD MIDDLE SCHOOL - FIELD TO WEST
25841	425556	3584798	RIDGEWOOD MIDDLE SCHOOL

2585	425640	3585508	ST JAMES EPISCOPAL CHURCH, ne OF CHURCH BEHIND CONSTRUCTION
2589	425367	3589856	MJ MOORE MIDDLE SCHOOL
2600	426936	3600704	1829 CORPORATE DR
26001	426986	3600322	CORPORATE DR OPEN LOT
2604	426441	3604117	NORTH HIGHLANDS ELEMENTARY SCHOOL
2605	426166	3605243	TRINITY HEIGHTS BAPTIST CHURCH
2679	426172	3579395	BARRON RD BAPTIST CHURCH, 1102 BARRON RD
2685	426250	3585391	SOUTHERN HILLS COMMUNITY PARK, GRASS AREA BETWEEN ENTRANCE RD & TENNIS COURTS
26851	426397	3585453	SOUTHERN HILL COMMUNITY PARK, PARKING LOT EAST SIDE
26852	426851	3585057	JIM'S SOUTH TIRE CENTER, "L" SHAPED FIELD BEHIND AND TO EAST SIDE OF BUSINESS
2688	426968	3588326	JOHNSTONE SUPPLY
2689	426881	3589770	OPEN LOT
2696	426253	3596272	NOTRE DAME HIGH SCHOOL, 2932 MURPHY ST
2697	426576	3597478	RADIO STATION 1300 KSYB
2781	427498	3580878	685 TYRE RD
2788	427241	3588366	OPEN LOT SOUTH OF COMMERCIAL BLDG
2789	427000	3589032	WOODLAWN HIGH SCHOOL - FOOTBALL FIELD
2790	427712	3590540	638 W 62ND ST OPEN LOT N SIDE 62ND ST
2791	427314	3591192	CADO CAREER CENTER / LIBRARY
27911	427829	3591806.9	HATTI PERRY RECREATIONAL CENTER
2796	427291	3596830	BOOKER T WASHINGTON TECHNOLOGY HIGH SCHOOL
2797	427013	3597141	JS CLARK MIDDLE SCHOOL
2800	428950	3600925	MAMIE HICKS PARK
28001	428616	3600258	INTEGRATED POWER SERVICES, 1245 N HEARNE AVE
2876	428035	3576899	MISSION BAPTIST CHURCH, 740 RICHARDSON RD
2883	428556	3583549	GRAND RUE OFF OF LINWOOD AVE, OPEN LOT BEYOND EAST END OF ROAD
2885	428343	3585279	CALVARY BAPTIST CHURCH
28851	428144	3585204	VACANT LOT FOR SALE
2886	428492	3586367	MATHEWS LANDSCAPE - LOT TO E
2889	428154	3589415	LINWOOD CHARTER SCHOOL
2900	429494	3600101	1551 AIRPORT DR, W OF DOWNTOWN AIRPORT
2981	429642	3581694	Kenneth & Jeanne Boutwell, 11260 Greenacres Rd

2984	429716	3584061	TEMPLE CHURCH, PARKING LOT S SIDE OF CHURCH
2986	429810	3586465	INDUSTRIAL PARK
29861	429992	3586048	INDUSTRIAL PARK - BENTON KELLY
2991	429292	3591453	SOUTHFIELD SCHOOL
2992	429550	3592713	BETTY VIRGINIA PARK
3078	430704	3578349	GBM POTENTIAL
30781	430720	3578206	SOCCER FIELD SW CORNER OF SOUTHERN TRACE PKWY
3079	430319	3579928	Shane Spann, 9990 Wallace Lake Rd
3081	430742	3581838	180 OVERTON BROOKS
3083	430643	3583764	E Flourney Lucas Rd, start of new development
3084	430353	3584690	TRAONE SUPPLY
3087	430828	3587345	OPEN LOT DUNKIRK
3089	430107	3589054	CADDO MIDDLE MAGNET SCHOOL FOOTBALL FIELD
3098-CLA 3	430190	3598832	MARGARITAVILLE CASINO - RED RIVER RALLY VENUE
3102	431975	3602731	PRACTICE TEE - DRIVING RANGE, 3102 BENTON RD
31021	431596	3602309	LANDERS DODGE CHRYSLER JEEP RAM
3104*	431526	3604942	CUT FIELD S SIDE OF MORDELLO RD
3178	431692	3578094	SOUTHERN TRACE COUNTRY CLUB PRACTICE RANGE
3179	431804	3579381	DUMAINE DR IN ELERBE WOODS.
3185	431475	3585828	WOODRIDGE BAPTIST CHURCH
31851	431506	3585297	EAST RIDGE COUNTRY CLUB DRIVING RANGE
3187	431658	3587466	SUNRISE HOSPITALITY
3189	431645	3589541	WYNDAM HOTEL - LARGE FIELD SOUTH
3190	431758	3590782	YOUREE DR MIDDLE SCHOOL
3191	431448	3591967	BROADMOOR MIDDLE LABRATORY SCHOOL
3200*	432123	3600598	OPEN GRASS AREA ACCROSS STREET FROM LITTLE CAESARS
3201	432325	3601890	APOLLO ELEMENTARY SCHOOL
3204-CLA 2	432110	3604965	NORTH BOSSIER PARK
32041	432973	3604163	AIRLINE BAPTIST CHURCH
3205	432013	3605859	GBM POSSIBILITY OPEN AREA WEST OF HOMES, ARBOR WAY
32051	432813	3605185	FIRST CHURCH - GOD - GRASS AREA TO WEST OF CHURCH
3283	432960	3583962	OPEN AREA WEST OF POND

3284	432530	3584596	THE GLEN NURSING HOME
3287	432627	3587339	SCHUMPERT HIGHLAND CLINIC
32871	432016	3587670	Holiday Inn Express, Park Plaza Dr
3290	432292	3590562	ARK-LA-TEX CARDIOLOGY
3291	432650	3591581	ARTHUR CIRCLE SCHOOL
3292	432293	3592213.1	AC STEERE PARK
3295*	432433	3595516.9	CADDO PARISH MAGNET HIGH SCHOOL / VALENCIA PARK
32951	432997	3595793	OPEN FIELD SOUTH OF CLYDE FONT PKWY
3296	432895	3596366	RED RIVER STONER BOAT LAUNCH
32961	432703	3596330.9	VETERANS PARK CENTER GRASS STRIP
3300	433751	3600714	GREENACRES MIDDLE SCHOOL
3303	433473	3603235	ASBURY UNITED METHODIST CHURCH
3304	433154	3604659	NORTH POINT COMMUNITY CHURCH
33041	433270	3604982	LARGE OPEN LOT NE OF SCARLET AVE
3383	433143	3583911	WALKING PATH NORTH OF POND
3384	433012	3584398	RAILSBACK RIDGE DR OPEN FIELD EAST SIDE
3386	433808	3586380	UNIVERSITY SCHOOL
3387	433528	3587301	VOLERO GAS STATION NW OF STATION
33871	433200	3587892	OPEN LOT SW WENDYS
33872	433940	3587837	LSU CAMPUS SOUTH END OPEN FIELD
3388	433325	3588131	LSU CAMPUS - E OF NOEL MEMORIAL LIBRARY
33881	433556	3588879	TRIANGLE FIELD - BERT KOUNS RD
3389	433355	3589188	OPEN LOT WEST OF E BERT KOUNS
3392	433783	3592497	Elk Lodge, 311 East Preston Ave
3393	433801	3593750	TK'S TAVERN - FIELD SW OF BLDG
3395	433142	3595674	Magnolia School of Excellence, 2290 Clyde Fant Prky
3398	433228	3598850	BOSSIER CIVIC CENTER
3480	434869	3580317	NEWBOURN LN N side CUL-DE-SAC AT WEST END
3484	434846	3584807	LARGE FARM FIELD SW CORNER OF YOUREE DR & E FLOURNOY LUCAS RD
3485	434198	3585944	ST NICHOLAS ORTHODOX CHURCH, 9100 YOUREE DR
3486	434183	3586767	GATEWAY CHURCH
3487	434276	3587832	LSU CAMPUS - S OF BASEBALL FIELDS

34871	434143	3587840	LSU CAMPUS OPEN FIELD SW OF BASEBALL COMPLEX
3488-CLA 1	434084	3588380	LSU SOCCER COMPLEX
3493	434509	3593566	BHP Billiton, 1000 E Preston Ave
34931	434791	3593818	Open field N of YMCA
3494	434247	3594571	SOUTH POINT PKWY DEAD END
3580	435491	3580034	11756 ELLERBE RD
3591	435394	3591728	RIVER PARK CHURCH
35911	435272	3591513	RIVERVIEW CHURCH
3592	435505	3592531	CENTER HWY GRASS STRIP
35921	435521	3592972	HAMMEL MEMORIAL PARK NORTH
35922	435743	3592226	HAMMEL MEMORIAL PARK SOUTH
3599	435204	3599507	OPEN FIELD NE OF CUBBY HOLE, OLD MINDEN RD
3691	436947	3591693	CORNERSTONE HOSPITAL - BOSSIER
3692-CLA 5	436825	3592732	LARGE LOR NE OF CENTURY LINK
36921	436579	3592664	GBM, CENTURY LINK FOUNTAIN AREA
3778	437974	3578432	DAVID LYNN, 2119 ROBSON RD
3791	437243	3591352	BARKSDALE BAPTIST CHURCH - E OF CHURCH
37911	437951	3591256	OPEN FIELD NW OF TACO BELL
3878	438026	3578852	DAVID LINN, 2119 ROBSON RD
3881	438982	3581970	PORT AUTHORITY
38811	438871	3581649	PORT AUTHORITY
3889	438835	3589738	HERITAGE BAPTIST CHURCH
3981-CLA 6	439266	3581743	PORT AUTHORITY
4078	440979	3578596	ENTER FROM GAIL RED BLUFF RD

# ***Landowner Relations***

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Kelly Wells and Nick Kopka are our Landowner Relations liaisons. He will be in the remote launch and landing areas along with you. His vehicle is marked with an Event logo and if you need any assistance, please contact either Kelly or Nick and they will be happy to help with any situation.

It is incumbent that everyone connected with the US National Hot Air Balloon Championship, organizers, officials, sponsors, pilots, crews, and even spectators, exercise the utmost courtesy and respect for private property. Prior permission to take off and land must be obtained from the landowner by the pilot or crew.

Pilots and crews are reminded of the importance of Landowner Relations. The countryside is the farmer's livelihood. Good farmer relations are essential to our sport. Pilots should be aware of the following:

- Uncut hay is a valuable cash crop. Landing in an uncut hay field will cause irreparable damage.
- Livestock (cattle, pigs, deer, horses, sheep and lamas) can be easily frightened and in their panic do damage to themselves and the farmers' fencing and pens.
- Most farmers rely on electrical power in their farming operations, from powering electric fencing to milking parlors. The disruption of electrical power to a farm can have economic impact.

Please remember these guidelines when dealing with our landowners:

1. At registration, each pilot will receive a competition map depicting all "RED AND YELLOW PZ's."
2. During pilot briefings, large maps will be displayed in the "Briefing Area." These maps will be used to display any "RED ZONES" added shortly before or during the event.
3. Always be COURTEOUS and respectful of the fact that you are trespassing unless invited on the property.
4. Select a landing site that will cause the least possible inconvenience to the farmer or landowner. Select a field FREE OF CROPS and be particularly CAREFUL OF ANIMALS on the approach and on the possible overshoot.
5. After landing, DISCOURGE ONLOOKERS from coming onto the land unless the owner is there, and they have their permission.
6. ALWAYS obtain permission BEFORE you bring the chase vehicle into the field.
7. Ensure those farms FENCES are NOT DAMAGED and gates are left as you found them.
8. Do not let anyone litter the property.
9. If damage is caused, or the farmer wishes to take further action, exchange names, addresses and call the officials.
10. Remember not to use the "ran out of fuel" excuse if you do damage; it is a violation of the FAR's to run out of fuel.

# ***Jury Pool***

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The use of a Jury Pool is specified in Rule 4.3.3. Details of the election procedures and conflict of interest criteria are described below.

## ***Jury Pool Election Procedures***

The election of the five (5) member jury pool described in Rule 4.3.3 for the 2018 US National Hot-Air Balloon Championship will be conducted using the following procedures.

- At the General Briefing each competitor will be provided with a ballot listing the names of eligible competitors. (Names of rookie competitors will not be included on the ballot.)
- Each competitor will be asked to vote for up to three (3) competitors listed on the ballot.
- Ballots will be tabulated by Jury Member (Watts) following the General Briefing. In the case of a tie, the selection(s) will be made by the Jury President in consultation with the Event Director or his designee.
- The names of the five-member Jury Pool will be posted on the Official Notice Board and announced at the briefing for the first competitive flight.

## ***Conflict of Interest Criteria***

A pilot member of the Jury Pool for the 2018 US National Hot-Air Balloon Championship will be deemed to have a possible conflict of interest in a particular case if any of the following criteria apply.

- The outcome of the case will likely significantly affect his standing in the cumulative ranking for the event.
- He has a significant business or other fiduciary relationship with the pilot filing the protest.
- He has a familial relationship with the pilot filing the protest.
- He is involved in any way with any other protest pending before the jury.
- There is some other aspect that the Jury President or Event Director deems could cause bias, or the appearance of bias, in the decision by the jury.

# FAA Approved Waiver & Special Provisions

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>CERTIFICATE OF WAIVER</b>	
ISSUED TO	<b>Shreveport-Bossier Sports Commission</b> <b>Responsible Person: Mr. Maury Sullivan</b>
ADDRESS	<b>6509 Yost St. NW</b> <b>Canton, OH 44718</b> <b>330-323-4455</b>
This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.	
OPERATIONS AUTHORIZED	<p>U. S. National Hot Air Balloon Championship competition. Approximately 40 hot air balloons in practice and competitive events, July 8-15.</p> <p>Events to take place within a 13 n.m. radius of Shreveport Regional Airport (KSHV), surface to 8000' MSL with an additional event within 1 n.m. of C E Williams Airport in Mansfield (3F3) Sunday evening, July 8 only.</p> <p>Flight by officially registered Hot Air Balloons only, no lower than 500 feet AGL above the highest obstacle within a 500 foot horizontal radius of the Balloon and 75 feet AGL over designated spectator areas.</p>
LIST OF WAIVED REGULATIONS BY SECTION AND TITLE	<b>See Attachment A</b>
<ol style="list-style-type: none"> <li>1. A copy of the application made for this certificate shall be attached to and become a part hereof.</li> <li>2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.</li> <li>3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.</li> <li>4. This certificate is nontransferable.</li> </ol>	
NOTE—This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.	
<b>SPECIAL PROVISIONS</b>	
Special Provisions Nos. 1 to 18, inclusive, are set forth on the attached pages. <b>See Attachment B.</b>	
This certificate is effective: <b>See Attachment A for dates and times.</b> <div style="text-align: right;"> <b>BY DIRECTION OF THE ADMINISTRATOR</b>     <b>WILLIAM A. SMITH, MANAGER</b>  <b>BATON ROUGE FSDO</b> </div>	
SOUTHWEST REGION June 1, 2018	

FAA Form 7711-1 (7-74)

DISTRIBUTION: Applicant, BTR FSDO, SHV RAPCON, BAFB ATC, DTN NFATCT  
 COORDINATION: SHV RAPCON,

**ATTACHMENT A - EFFECTIVE DATE AND TIMES**

ISSUED TO: Shreveport-Bossier Sports Commission

RESPONSIBLE PERSON: Mr. Maury Sullivan

EFFECTIVE: Sunday, July 8, 2018, 7:30pm-9:30pm CDT (demonstration)

Monday, July 9, 2018, 6:30am-9:30am CDT (practice)

Tuesday, July 10, 2018, 6:30am-9:30am CDT (competition)

Wednesday, July 11, 2018, 6:30am-9:30am CDT (competition)

Thursday, July 12, 2018, 6:30am-9:30am CDT (competition)

Friday, July 13, 2018, 6:30am-9:30am CDT (competition)

Saturday, July 14, 2018, 6:30am-9:30am CDT (competition)

Sunday, July 15, 2018, 6:30am-9:30am CDT (competition)

Thursday, July 12–Saturday, July 14, 2018, 8:15pm-9:15pm CDT  
(static display/night glows)

**WAIVED REGULATIONS BY SECTION AND TITLE**

14 CFR section 91.119	Minimum Safe Altitudes: General (b) Over congested areas. (c) Over other than congested areas.
14 CFR section 91.127(a), (b)	Operating on or in the vicinity of an airport in Class E airspace.
14 CFR section 91.129(a)	Operations in Class D Airspace.
14 CFR section 91.130(a), (c)(1), (d)	Operations in Class C Airspace.
14 CFR section 91.209	Aircraft Lights

## ATTACHMENT B - AVIATION EVENT SPECIAL PROVISIONS

1. The FAA has the authority to cancel or delay any or all acts or events if the safety of persons or property on the ground or in the air is in jeopardy, or there is a violation of the terms of this Certificate of Waiver.
2. **The Responsible Person, Mr. Maury Sullivan**, will ensure that notification is made to Leidos Flight Service Station (AFSS) 1-877-487-6867 of the date, time, place, demonstration areas, altitudes, nature of the activity, and duration of the operation and request that a Notice to Airmen (NOTAM D) be issued.
  - a. Such notice shall be accomplished by providing the controlling flight service station (FSS) with a copy of the Certificate of Waiver at least 48 hours before the event and no more than 72 hours before the event.
3. **Mr. Maury Sullivan** must ensure that participants are thoroughly briefed on special field rules, the established demonstration area and other defined areas within the waived airspace, manner and order of events and special provisions of the Certificate of Waiver before beginning the activities each day.
  - a. No person may participate in any event listed on the Certificate of Waiver unless that person has signed a statement stating that they have received a briefing on the provisions of the Certificate of Waiver.
4. All civil aircraft and pilots participating in the aviation event shall provide the requested data to establish qualifications and airworthiness to the event organizer and, if required, be available for FAA inspection at the time and place agreed upon by **Mr. Maury Sullivan** and the FAA IIC.
5. For civil aircraft, only required flight crewmembers by type design, safety pilots as listed in FAA Order 8900.1, Volume 3, Chapter 6, or those persons required to participate in the demonstration (those conducting safety related functions) will be carried on any aircraft engaged in demonstrations authorized by this Certificate of Waiver. Additional crewmembers or essential personnel may not participate without specific approval by **Mr. Maury Sullivan** and the IIC.
6. No demonstrations shall be authorized or scheduled when a suspension of airport traffic or diversion of other aircraft traffic would cause a hardship to scheduled air carrier operations.
7. A control point shall be established where **The Shreveport-Bossier Sports Commission or Mr. Maury Sullivan** shall direct the demonstration. **Mr. Sullivan** shall be continuously available to the FAA IIC or designated representative and is the person designated as responsible for the overall safety of the event.
8. Adequate communication capability (electronic and visual) must be provided to maintain a safe operation, to control spectators, and to advise participants that the aerial demonstration has been halted or canceled.
9. A crowd line consisting of a physical barrier and/or adequate policing shall be provided to confine the spectators to designated areas. The spectator area shall have well-defined lateral boundaries.
10. The demonstration shall be halted for any reason that is in the interest of safety.
  - a. NA
  - b. **The Shreveport-Bossier Sports Commission and Mr. Maury Sullivan** assume responsibility for the security of areas where unauthorized personnel and aircraft are not authorized access and for compliance with the event security plan.

c. The IIC has the responsibility to make **The Shreveport-Bossier Sports Commission and Mr. Maury Sullivan** aware of any identified safety concerns and if necessary has the authority for canceling or delaying any or all aviation demonstrations if it is deemed necessary in the interest of safety.

11. The following facilities shall be provided and readily available in accordance with the submitted emergency response plan for the demonstration site, Common Launch Area (CLA) #1:

- a. Ambulance
- b. Fire Truck

12. Persons or aircraft not appearing on the Certificate of Waiver application and subsequently added to the Certificate of Waiver may not participate without specific approval by **Mr. Maury Sullivan** and the IIC. Proof of appropriate qualifications for crewmember(s), and an airworthy aircraft is required before the performance can be conducted at that event site.

13. Unmanned Aerial Systems (UAS) demonstrations are not authorized under this Certificate of Waiver.

14. Rocket demonstrations are not authorized under this Certificate of Waiver.

15. Parachute demonstrations are not authorized under this Certificate of Waiver.

16. Section 91.119(b) and (c) of the Code of Federal Regulations is waived to the extent necessary to allow participating balloons to compete in the 2018 U.S. National Hot Air Balloon Championship under the terms and conditions set forth in the FAA approved procedures section of the Balloon Competition Operations Manual.

17. The 2018 U.S. National Hot Air Balloon Championship Balloon Competition Operations Manual is incorporated into this Certificate of Waiver and becomes a special provision thereof. Any action contrary to the terms, controls, procedures, and conditions pertaining to safety set forth in the FAA approved procedures is grounds for cancellation of this Certificate of Waiver.

