



Plano Balloon Festival Operator Training

**Recovery and Field Operations
2011**

Introduction

- **Why are we here?**
 - We provide safety communications for the festival
 - Our primary task is to track the balloons in all phases of their flight operations
- **We do it because....**
 - Provides a safety valve for the event
 - Provides good PR for area clubs and for Ham Radio
 - Acts as a training exercise to support EmComm
 - It's Fun!
- **Remember, our actions have a huge impact on how people view us!**

Introduction

- **Balloon Tracking**

- **Field Net**

- **Occurs on the Launch Field**
 - **Volunteers on foot**
 - **Track balloons that fly and/or glow**
 - **Track balloon Chase vehicles on/off the launch field**

- **Recovery Net**

- **Occurs in the surrounding area**
 - **Volunteers in vehicles (and on foot)**
 - **Track balloons down and deflated and recovered with Chase crew**

Event Dates

- **Friday, Sept. 16**
- **Saturday, Sept. 17**
- **Sunday, Sept. 18**

**Morning and
afternoon flights
scheduled**



Photo: Chadwick Steizi- KD5UMO

Daily Schedule

Mornings

- 05:30 – Field Shuttle Begins
- 05:30 – Field net control shift starts
- 06:00 – APRS on Field
- 06:15 – Field personnel arrive at the operations tent
- 06:15 – Dawn patrol operators meet
- 06:30 – Recovery crews meet at the staging area
- Pre-Launch Glow “Wake Up Plano”**
- 07:00 – [Balloon Launch](#) (may be delayed)
- 07:30 – ½ Marathon Starts (not supported)
- 08:00 – Balloon Fly-In Competition
- 10:30 – Exercise Complete

Afternoon

- Talk-in Net Control Only (at Field)
 - 11:00 – Start shift
 - 16:00 – End shift

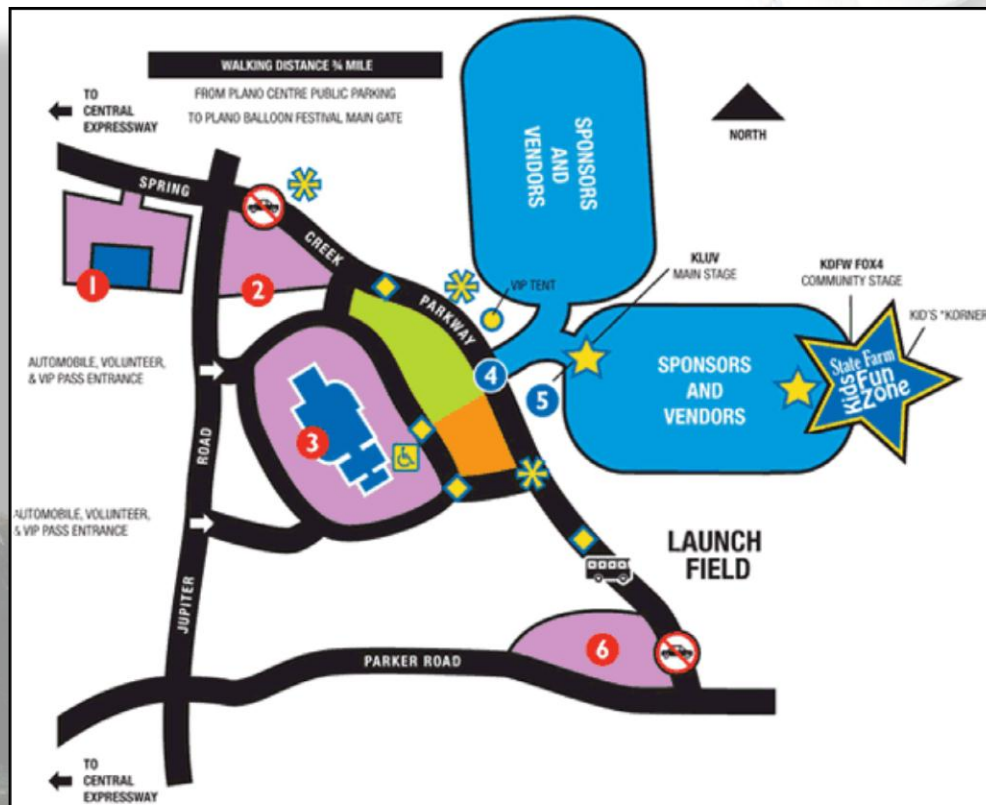
Evenings

- 16:00 – Field Net Control shift starts
- 16:15 – Field personnel arrive at Ops tent
- 17:00 – Balloon Crews arrive on field
APRS on Field
- 17:30 – Recovery Crews meet at staging area
- 17:30 – Parachute Exhibition
- 18:00 – [Balloon Launch](#) (may be delayed)
- 20:00 – Balloon Glow
- 21:00 – Fireworks (Saturday)
- 22:30 – Event Closes (19:00 Sunday)