18. **Mr. Maury Sullivan** shall ensure that each participating event crewmember has read and understands the FAA approved procedures section of the 2018 U.S. National Hot Air Balloon Championship Balloon Competition Operations Manual and the special provisions of this Certificate of Waiver.



US Department of Transportation  
Federal Aviation Administration

**APPLICATION FOR  
CERTIFICATE OF WAIVER  
OR AUTHORIZATION**

From Approved: O.M.B. No.2120-0027 08/31/2008

**APPLICANTS - DO NOT USE THESE SPACES**

Region Southwest Date 6/16/2017

Action  Approved  Disapproved – "Explain under "Remarks"

Signature of authorized FAA representative

**INSTRUCTIONS**

Submit this application in triplicate (3) to any FAA Flight Standards district office.

Applicants requesting a Certificate of Waiver or Authorization for an aviation event must complete all the applicable items on this form and attach a properly marked 7.5 series Topographic Quadrangle Map(s), published by the U.S. Geological Survey (scale 1:24,000), of the proposed operating area. The map(s) must include scale depictions of the flightlines, showlines, race courses, and the location of the air event control point, Police dispatch, ambulance, and fire

fighting equipment. The applicant may also wish to submit photographs and scale diagrams as supplemental material to assist in the FAA's evaluation of a particular site. Application for a Certificate of Waiver or Authorization must be submitted 45 days prior to the requested date of the event.

Applicants requesting a Certificate of Waiver or Authorization for activities other than an aviation event will complete items 1 through 10 only and the certification, item 17, on the reverse.

1. Name of organization: **Shreveport-Bossier Sports Commission**  
2. Name of responsible person: **Maury Sullivan**

3. Permanent mailing address	House number and street or route number <b>6509 Yost St NW</b>	City <b>Canton</b>	State and ZIP code <b>Ohio 44718</b>	Telephone No. <b>330.323.4455</b>
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4. State whether the applicant or any of its principal officers/owners has an application for waiver pending at any other office of the FAA.  
N/A

5. State whether the applicant or any of its principal officers owners has ever had its application for waiver denied, or whether the FAA has ever withdrawn a waiver from the applicant or any of its principal officers/owners.  
N/A

6. FAR section and number to be waived  
**14 CFR Part 91: §91.119 (b) and (c); §91.127 (a) and (b); §91.129 (a); §91.130 (a), (c)(1) and (d); and §91.209**

7. Detailed description of proposed operation (*Attach supplement if needed*)  
  
US National Hot Air Balloon Championship competition with approximately 43 balloons involving two days of practice flights (July 9-10) and six days (July 11-16) of competition with six competitive flight opportunities.  
  
There are night glows scheduled for the evenings of July 14-15 as well as a demonstration flight and glow the evening of July 13. Complete details are included in the attached Balloon Competition Operations Manual.

8. Area of operation (*Location, altitudes, etc.*)  
**Shreveport Regional Airport (SHV), 32-26-47.80N/093-49-32.20W; within a 13 NM radius from the surface up to 8,000' MSL. Also see info on 3F3.**

9a. Beginning ( <i>Date and hour</i> ) <b>07/09/2017 06:30:00</b>	b. Ending ( <i>Date and hour</i> ) <b>07/16/2017 09:30:00</b>
--	--

10. Aircraft make and model (a)	Pilot's Name (b)	Certificate number and rating (c)	Home address (Street, City, State) (d)
SEE ENCLOSED	SEE ENCLOSED	SEE ENCLOSED	SEE ENCLOSED

**ITEMS 11 THROUGH 16 TO BE FILLED OUT FOR AIR SHOW/AIR RACE WAIVER REQUESTS ONLY.**

11. The air event will be sponsored by:  
**Shreveport-Bossier Sports Commission**

12. Permanent mailing address	House number and street or route number 629 Spring Street	City Shreveport	State and ZIP code LA 71101	Telephone No. 318.429.0632
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13. Policing (Describe provisions to be made for policing the event.)  
Refer to enclosed Balloon Competition Operations Manual for provisions of crowd control which will be performed by event officials or local law enforcement, as appropriate, in the area of operations and at all targets.

14. Emergency facilities (Mark all that will be available at time and place of air event.)

Physician                       Fire truck                       Other - Specify \_\_\_\_\_  
 Ambulance                       Crash wagon                      These are located at LSU Shreveport only (CLA 1)

15. Air Traffic control (Describe method of controlling traffic, including provision for arrival and departure of scheduled aircraft.)  
In accordance with §91.145, a NOTAM will be issued with Lockheed Martin advising of traffic involving numerous balloons in the area flying at various altitudes from Sunday, July 9 through Sunday, July 16 during the three hours immediately after sunrise and three hours before sunset.  
The event Assistant Safety Officer will contact Robert Woods, SHV/RAPCON, before each flight operation to brief on details of flight operations including intended launch areas, flight paths and coordinate all flight activities with DTN, BAD and SHV.

16. Schedule of Events (include arrival and departure of scheduled aircraft and other periods the airport may be open.)

Hour (a)	Date (b)	Event (c)
6:30 - 9:30	2017 July 9 - 10	Practice competition for approximately 35 hot air balloons
6:30 - 9:30	July 11-13	Championship competition for approximately 45 hot air balloons
18:30 - 20:00	July 13	CE Williams Airport (3F3) 32-04-22.00N / 093-45-56-20W: demonstration flight with pole grab and night glow on airport grounds
6:30 - 9:30	July 14 - 16	Championship competition for approximately 45 hot air balloons

*If sufficient space is not available, the entire schedule of events may be submitted on separate sheets, in the order and manner indicated above.*

Please Read > The undersigned applicant accepts full responsibility for the strict observance of the terms of the Certificate of Waiver or Authorization, and understands that the authorization contained in such certificate will be strictly limited to the above described operation.

17. Certification - I CERTIFY that the foregoing statements are true.

Date 3/31/17	Signature of Applicant <i>M Sullivan</i>
-----------------	---

Remarks  
Maury Sullivan, Certificate #2822215

# US National Hot Air Balloon Championship



# WAIVER APPLICATION & Balloon Competition Operations Manual

July 8-15, 2018  
Shreveport-Bossier City, LA

# *Balloon Competition Operation Manual*

## *US National Hot Air Balloon Championship*

### *July 8-15, 2018*

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 July 8-15, 2018. All competition is in conjunction with the **US National Hot Air Balloon Championship**.

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## **SECTION I**

### *PURPOSE*

This manual is submitted as a part of an application for a waiver of Title 14 of the Code of Federal Regulations (14 CFR) part 91, §§ 91.119(b) and 91.119(c), 91.127 (a) and (b), 91.129 (a), 91.130 (a), (c)(1) and (d) by the **Shreveport-Bossier Sports Commission for the US National Hot Air Balloon Championship**. Specifically, 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 en-route to the target within a thirteen (13) 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.

## **SECTION II**

### **RESPONSIBILITIES AND PROCEDURES**

#### **Duties of Personnel**

Event Organizer	Kelly Wells
Event Championship Director (Balloonmeister)	Maury Sullivan
Operations Director / Deputy Director	Sam Parks
FAA Liaison	Maury Sullivan
Weather Officer	Todd Fisher and National Weather Service Forecast Office, SHV
Safety Officer & Air Traffic Coordination	Henry Rosenbaum

#### **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. All competitive pilots are required to register in the afternoon of **July 9 or 10, 2018**. At this registration, they will be required to show an Annual or 100-hour inspection endorsement and an Aircraft Registration.

Chapter 3 of the competition rules covers procedures for balloons damaged or otherwise made unairworthy during the event. Throughout the event, the Safety Officer or his designees, and appropriate FAA personnel, will be consulted as necessary.

#### **Pilot and Event Flightcrew Members**

Each pilot must hold the appropriate pilot certificate (Private or Commercial) with Lighter-Than-Air Category and Free Balloon Class Rating. Each pilot must show evidence of current Flight Review (14 CFR part 61, § 61.56) and must show evidence of currency per §61.57. Participating pilots must show evidence of a minimum of 75 hours as PIC in Lighter-Than-Air Category, Free Balloon Class.

Event flightcrew members carried on board a balloon during the event must have been briefed by the pilot of the balloon and must attend the pilot briefing for that flight. Each event flightcrew member must sign the waiver form supplied by the pilot. Each event flightcrew member must attest that they have attended the applicable pilot briefing(s) and have read and understand the conditions of the waiver. Only the number of event flightcrew member(s) (passengers) specified by the respective balloon flight manual may be carried in each balloon during the flight. During competition, the event flightcrew members carried on board will be kept to a maximum of one (pilot plus one).

#### **Commercial Ride Operations**

There will be a commercial ride operation operating with permission of the organizer within the waived airspace, but they will not be operating under the terms of our waiver. Those pilots provide VIP and guest ride services and their passenger limit is controlled by their respective balloon flight manuals. These passengers are not asked nor are they required to sign a designated flightcrew form.

#### **Pilot/Crew Briefing Procedures**

All pilots are required to sign a statement indicating that they have read and understand the provisions of the Waiver and the official US National Competition Rules prior to any competitive flight.

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

#### **Letter of Agreement / Statement of Responsibility**

Each pilot has signed a Letter of Agreement and Statement of Responsibility acknowledging their responsibilities under the FARs as related to the US National Hot Air Balloon Championship.

#### **Event Documentation**

All relevant registration files, task data sheets, pilot registration information, etc., will be maintained by the organizer at least 60 days after the event and will be made available to the FAA Monitor upon request. Printed competition maps will be made available to the FAA Monitor at the time of pilot on-site registration or the general pilot briefing. Digital versions (pdf) of the competition map will be sent via email.

## **SECTION III**

### **GROUND OPERATIONS**

#### **Clear Areas**

Clear areas are established at each target site. These areas are kept clear of spectators and are controlled with caution tape in highly visible areas, e.g. LSUS (CLA 1). Scoring officials will monitor and control target sites to keep unauthorized persons out. In the Minimum Altitude Diagram, this is referred to as the “Target Area.”

Mass launches may occur in areas defined as Common Launch Areas (CLA’s). These areas have been selected based on their size and suitability for control of access and safety of launch. These areas have been selected to provide officials flexibility in tasking given variable wind conditions and working with congested areas and airspace restrictions. See attachments for aerial views of CLA’s currently identified.

Certain competitive tasks have predetermined goals associated with the intersection of two minor public roads, a public road and a railroad, or an identifiable feature such as 50-yard line of a football field or pitcher’s mound of a baseball field where strict control by event officials is not maintained since there is no expectation of spectators. **Markers are not dropped at these goals**, but results are determined electronically with the use of GPS loggers. Pilots are expected to maintain a 200’ vertical clearance over any obstacles on approach or in the area of these pre-determined goals. Chapters 6 and 12 of the rules provide more details about these goals.

#### **Spectator Areas**

A primary competitive spectator area is only in use on the mornings of Saturday – Sunday, July 14-15, 2018. It is located on the soccer field complex at LSU Shreveport (see attachment CLA 1). A controlled spectator area is also maintained on Sunday evening at C E Williams Airport (see attachment 3F3. Physical barriers around the launch/target site initiate crowd control, and target areas are controlled by Scoring Officials. Official and balloon recovery vehicles are parked in restricted areas. Traffic is controlled by local police as required. The use of existing and temporary barriers is used to secure spectators from the briefing area, headquarters, and from potential low-level flight areas surrounding goals/targets. It should be noted that the flight of the balloon is occurring at sufficiently slow speeds that people have ample opportunity to move away and stand well clear from approaching balloons as directed by event safety officials.

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

#### **Crowd Control Requirements**

LSUS Police Department, Louisiana State Police and committee security personnel under the direction of the Safety Officer will provide crowd control as needed.

#### **Landowner Relations/Notification**

Positive landowner relations are vital to the continuance of competitive balloon events. There is an ongoing effort by all involved persons prior to, during and after a competitive event to maintain good landowner relations for the event. Additionally, as per Rule 9.2, pilots must obtain permission to launch from private property; and per Rules 10.5, 10.6, and 10.7 minimize disturbing landowners. Landowners may request that their property be indicated on the competition map as a Prohibited Zone (PZ) and per rule 7.3.

# SECTION IV

## FLIGHT OPERATIONS

### Areas of Operation

Primary flight operations will occur within a 13-nautical mile radius of a point located 20.0 nautical miles on the 172° radial from the Belcher (EIC) VOR (32.7713647°/-93.8099292°). The competition map center is located at 32.436459°/-93.802519°. Final landings may occur beyond these boundaries, but no pilot choice take-offs or mass ascensions will exceed these boundaries. Headquarters for the event operations will be located at the Hilton Garden Inn, 5971 Financial Plaza, Shreveport, LA.

One flight operation is scheduled for CE Williams Airport (3F3) 32.066958°N / 093.764581W. All flight operations will occur within the physical boundaries of that airport. That flight will take place the evening of Sunday, July 8.

While the event does not have a single primary launch field, weekend activities attracting large crowds are located at LSU Shreveport soccer complex (see attached CLA 1). These activities will take place Saturday and Sunday morning as well as Friday and Saturday evening (glows). LSUS campus is located at 32.430471°/-93.701099°. This point is 21.2 nautical miles on the 158° radial from the Belcher (EIC) VOR (32.7713647/-93.8099292).

### Types of Operations

The event will consist of single and multiple tasks called by the Event Director after consultation with other approved competition officials and the FAA monitor (if available), as appropriate, considering the conditions at hand and forecast to develop during the anticipated flight times. The tasks may include any listed in Chapter 15 of the competition rulebook.

A "Key Grab" task will be utilized at the DeSoto Parish Airport event. This task has a target (generally a tall pole with flag to grab or place a ring on when flying past. The balloonist must launch a predetermined distance from the target. The object is to maneuver the balloons over the target(s), so the pilot can attempt to grab the prize or ring the pole as the balloon goes by the pole.

The area around the pole is kept completely clear of spectators and under the control of the event officials. Balloon race officials will have portable bullhorns to control the crowd movements or to direct the balloonist away from the target area in an emergency.

The landing areas are segregated from the spectators with ample airport space available after passing the poles. Balloon groundcrew are permitted in the area beyond the target poles to assist the balloonist with recovery. All participants are briefed before flight operations.

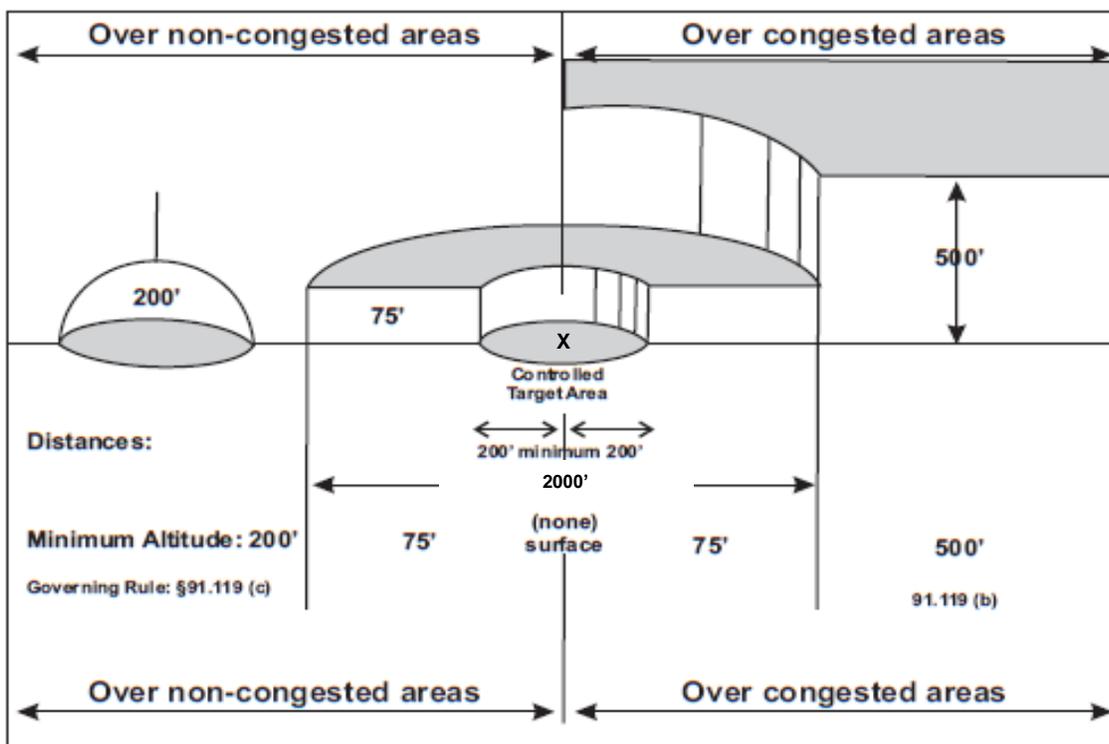
### Altitudes

The waiver provides that registered balloons will be allowed to make approaches to targets and/or goals within the designated areas. Balloons making these approaches will be permitted to fly at altitudes as follows:

- a) Over congested areas, and other than during take-off and landing operations, at altitudes of not less than 500 feet above the highest obstacle within a 500-foot horizontal radius of the balloon
- b) Within 2,000 feet of a target or goal site, allow flight above, but not less than 75 feet above, any open-air assembly of persons (designated spectator area) under the direct control of the event organizer. The balloons must have attained a state of altitude equilibrium at this 75-foot minimum altitude and shall not descend while passing over spectator areas.
- c) To allow flight over open water or sparsely populated areas (non-congested areas), no closer than 200 feet horizontally to any person, vessel, vehicle, or structure. Balloons may descend to the surface over non-congested areas but must remain at least 200 feet from occupied buildings and spectators not in the immediate vicinity of the event locations.
- d) No balloon shall descend faster than 300 feet per minute while below 200 feet above ground level
- e) At any altitude within a controlled target area or corridor cleared of spectators

In order to provide the highest possible level of safety for spectators, the scoring officials will cause scoring/measuring officials 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 spectator areas.

## Minimum Altitude Diagram



### Weather Requirements

Flight operations will be conducted during the period from published Sunrise to Sunset, with Visual Flight Rules (VFR) and weather conditions as specified in §91.155. Maximum demonstrated surface winds must be 12 knots or less.

Flight activity will not be conducted unless the ceiling is at least 1,500 feet and the visibility is at least 3 statute miles. The FAA monitor may adjust the minimum ceiling and visibility requirements as his or her discretion, but no less than 1,000 feet and 3 statute miles.

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 Event Championship Director (Balloonmeister) after consultation with appropriate safety and event officials and the FAA monitor (if available).

### Communication Requirements / Recall

Primarily by the required pilot briefing, however, supplementary information is also given using a mobile texting service, Remind, and on the public-address system. Most pilots carry FM radios and are required to carry aircraft radios and monitor frequency 121.4 (SHV Tower).

Pilots will be asked to register their phone number and that of their crew chief with the Remind texting system. While the primary use of the number is for Emergency Recall, we may also use the number to make contact to resolve flight and scoring issues, follow up on missing markers or loggers, and propane refueling status.

## **Air Traffic Coordination**

A Class D NOTAM will be requested from Lockheed-Martin Information Technology at 877-487-6867 advising of numerous balloons in the Shreveport Bossier City area operating at varying altitudes from July 8-15, 2018 during the three hours immediately after sunrise and three hours prior to sunset. The NOTAM will also note UAS flight operations.

All flight operations will be coordinated with Robert Woods, SHV/RAPCON. Prior to each flight the event's Safety Officer will contact Mr. Woods and provide information on intended flight times, launch sites, targets, potential flight times and all other facets of the flights. Mr. Woods will communicate, coordinate and disseminate event information with all local air traffic entities: DTN, BAD and SHV.

ATC communication and coordination will be handled through SHV/Rapcon. Tower personnel at DTN, SHV and BAD have been provided copies of event competition maps depicting all targets along with identifying numbers. Prior to each flight window, the event Safety Officer will contact SHV/Rapcon and identify targets in play, anticipated launch areas, flight paths and expected landing areas. This information, combined with the competition map will allow ATC to coordinate air traffic in the area.

Safety officials monitor the flight status of all balloons and when they determine that all, or substantially all, balloons have landed they will again contact SHV/Rapcon indicating hot air balloon operations are complete.