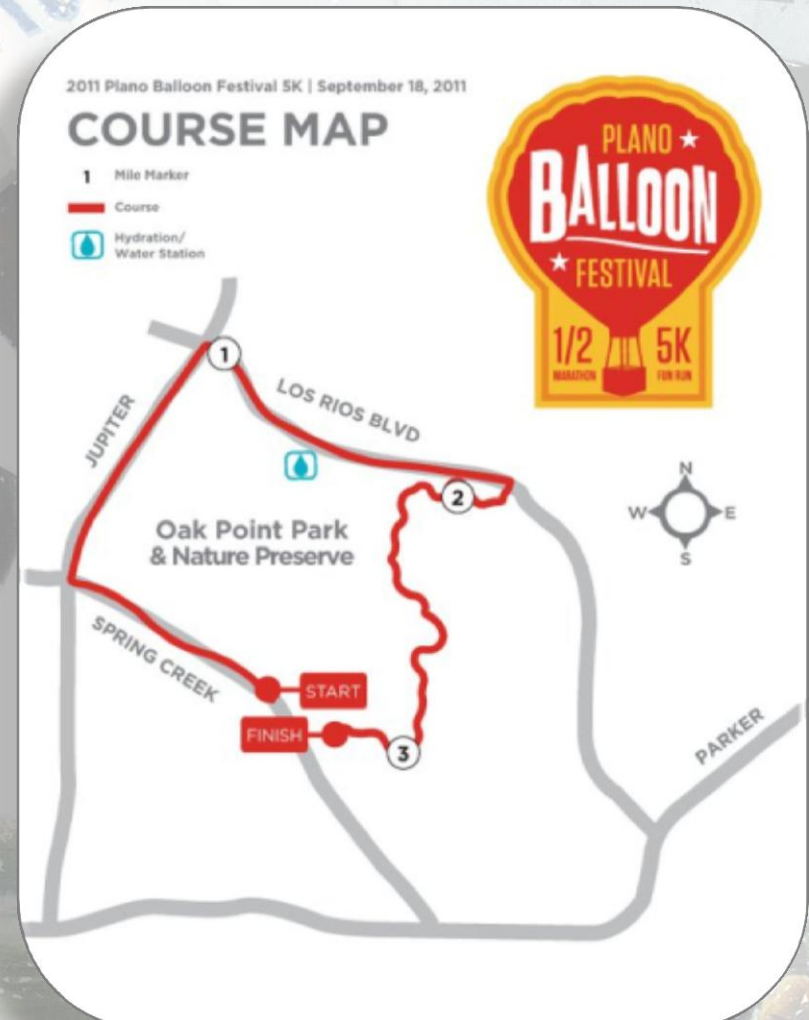
- **Briefings will be held before each scheduled launch.**
- **Please be punctual and attentive.**

Festival Site

- Admission
 - \$5.00 General
 - \$4.00 (9am-3pm)
 - \$1.00 off (over 65)
 - Kids free (under 36")



Added Twist – Sunday AM



General Information

- **Minors**
 - Must have a signed waiver by a parent/guardian
- **Volunteer Information Sheet**
 - Important details
 - Questions answered
- **General information and sign up:**
 - <http://www.w5adc.com/PBF/PBF.html/>
- **Organizational Yahoo Group at:**
 - http://groups.yahoo.com/group/ntx_pse_pbf/

General Information

- **Be self sufficient (CRF)**
 - Water/refreshments
 - Medications
 - Money for vendors/pit stops
 - Appropriate attire
 - Chilly and damp in the mornings
 - Hot and sunny in the afternoons
 - Comfortable shoes, no sandals
 - Conveniences
 - Bug spray
 - Sunglasses
 - Hat
 - Sunscreen

T-Shirts

- **Festival Provides t-shirts for marking volunteers**
 - More volunteers than shirts
 - Committed hams for the weekend – First cut
 - Remainder to the hams with the most hours
- **Volunteers need to be signed up to work**
 - Ride-alongs do not receive shirts
 - Your entire family does not qualify for a shirt
 - You may not get one – Sorry!
 - You must make an effort to sign in and out, otherwise your time does not count

CRF – Communicator Resource Function

AMATEUR RADIO PUBLIC SERVICE COMMUNICATIONS

A Resource Guide for ARES, RACES, EmCom or Public Service Communication activities

Amateur Radio Resource Typing enables amateur radio communicators, emergency managers, staging managers, EmCom Leaders and event coordinators to identify request and receive consistent, standardized and coordinated amateur radio resources needed during an emergency, disaster or event. It identifies, categorizes and labels communications functions amateur radio operators typically perform at events and incidents for easy reference. By using these Communications Resource Functions presented here, mutual aid resources are easier to request and supply and event or incident assignments can be quickly made by staging managers or event coordinators.

This Guide is an aid in creating a resource standard for all Amateur Radio mutual aid and EmCom groups.

Basic Communications Resource Functions¹

Common Items for all Communications Resource Functions (CRF)

- Copy of amateur radio license, badge/ID, and photo drivers license
- Writing material; pen, pencil, writing pad, and message forms
- Transceiver operating instructions or summary guide
- Portable power source meeting equipment needs for a minimum of 12 hours of typical operation (Medium to Long Assignments may require additional power sources)
- Vehicle power port and dip lead power adapters, equipment fuses and power cords
- All equipment ARES/RACES standardized (Powerpole™, PL-259, 1/8" speaker plug)
- Mission suitable personal support gear (Refer to local group standard kit lists; adjust for duration)
- Duct tape, miscellaneous adapters and comfort items (food, water, optional chair and table)

♦ A Type I CRF includes recommended items | A Type II CRF is without recommended items ♦

Communications Resource Function S - (Shadow | VHF/UHF)

CRF-S identifies the function and basic amateur radio equipment for operation of as a "foot mobile" station while shadowing an event or incident official.

- Hand-held, 2 Meter (2M/70Cm Recommended) FM synthesized transceiver with programmable CTCSS, 2.5 watts minimum output
- Earphone or Headset attachment (VOX disabled)
- Adapter cable/bracket or magnetic mount antenna for temporary vehicle duty with shadow

Communications Resource Function B - (Base | VHF/UHF)

CRF-B identifies the function and basic amateur radio equipment for portable operation as Base, Rest Stop, Shelter, Net Control, etc. or fixed location station.

- 2 Meter (2M/70Cm Recommended) Transceiver with programmable CTCSS, 25 watts minimum output (HT+amplifier combination is a viable alternative)
- Gain antenna (dual band recommended) with mast and support, 25' minimum coax cable with PL259 connectors, PL258 coupler (Additional 25' or longer RG58 or better coax cable recommended)
- External speaker with 1/8" phone plug and/or earphones or headset attachment with VOX disabled

Communications Resource Function M - (Mobile | VHF/UHF)

CRF-M identifies the function and basic amateur radio equipment for mobile operation as a station in a moving vehicle such as a car, truck, van, aircraft, boat or bus.

- 2 Meter (2M/70Cm Recommended) Transceiver with programmable CTCSS, 25 watts minimum output (HT+amplifier combination is a viable alternative)
- Gain antenna (dual band recommended) with magnetic base with 15' of coax cable with PL259 connector
- External speaker with 1/8" phone plug and/or earphones or headset attachment with VOX disabled

Communications Resource Function H - (Long-Range Communications | HF)²

CRF-H identifies the function and basic amateur radio equipment for portable or mobile operation of a station for long and intermediate range communications. General Class or higher License required.