## **Airport frequencies**

SHV RAPCON	318.747.8519
SHV: pilots will monitor tower at 121.4	318.638.3009
DTN: tower 120.22	318.221.6587
BAD: tower 128.25	318.456.4065

## **UAS Operations**

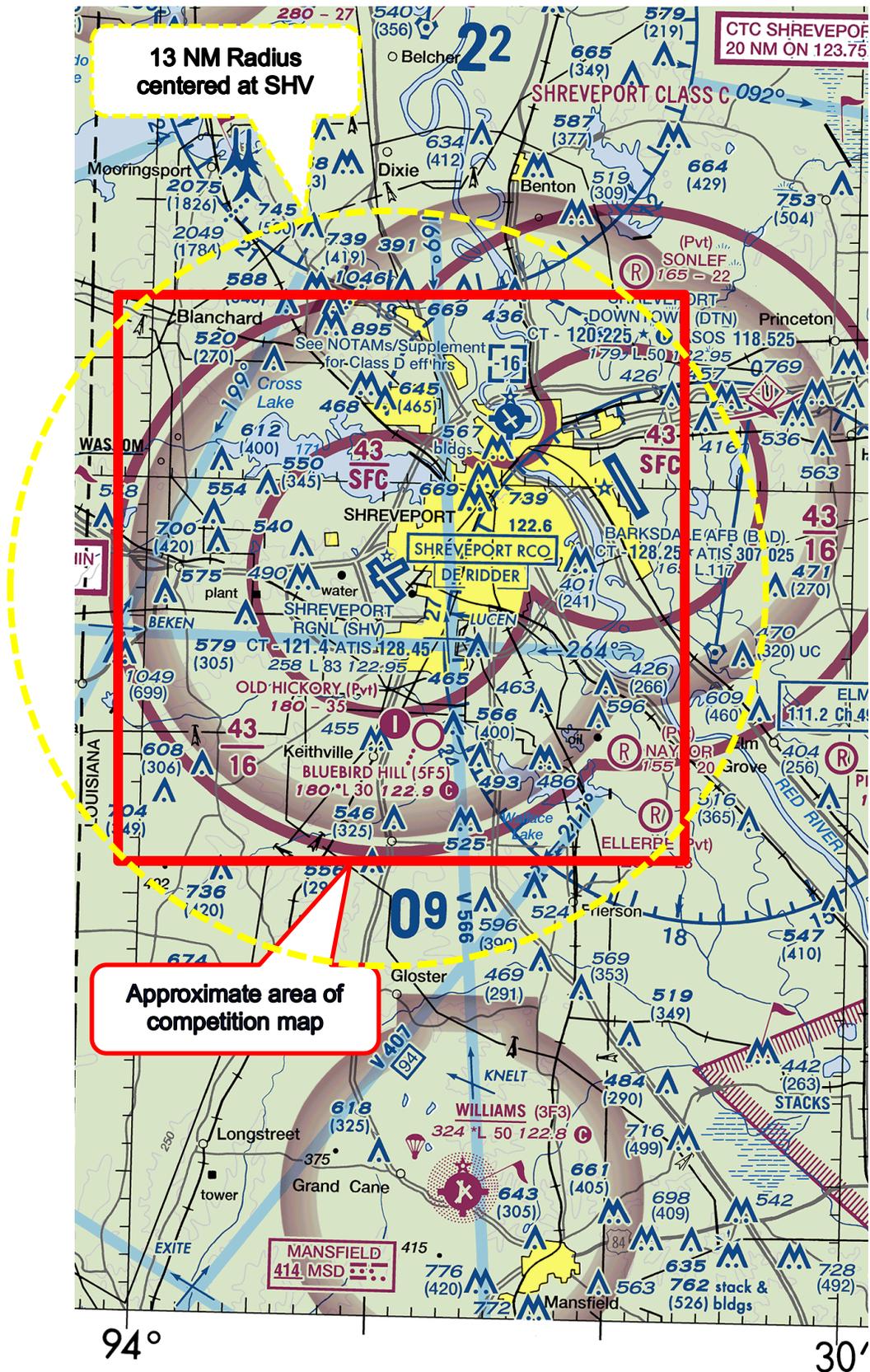
Day VFR UAS operations will be under the control of a Part 107 licensed UAS operator for the purposes of providing media coverage of the ground-based static displays at LSU campus on the evenings of July 13 and 14. The operator will be assisted by the event Safety Officer.

Other scheduled UAS operations may be involved in the immediate vicinity of targets during the period of 0600 and 0900 CDT.

No educational demonstration of aerobatic display of any UAS is intended.

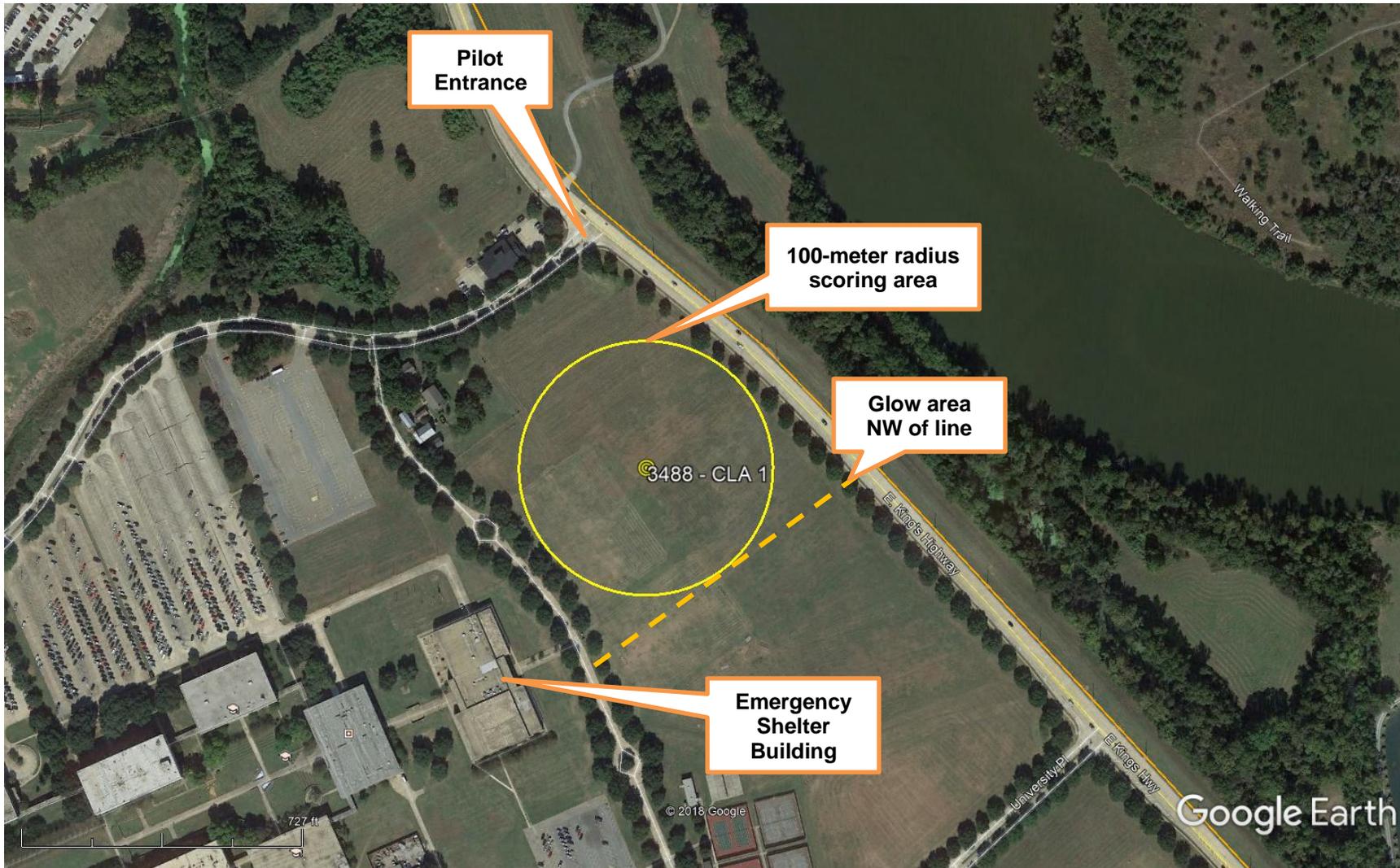
# ATTACHMENTS

## SHV, DTN, BAD Airspace



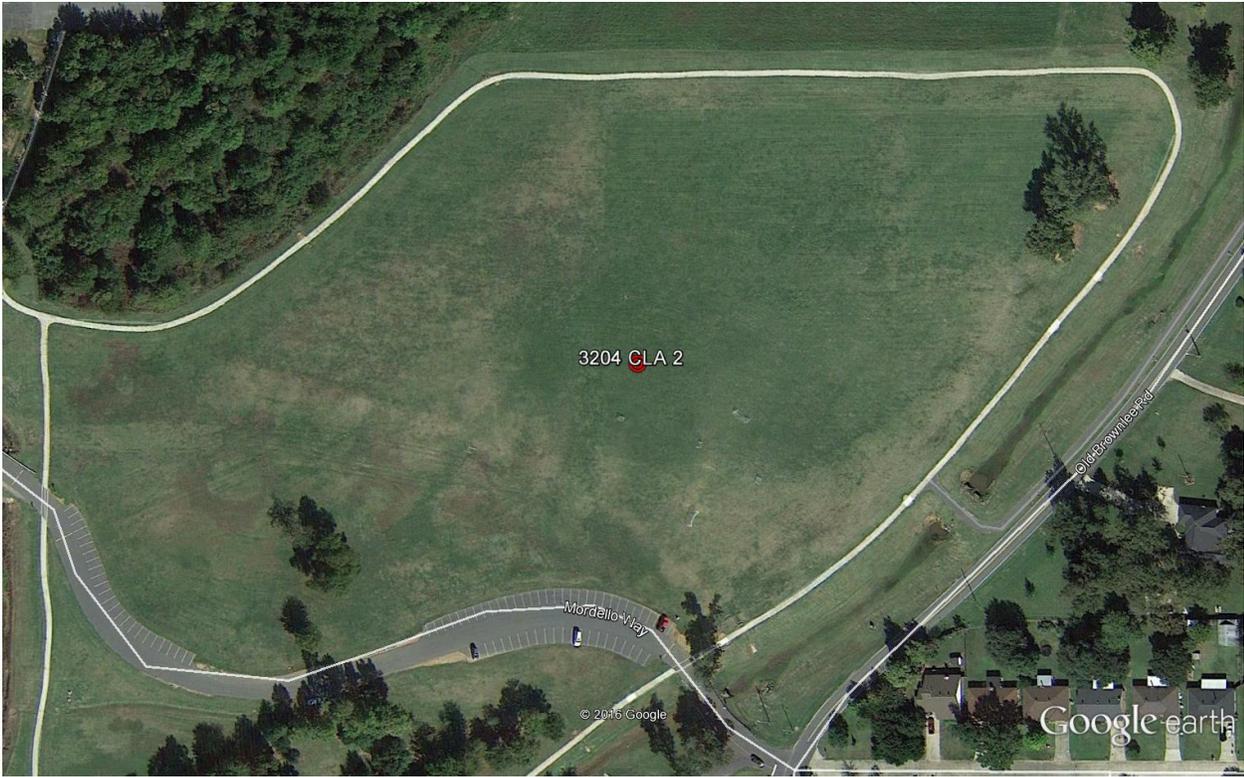


## LSU Shreveport Soccer Complex – CLA 1

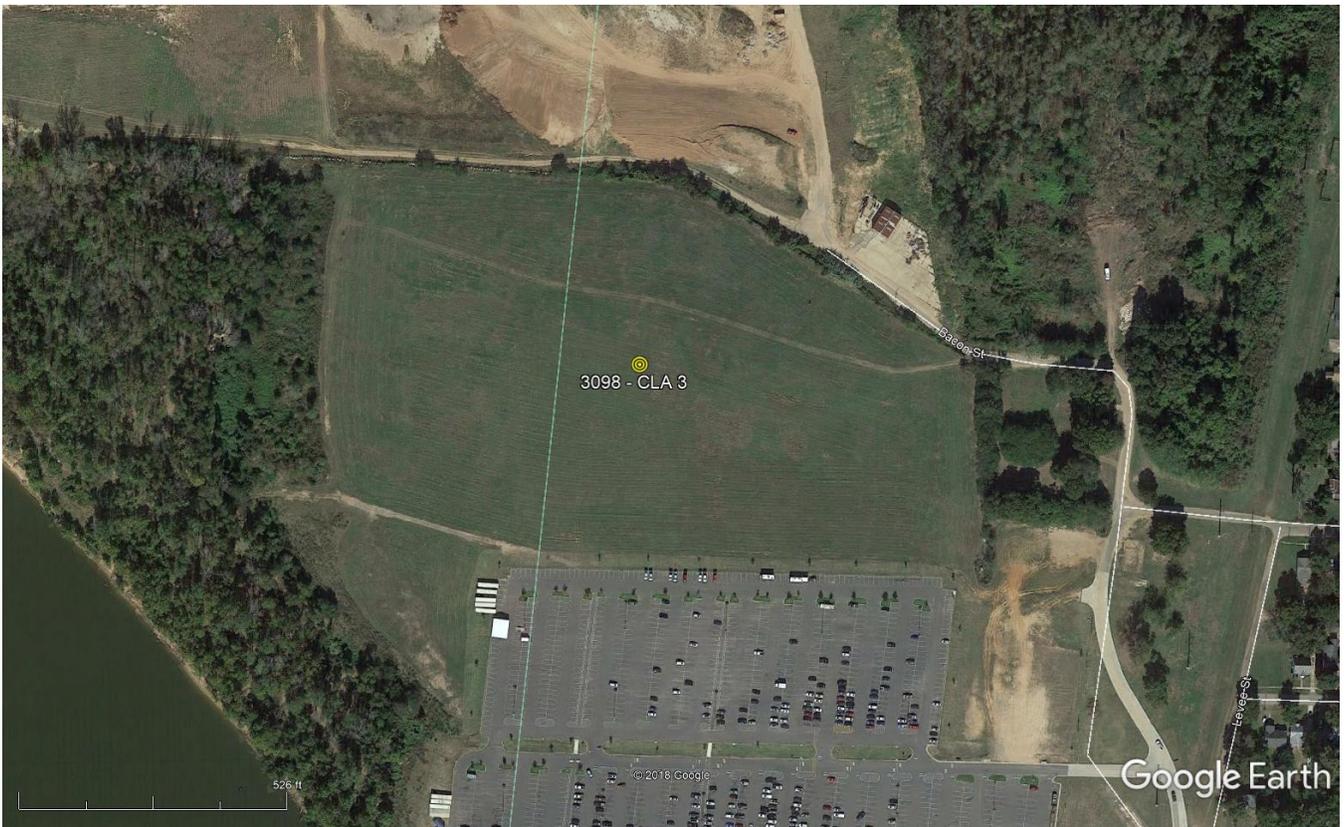


This is the primary venue for public weekend events. Large crowds are expected for evening glows. The event and city will be providing law enforcement, fire and emergency management services. Crowd control will be maintained at the target area during morning fly-ins to this target area.