Sub Functions: **Hp**, Field Portable; **Hm**, Mobile (suitable for in vehicle use)

- All modes HF SSB DC Transceiver with auto-tuner, 100 Watts output minimum
- HF Antenna(s), mast and support accessories, 50' coax cable with PL259 connectors. (Additional 50' - 100' RG58 or better coax cable recommended) PL258 coupler with each coax cable. Common bands are 20, 40, 60, 80 & 160 meters. 40M, 60M & 80M preferred for EmCom support. NVIS capability recommended for tactical situations
- Earphones and/or headset, miscellaneous coax and power adapters

Notes: 1. To request only a CRF operator, use Communications Resource Operator (CRO) with appropriate designation
2. For MARS operations, equipment/capabilities must meet unit's operational requirements
3. For permanently installed CRF equipment, the modifier 'F' for fixed is added to CRF (i.e., CRF-M/F)

♦ This guide details radio equipment and does not include general personal support gear or 24/72 hour kit items ♦

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AMATEUR RADIO PUBLIC SERVICE COMMUNICATIONS

A Resource Guide for ARES, RACES, EmCom or Public Service Communication activities

Specialty Communications Resource Functions¹

♦ A Type I CRF includes recommended items | A Type II CRF is without recommended items ♦

Communications Resource Function DA - (Data - APRS Operations | VHF/UHF)

CRF-DA identifies the function and basic amateur radio equipment for operation as an Automatic Positioning/Packet Reporting System providing the event or incident official(s) with a "view" of resource positions in real time along with short messaging capability.

- CRF-B resource equipment
- Terminal Node Controller (TNC) with necessary cables, accessories, and documentation
- Computer (laptop or other) suitable for portable operations and running mission applicable amateur radio software - (Printer, printing supplies and AC adapter recommended)
- Software: APRS with digipeating capability

Communications Resource Function DT - (Data - Resource Tracking | VHF/UHF)

CRF-DT identifies amateur radio equipment used for tracking of a mobile asset or other resource as requested by event or incident officials for display with CRF-DA equipment.

- Self contained pre-packaged portable equipment unit containing transceiver, antenna, Global Positioning Satellite (GPS) unit, APRS tracking encoder, power unit, and necessary external cabling

Communications Resource Function DM - (Tactical Data Messaging | VHF/UHF)

CRF-DM identifies the function and basic amateur radio equipment for operation as a "last mile" data messaging system providing event or incident officials with traceable messaging and/or "radio Email" capability.

Sub Functions: **DMw**, Winlink capable; **DMP** packet capable

- CRF-B resource equipment
- Terminal Node Controller (TNC) with necessary cables, accessories, and documentation
- Computer (laptop or other) suitable for portable operations and running mission applicable amateur radio software - (Printer, printing supplies and AC adapter recommended)
- Software: Paclink, Airmail, compatible email and user group's standard Packet program(s)

Communications Resource Function DH - (Long-Range Data Messaging | HF)²

CRF-DH identifies the function and basic amateur radio equipment for portable operation as a long range data messaging system providing event or incident officials with traceable messaging and/or "radio Email" capability.

Sub Functions: **DHw**, Winlink capable; **DHR**, Winlink Routing (Unique hub/routing function)⁵

- CRF-Hp resource equipment (General Class License or higher required for operation)
 - Pactor I, II and/or III capable modem (Pactor III recommended) | WINMOR a viable alternative
 - Computer (laptop or other) with monitor suitable for portable operations capable of running mission applicable amateur radio software - (Printer, printing supplies and AC adapter recommended)
 - Software: Airmail, Paclink, RMS Packet, RMS Relay, RMS Express, Email, user group's specialty modes
 - Sound Card Interface and accessories required to support software based communications modes
 - CRF-DM resource equipment & Pactor III modem required for Sub Function **DHR**
- Note: If WINMOR used to facilitate CRF-DHw, a sound card interface is required.

Communications Resource Function DN - (Data Networking | UHF)

CRF-DN identifies basic equipment for a field deployable 802.nna resource providing a wireless node(s) in support of event or incident communications. Equipment should be capable of operating on +12VDC.

- Self contained "802.11 repeater" unit functioning as a Bridge/Router/Access Point including antenna
- Minimum of 50' Cat 5 cable and POE interface
- Wired/wireless access point unit.
- Associated networking support equipment (Mast, aiming device, CAT5 cable, jumpers, etc.)

Communications Resource Function AV - (Amateur TV | UHF)

CRF-AV - Portable amateur television (ATV) equipment for transmitting and receiving video information (TBD)

CRF Assignment Durations

- Short - Up to 12 hour duration (Shifts)
- Medium - 12 to 72 hour duration (Shifts)
- Long - 72 hour or greater duration (Typically an away assignment)

Notes: 4. D-Star digital transceivers when requested in a CRF shall have the modifier 'D' added to CRF
5. Special VHF data to/from HF data hubbing function requiring Pactor III

♦ This guide details radio equipment and does not include general personal support gear or 24/72 hour kit items ♦

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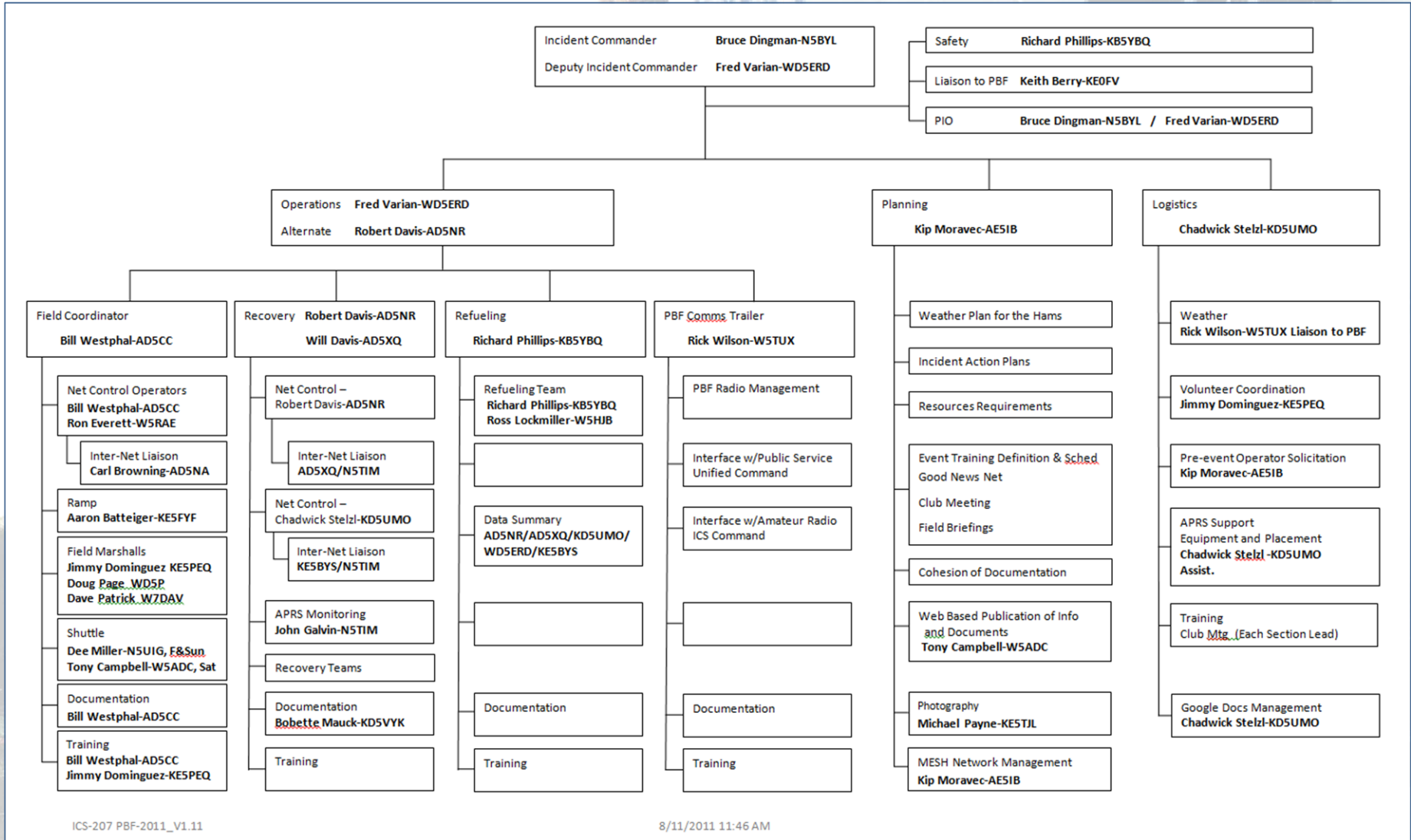
Operator Safety Policy

- **The safety of our operators is of utmost importance.**
- **If the Incident Commander or his Deputy becomes aware of a situation that could potentially threaten the safety of any Amateur related operation, they will exercise their authority to suspend a specific activity at a moments notice and direct Operators to take appropriate actions to insure their safety. The Incident Commander or his Deputy will notify the Festival Liaison that such action has or will be taking place.**