**North Bossier Park – CLA 2**



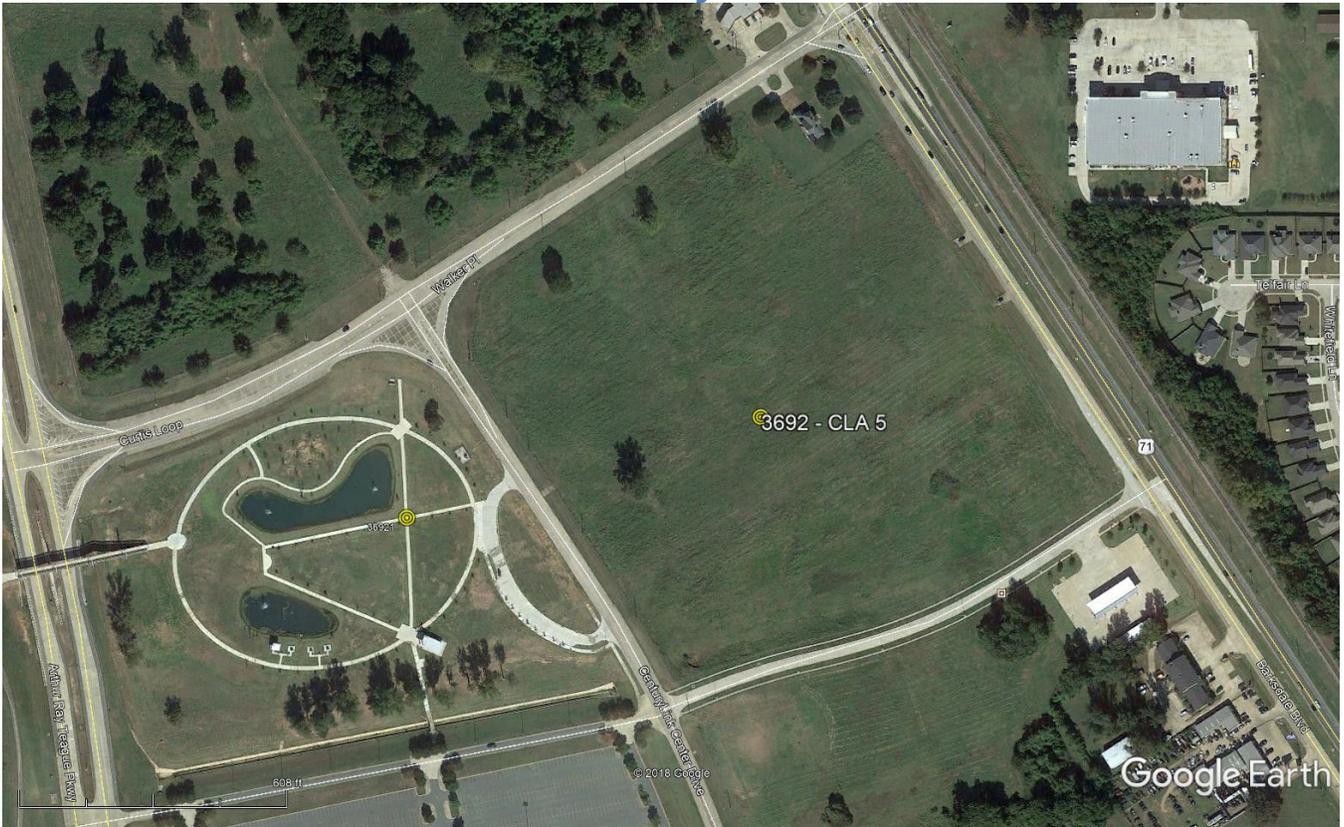
**Margaritaville Casino – CLA 3**



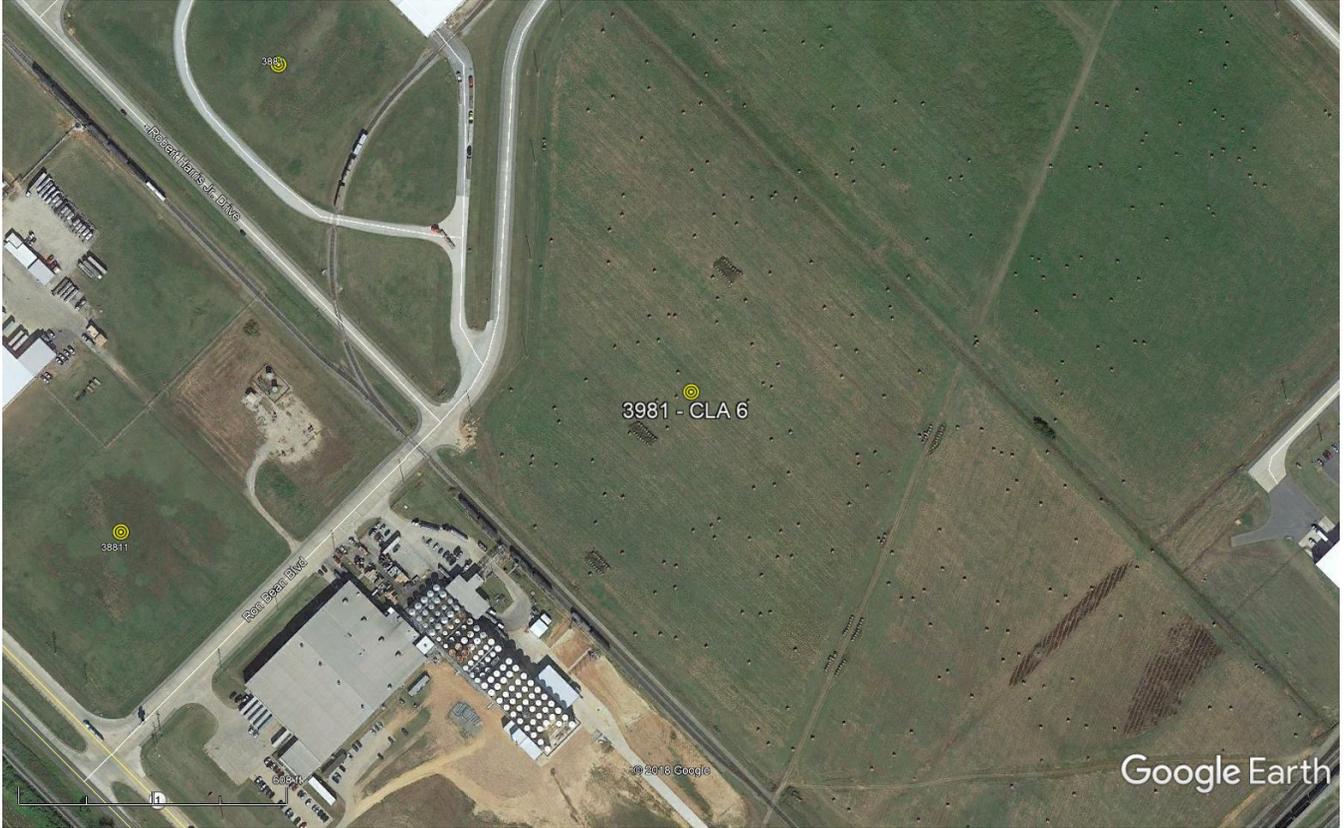
## Old AT&T Plant South End – CLA 4



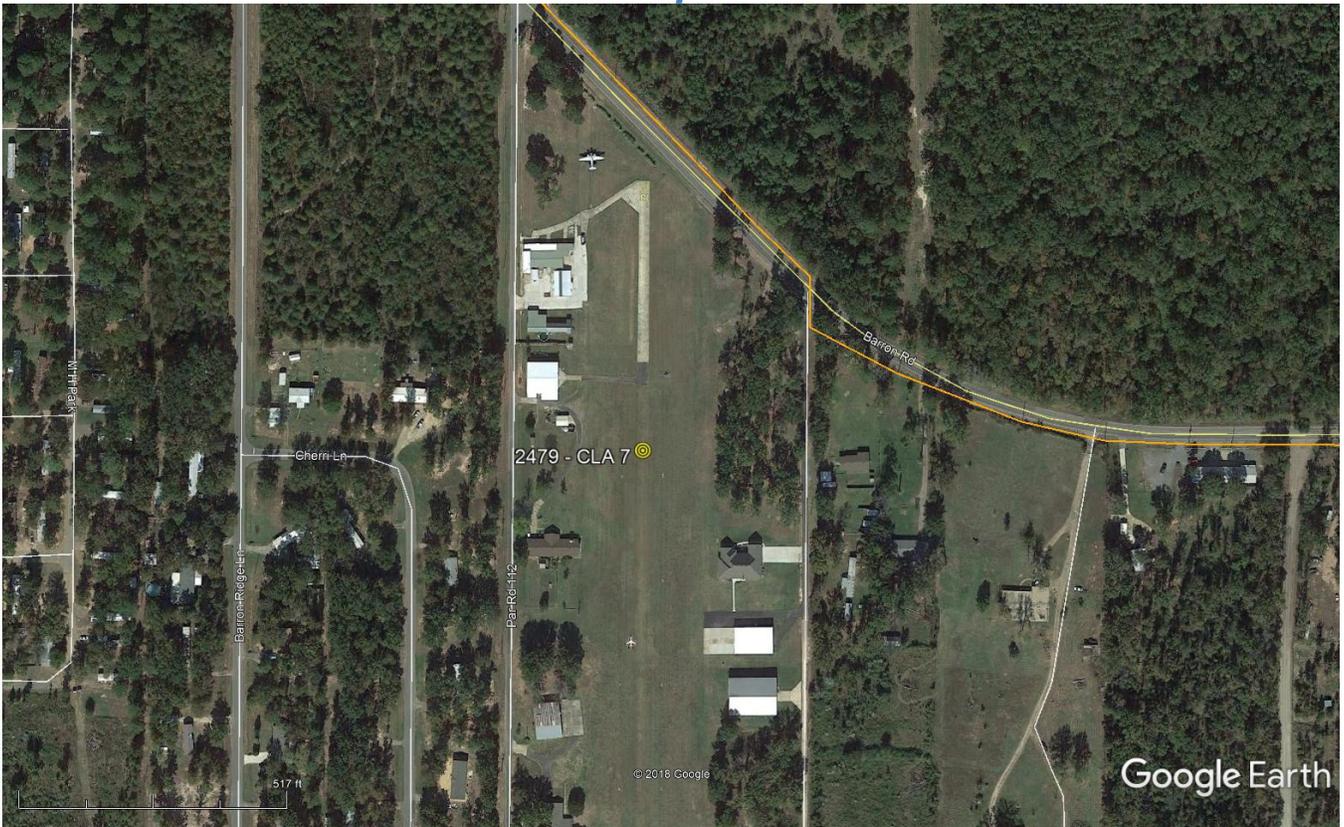
## Lot NE of Century Link – CLA 5



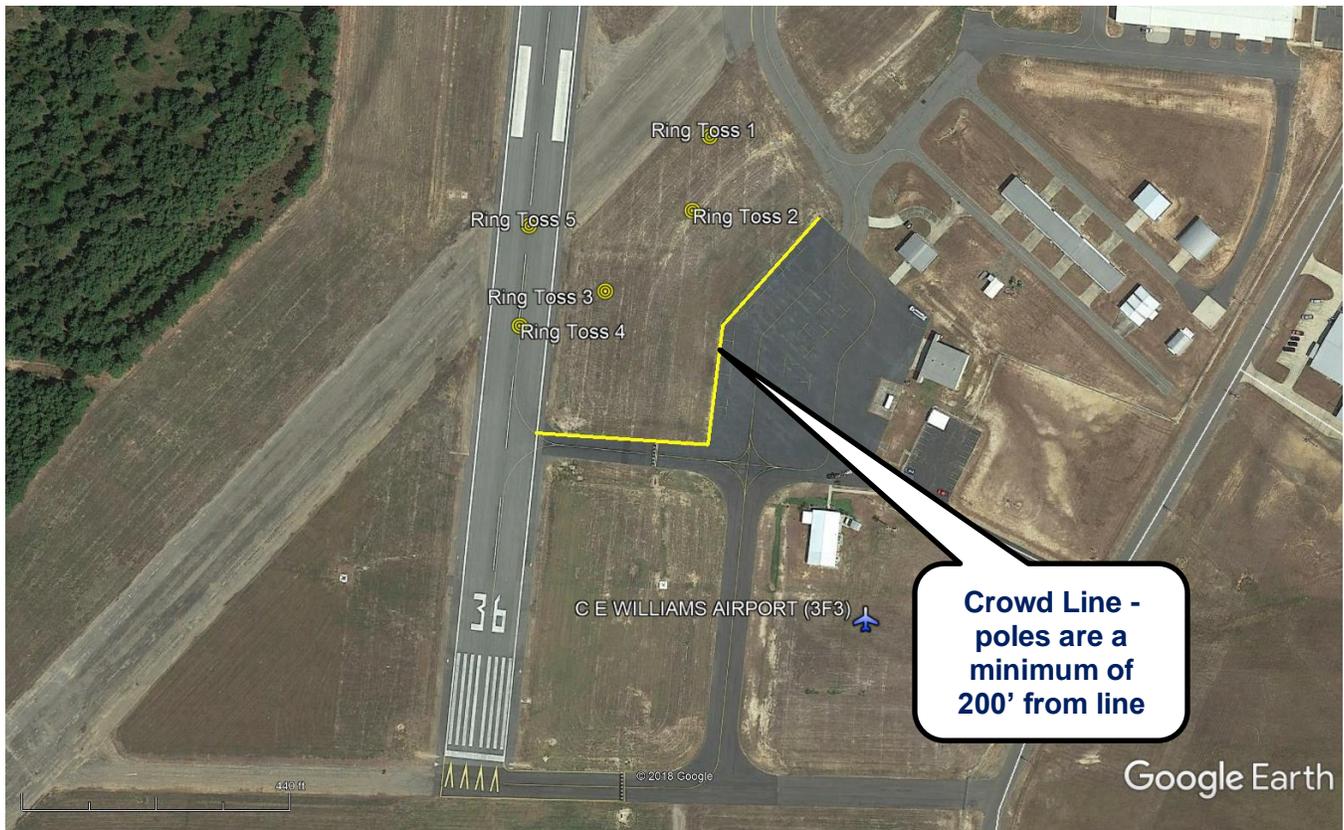
**Port Authority – CLA 6**



**Blue Bird Airport – CLA 7**



## C E Williams Airport (3F3)



This is the location of the Sunday evening fly-in and the DeSoto Parish will be providing security, fire and emergency services. The crowd line is controlled by use of caution tape.

# Balloon Federation of America



## Competition Rules

# 2018

US National Hot Air Balloon Championship  
Shreveport, Louisiana



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## **DISCLAIMER**

The Balloon Federation of America offers this set of competition rules for aeronauts who are interested in competitive ballooning. These rules are designed to afford balloonists and balloon organizations the opportunity to participate in competitive hot air ballooning activities while observing the principles of sportsmanship and the mandates of the Federal Aviation Regulations (FAR's).

These rules are only examples to be used by persons or organizations who are interested in exploring the world of competitive hot air ballooning. While these rules have been developed by the BFA over years of competition, they are no substitute for well-reasoned pilot decision making by pilots in command of lighter-than-air craft. Likewise, they are not intended as a substitute for the Federal Aviation Regulations with which competing pilots should be totally familiar.

Many of the tasks referenced in these rules could potentially involve flight which would be below the minimum safe altitudes mandated by FAR 91.119 (b) and (c) (14 C.F.R. § 91.119(b), (c)). **These competition rules do not grant participating pilots the right to contravene FAR's, including minimum safe altitudes.** Limited operational airspace waivers may be available. However, the applicant must comply with the requirements of the Federal Aviation Administration to obtain such a waiver. Applications for waivers must be submitted on FAA Form # 7711-2 which can be found on the FAA Website at [FAA Form 7711-2](#). **Organizers should not attempt to stage a competitive event without contacting their local Flight Service District Office (FSDO)**

**THESE RULES ARE OFFERED BY THE BALLOON FEDERATION OF AMERICA, WITHOUT CHARGE TO THE USER, ONLY AS A SERVICE TO HOT AIR BALLOON PILOTS AND ORGANIZATIONS. NO PERSON OR ORGANIZATION MAY, WITHOUT THE WRITTEN PERMISSION OF THE BALLOON FEDERATION OF AMERICA PRESIDENT, MAKE ANY USE OF THE BFA NAME OR LOGO OR IN ANY WAY, EXPRESSLY OR IMPLIEDLY REPRESENT THAT THE USER HAS ANY CONNECTION WITH OR SANCTION FROM THE BALLOON FEDERATION OF AMERICA.**

## SECTION I – EVENT DETAILS

### I. 1 TITLE

The Event shall be known as **THE U.S. NATIONAL HOT AIR BALLOON CHAMPIONSHIP.**

### I. 2 SANCTION

The event is sanctioned by the **Balloon Federation of America Hot Air Competition Division (BFA/HACD).**

### I. 3 ORGANIZATION

The event is organized by the **Shreveport-Bossier Sports Commission.**

### I. 4 CORRESPONDENCE

All correspondence regarding local hospitality and logistics should be addressed to:

**Sheila Norman**  
**629 Spring Street**  
**Shreveport, LA 71101**  
[snorman@sbsports.org](mailto:snorman@sbsports.org)

All official entries, entry fees and Competition Division correspondence should be addressed to:

**Balloon Federation of America**  
**1601 N Jefferson**  
**PO Box 400**  
**Indianola, IA 50125**  
[Bfaoffice@bfa.net](mailto:Bfaoffice@bfa.net)

### I. 5 PERSONNEL

Event Director	<b>Maury Sullivan</b>	Weather Officer	<b>Todd Fisher</b>
Deputy Director	<b>Jason Jones</b>	Steward	<b>Sam Parks</b>
Safety Officer	<b>Henry Rosenbaum</b>	Logger Manager	<b>Dottie Humbert</b>
Chief Scoring Officer	<b>Mike Gilligan</b>	Jury President	<b>Gary Briton</b>
Assistant Scoring Officer	<b>Lynn Sullivan</b>	Jury Member	<b>Ted Watts</b>
		Chief Measuring Officers	<b>Sheri Berry,</b> <b>Jim Dieball</b>

### I. 6 PLACE

The Event will be held at **Shreveport, LA.**

### I. 7 DATES

The Event will run from **July 10 – 15, 2018**  
The last flying day will be **July 15, 2018**

### I. 8 PROTEST FEE

The protest fee to accompany a protest is \$100.00 cash.

### I. 9 LANGUAGE

In the rules, the masculine form is used as a standard. Wherever you find the masculine form, it is implied that the feminine form is included.

### I.10 PARTICIPATION

The Event is open to **BFA/HACD member pilots who have met the US Nationals eligibility requirements or the sponsor's exemption rule as detailed in the registration materials provided.**

### I.11 CLOSING ENTRY DATE

The closing entry date for the Event is **March 31, 2018.**

### I.12 ACKNOWLEDGEMENT OF RESPONSIBILITY AND ASSUMPTION OF RISK

I.12.1 A competitor, by entering the event, acknowledges awareness of, and agreement with, the responsibility legally transferred to the pilot in command under the Federal Aviation Regulations (FAR's) as regards the personal decision to fly his balloon and any bodily injury or property damage resulting therefrom is solely the pilot's liability.

- 1.12.2 The competitor acknowledges that none of the flights are mandatory and that all flights will be made at the sole discretion of the competitor. Competitor's decisions as pilot in command may affect his standings in competitive events and any awards or prizes to which the competitor might otherwise be entitled if choosing not to fly.
- 1.12.3 The balloon and other property of a competitor shall be at risk of the competitor at all times. By entering the Event a competitor agrees to waive all claim for injury to himself or loss or damage to his property.

I.13 **INSURANCE**

Each competitor shall be insured against all claims by third parties to a minimum of \$100,000 per passenger, \$100,000 property damage and a minimum limit of **\$1,000,000** combined single limit coverage on the operation of their balloon. The competitor shall produce documentary evidence of this insurance and additionally insured endorsements valid for the period of the Event covering any balloon which he may fly.

## SECTION II – COMPETITION DETAILS

### II. 1 CONTEST AREA (7.1)

The competition map will consist of special editions of maps produced using DeLorme XMap® 6 software licensed for this application. Paper maps will be distributed at on-site pilot registration or arrangements can be made to have them mailed in advance. Digital versions of the competition map will be available for download at [Official Notice Board](#) as well as the BFA’s web site (<http://bfa.net>) by July 1, 2018.

The contest area will be the entire competition map except for areas designated as out of bounds. Any changes will be published on the Official Competition Map and posted on the [Official Notice Board](#). The contest area is as shown on the map and defined as:

- From the North, the gridline 0700
- From the West, the gridline 0800
- From the South, the gridline 7100
- From the East, the gridline 4200

### II. 2 OUT OF BOUNDS (7.2)

All red and blue PZs are considered out of bounds airspaces. Ground contact and other penalties will be applied. Changes will be posted on the Official Notice Board.

### II. 3 PZ LIST (7.3)

II. 3.1 The details of Prohibited Zones will be printed on the Official Competition Map; changes will be posted on the Official Notice Board and written supplements will be distributed at task briefings as changes occur.

No	Name	Address	Reason	Type	Coordinates
1	BAD – Weapons Storage	Do not land east of Easting grid line 3800	Military	Red 1,200' MSL	3700 / 9600
1A	BAD – Operating Air Force base				
2	Harrah’s Louisiana’s Downs (318) 742-5555	8000 E Texas St Bossier City, LA 71111	Horses	RED 1200' MSL	4150 / 0150
3	Riverfront Racing & Eqstrn Center (318) 390-8130	1107 River Bend Rd Haughton, LA 71037	Horses	RED 1200' MSL	4250 / 0100
4	Calumet Lubricants (318) 636-2711	3333 Midway St	Chemical Refinery	Yellow	2550 / 9250
5		Approx. 1800 Leonard Rd, Keithville	Exotic animals	Red 500' MSL	3620 / 8140
6		114 Curtis Sligo Rd	Cattle & Crops	Red 500' MSL	3800 / 8600
7	General Electric	7000 W Bert Kuhn’s Industrial Loop Rd	Sensitive Gov’t Area	Yellow	1510 / 8950
8	Old Hickory Ranch David Billingsley 925-2348 or 925- 9501	3315 Barron Rd Keithville	Cattle	RED 500' MSL	2270 / 7950
9	Red River National Wildlife Preserve	150 Eagle Bend Point, Bossier City	Per AIM 7-4-6	Red 700' MSL	3700 / 8950
10	Old Hickory Ranch Farm David Billingsley 925-2348 or 925- 9501	5287 Keithville- Springridge Rd, Keithville	Crops	Yellow	0900 / 7900
11		600 Hamilton Rd Bossier City	Locked Property	Yellow	3210 / 9870
12		1397 Barron Rd Keithville	Sensitive	Yellow	2515 / 7909
13		6095 Keithville- Springridge Rd Keithville, LA 71047	Cattle & Crops	Red 700' MSL	1777 / 7684
14	Henry Matins Gun Shop 318.797.1119	206 Kay Ln Shreveport, LA	Landowner Request	Yellow	3450 / 8590

15	Red Roads, 300' radius around center point axis of divided highway	I-49, 3132, I-220, I-20		Red 500' MSL	
16	Blue			8000' MSL	

**II. 4 COMMON LAUNCH AREA(S) (9.1.1)**

More CLAs may be announced at the General Briefing. Changes to Common Launch Areas will be posted on the Official Notice Board and written supplements will be distributed at task briefings should changes occur.

CLA	Location	CLP
1	LSU Shreveport Soccer Complex	434063.00 m E / 3588397.00 m N
2	North Bossier Park	432110.00 m E / 3604965.00 m N
3	Margaritaville Casino	430191.00 m E / 3598833.00 m N
4	Old AT&T Plant, South End	423288.00 m E / 3583224.00 m N
5	Lot NE of Century Link	436825.00 m E / 3592732.00 m N
6	Port Authority	439266.00 m E / 3581744.00 m N
7	Blue Bird Airport	424747.00 m E / 3579210.00 m N

**II. 5 COMMON LAUNCH POINT(S) (9.1.2)**

Changes to Common Launch Points will be posted on the Official Notice Board and written supplements will be distributed at task briefings should changes occur.

This data may be changed before the event and the final information will be published on the Official Notice Board and covered in the General Briefing.

**II. 6 LANDOWNER'S PERMISSION (9.3)**

Landowner's permission must be obtained for each launch/landing and if several competitors launch/land at the same location, each competitor must ask for permission. Pilot must obtain landowner name, address and phone number and include on Flight Report Form.

Public areas such as public parks, schools and industrial areas are considered as places without need for permission for take-offs or landings. Landowner permission is not required if the basket and retrieve vehicle is on a public road or driveway and the envelope is laid out in a field which is not fenced and not cultivated, and no damage is done. Traffic may not be obstructed. Church property may also be used in this manner as long as no basket or retrieve vehicle is on grassy areas.

These provisions and instructions are subject to change before or during the event any time by announcements by the Event Director.

**II. 7 LIVESTOCK AND CROP (10.6)**

Balloons shall not fly closer than 200' from livestock or buildings containing livestock. Any special notes will be made available during the general pilot briefing and on the Official Bulletin Board.

**II. 8 DRIVING LAW (10.11)**

All participants are required to follow Louisiana laws and regulations. Items of specific interest include:

- Texting and driving is considered a moving violation and is a primary offense subject to a first time fine of \$175 fine and a second offense is subject to a \$500 fine.
- It is illegal to drive or occupy a moving motor vehicle in possession of an alcoholic beverage open to consumption.
- Vehicle 10,000 lbs. or less, all occupants must have seat belt when vehicle is in motion.
- Children under the age of 6 years or less than 60 lbs. must be in a child restraint system or booster seat that is age and size appropriate, in accordance with manufacturers' recommendations. Children 6 to 12 years of age must be restrained by a lap belt, shoulder harness, or an age / size appropriate child safety or booster seat.
- All motorcycle operators and passengers must wear a motorcycle helmet.
- Less than 12 years of age may not ride in an open truck bed or trailer.

## II. 9 AIR LAW (10.14)

When flying over congested areas, persons, livestock or property, competitors must follow the restrictions issued by the FAA in the Event Waiver. Violation of this rule will result in a penalty. The entire contest area will have 8,000 ft. MSL as a maximum altitude (Blue PZ) during competition flights. This may be subject to change before or during the event by announcements of the Event Director.

Pilots are required to carry an operating aircraft radio and monitor frequency 121.4 (SHV Tower)

## II.10 RECALL PROCEDURE (10.15)

Primary recall will utilize text messaging using **Remind**. These text messages will utilize the phone numbers of the pilot and crew chief entered by them into the system. The system provides instantaneous communication to all. Additional or backup recall may use aircraft radios (121.4 frequency).

## II.11 GOAL CENTER (12.1)

The center point of the intersections of roads will be the intersection of the projected centerlines of the roads. The Director may provide graphical definition of unusual intersections or goals.