Situations

- **No Emergencies**
 - **We use the word “Situation”**
 - **Monitored by the public, news media and others**
 - **Remain calm**
 - **Think before you act or say**
 - **Notify the NCS you have a “Situation”**
 - **If it warrants a 911 call, notify NCS and do so**
 - **You may be asked to moved to another frequency or a cellular call**
 - **Provide as much information as possible and document**
- **Individually, we do not speak for festival or hams**
 - **The IC or PIO is our only voice**

Leadership



Definitions

- ***Field***
 - The Ham operations in the festival area and launch area
- ***Recovery***
 - Relative to the Ham operations during recovery
- ***Chase***
 - Relative to the Balloonist and their operations
- ***UP***
 - Balloon is off the ground and free of any ground support
- ***Down***
 - Balloon landed, envelope is deflated
- ***Situation***
 - Outside of normal operation, often safety related

A large hot air balloon launch field. In the foreground, a person wearing a high-visibility yellow safety vest and a grey jacket stands with their back to the camera, looking towards the balloons. To the left, a dark-colored SUV is parked on the grass. In the background, several hot air balloons are visible: a large one with vertical stripes of purple, orange, and red is the most prominent; another with a colorful patchwork pattern is to its left; and two smaller ones are further in the distance. The sky is overcast and grey.

Field Operations

- **Mission**
 - Provide Field Net Control with an accurate list of balloons launched from the Field and to help maintain a high level of safety on the launch field.

Field – Required Equipment

- **2m HT**
 - Preprogrammed frequencies
 - Headset
 - (Preferably no speaker mics)
 - Battery for all day operation
 - Small Flashlight
 - Safety Vest
 - Orange or Green
 - Limited amount for loan
- **Water resistant boots/Shoes**
- **Jacket/Raincoat/Hat**
- **CRF-S**



Photo: Chadwick Steizi- KDSUMO

Volunteer Field Shuttle

- **Field volunteers shuttled from off site**
 - Morning 6am to 11:30 am
 - Evening 4pm to 9pm
 - Not available outside these hours
- **Calling for Shuttle**
 - Field Ops/Talk-In 147.18 PARK
 - (Not during OPS)
 - Field Simplex 146.48 Simplex
- **Do not miss your shift**
 - Allow 20-30 minutes travel time
- **Parking and Festival Shuttle cost money**

Field – Volunteer Parking



Field Ops

- **Field Manager**
 - Oversees all Field operations, tracks metrics
- **Field Net Control**
 - Tracks balloons and crews in and off the Field
 - Collects launch status of balloons
- **Field Net Liaison**
 - Passes Field status to the Recovery Net
 - Tracks the status of balloons reported by the Recovery Net

Field Ops

- **Field Marshall**
 - Gives the Field Spotters their safety briefing and directs spotters on the Launch Field
- **Field Spotters**
 - Reports balloons when they lift off the Field. May be called upon to check the status of Chase vehicles
- **Ramp Spotter**
 - Reports balloon Chase vehicles on and off the Field
- **Volunteer Shuttle**
 - Gets Field Operators to and from Staging to Field

Flight Ops

- **Controlled by Flight Ops Staff**
 - Determines what kind of event will be held and watch current weather conditions determining if balloons can fly
 - Flight status marked by flag flown at Pilot briefing area
 - Green Field open for flights
 - Amber Balloons may inflate/fly with Launch Dir. approval
 - Red Closed to all flight operations
 - Pink Supplemental briefing at flight tower
 - Black Field is closed for flight
 - Launch Directors may vary as necessary

We do not notify the public of launch status!

Flight Ops

- **Balloons cannot launch until they have been given permission by one of the Field Launch Directors**
 - Clearly marked in an umpire/referee striped shirt
 - Monitor their activity
 - Clues to which balloon may fly next
 - Hams sometimes mistaken for “officials”

NO HAM CAN GIVE PERMISSION TO LAUNCH!