In the case of goals selected by competitors from a published intersection list and measured by track log, all logger measurements will be made to the published intersection coordinate. Competitors should be advised that pre-approved list of published goals may not be the exact center of the intersection, may be represented by some other ground-based identifiable landmark and that they should fly to the coordinate provided. Measurements involving markers will be made from the center of the 'marked' intersection or goal.

## II.12 GOALS SELECTED BY A COMPETITOR (12.2)

II.12.1 In the case of goals selected by competitors, pilots are required to select goals as indicated on the TDS. A list of preapproved goals is provided in the Pilot Operations Manual. These goals are also printed on the competition map and are labeled with a three-digit identifier. If used, these goals shall be identified using these three-digit identifiers.

In addition to the list of pre-approved goals noted above, the following types of goals are also permitted:

- a) Intersection of two roads
- b) Intersection of a road and a railroad
- c) Any point not in violation of II.12.2

II.12.2 No goal selected by a competitor shall be:

- a) Within a built-up area (designated areas on competition map)
- b) Within a blue PZ
- c) Within 200 meters of:
  - i. A Red PZ
  - ii. Red roads (I 20, I 220, I 49 or 3132)
  - iii. A power line shown on the competition map

II.12.3 Declaration methods:

### a) Pilot Declared Goals (PDG)

- i. A written declaration may be submitted by the pilot at the conclusion of the task briefing or at a later time as specified on the TDS
- ii. Text or other electronic methods of declaration (BFA Declarations app) as specified on the TDS
- iii. A competitor who wishes to revise his declaration may deposit/text a further declaration, within the declaration time, provided it is clearly marked to distinguish it from any previous declaration(s).
- iv. If no valid goal is declared, the competitor will not achieve a result. If more goals are declared than are permitted, the competitor will be scored to the least advantageous valid goal.

### b) Fly On (FON)

- i. The competitor must clearly declare his Fly On goal(s) using one of the following methods:
  1. On a properly submitted written declaration at the conclusion of the task briefing
  2. On the marker tail of a previous task as defined on the TDS,
  3. Text or other electronic methods of declaration (BFA Declarations App) as specified on the TDS
  4. Any method and timing as specified on the TDS.
- ii. A competitor who wishes to revise his declaration may text a further declaration using the BFA Declarations App within the declaration time, provided it is clearly marked to distinguish it from any previous declaration(s).
- iii. If no valid goal is declared, the competitor will not achieve a result. If more goals are declared than are permitted, the competitor will be scored to the least advantageous valid goal.

These instructions are subject to change before or during the event anytime by announcements by the Event Director.

## II.13 LOCATION OF OFFICIAL NOTICE BOARD (5.11)

Electronic versions of The Official Notice Board will be available using the Remind text messaging system and on line on the **BFA website** (<http://bfa.net>). **A paper Official Notice Board will be located at the Hilton Garden Inn.** Scores and other information will be sent to all competitors directly via the Remind messaging system first and to all other locations at approximately the same time.

## II.14 COMMUNICATION TIMES (5.3)

Replies to general inquiries or complaints will be **posted on the even hours between 8:00 AM and 8:00 PM every day** at the Official Notice Board. ***While a reply may be posted anytime, it will take effect at the next 13:00 or 20:00 whichever is earlier.***

## II.15 PUBLICATION TIMES ON THE LAST FLYING DAY (5.6.3)

Every half-hour beginning at 7:30 AM.

## II.16 FLIGHT CREW (Section III, 10.9). Also see Rule 2.2.

Flight crew carried on board may assist the competitor with any duties assigned by the pilot in command except manipulating the controls of the aircraft or throw markers.

## II.17 DETAILS FOR THE USE OF GPS-LOGGERS (See Chapter 6)

### a) Logger:

- The Logger used in this Event is the Garmin Dakota 10 logger.
- The logger will be configured by the Event Officials and at no time is a competitor allowed to interfere with the configuration. If the competitor notices a different setup he shall contact the appointed official.

Details on the operation of the logger can be seen at [You Tube Dakota 10 tutorial video](#)

### b) Configuration:

The setup for this event will be:

- GPS System: WAAS/EGNOS enabled
- time interval: 3 seconds
- altitude: GPS
- altitude unit: feet
- distance unit: metric
- date/time: local time
- position format: UTM
- map datum: WGS84

To qualify as backup, a competitor's logger shall be set up to a time interval of 5 seconds or less. The GPS shall report position data using the WGS84 map datum and satellite-based augmentation (WAAS) shall be enabled.

### c) Handling by competitor:

- The logger will be handed out at each pilot briefing. The competitor is responsible for the logger throughout the flight until returned to officials.
- The logger must be switched on 5-10 min before the intended take-off to allow proper GPS initialization. The start of cold inflation is generally adequate time.
- During flight, the logger must remain attached to the basket to ensure optimum GPS reception.
- Competitors experiencing logger operation problems must contact the appointed official before any self-remedy is exercised.
- 5-10 minutes after landing the logger must be switched off.
- After landing, the competitor will detach the logger, turn it off, and return it to the Operations Center or other location designated by the Director in briefing.
- Each pilot is responsible for the safe and undamaged return of the GPS logger as supplied by the Organizer. Damage to, or loss of an Organizer provided GPS or related accessories will result in the pilot being assessed a charge of \$200 for logger, \$10 for clips, and \$5 for Velcro straps. If a charge is assessed, it must be paid prior to another official logger being provided.
- At no time is the competitor allowed to modify the logger's critical settings (see 6.13.3) or interfere with its operation other than specifically instructed by the Director.

**d) Track data:**

The GPS logger track is the property of the competitor and shall not be made available to the public without his permission. The Director may announce at the General Briefing a procedure for competitors to retrieve their track logs.

Failure to follow the instructions 'Details for the use of GPS Loggers' may be penalized without warning.

**II.18 DETAILS FOR TIME LIMITS (rest hours) (5. 6)**

The hours between **10:00 PM and 8:00 AM** local time will be disregarded for the purpose of the time limits of complaints and protests.

**II.19 LOST MARKER (12.15.3)**

Competitors will be charged **\$20 for each lost marker**. Lost marker fees must be paid prior to the first briefing following the flight in which the marker was lost.

**II.20 BALLOON SIZE (3.3)**

The maximum size balloon permitted is **AX8 (3000cbm/105000cft)**.

**II.21 ASSESSED MARK (NOT USED)**

**II.22 ALTITUDE (6.9.2)**

GPS Loggers will use **GPS altitude**.

**II.23 SCORING FORMULA**

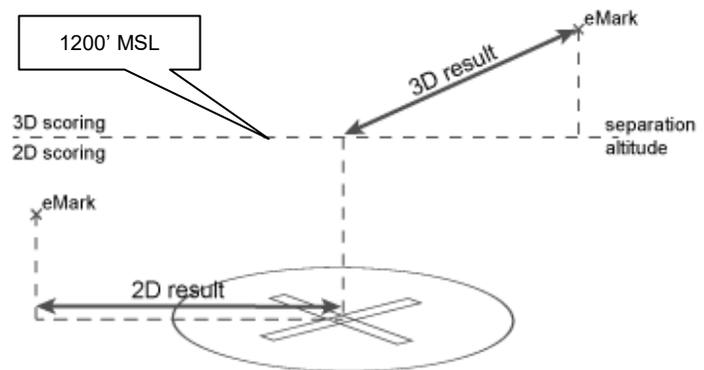
The Event will be scored using **Proportional (14.5) scoring**.

**II.24 2D / 3D SCORING ALTITUDES**

The separation altitude between 2D and 3D scoring is 1,200' MSL

When goals or targets on the ground are used, results based on track points will be the:

- 3D-distance to the point at the separation altitude above the goal/target if the track point is above the separation altitude
- 2D-distance to the goal/target if the track point/electronic mark is at or below the separation altitude.



When goals/targets above the ground are used, results based on track points will be 3D-distance

**II.25 COMPETITION STRUCTURE (6.1)**

The competition will be conducted using **loggers and physical markers**. No observers will be used.

**II.26 MAP COORDINATES**

The map datum is WGS 84 and UTM coordinates are applied with **one (1) km grids; scale 1:36,000; magnetic deviation 1.6° East and Grid N = 0.3° west of True North**.

The basic map coordinate of a UTM map with WGS84 datum is:

- 15S (Zone reference, where 15=zone and S=latitude band)
- 425000 (6-digit Easting)
- 3590000 (7-digit Northing)

To identify a point on the competition map, the coordinates must be written in one of the following formats:

- The competition area is completely in one zone; therefore, the zone reference may be omitted.
- Using the BFA Declarations app: Easting and Northing entered as 4 by 4-digit unless entering a 3-digit goal or 4-digit target reference number in which case the Northing cell will be left blank. See complete description on page 15 of the Pilot Operations Manual.
- 6-7 format: this complies with the standard UTM grid format. First six digits easting and second, seven digits northing. (e.g. 425000-3590000 alternatively 0425000-3590000)
- 4-4 format: this format uses two times four-digits. First four digits easting and the second four digits northing. (e.g. 2500-9000), leaving out the 1m digit.
- A target list number according to the list provided for the competition at hand.

Eastings must be separated from Northing's by one of the following methods:

- a new line
- a blank space,
- a minus character (-) or the slash character (/)

## **SECTION III – RULES**

### **CHAPTER 1 - OBJECTIVES**

#### **1.1 OBJECTIVES**

The objectives of the Event are:

- To determine the Champion Pilot
- To stimulate the development of aerostation by a comparison of performance of pilots and aerostats;
- To reinforce friendship among aeronauts.
- To provide task opportunities for pilots interested in qualifying for the US National Hot Air Balloon Championship through the National Eligibility List System

#### **1.2 DEFINITION OF CHAMPION**

1.2.1 The Champion shall be the competitor who has the highest aggregate score at the end of the event.

1.2.2 To be recognized as a Champion and for a Champion to be declared for State or Regional Championships, at least three tasks must be completed.

#### **1.3 INTERPRETATION OF ENGLISH WORDING**

1.3.1 “**Shall**” and “**must**” mean the application is mandatory. Failure to comply will normally lead to a penalty, disadvantageous interpretation, or other disadvantages.

1.3.2 “**Should**” means that the application is recommended. Failure to comply may lead to penalties, disadvantageous interpretation, or other disadvantages.

1.3.3 ” **May**” means that the application is optional.

#### **1.4 DOCUMENTATION**

The following documents will be inspected when competitors register on arrival at the Event:

- a) Pilot Certificate
- b) Pilot Log Book
- c) Balloon Log Book
- d) Certificate of Airworthiness
- e) Certificate of Registration
- f) Certificate of Insurance

## **CHAPTER 2 – ENTRY CONDITIONS**

### **2.1 COMPETITOR**

A person entered and competing in the event.

### **2.2 COMPETITOR'S RIGHTS OF REPRESENTATION**

2.2.1 Members in good standing and not on probation with the BFA/HACD are eligible to compete in BFA events.

2.2.2 Women qualifying and stating their intention is to use the US Nationals as a qualifier to the Women's World Championship must have only females as on-board crew.

Juniors stating their intention is to use the US Nationals as a qualifier to the Junior World Championship may not have anyone on board during the flight over 30 years of age.

### **2.3 QUALIFICATION**

Each pilot-in-command shall meet the requirements of the organizer and the BFA/HACD Policies and Regulations.

### **2.4 SPORTING LICENSE (NOT USED)**

### **2.5 ENTRY**

The completed entry form and entry fee for each competitor must reach the organizers by the closing entry date, except in the case of extra places offered by the organizers. The entry fee may or may not be refundable.

### **2.6 ACKNOWLEDGEMENT**

A competitor who has not received acknowledgement of their entry within fourteen days after the closing entry date should make inquiries of the organizer.

### **2.7 ACCEPTANCE OF CODE OF CONDUCT, RULES AND REGULATIONS**

All entrants and competitors are expected to know, understand, and abide by the competition Rules and Regulations for this event. In addition, the competitors are required to know, understand, accept and abide by the Code of Conduct (see APPENDIX A), and by entering are deemed to accept without reservation. They should appreciate that they should compete in a sporting manner and that their behavior must be beyond reproach.

### **2.8 RELEASE OF LIABILITY**

2.8.1 The competitor, by entering the event, agrees that the organizers and sponsors of this event, competition officials, Balloon Federation of America, BFA/HACD, owner of any site, officers, trustees, agents and/or members of these entities are providing the competitor with the facilities and means for participation in this event and in no way do they supersede the responsibility of the pilot in command as stated in the FAR's, or otherwise.

2.8.2 The competitor releases the aforementioned from liability for their actions or inactions in relation to the event which may arise out of or result from or in any manner relate to the balloon flight or activity in which the competitor participates as a pilot in command.

### **2.9 LIABILITY TO THIRD PARTIES**

By entering the Event, a competitor assumes all liability for injury, loss or damage to third parties or their property caused by himself or his crew.

### **2.10 SAFETY**

2.10.1 Any meteorological report or forecast, or other safety or navigational information is provided in good faith for the guidance of competitors. The event assumes no responsibility for the completeness or accuracy of such information. It is the competitor's decision whether to rely on that information or acquire additional information.

2.10.2 Officials may be appointed to regulate the inflation and launching of balloons. However, nothing shall diminish the responsibility of each pilot under this chapter.

2.10.3 Recall procedures will be used as described in II.10 and 10.15.

### **2.11 RESPONSIBILITY**

Entrants and competitors remain completely responsible for the safe operation of their aerostats at all stages of inflation, launch, flight and landing. **Competitors** must ensure that their crew, equipment, and their own level of skill and experience are suitable for the conditions in their own judgment. A competitor is responsible for all the actions of his crew during the event.

## **2.12 CONDUCT**

Entrants and competitors and their crews are required to behave in a sportsmanlike manner, follow the Code of Conduct, and comply with the directions of Event Officials. Inconsiderate behavior, profanity, or unsportsmanlike conduct will be penalized by the Event Director and may be grounds for expulsion of a competitor. (See APPENDIX A for Code of Conduct.)

## **CHAPTER 3 - BALLOON QUALIFICATIONS**

### **3.1 DEFINITION OF BALLOON**

- 3.1.1 Aerostat: a lighter-than-air aircraft  
Free Balloon: an aerostat supported statically in the air, with no means of propulsion by any power source.
- 3.1.2 Sub-class AX: free balloons which obtain their buoyancy solely as a result of heating air. The envelope may contain no gasses other than air and the normal products of combustion.
- 3.1.3 The use of vents which are designed to propel a balloon is prohibited. Turning vents may only be operated in flight for the purpose of orienting the basket. Prolonged or excessive use of the turning vents is prohibited. Penalty 250 to 500 task points

### **3.2 FUEL**

Each balloon shall carry an adequate fuel supply to ensure completion of the flight with an adequate reserve. The lack of adequate fuel to complete a task shall not be grounds for protest.

### **3.3 DESIGNATION OF BALLOON**

Each competitor shall designate the balloon he is to fly during the Event. No change of balloon may be made after the start of the first task briefing except as provided in these rules. The maximum size category is designated in II.20.

### **3.4 AIRWORTHINESS**

Aerostats flown in the Event must have current certificates of registration and airworthiness, or in place of the later, an equivalent document from the FAA. All required instruments under the guidelines of the aircraft operations manual must be on board. The organizers/officials are empowered to visually inspect and/or reject any aerostat which in their opinion is not of a reasonable standard of airworthiness.

### **3.5 DAMAGE**

- 3.5.1 If a balloon is damaged during the Event, it may be repaired. Damaged components may be replaced or repaired, except that a complete envelope may be replaced only at the discretion of the Event Director.
- 3.5.2 The pilot of a balloon damaged while in flight, to the extent affecting its airworthiness (according to the individual balloon's flight manual), is prohibited from continuing in the task(s) and must land at the first practical opportunity. The damage must be reported to the Safety Officer per rule 3.5.3
- 3.5.3 Any damage to a balloon affecting its airworthiness must be reported to the Safety Officer before it is entered for a further flight, and the balloon may only be flown after appropriate repairs have been made and proper evidence and documentation of such has been provided to the Safety Officer. Penalty: up to 1000 competition points.

### **3.6 AUTOMATIC FLIGHT CONTROLS**

Any device designed to act as an automatic flight control is prohibited, regardless of the specific nature of the device.

### **3.7 ALTIMETER**

Each balloon shall carry a serviceable altimeter.

### **3.8 COMPETITION NUMBERS**

The organizer will provide two banners which will be displayed on opposite sides of the basket during tasks. In addition, all crew vehicles shall be clearly identified on opposite sides with competition numbers, if provided. Penalty is up to 200 competition points applied to the first task of the flight(s).

### **3.9 BASKET**

The term "basket" includes any crew or passenger compartment, regardless of its construction. All sharp objects must be covered to avoid risk to other balloons. When using nylon straps (Zip Tie Straps) to attach basket banners, they be set (closed) from the inside of the basket. Fuel tanks attached to the outside of the basket must be protected on the bottom ring to ensure there are no spurs or that the surface is covered to protect against any risk to other balloons.

### **3.10 RETRIEVE**

- 3.10.1 Retrieve Crew shall not be within any MMA or within 100m radius of a target except with permission and in the presence of an official. Crews are not allowed to make permanent marks on an intersection (temporary marks are permitted, e.g. paper, chalk).

- 3.10.2 All vehicles used to aid the retrieval of a balloon shall be marked with the competition number.
- 3.10.3 Retrieve vehicles shall not be parked within 100m of a goal/target set by the Director, unless specifically authorized in the briefing.

## **CHAPTER 4 - ORGANIZATION OFFICIALS**

### **4.1 EVENT DIRECTOR**

- 4.1.1 The Event Director will be in overall charge of balloon operations of the event. He may have an assistant director and technical officials to assist him.
- 4.1.2 The Event Director is responsible for the good management, smooth, and safe running of the event. He shall make operational decisions in accordance with the rules of the Event. He may penalize or disqualify a competitor for misconduct or infringement of the rules. He shall attend meetings of the jury and give evidence if requested.
- 4.1.3 In the rules the word "Director" may be used instead of "Event Director."
- 4.1.4 The responsibility of the Event Director is limited to competition operations and does not include any other activity within the event not related to competition operations.

### **4.2 STEWARDS**

- 4.2.1 Stewards are advisors to the Director and, if used, shall:
- Watch over the conduct of the event and report any unfairness or infringement of the regulations or behavior prejudicial to the safety of other competitors or the public or in any way prejudicial to the sport.
  - Address competitor requests for assistance and inquiries, process complaints and discuss issues with appropriate officials and report findings to the competitor.
  - Investigate protests and assemble information and facts concerning matters to be considered by the Jury.
  - Advise on the interpretation of the rules and regulations and to advise on penalties.
- 4.2.2 A steward has no executive powers; he must not be a member of the organizing committee. A steward may attend a meeting of the Jury as an observer or witness.

### **4.3 JURY DUTIES AND COMPOSITION**

- 4.3.1 Matters of advice, arbitration or rule interpretation shall be the responsibility of the Jury President and the Jury having been appointed in accordance with 4.3.3.
- 4.3.2 During the event, the Jury deals with protests made by competitors. A Jury member must possess a thorough knowledge of the rules and regulations for the Event. At least one Jury member is to be on site during the competition operations.
- 4.3.3 The Jury shall be composed of three members: the Jury President appointed by the HACD Board, one Jury Member selected by the Director and approved by the HACD Board, and one competitor juror. The competitor member shall be selected from a pool of five, non-rookie, potential jurors chosen by all the competitors at the general briefing. In the event of a protest the Jury President shall select a competitor from this pool who has have no conflict of interest, as determined by the President, with the protest to be heard. In the event of a subsequent protest(s) the President shall make a new selection for the competitor jury member. In the event that all but one, or all members of the pool, should have a conflict with the current protest, the Safety Officer, or the Safety Officer and one additional member from the competition staff if needed, shall complete the Jury. The Event Director shall not serve as a juror. The President reserves the right to eliminate competitors from the jury pool election at their request.
- 4.3.4 In addition to being Chairman at jury meetings, the Jury President has the right to require the Organizer to abide by the published rules and regulations for the Event. If the Organizer fails to do so, the Jury President has the power to stop the Event until a jury meeting has considered the situation.

### **4.4 SCORING OFFICER**

The scoring officer shall be responsible for collecting results and producing scores using the BFA Scoring Software or some other valid method.

### **4.5 SAFETY OFFICER**

The Safety Officer shall give advice to the Event Director on any matters regarding safety and will be in consultation on weather forecasts and briefings. Mandatory operational procedures for the safety officer are contained in the Safety Officer's Handbook (SOH).

### **4.6 TECHNICAL SUPPORT OFFICERS**

Technical Support Officers are competition officials who are responsible to the Scoring Officer. If utilized, they are responsible for the computer mapping software and verifying the records of each pilot's flight track. Their duties include the downloading of the GPS tracks and they will be responsible for verifying each pilot's recorded track and recording relevant information regarding their flight and performance during the task for the Scoring Officer.

## **CHAPTER 5 - COMPLAINTS & PROTESTS**

### **5.1 ASSISTANCE**

At any time during the Event, a competitor who is dissatisfied on any matter should first ask the appropriate Official for assistance.

He may ask for his result or points score to be checked, or the calculation to be explained.

If still dissatisfied, a complaint may be made by the competitor to the Event Director or his designated official.

### **5.2 COMPLAINT**

5.2.1 The purpose of a complaint is to obtain a correction without the need to make a formal protest.

5.2.2 A complaint is a request by a competitor to the Director, or his delegated official, to investigate any matter in which the competitor is dissatisfied.

5.2.3 A formal complaint must be submitted in writing and will receive a written reply.

5.2.4 Complaints shall be handled or transmitted by the competitor to the Director, or his designated official, who will acknowledge receipt and record the time of receipt.

### **5.3 COMMUNICATION (II.14)**

Replies to complaints will be posted on the Official Notice Board at fixed times as per Rule II.14

### **5.4 PUBLICATION**

The Director may at his discretion publish the text of any formal complaint together with his reply. If requested by the competitor, the Director must do this.

### **5.5 PROTEST**

5.5.1 If dissatisfied with the Director's decision on a Complaint made during the Event, a competitor has the right of protest.

5.5.2 Declarations of intention to protest and protests with protest fees shall be handled or transmitted by the competitor to the Event Director, or his designated Official, who will acknowledge receipt and record the time of receipt. These declarations of intent or protests shall be handed in at the Operations Center to an official.

5.5.3 A competitor who has made a protest has the right to make a verbal presentation of his case to the Jury. He may be assisted by an advisor of his choice during this meeting.

5.5.4 The text of all protests and the decisions of the Jury shall be posted on the Official Notice Board.

### **5.6 TIME LIMITS**

#### **5.6.1 TIME LIMITS FOR COMPLAINTS (II.18)**

5.6.1.1 Complaints must be submitted as soon as possible after the event giving rise to the complaint and must be dealt with expeditiously.

5.6.1.2 Complaints concerning scoring must be made to the Event Director, Scoring Officer or delegated official within eight (8) hours of publication of the official scores for a task. The rest hours defined in the competition details (II.18) will be disregarded for the purpose of the time limits.

5.6.1.3 Publication of a new version of official scores will only extend the complaint time in the matter concerned.

#### **5.6.2 TIME LIMITS FOR PROTESTS (II.18)**

5.6.2.1 A competitor intending to protest shall, within one (1) hour of the reply to his complaint, declare his intention to protest to the Event Director.

5.6.2.2 Within eight (8) hours of the reply to his complaint the competitor shall submit his protest in writing accompanied by the protest fee (I.8). The rest hours defined in the competition details (II.18) will be disregarded for the purpose of the time limits.

### **5.6.3 SHORTENED TIME LIMITS FOR COMPLAINTS AND PROTESTS (II.15)**

- 5.6.3.1 Complaints made on or after the last day of the Event must be submitted to the Director within one (1) hour of publication of the official scores.
- 5.6.3.2 Protests made on or after the last day of the Event must be submitted within one (1) hour of the reply.
- 5.6.3.3 The Event Director shall announce the publication times for all task scores on the last flying day.
- 5.6.3.4 Time limits applying to scores published after 1300 on the day before the last flying day will also be reduced to one hour on or after the last flying day of the event.

### **5.7 TREATMENT OF PROTESTS**

- 5.7.1 The Event Director must present any protest to the Jury President without delay. The Jury President will call a meeting of the Jury within 24 hours of receiving a protest.
- 5.7.2 The Jury will hear both sides of the matter of any protest, applying the relevant rules for the event.
- 5.7.3 The President of the Jury shall report the result and a summary of any relevant considerations in writing to the Event Director without delay, who shall make public the President's report.

### **5.8 RETURN OF DEPOSIT**

- 5.8.1 Normally the deposited fee is returnable only if the protest is upheld or is withdrawn prior to the hearing by the Jury.
- 5.8.2 All non-refunded deposit fees from protests will be sent by the Jury to the BFA/HACD.

### **5.9 JURY APPROVAL OF SCORES AND PRIZE GIVING**

- 5.9.1 The last action of the Jury President is to verify and approve the competition results of the Event and declare the Event valid providing it has been conducted in accordance with the rules and the decisions of the Jury.
- 5.9.2 The scores of the event shall be final only after all protests have been dealt with by the Jury and the Jury has ceased its functions. The final scores must be made public before the prize giving is held.
- 5.9.3 The Jury President shall verify and sign the final total scores before they are made public.

### **5.10 OFFICIAL NOTICE BOARD (II.13)**

- 5.10.1 The Event Director will announce at the General Briefing the place where the Official Notice Board is located. This should be marked OFFICIAL NOTICE BOARD and is the place where all results, scores, replies to complaints and protests, and other official communications directly relating to the Event will be published. All information shall be signed, dated, and timed. Postings to an official web site implies the required signature and shall display the date and time.
- 5.10.2 If an Electronic Notice Board is used, the details will be announced in the General Briefing. In case of conflict between the Official and the Electronic Notice Board or failure of the availability of the Internet, the information on the Official Notice Board will prevail.

## CHAPTER 6 – LOGGERS

### 6.1 COMPETITION STRUCTURE

The competition will be conducted as defined in Section II.25.

### 6.2–6.8 (NOT USED)

### 6.9 GPS-LOGGERS

A GPS Data Logger is a device that logs track and altitude of a balloon. The track points of the log will specify the position (latitude/longitude), the altitude (barometric or GPS altitude as specified in II.22), and a time stamp. Devices enabling competitor's input may additionally be available depending on the type of logger. GPS-loggers may be used in competition as an observation tool to monitor compliance with the rules, for task setting and for achieving a score or result. Competitors must comply with the operational instructions on their use (see II.17).

### 6.10 HANDLING (II.17)

6.10.1 Rules on the handling of loggers are specified in Section II.

6.10.2 The competitor will take the logger with him after briefing, turn it on, and attach it to his balloon before take-off on the appropriate spot and in the appropriate manner and location.

6.10.3 After landing, the competitor will detach the logger, turn it off, and return it to the Operations Center or other location designated by the Director in briefing.

6.10.4 At no time is the competitor allowed to modify the logger's critical settings (see 6.13.3) or interfere with its operation other than specifically instructed by the Director.

### 6.11 FLIGHT REPORT FORM (FRF) (For events without observers)

6.11.1 A Flight Report Form (FRF) stating the take-off and landing place and time, estimated task results, landowner related issues, and other relevant data shall be completed and signed by the competitor.

6.11.2 The competitor will return the:

- FRF
- Logger
- Any unused markers

to the designated Official(s) and sign off the return in a log sheet at a location designated by the Event Director during the General Briefing. Any undue delay in returning the above objects may result in a penalty.

### 6.12 RESPONSIBILITY

The competitor is responsible for any loss or damage between receiving the logger at briefing and return of it after the flight.

### 6.13 GPS-LOGGER FAILURE (II.17)

6.13.1 Reported malfunctions are considered failures only when they can be reproduced after flight. When a failure is found, the officials may ask the competitor to provide his GPS equipment to substitute the missing track information. Not carrying the official logger in the basket or not turning it on does not constitute logger malfunction.

6.13.2 If the official logger is not carried in flight or turned on, but an approved GPS (see 6.9.2) with a usable track is provided, the competitor will receive a penalty of 200 task points on the first task of the flight for a first offense. Subsequent offenses will be penalized by no result on logger results and up to 200 task points on marker results.

6.13.3 In case both the official track log and the competitor's GPS are not providing the necessary information to establish a result, the competitor will not receive a result based on track points. Marker results will be penalized up to 200 task points when no official or approved track log is available. It is therefore in the competitor's interest to equip himself with a GPS that provides track information usable for scoring (position, altitude and time in accordance with II.22) and use the same set-up (sampling time interval, map datum, minimum track point memory, etc. in accordance with II.17) as the official logger.

6.13.4 An electronic mark recorded by a competitor's GPS equipment can only be used if the equipment has been approved by the Director before the flight or specific rules under Section II have been followed. Otherwise the competitor will be scored to his nearest electronic mark of the official logger, nearest physical mark or landing position, whichever is best. A score to a track point will not be made.

## **CHAPTER 7 - MAPS**

### **7.1 CONTEST AREA (II. 1)**

An area defined by reference to the official competition map published at the start of the Event. Tasks will not be set, and results will not be measured+, outside this area.

### **7.2 OUT OF BOUNDS (II. 2)**

The Director may define areas or airspaces as out of bounds. Take-offs or contest landings in OFB areas are prohibited and the competitor will achieve no result in the relevant task. Goal declarations in OFB areas or airspaces will be considered invalid. Competitors cannot achieve a valid mark, valid track point or result in OFB areas or airspaces.

### **7.3 PROHIBITED ZONES (PZ's) (II.2 and II. 3)**

7.3.1 The Director may define airspace or other areas as prohibited. A mark or track point inside a red, yellow or blue PZ is valid unless the area is defined as OFB. The boundaries and, if applicable, the altitude limits in feet MSL, shall be published in writing for each PZ.

7.3.2 There are three classifications of PZ's: Red, Yellow and Blue.

7.3.3 A Red PZ is restricted airspace and will include an upper altitude limit which a competitor shall not fly below. Ground contact of the inflated balloon is not permitted.

7.3.3.1 A Red Road PZ identifies restricted airspace surrounding major roadways or interstates. It is measured from the centerline (expressed as a tunnel around the axis) of an interstate or other major highways identified as red roads.

7.3.4 A Yellow PZ is a restricted area where no take-offs, landings or ground handling are permitted.

7.3.5 A Blue PZ is a restricted airspace and will include a lower altitude limit which a competitor shall not fly above. The Blue PZ is considered OFB and infractions will be penalized under Rule 10.14.2

### **7.4 PZ's IN FORCE**

At each task briefing PZ's will be published as in force or not in force for competition purposes in that flight. This does not necessarily describe their operational activity or status for other aviation purposes.

### **7.5 PZ INFRINGEMENT**

A competitor violating a PZ in force will be penalized by up to 1000 competition points, proportionally to the offense. See COH for official guidance on calculation of PZ infringement penalty violations.

### **7.6 MAPS**

A competitor is required to carry a competition map, paper or digital, in the basket. All published PZ's, whether in force for the task, and all out-of-bounds areas shall be clearly and accurately marked on the map. An adequate map of aeronautical restrictions must be carried, unless these are also marked on the competition map. A competitor violating this rule will be penalized up to 250 competition points.

### **7.7 EARTH TO BE FLAT**

For scoring purposes, the earth is flat, and calculations based on the competition map will be taken as accurate.

### **7.8 MAP COORDINATES**

To identify a point on the competition map, the coordinates must be written in eight-digit format (first four digits west/east and the second four digits south/north - Easting then Northing) or one of the formats as defined in Section II. For goal declaration of pre-defined goals, the complete goal number of the published list may be used. Penalty for inappropriate but unambiguous declarations is 100 task points.

### **7.9 DEGREE REFERENCE**

Unless otherwise stated, directions are expressed in degrees referenced to the grid system printed on the competition map.

## **CHAPTER 8 – PROGRAM, BRIEFINGS**

### **8.1 TASK PROGRAM**

The Event will consist of a series of tasks. The number and frequency of the tasks and rest periods are at the discretion of the Director. At the first task briefing on the day before the last planned flying day, the Director shall publish the remaining flying program.

### **8.2 VALID TASK**

- 8.2.1 A valid task is defined as one in which all entered competitors were given a fair opportunity to make a valid take-off, unless they had withdrawn or had been disqualified.
- 8.2.2 The Director has the authority to cancel a task(s) for safety reasons at any time before the official status task scores are published.
- 8.2.3 Tasks are not valid if less than 50% of the competitors take off.

### **8.3 TASK SELECTION**

The Director shall select tasks from those described in Chapter 15. Particular tasks may be set more than once or not at all.

### **8.4 MULTIPLE TASKS**

- 8.4.1 The Director may set more than one task to be performed on one flight. The tasks will be scored separately, with a winning score of 1000 points (or best positional score per 14.6.2) before penalties for each task. The combination of tasks should aim at the possibility of winning each task independently.
- 8.4.2 Unless otherwise specified, tasks in a multiple task flight shall be flown in the order indicated in the Task Data, penalty up to 1000 task points in each task.
- 8.4.3 When markers are used, dropping the marker(s) of a task inside the set MMA indicates the completion of that task and the start of the following task, if applicable. Ground contact penalties of Rule 11.5 within an MMA will be assessed to the task of the MMA.
- 8.4.4 Competitors missing the MMA or choosing not to drop their marker(s) or when scoring by track points is indicated, are considered flying in the follow-on task if they cross the boundary line (area, grid line, arc, etc.) or boundary time of the follow-on task.
- 8.4.5 NOT USED
- 8.4.6 Penalties related to the take-off will normally be applied in the first task. Penalties related to the landing will normally be applied in the last task. Other penalties should be applied in the task in which they were incurred unless this is impossible, in which case they will be divided equally over more than one or all tasks.
- 8.4.7 Marker order: Unless track points are used, the Task Data shall specify for each task the marker(s) and/or electronic marks to be used. If no competitive advantage is gained, the penalty for releasing the wrong marker or dropping the wrong electronic mark is 25 task points per task. If more than the allowed number of physical markers are released in a task, the competitor will be scored by track point. If an electronic mark is dropped more than once, the first (1<sup>st</sup>) electronic mark in time will be scored (for use with BFA Declarations App).

### **8.5 MODIFICATION OF RULES**

- 8.5.1 No further modification, after approval by the BFA/HACD Board, shall be permitted during the Event unless approved by the Jury President. No such rule addition or modification shall be retroactive.
- 8.5.2 The task rules of Section I, II, and III, Chapter 15 are defined as variable rules and changes to those may be made without authorization.
- 8.5.3 Variations to task rules shall be provided individually to each competitor in writing.

### **8.6 GENERAL BRIEFING**

A General Briefing on the rules, regulations and all major aspects of the Event will be held before the start of the Event. Attendance at the General Briefing is compulsory for all entrants and Officials. The official competitors list, compiled from the roll call of the entrants taken at the General Briefing, shall be published as soon as practical after the General Briefing, but before the first task briefing. Where a justifiable reason exists, a late entry may be accepted by the Director in consultation with the Jury President, but before the publication of the first scores.

## **8.7 TASK BRIEFING**

8.7.1 Task briefings will be called by the Director at times published on the Official Notice Board. Alternative methods may be used as announced in the General Briefing. At the briefing the following information will be given verbally, by written circular, or by posted notices:

- a) Meteorological information
- b) Air traffic and safety information (if any)
- c) Task Data

8.7.2 Where written information is supplied, adequate study time should be allowed before the briefing proceeds (as specified in the COH).

## **8.8 TASK DATA**

8.8.1 At task briefings the Task Data, preferably in writing, shall be given to competitors. The Task Data sheets (TDS) will contain flight data related to all tasks and individual Task Data.

8.8.2 Flight data:

- a) Date
- b) Official sunrise/sunset
- c) PZs in force
- d) Launch area
- e) Minimum distance from ILP to all goals/targets set by director (if applicable)
- f) Launch period
- g) Provisional time and place of next briefing
- h) Solo flight (if directed)
- i) Search period

8.8.3 Individual Task Data:

- a) Marker(s) color to be used (if used)
- b) Task/Marker order (if other than normal)
- c) Dropping method (if gravity drop directed)
- d) Marker Measuring Area (MMA)
- e) Scoring period, scoring area, and/or scoring airspace (if set)
- f) Task Data as per task rule

## **8.9 SUPPLEMENTARY BRIEFING**

If it should be necessary to publish additional or revised information to competitors at the common launch area, a pink flag will be raised at the signals point. The competitor should attend in person or send a responsible crew member to the signals point. The information will be given verbally and a written copy may be displayed. All competitors will be deemed to have proper notice of the information. Alternatively, an official may circulate a written notice to each balloon and obtain the signature of the competitor or crew member. Supplemental information may also be disseminated electronically via text messaging or special apps.

## **8.10 ENTRY FOR TASKS**

A competitor shall enter a task by answering his name or competition number at roll call at the task briefing. Alternative methods of checking the competitor's attendance may be used.

## **8.11 LATE ENTRY**

8.11.1 A competitor may make a late entry at the signals point with a penalty of 50 task points up to five minutes before the start of the launch period, or 100 task points thereafter. Officials will not be available to give a personal briefing except for Air Traffic, safety matters, and PZ's.

8.11.2 In tasks where competitors select their own launch areas, late entries shall be made by contacting an official and making arrangements on where to be briefed and receive a task sheet, GPS-logger, weather sheet and markers.

## **8.12 OFFICIAL TIME**

The official time is GPS time corrected for the local time offset.

## **CHAPTER 9 - LAUNCH PROCEDURES**

### **9. 1 COMMON LAUNCH AREA(S) (CLA) (II. 4)**

- 9. 1.1 One or more areas defined by the Organizer and used when the task requires all pilots to launch from a common area. A competitor taking off outside the prescribed common launch area (CLA) will not achieve a result for any of the tasks of that flight. Once his balloon is inflated a competitor may not move his balloon on the CLA except for safety reasons and only after approval from a responsible official.
- 9. 1.2 The Common Launch Point (CLP) is a point in or near the launch area, physically marked on the ground before the beginning of the Event, from which all angles and distances are measured, irrespective of the take-off points of individual balloons. (II. 5)

### **9. 2 INDIVIDUAL LAUNCH AREAS (ILA)**

- 9. 2.1 Individual launch areas are selected by the competitors. The boundary of the Launch Area is a circle of 100-meter radius from the position of the basket at the start of hot inflation.
- 9. 2.2 Competitors must ensure permission has been obtained from the landowner or occupants before driving onto, or launching from, any land which is enclosed or cultivated, or apparently private, or used for agricultural purposes. Penalty for infringement is up to 250 task points.
- 9. 2.3 In tasks where competitors select an individual launch area, the Individual Launch Point (ILP) is the position of the basket at take-off. Unless otherwise stated in the TDS only one take-off is permitted.
- 9. 2.4 In tasks where multiple take-offs are allowed, unless the balloon is deflated, the landing position of the discontinued flight is considered the ILP for the next take-off.
- 9. 2.5 Individual launch areas shall not be selected outside the contest area. Penalty: no result in the first task of that flight.
- 9. 2.6 A balloon inflated in an individual launch area shall not be moved and take-off outside of that launch area unless it is deflated, moved to another launch area and re-inflated. Penalty: no result in the first task of that flight.

### **9. 3 LAUNCH PROCEDURES (II.6)**

- 9. 3.1 The launch director may allocate to each competitor a space in which to prepare and inflate his balloon. He has the authority to regulate the operation of all balloons and vehicles in the launch area. Penalty is up to 200 task points.
- 9. 3.2 Quick-release tie-offs must be used for all balloons inflating in a common launch area and are recommended in individual launch areas.

### **9. 4 VEHICLES**

- 9. 4.1 Not more than one vehicle per balloon may be present in the common launch area during the launch period. Penalty: 100 task points.
- 9. 4.2 Vehicles must be driven at suitably reduced speeds within the launch area. The Safety Officer and the Launch Directors may bar from the area any vehicle that is driven inconsiderately.
- 9. 4.3 No vehicle may enter the common launch area after the advance yellow warning flag has been raised except by permission of a Launch Director or other official. Penalty: 100 task points.

### **9. 5 COLD INFLATION**

Burners may be briefly tested, and cold air may be induced into the envelopes for rigging and inspection, but before permission for hot inflation has been given, there must be no hot inflation, no use of powered fans, and no part of the envelope fabric may be more than two meters off the ground. Fans may be tested or used before the launch period until a flag of any color has been raised. This rule does not apply to ILA.

### **9. 6 SIGNALS POINT**

One or more points at the launch area where flag signals may be displayed and competitor's task declarations, late entries and supplementary briefings take place. Competitors are responsible for keeping observation on the signals point, and its obscuration shall not be grounds for complaint.

## **9.7 LAUNCH SIGNALS**

9.7.1 Colored flags shall have the following meanings when displayed at the signals point:

RED	No inflation or take-off permitted. Previous permission to take-off cancelled.
GREEN	General permission to all balloons to begin hot inflation.
BLUE	Permission to 'blue' wave (odd numbered balloons) to begin hot inflation.
WHITE	Permission to 'white' wave (even numbered balloons) to begin hot inflation.
YELLOW	Five-minute warning.
PINK	Supplementary or amended briefing information available at signals point.
BLACK	Task cancelled.
VIOLET	(Reserve) Meaning as notified at task briefing for a particular task.

9.7.2 An audible signal may be given to draw attention to changes of flag signals.

## **9.8 PUBLIC-ADDRESS**

Unless the Director has specified at the task briefing that the public-address system will be used, any information given over the public-address system is of no effect for competition purposes.