- **Verify a number banner is attached to each balloon basket and corresponding number is visible on the Chase vehicle**
 - If not, notify Launch Director

Field Spotter Procedures

- **Must sign in and off the Field**
 - Tracking to ensure volunteer safety
 - Most logged hours - first for shirts
- **Check in with Field Marshal at the Ops tent**
 - Safety briefing and flight information
 - Receive assignment
 - Acquire clipboard, pencil, balloon check, reference sheet
 - Acquire a safety vest if needed
 - Limited supply
 - Providing your own is highly encouraged
- **Calling “UP” correctly**
- **Do not leave the field until you are released**

Field Ops Voice Calls

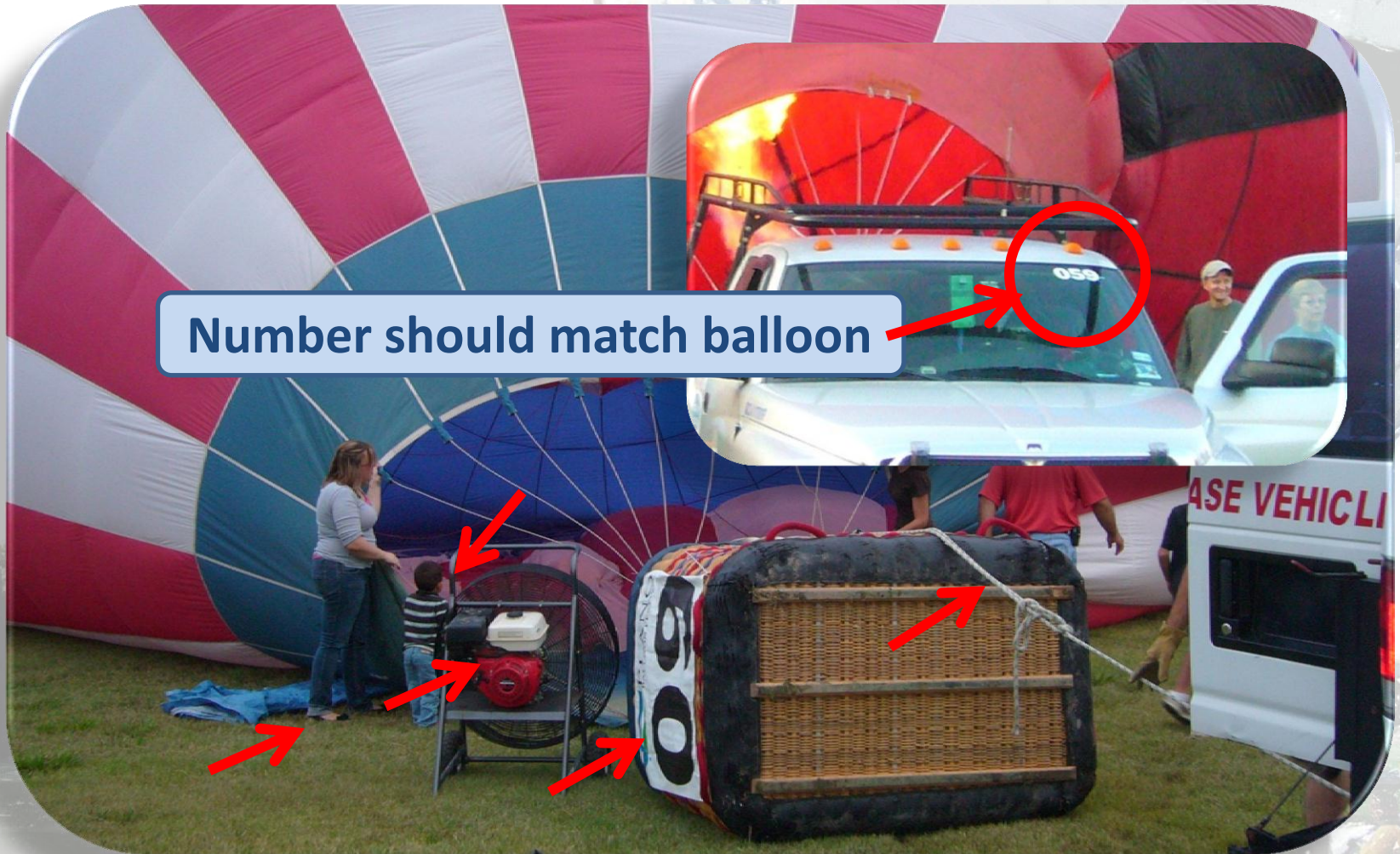
- **Voice calls are set up to minimize traffic**
- **Identifying**
 - During Ops, do not identify yourself when giving status
 - Net Control will do a “mass” call for identification
- **Status Calls**
 - Key up and use pro sign “UP”
 - Field Spotter “32 UP”
 - Ramp “12 ON” , “12 OFF”
 - Net Control will acknowledge
 - Repeats shortly after - “32 UP”
 - If not, repeat. Do not ask for confirmation.