## **9.9 LAUNCH PERIOD**

Take-off may not be made before or after the launch period. Any take-off made outside the launch period, except under rule 9.12, will be subject to a penalty of 100 task points per minute or partial minute early or late. The yellow warning flag will be raised five or more minutes before the end of the launch period (for launches from a CLA)

## **9.10 OBSTRUCTION**

Once his balloon is fully inflated a competitor may not unnecessarily remain in position where his balloon obstructs another.

## **9.11 ADEQUATE TIME**

A competitor who has been given permission to begin hot inflation 20 or more minutes before the end of the announced launch period is deemed to have adequate time, even if the launch period is curtailed for any reason.

## **9.12 EXTENSION OF TIME**

A competitor may request an extension of time from the Launch Director. The Launch Director may grant an extension if he is satisfied that the competitor was delayed by the action of officials or other competitors, or by causes outside his control (equipment malfunction excluded).

## **9.13 LAUNCHING ORDER**

Balloons may be allotted an order of priority for inflation, which will be rotated from one task to the next. Competitors may commence hot inflation according to the flag signal is hoisted or when given individual permission by the Launch Director.

## **9.14 LAUNCH DIRECTORS**

9.14.1 Launch directors are officials designated by the Director to regulate the operation of all balloons and vehicles in the launch area and to assist in launching of balloons from CLAs.

9.14.2 The Director can make the use of launch directors compulsory for all competitors or optional.

## **9.15 PROCEDURES WHEN LAUNCH DIRECTORS ARE COMPULSORY**

9.15.1 When a competitor is completely ready for take-off, and has positive buoyancy, he should wave a white flag to indicate his readiness to the launch director. When the launch director has acknowledged this signal, the competitor should leave the flag displayed on the edge of the basket and await further instructions while maintaining his readiness to take off. The launch director will, as far as possible, launch balloons in the order of signaling their readiness. Competitors should equip themselves with a suitable white flag about 50 cm square (handkerchief) for this purpose.

9.15.2 To avoid congestion, extension of time will not be granted when competitors wave their white flag within the last ten minutes of the launch period.

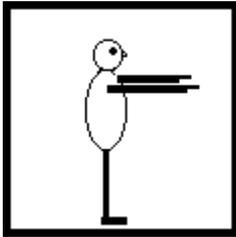
9.15.3 The launch director will give each competitor permission to take-off according to the signals as published. The competitor may then take-off at will, subject to any instructions from the launch director at the time.



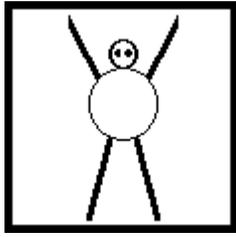
I acknowledge your white flag.



Stay on ground; follow instruction of my right hand.



I'm going to clear you for take-off.



Clear for take-off



Cancel all previous instructions. Wait.

9.15.4 This permission does not relieve the competitor of complete responsibility for his take-off, including adequate lift to clear obstacles and other balloons, and to continue safely in flight. A competitor taking off without permission, whether due to loss of control or any other reason, may be penalized up to 500 competition points

9.15.5 If the balloon does not take off within 30 seconds, permission to take off may be cancelled by the launch director.

**9.16 PROCEDURES WHEN LAUNCH DIRECTORS ARE OPTIONAL**

When a competitor is completely ready for take-off, he should have an experienced crew member advise him when the airspace above and upwind is clear for launch. Alternatively, he may ask an available launch director or official to clear him for launch.

**9.17 LOSS OF CONTROL**

A competitor losing control of his balloon shall deflate immediately or take other appropriate action.

**9.18 TAKE-OFF (T/O)**

The point and/or time at which an aerostat first becomes airborne.

An aerostat is airborne when its envelope, gondola, crew and all substantial parts of its equipment and payload have no contact with the ground or water surface or anything attached or resting on the ground or water.

**9.19 VALID TAKE-OFF**

A balloon is considered to have taken off and to be flying the task(s) if a mark has been achieved or if the balloon passes over the boundary of any launch area.

**9.20 ABORTED TAKE-OFF**

9.20.1 A competitor may abort his take-off for safety reasons but must avoid the obstruction of other balloons. He may attempt further take-off(s) inside the launch period.

9.20.2 At a Common Launch Area he must inflate in his originally allocated space, except by permission of the Launch Director, and must again obtain permission to take-off.

**9.21 CLEARING LAUNCH AREA**

Within three minutes of his basket first leaving the ground, a competitor shall have passed over the boundary of the launch area or shall have climbed to 500 feet AGL, regardless of the end of the launch period. He shall not re-enter the launch area below 500 ft. AGL before the end of the launch period or until after all balloons have taken off, whichever is earlier.

## **CHAPTER 10 - FLIGHT RULES**

### **10.1 MIDAIR COLLISION**

- 10.1.1 When two balloons are converging in flight, both competitors are responsible to avoid collision. The competitor of the higher balloon shall give way and shall climb if necessary.
- 10.1.2 Competitors shall not initiate or maintain a vertical speed exceeding 1.5 m/s (300 ft./min) unless they are certain that no balloon is in their flight path.
- 10.1.3 Competitors causing a collision will be penalized by up to 1000 competition points.

A repeated offense will be penalized at least 1000 competition points and the competitor may be grounded for the next flight(s).

- 10.1.4 Envelope to envelope contact in approximate level flight will generally not be penalized.

### **10.2 DANGEROUS FLYING**

Dangerous flying (e.g. any flying creating an unnecessary risk to other balloons or people on the ground), not necessarily causing a collision, will be penalized up to disqualification from the event.

### **10.3 CLEARING GOAL/TARGET AREA**

A competitor who has dropped his marker shall clear the vicinity of the goal/target as quickly as reasonably possible.

### **10.4 DROPPING OBJECTS**

No objects may be dropped from the balloon except for official markers, or small pieces of paper or similar lightweight materials for navigational purposes.

### **10.5 BEHAVIOR**

Competitors are required to fly with proper consideration for persons and livestock on the ground and to follow good landowner relations etiquette and the code of conduct. Inconsiderate behavior by competitors or crew members, or endangering the public during flight, may be penalized up to 1000 competition points.

### **10.6 LIVESTOCK AND CROP (II. 7)**

Balloons must not fly closer than defined in Section II from livestock or buildings containing livestock, and competitors and crews must not damage crops unless given permission by the landowner or person responsible for the crop. Penalty up to 1000 competition points.

### **10.7 LANDOWNER**

In these rules, the term "Landowner" means the person who is responsible for any crop or livestock on the land, not necessarily the legal owner of the land itself.

### **10.8 COLLISION**

A competitor whose balloon is in collision with power or telephone lines or their supports at any time between inflation and completion of final landing will be penalized up to 500 competition points. Collisions may additionally be penalized under the rule for dangerous flying.

### **10.9 PERSONS ON BOARD (Section II.16)**

- 10.9.1 Competitors may carry other crew during a flight, and they may perform any duties he wishes to assign to them, except to act as pilot-in-command and as specified in Section II.16.
- 10.9.2 The total number of persons on board (including competitor) shall not exceed two (2).
- 10.9.3 The Event is operating under a standard FAA Waiver and flight crew are required to sign 'designated flight crew' forms.
- 10.9.4 Competitors may be required to perform a flight "solo" as specified in the Task Data. Penalty: the competitor will not receive a result.

### **10.10 GROUND CREW**

Each competitor will ensure that he has sufficient crew to operate his balloon and retrieve vehicle. He will ensure that all those involved with his balloon are adequately briefed on safety.

### **10.11 DRIVING (II. 8)**

Vehicles must be driven safely during the retrieve and comply with local driving laws. Penalty up to 500 competition points.

**10.12 DISEMBARKATION**

No person may enter or leave the basket between take-off and completion of the final task of that flight.

**10.13 ASSISTANCE**

The use of handling lines or any handling assistance from persons on the ground is forbidden during flight.

**10.14 AIR LAW (II. 9)**

10.14.1 Infringements of air law included in the FARs which do not contravene the rules of the Event or provide competitive advantage will not be penalized by the Director except in cases of damage, disturbance, or reasonable complaint from persons not connected with the Event.

10.14.2 Infringement of the FAA Event Waiver will be penalized up to 1000 competition points and if repeated violations occur may result in disqualification from the event.

**10.15 RECALL PROCEDURE (II.10)**

The organizer's recall procedure is defined in Section II.10.

## **CHAPTER 11 - LANDINGS**

### **11.1 LANDINGS**

A competitor may land at will when he has completed all tasks during flight.

### **11.2 LANDING AT WILL**

11.2.1 When a competitor makes a landing at will, the landing point is the final resting place of the basket after landing.

11.2.2 All pilots must have landed by sunset as published or announced at the task briefing. Penalty for infringement of this rule is 100 task points per minute or part thereof.

11.2.3 Unless otherwise stated in the Task Data, a landing at will is not permitted within a MMA where a target is displayed, or if no MMA is set, within 200 meters of any goal/target set by the Director or selected by the competitor or any physical mark of the competitor or any physical mark of the competitor (for penalty see distance infringements).

### **11.3 CONTEST LANDING**

11.3.1 In tasks where a competitor is required to produce a physical mark but does not do so, his landing will be deemed a contest landing. The scoring position for a contest landing is the final resting place of the basket. Published scoring periods and search periods apply.

11.3.2 No handling assistance may be received from anyone on the ground and no one of the flight crew may leave the basket before the basket has reached its final resting place.

11.3.3 Any retained marker must be handed over to an official at the earliest opportunity.

11.3.4 Unless otherwise stated in the Task Data, a contest landing is not permitted within 200 meters of any goal/target set by the Director or selected by the competitor or within a MMA (Rule 13.3.4 distance infringements).

### **11.4 GROUND CONTACT 1**

After passing over the boundary of any launch area, no part of the balloon or anything attached to it may make solid contact with the ground or water surface or anything resting on or attached to the ground, until the last task has been completed. Penalty for each contact is 200 task points.

- Note 1: A contact is solid if it is prolonged or results in a change of motion of the basket or the envelope.
- Note 2: Incidental contact with grass or leaves will not be penalized.

### **11.5 GROUND CONTACT 2**

No part of the balloon or anything attached to it may contact the ground or water surface or anything resting on or attached to the ground (marker excepted) within the Marker Measuring Area or within 200 meters of any goal/target set by the Director or selected by a competitor. Penalty for each contact is 100 task points if light and 500 task points if solid. The penalty is applied to the task of the goal/target involved.

- Note 1: A contact is solid if prolonged or results in a change of motion of the basket or the envelope.
- Note 2: Incidental contact with grass or leaves will not be penalized.
- Note 3: Competitors will not be penalized under both rules for any single contact. If a landing occurs within an MMA, the competitor will be penalized under Rule 13.3.4 distance infringements.

### **11.6 PERMISSION TO RETRIEVE**

Competitors must ensure that permission has been obtained from the landowner or occupier before driving onto any land that is enclosed or cultivated or apparently private or used for agricultural purpose. Penalty is up to 250 task points.

## **CHAPTER 12 – GOAL, TARGET, MARKER, TRACK POINT**

### **12.1 GOAL (II.11)**

- 12.1.1 A place defined by grid reference on the competition map, set by the Director or chosen by the competitor.
- 12.1.2 A competitor arriving at an expected goal that was rebuilt or moved should aim for the closest replaced goal within 100 meters. If the goal has ceased to exist and no similar goal is seen within 100 meters, the competitor should aim for the coordinates. These coordinates will also be taken to calculate/measure any other related tasks of that flight.
- 12.1.3 The Director may provide a list with predetermined goals. The goals are numbered followed by the map coordinates.

### **12.2 GOAL SELECTED BY A COMPETITOR (II.12)**

- 12.2.1 Unless otherwise allowed in the Task Data, e.g. any point on the competition map, a surface-based goal selected by a competitor shall appear from the map to be easily accessible to vehicles on the ground and precisely identifiable for measurement and the goal shall be the intersection of two roads or a road and a railroad. According to the Task Data, competitors may be required to choose one or more goals from the list of predetermined goals or as listed in the TDS.
- 12.2.2 Measurements will be made from the center of the intersection, defined goal, marked point or coordinates as specified in the competition details and TDS (see Section II.11).
- 12.2.3 The types of roads allowed for goal declarations by competitors are published in Section II.12
- 12.2.4 In the case of goals allowed by the TDS that do not require predetermined goals or the use of intersections, competitors must identify their goal by methods enumerated in Section II.26.

### **12.3 DECLARATIONS BY COMPETITORS (II.12)**

- 12.3.1 A competitor shall identify his goal by map coordinates. For goal declaration of pre-defined goals, the goal number may be used.
- 12.3.2 A goal declaration violating the restrictions of Section II will be considered invalid and the competitor will not achieve a result. In case the competitor is allowed to declare more than one goal in a task and one or more goals are invalid, the competitor will be scored to the nearest valid goal if any.
- 12.3.3 In tasks where a competitor is required to declare his goal(s) or other declarations according to the TDS, he shall do so in writing and his declaration shall be deposited before declaration time at the place of the declaration box specified in the briefing data, clearly identified with his name and/or competition number. If more goals or declarations are made than permitted, the competitor will be scored to the least advantageous valid goal.

A competitor who wishes to revise his declaration may deposit a further declaration, within the declaration time, if it is clearly marked to distinguish it from any previous declaration(s).

The timekeeper/official will close the declaration box precisely at the declaration time, and will accept late goal declarations, writing the time in minutes and seconds on each.

- 12.3.4 Penalty for late declarations that must be made a specified time before take-off is 50 task points per minute or part minute late.

If the competitor fails to declare before take-off, he will not achieve a result.

- 12.3.5 If a declaration may be made in flight - before a defined time, point or boundary - and the competitor fails to do so, he will not achieve a result.

Goals not meeting distance limitations will be scored according to the rule on distance infringements.

### **12.4 (NOT USED)**

### **12.5 TARGET**

A prominent cross intended to be displayed within 100 meters of a goal or at a specified coordinate. Where a target is displayed, any measurements are made from the target, not from the goal. A competitor reaching a goal where an expected target is not displayed should aim for the goal coordinate.

## **12.6 MARKER**

Markers (as specified in the COH) supplied by the organizer will be used for scoring purposes to create a physical mark. Competitors are responsible for collecting the necessary marker(s) before the task. The marker must not be modified in any way. Penalty for modified or unauthorized markers is up to 250 task points.

## **12.7 (NOT USED)**

## **12.8 MARKER RELEASE**

The marker may be thrown by hand unless a Gravity Marker Drop is specified on the TDS.

## **12.9 GRAVITY MARKER DROP (GMD)**

12.9.1 In a Gravity Marker Drop task, no horizontal motion shall be applied to the marker in relation to its release, and gravity shall be the only means for the marker to drop. The person releasing the marker must hold the unrolled marker by the tail. The person's hand holding the tail of the marker shall not be outside the basket.

Penalty for violating this rule, unless otherwise stated on the TDS:

- Minor infringements with no competitive advantage: 50 task points
- Infringements with competitive advantage: 50 meters will be added to the competitor's result in the least advantageous direction.

12.9.2 Unless otherwise stated on the TDS, a marker thrown into a marker measuring area (MMA) or scoring area under limited scoring will be regarded as a valid result and the penalty will be applied.

## **12.10 FREE MARKER DROP (FMD)**

The marker must be completely unrolled prior to coming to rest on the ground. No mechanism may be used to propel the marker. The person releasing the marker must stand on the floor of the basket. Penalty for minor infringement with no competitive advantage: 50 task points; otherwise 250 task points for a competitive advantage.

## **12.11 MARK (12.20 and 12.21)**

12.11.1 A physical mark is the point on the ground vertically below the weighted part of the official marker where it comes to rest after falling from the balloon. If the marker is displaced after coming to rest or disappears subsequently from view (e.g. beneath water level), the earliest position an official or observer has seen the marker in ground contact, or having come to rest, will be taken with the accuracy available. Same applies if the marker is carried on top of another balloon, automobile, train, etc.

12.11.2 NOT USED

## **12.12 (NOT USED)**

## **12.13 INTERFERENCE WITH MARKER**

No person other than an official may touch or interfere with a marker on the ground. Any marker moved must be replaced to its original position based on the best evidence available.

## **12.14 SEARCH PERIOD**

12.14.1 Competitors have a specified period from the actual start of the launch period in which to find their marker(s).

12.14.2.1 The choice between searching for the marker and first recovering the competitor rests with the competitor or his crew.

## **12.15 LOST MARKERS**

12.15.1 A marker, dropped within the Marker Measuring Area, is considered lost if it is not found and in possession of Officials within the time limit specified. Competitors may inquire with the measuring officials at a target or goal if they have doubt that their marker will be found. Competitors will not be allowed to search for markers in the MMA without the presence of an official. If a marker dropped, or allegedly dropped, in the MMA is considered lost the competitor will be scored by track point as if the competitor had missed the MMA.

12.15.2 If the marker has earlier been seen by an official on the ground and is estimated within the Marker Measuring Area, the official's evidence, together with the logger's data, will be used to determine the competitor's result based on the least advantageous interpretation of evidence available.

12.15.3 Competitors are required to pay for any marker damaged, not reusable, lost or not brought back in time. Charges for lost or damaged markers are stipulated in Section II. Competitors are responsible for returning markers dropped outside the MMA.

**12.16 (NOT USED)**

**12.17 SCORING PERIOD (SCP)**

12.17.1 When defined by the Director in the task briefing, the scoring period is the time limits, within which a goal/target or scoring area is valid.

12.17.2 A competitor will only score if his marker, or any subsequent marker, is found or seen falling to the ground (except as noted in Rule 15.9) by officials or he has landed, within the set time limit (except as noted in Rule 15.9). Otherwise, he will be scored by track point.

12.17.3 A competitor who does not achieve a scoring position within the scoring period (if set) or within the search period (if no scoring period is set) will not achieve a result.

12.17.4 Under all circumstances scoring within the last fifteen (15) minutes prior to official sunset is prohibited.

**12.18 SCORING AREA (SCA)**

12.18.1 An area or areas, defined by the Director in the Task Data within which a valid mark or track point can be achieved. Unless otherwise stated in the Task Data, the boundary will be the inner hard-surface or gravel edge of a road, the inner bank of a river, or other defined marked area. Any part of the weighted bag that is on the inner edge will be considered valid.

12.18.2 A competitor who does not achieve a scoring position inside the scoring area(s) will not achieve a result.

**12.19 SCORING AIR SPACE**

An air space or spaces, defined by the Director in the Task Data within which a valid track point can be achieved. Unless otherwise stated in the Task Data, the boundary will be defined by coordinate lines. The altitude limits are defined by GPS altitude as recorded by the GPS-logger and under Rule II.22. Any recorded track point exactly on the line or altitude limit will be considered valid.

**12.20 MARKER MEASURING AREA (MMA)**

12.20.1 The MMA is an area defined by a radius around a goal/target or an otherwise clearly defined area within which results will be achieved by markers.

12.20.2 The MMA will be provided for each task in which markers are used.

12.20.3 Competitors not achieving a physical mark within the MMA will be scored by track point.

**12.21 VALID MARK**

12.21.1 A physical mark is considered valid if it is within the MMA or scoring area and within the scoring period if set.

12.21.2 An electronic mark is considered valid if the recorded track point meets all scoring criteria defined in the TDS.

12.21.3 A valid physical mark shall have precedence over any track point or electronic mark.

12.21.4 Measurements will be made to the closest point of the weighted bag portion of the marker.

**12.22 TRACK POINT**

12.22.1 A track point is defined by recorded date / time, coordinates, and altitude of a point of the track of a GPS-logger.

12.22.2 When goals or targets are used, results based on track points will be the 2D or 3D-distance from the goal/target to the track or electronic mark. Shortest distance is best.

12.22.3 A competitor's result based on a track point cannot be better than the worst possible result in the MMA.

12.22.4 In tasks without goals or targets, the horizontal distance (2D-distance) between points will be used to calculate results.

**12.23 VALID TRACK POINT**

A valid track point is a track point meeting all scoring criteria set in the Task Data such as scoring area, and/or scoring airspace, and/or scoring period.

**12.24 TARGET OFFICIALS**

Target Officials are assigned to establish the competitor's results and possible rule violations. In general, in all tasks having set goals or targets, the Target Officials will measure the results by tape or surveyor equipment within the Marker Measuring Area (MMA) or Scoring Area.

## **CHAPTER 13 - PENALTIES**

### **13.1 SERIOUS INFRINGEMENTS, UNSPORTING BEHAVIOR**

- 13.1.1 Serious infringements include dangerous or hazardous actions or repetitions of lesser infringements and will be penalized according to the appropriate rule.
- 13.1.2 Dishonesty or unsporting behavior, including deliberate attempts to deceive or mislead officials, willful interference with other competitors, falsification of documents, use of forbidden equipment or prohibited drugs, or repeated serious infringements of rules should, as a guide, result in disqualification from the event.

### **13.2 UNSPECIFIED PENALTIES**

- 13.2.1 A competitor infringing any rule for which a penalty is not specified in the rules may have a penalty (distance, angle, or time) applied to his result or a deduction of points.
- 13.2.2 Where safety is not an issue, and no competitive advantage has been gained, he will normally receive a warning in the first instance.
- 13.2.3 A competitor may not be penalized for infringing a rule for which the penalty is not specified, if he has already been penalized under the same rule in a previous task but has not been informed of the fact before the beginning of the task in question, except for follow-on tasks in the same flight.

### **13.3 DISTANCE INFRINGEMENTS (also see II.12)**

- 13.3.1 Where the individual launch point, a goal selected by a competitor, a mark, or a final landing infringes a distance limit at any time, the competitor will be penalized.
- 13.3.2 If a launch point infringes a natural set boundary, the infringement is the distance to the closest correct point.
- 13.3.3 Competitors landing in an MMA will not achieve a result in the related task. If no MMA is set, landing within 200 meters of goals/targets or any physical mark of the competitor will be penalized up to 200 task points.
- 13.3.4 Where the penalty relates to landing too close to a goal/target or mark, the competitor will only receive a penalty for the greater infringement.
- 13.3.5 The penalty will be waived if the competitor can show that he was unable to comply because of safety reasons, or because of light winds (unable to clear area within 10 minutes).
- 13.3.6 For competitors taking off too close to a goal or target, declaring a goal outside the limits specified in the TDS or otherwise abusing the set distance limits of a task, the penalty will be 2 task points per 0.1% infringement. Above 25% infringement the competitor will be scored in group B.

For Elbow, Angle and Land Run Tasks, the percent infringements will be the sum of the percent infringements of each 'leg', unless otherwise defined in the TDS. A competitor penalized under this rule cannot achieve a score less than Group B because of the distance infringement penalty.

### **13.4 PENALTY POINTS**

- 13.4.1 There are two kinds of point penalties: task points and competition points.
- 13.4.2 Task point penalties are subtracted from a competitor's task score, which cannot be reduced below zero (0). Competition point penalties are also subtracted from a competitor's task score and may result in a negative score, which will be set against his total score in the Event.

### **13.5 PROOF OF RULES VIOLATION**

The production and demonstration of evidence for any alleged infringement by a competitor always rests entirely with the event officials. Rules shall not be written to oblige the competitor to prove his compliance with the rules or his innocence in case of alleged infringement.

### **13.6 FARs**

It is the responsibility of competitors to follow the requirements of the Federal Aviation Regulations and any waiver for the event. In all cases involving air traffic rules and air safety, the Director or his delegated official will act in consultation with the FAA Monitor.

## CHAPTER 14 - SCORING

### 14.1 RESULT

A competitor's result is the achieved outcome in a task including result penalties. Results should be expressed in meters, square kilometers, feet, minutes, with an accuracy of two decimal places. Degrees will be measured to an accuracy of one or two decimal places depending on the distance defined in the TDS. See COH 6.9.2 for guidance.

### 14.2 SCORE

A competitor's score in the Event is the total of all the points achieved in a task when applying the appropriate formulas. Task or competition penalties may be applied according to the rules.

### 14.3 PUBLICATION OF SCORES

14.3.1 The scores of each task shall be published with the minimum of delay on the Official Notice Board.

14.3.2 Task score sheets shall include:

- a) Event name, task date and time, task sequence number, task name and rules reference.
- b) For each competitor, his: rank, competition number and name, result, score, and, if applicable, penalties followed by the kind of penalty, a rule reference, and a brief description.
- c) The fixed data used in the Scoring Formulas (P, A, M, RM, W, and SM) and the checksum
- d) Publication date and time and version number
- e) If more than one score sheet version is published for a task, the changes from the previous issue shall be marked and the different versions shall be numbered in sequence.

14.3.3 Task score sheets will have the following status:

**PROVISIONAL RESULTS** Provisional result scores are published for information only and have no validity for timing purposes. They serve the purposes of allowing competitors check their pending result before penalty or result mistakes (if any) are placed into the scoring software for assignment of points

**OFFICIAL FINAL** Time periods for complaints/protests start from the publication of official scores. Official scores automatically become final after all relevant time periods have expired. The Jury may require a correction of the results and/or penalties prior to approving and signing the final scores.

14.3.4 Total score sheets shall include:

- a) Event name
- b) For each competitor, his: rank, competition number and name, total score and task scores
- c) Task checksums

14.3.5 Total scores are for information only and will not carry a signature.

### 14.4 RANKING ORDER

14.4.1 Competitors will be ranked in order of performance according to the rules for each task, after adjustment for any penalties. Competitors will be ranked in the following groups for each task:

GROUP A Competitors whose results have been measured or have been assessed under the rule for lost markers.

GROUP B Competitors flying the task, but not achieving a result. They will be scored equally using Formula Three, or share equally the remaining points using Formula Two, whichever is the higher.

GROUP C Competitors not making a valid launch or disqualified in the event, all scoring zero points.

14.4.2 After calculating the points score with the applicable formula, any penalty points will be subtracted to obtain the competitors final task score. The competitor's final task scores will be ranked again before being published.

## 14.5 POINTS FORMULA - PROPORTIONAL SCORING

14.5.1 Each competitor will be awarded a number of points according to his performance. The formula to be used will depend on the competitor's place in the ranking order for the task.

14.5.2 The best result can be awarded up to 1000 points before deduction of any penalty points.

14.5.3 The superior half of the results will receive a score between 1000 and approximately 500 points, in proportion to their performance using Formula One.

14.5.4 The inferior half of the results will receive a score between approximately 500 points and 0 points according to their relative position in the ranking order using Formula Two.

14.5.5 FORMULA ONE: (superior half of performances):

$$1000 - [(1000 - SM) / (RM - W)] \times (R - W)$$

FORMULA TWO: (inferior half of performances):

$$1000 \times (P + 1 - L) / P$$

FORMULA THREE: (competitors in Group B):

$$1000 \times [(P + 1 - A) / P] - 200$$

- P = number of competitors entered in the competition.  
M = P/2 (rounded to the next higher number) (Median Rank)  
R = competitor's result (meters, etc.) if in the superior half.  
RM = result achieved by the median ranking competitor.  
L = competitor's ranking position if in the inferior portion.  
W = the winning result of the task.  
A = number of competitors in Group A  
SM = rounded points score of the median ranking competitor, calculated under formula two.

14.5.6 If fewer than half of the competitors achieve a result in the task, the following changes in definition will apply:

- RM = lowest ranking result in Group A.  
SM = rounded score of the lowest ranking competitor in Group A, calculated under Formula Two.  
M = lowest ranking competitor in Group A.

14.5.7 In tasks where no competitor achieves a result, all competitors in Group B will receive a score of 500 points before any penalty points.

14.5.8 Points scores will be rounded to the nearest whole number.

## 14.6 NOT USED

## 14.7 PRECISION

14.7.1 Results will be established with the highest precision available.

14.7.2 The following standards will be used:

Result Method	Precision	Example (m)
Tape / surveying	Centimeters	1.23 m
Map coordinate	Decameters	1250.00 m
Track point - GPS	Meters	1231.00 m

Any combination of result methods will revert to the lowest precision method used.

If positions can be determined relative to a common coordinate with a more accurate method, the precision of that method will be used.

Interpolation between track points may be used to establish the scoring position.

14. 7.3 Results are considered tied when the outcome is the same after applying the above-mentioned principles. Competitors whose results are tied will share equally between them the points, which they would have received had they not been so tied.

14. 7.4 The altitude used in the Event is specified in Section II.22.

**14. 8 MEASURING (for events without logger scoring)**

14. 8.1 Measurements by the measuring officials take precedence.

14. 8.2 Within 200 meters, tape/surveying, should be used. If there is reason to believe that a GPS measurement may be more accurate or safer for officials/crew than the tape/surveying, a GPS measurement shall be recorded.

14. 8.3 All marks outside 200 meters shall be recorded by GPS. In case of a goal selected by the competitor, the coordinates of the goal shall also be recorded by GPS.

**14.9 TOTAL SCORES**

14.9.1 The Total Score is the addition of the individual task scores.

14.9.2 Where two competitors have equal total scores in an Event, the competitor with the smaller difference between their best and worst scores will be ranked higher.

## **CHAPTER 15 - TASKS**

### **15.1 PILOT DECLARED GOAL (PDG)**

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

15.1.2 Task Data:

- a) Method of declaration (also see Section II.12 and 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(s) from any subsequent goals or targets, if applicable

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

### **15.2 JUDGE DECLARED GOAL (JDG)**

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

15.2.2 Task Data:

- a) Position of set goal/target

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

### **15.3 HESITATION WALTZ (HWZ)**

15.3.1 Competitors will attempt to achieve a mark or valid track point close to one of several set goals.

15.3.2 Task Data:

- a) Position of various set goals/targets

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

### **15.4 FLY IN (FIN)**

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

15.4.2 Task Data:

- a) Position of set goal/target

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

15.4.4 Only one scoring attempt (marker drop) may be made.

### **15.5 FLY ON (FON)**

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

15.5.2 Task Data:

- a) Method of declaration (also see Section II.12 and 12.3)
- b) Number of goals permitted
- c) Goals available for declaration
- d) Declaration point requirement
- e) Minimum and maximum distance between declaration point and declared goal(s)
- f) Minimum and maximum distances of declared goal(s) from any other targets noted on TDS.

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

15.5.4 Rules governing the declaration methods are in Section II.12 and shall be detailed on the TDS.

## **15.6 HARE AND HOUNDS (HNH)**

15.6.1 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.

15.6.2 Task Data:

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

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

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

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

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

## **15.7 WATERSHIP DOWN (WSD)**

15.7.1 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.

15.7.2 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

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

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

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

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

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

## **15.8 GORDON BENNETT MEMORIAL (GBM)**

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

15.8.2 Task Data:

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

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

## **15.9 CALCULATED RATE OF APPROACH TASK (CRT)**

15.9.1 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.

15.9.2 Task Data:

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

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

15.9.4 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.

**15.10 RACE TO AN AREA (RTA)**

15.10.1 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).

15.10.2 Task Data:

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

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

15.10.4 Timing ends at the moment the marker is released, falling, or on the ground as seen by the officials, the electronic mark is dropped (Flytec loggers only) or at the moment of the first valid track point in the scoring area if track points only were set.

**15.11 ELBOW (ELB)**

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

15.11.2 Task Data: (If no markers are used)

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

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

**15.12 LAND RUN (LRN)**

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

15.12.2 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)

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

**15.13 MINIMUM DISTANCE (MDT)**

15.13.1 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.

15.13.2 Task Data:

- a) Arrangements of timing
- b) Minimum set time or distance
- c) Reference point

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

15.13.4 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

**15.14 SHORTEST FLIGHT (SFL)**

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

15.14.2 Task Data:

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

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

### **15.15 MINIMUM DISTANCE DOUBLE DROP (MDD)**

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

15.15.2 Task Data:

- a) Description of the scoring areas

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

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

### **15.16 MAXIMUM DISTANCE TIME (XDT)**

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

15.16.2 Task Data:

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

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

### **15.17 MAXIMUM DISTANCE (XDI)**

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

15.17.2 Task Data:

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

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

### **15.18 MAXIMUM DISTANCE DOUBLE DROP (XDD)**

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

15.18.2 Task Data:

- a) Description of Scoring Area(s)

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

### **15.19 ANGLE TASK (ANG)**

15.19.1 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".

15.19.2 Task Data:

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

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

### **15.20 3-D SHAPE TASK (3DT) (for events with logger scoring)**

15.20.1 Competitors will attempt to achieve the greatest distance within a set airspace.

15.20.2 Task Data:

- a) Description of set airspace(s)

15.20.3 The result is the accumulated horizontal distance between valid track points in the set airspace(s). Greatest result is best.

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

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

15.21.2 Task Data:

- a) Boundaries of scoring area

15.20.4 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.

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

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

15.22.2 Task Data:

- a) Boundaries of scoring area

15.20.5 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.

## APPENDICES

### APPENDIX A - CODE OF CONDUCT

All **OFFICIALS, PILOTS/COMPETITORS AND CREWS** are required to comply with the Code of Conduct. In addition to the excerpts from the Competition Rules shown below, competitors and crews are expected to conduct themselves in a manner that promotes the sport of hot air ballooning.

#### 2.12 CONDUCT

Entrants and competitors and their crews are required to behave in a sportsmanlike manner, follow the Code of Conduct, and comply with the directions of Event Officials. Inconsiderate behavior, profanity, or unsportsmanlike conduct, or any violation of the FAA Waiver will be penalized up to 1000 competition points by the Event Director and may be grounds for expulsion of a pilot.

#### 10.5 BEHAVIOR

Competitors are required to fly with proper consideration for fellow competitors, persons and livestock on the ground and to follow good landowner relations etiquette and the code of conduct. Inconsiderate behavior by competitors or crew members, or endangering the public during flight, may be penalized up to 1000 competition points.

#### 13.1 SERIOUS INFRINGEMENTS, UNSPORTING BEHAVIOR

Cheating or unsporting behavior, including deliberate attempts to deceive or mislead officials, willful interference with other competitors, falsification of documents, use of forbidden equipment or prohibited drugs, or repeated serious infringements of rules will be penalized up to 1000 competition points and may be disqualified from the task or Event. Pilots/crews found to misappropriate propane during the event would be penalized and/or disqualified.

### EVENT ETIQUETTE

Pilots registering for and attending events are expected to be present for the General Briefing and attend all flight briefings. In circumstances requiring a participating pilot to miss a briefing or flight, the pilot is responsible to notify the organizer and Event Director of their situation. Violations of normally accepted conduct will result in a warning and possible expulsion from the Event.

Penalty for violation, regardless of NEL standing, may include DQ from State, Regional and National and International competition for the next year.

All pilots and their crews will conduct themselves in such ways as their actions will be a credit to and in the best interests of hot air ballooning and the Event, its officials and staff, and its Event sponsors.

All participants will treat fellow pilots, crews, officials, sponsors, etc. with respect at all times.

Pilots will be responsible for operating within both the letter and spirit of the Event Competition Rules.

## **APPENDIX B - LANDOWNER RELATIONS**

All competitors and crews are reminded of the importance of Landowner Relations and that the countryside is the farmer's livelihood. It is important to remember that good rural relations are essential to our sport. Grass is a crop, cattle, pigs and horses are easily frightened and farmers depend on electric power for many purposes not the least of which is for their milking plant.

Please remember these guidelines when dealing with our landowners:

1. Always be **COURTEOUS** and respectful of the fact that you are trespassing unless invited onto the property.
2. Select a landing site that will cause the least possible inconvenience to the farmer. Select a field **FREE OF CROPS** and be particularly **CAREFUL OF ANIMALS** on the approach and on possible overshoot.
3. After landing, **DISCOURAGE ONLOOKERS** from coming onto the land unless the owner is there, and they have his permission.
4. **ALWAYS** obtain permission **BEFORE** you bring the retrieve vehicle into the field.
5. Ensure farm **FENCES** are **NOT DAMAGED** and gates are left as you find them.
6. **DO NOT** let anyone **LITTER** the property.
7. If damage is caused, or the farmer wishes to take further action, exchange names and addresses and report the facts to race officials upon your return.
8. Remember not to use the "ran out of fuel" excuse if you do damage. It is a violation of the FARs to run out of fuel.

## APPENDIX C – PROPANE REFUELING

### When refueling, please follow these guidelines:

1. Have your refueling adapters hooked up prior to entering the fueling area. After completing refueling, leave the area to complete the covering of your balloon and any other housekeeping that may be required.
2. No more than two from each balloon crew may be in the refueling station area. Persons involved in refueling must be experienced in refueling propane tanks.
3. Pilots are responsible for proper filling of tanks.
4. Disarm strikers and remove from basket.
5. Leave cell phones in the chase vehicle.
6. No nylon jackets in the refueling area.
7. Only tanks used in flight will be refueled.
8. Pilot lights in campers, chase commanders, etc., must be turned off.
9. All vehicles must be turned off.
10. No persons are permitted inside the balloon basket or vehicle passenger compartment during refueling.
11. No refueling of tanks in enclosed trailers or vans.
12. Absolutely no smoking in the area.

### Emergency Procedures.

In the event of a fire during refueling. It is recommended to leave your keys in your vehicle prior to refueling -- in the ignition or on the dash.

Fire is not involving your balloon system:

1. Stop all refueling operations.
2. Shut all valves, including liquid and vapor.
3. Leave your equipment connected.
4. Confirm with propane operator the "Emergency Shut Off" on propane vehicle is activated.
5. Leave the refueling area and report to check-in location.
6. Do Not attempt to remove your vehicle from the refueling area.
7. Stand by for further instruction from Public Safety Officials.

Fire involving your balloon systems:

1. Shut all valves, including liquid and vapor, if conditions will allow.
2. Notify propane operator of fire.
3. Confirm with propane operator the "Emergency Shut Off" on propane vehicle is activated.
4. Report all injuries to Public Safety Officials if not injuries are not noticeable.

## APPENDIX D – ALLOWABLE DAMAGE on Balloon Envelopes and Baskets

The following is provided only for general guidance to event officials to quickly evaluate the effect of envelope and/or basket damage during a balloon event. In all cases, the manufacturer's manuals for continued airworthiness for each particular aerostat MUST be consulted when evaluating any situation of 'allowable damage. Refer to Rule 3.5 for further guidance.

<b>Manufacturer</b>	<b>Allowable Damage Limitations</b>
ADAMS	No allowable damage is listed.
AEROSTAR	For fabric with less than 100 hours and less than 3 years old: <ul style="list-style-type: none"><li>• Above 1ST horizontal band below the equator: 1 inch.</li><li>• Below 1ST horizontal band and above 6 feet above mouth: 2 inches.</li><li>• Envelope within 6 feet of mouth: 18 inches</li></ul> For fabric with greater than 100 hours and greater than 3 years old: <ul style="list-style-type: none"><li>• Above 1ST horizontal band below the equator: 3/8 inch.</li><li>• Below 1ST horizontal band and above 6 feet above mouth: 1 inch.</li><li>• Envelope within 6 feet of mouth: 12 inches</li></ul> Envelope skirt or Dipper: no more than 10%.
AVIAN	1/2" long tear, hole or wear area from equator to top of envelope; 1-1/2" long tear, hole or wear area from 10 feet above mouth to equator; 12" long tear, hole or wear area from mouth to 10 feet up envelope No load tape may be damaged
FIREFLY AND GALAXY	Fabric: holes, tears or areas of damaged fabric of 1 cm (3/8 inch) in maximum dimensions are acceptable above the equator and of 2.5 cm (1 inch) below the equator and a maximum of 30.5 cm (12 inches) in bottom panel no.1 if: <ol style="list-style-type: none"><li>1. They are more than 30.5 cm (12 inches) apart and more than 30.5 cm (12 inches) away from a seam.</li><li>2. There are no more than four in any one panel.</li></ol> Basket wicker: Holes up to 25cm (10 inches) may be considered acceptable providing the damage does not endanger passenger safety or fuel system components.
CAMERON	In lowest 10', holes need not be repaired provided load tapes are undamaged; above 10' ≤3/4" in longest dimension. Basket damage – horizontal <3/4" in floor; <1/4" of thickness gone
LINDSTRAND BALLOONS	No damage to envelope fabric which is above the lower two nylon panels may be larger than 3/4" in any one direction. No damage is permissible to load tapes, control lines or parachute valve rigging. No damage to the basket that exceeds more than five strands of a basket wire broken, more than six broken consecutive strands in the woven floor is permissible. No damage to a plywood floor that is more than 10", visible from both sides, or the floor has separated from the lower stainless-steel frame is permissible.
HEAD	Maximum damage near mouth 12"; more than 72" from bottom of envelope, but below equator, not greater than 1"; above equator not greater than 1/2". No damage listed for basket.
PICCARD	The manual only lists damage above the lower horizontal load tape. This damage must be less than 1". No damage limitations are given below the lower horizontal load tape. No broken wicker allowed on basket which might affect passenger safety.
THUNDER & COLT	No damage to envelope may be greater than 1". Damage to basket is acceptable if "hand or foot size."
NATIONAL	No damage limitations listed.

KUBICEK

Any damage of the envelope fabric below the third horizontal load tape is permitted. The maximum size of an unrepaired tear or damage to the envelope fabric above the third horizontal load tape is 5mm (0.2 in).

ULTRAMAGIC

Damage to the fabric in the lower third of the envelope must be limited to an area affecting no more than 3 panels, though they may be completely damaged, and panels may be adjacent. Holes no greater than 10mm in diameter (e.g. cigarette burn) are permitted elsewhere on the envelope. These holes must not be within 25mm of a load tape, with no more than 5 in any one panel and no closer than 50 mm to each other. No more than 3 panels in the upper two-thirds of the envelope may have these small holes. No damage is permitted to any part of the burner, fuel or load suspension system.

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