Field Safety Guidelines

- **No Smoking on or near launch field**
 - Politely inform smoker
 - If noncompliant, tell Net Control and the nearest Flight Director. It is not your job to get in an argument.
- **No Casual bystanders allowed on launch field**
 - Crew members and media have passes
 - Kindly ask others to leave
- **Do Not walk on or over any part of the balloon**
- **Be alert to your surroundings**

If you hear an air horn blow, leave the field immediately!

The Good and the Bad



Number should match balloon

Photos: Chadwick Stelzl- KDSUMO

Field Recovery

- **Red-Lined Area**
 - **Outside**
 - Recovery's responsibility
 - **Inside**
 - Field's
- **Area can be expanded if coordinated**
- **Balloons down in Field**
 - **Field NCS Liaison relay to Recovery**



Relax!

- ... Launch field work is not a contest to see who can call in the most launched balloons. It is an exercise to see that all launched balloons are accurately accounted for.
- We are communicators and observers and should be transparent.
- Have fun!

Balloon Glows



Photo: Chadwick Stezli- KD5UMO

Field Review

- **Do**

- Check in/out of Net
- Alert Net Control of situations
 - Smoking
 - Fire
 - Crowd Issues
- Be calm
- Short communication
- Call for re-check on balloon “Up”
- Leave the Field if air horn blows
- Enjoy yourself

- **Do Not**

- Walk on or over balloon components
 - Tether can snap and cause injury
 - Envelope is fragile
- Get distracted
- Smoke on the field
- Pester balloon crews for giveaways
- Skip briefings
- Show up late



Recovery Operations

- **Mission**
 - Provide Recovery Net Control with an accurate list of balloons that have been recovered by their crew and to help maintain a high level of safety during the recovery operation

Recovery – Equipment

- **Required**

- **2m Mobile Radio**
 - **Preprogrammed**
 - **25w or more**
- **Area maps**
- **Leather gloves**
- **Safety vest**
 - **Orange or Green**
 - **Some may be available for loan**
- **Appropriate shoes (no flip-flops/sandals)**
- **Full tank of fuel**
- **Co-pilot**
- **CRF-M**



Photo: Chadwick Steizl - KD5UMO

Recovery – Equipment

- **Recommended**
 - HT
 - Food/snacks
 - Water
 - Medications
 - Flashlight
 - Bug spray
 - Binoculars
 - Cash
 - APRS
 - Some for loan



Photo: Chadwick Steizi- KD5UMO

Recovery Ops

- **Recovery Manager**
 - Oversees all Recovery Operations
 - Tracks metrics
- **Recovery Net Control**
 - Tracks the status of balloons
 - Balloons Up/Down, with crew
 - Balloons recovered
- **Recovery Net Liaison**
 - Monitors the status of balloons between the Nets
- **Recovery Marshal**
 - Directs Recovery teams as needed in the field of recovery

Recovery Ops

- **Recovery Teams**
 - Visually identifies the balloon status
 - Down, and with crew
 - Assists in recovery where necessary
 - Reports “situations”
 - Safety conscientious
- **APRS Liaison**
 - Installs tracking equipment
 - Monitors
 - Weather stations
 - Balloon tracks
 - Whereabouts of recovery personnel

Recovery Rules

- **Two person teams**
 - **Safety**
 - Cannot watch the sky and drive!
 - Traffic does not watch you! They watch balloons!
 - Copilot - 14yrs and older
- **Meet/sign in at staging**
- **Obey all traffic laws**
 - No special privileges!
- **No motorcycles**
 - Difficult to see
 - No protection
- **Flashing Lights**
 - Must be amber
 - No external strobes
 - Revolving beacons or directional lightbars only
 - Must be legal
 - Stopped or <10 mph
 - Failure to comply forfeits your involvement
- **Private property**
 - Stay out unless you have permission from owner
 - Notify Net Control

Net Control Wants To:

- **Know:**

- When a balloon is down
- Where balloon is located
- With Chase Crew?
- Any “Situation”
 - 911 if necessary
- If retrieval of balloon is obstructed
- Your position and status if asked
- Stepping away from your vehicle
 - When you will be back

- **Not Know:**

- Balloon is sitting down but not deflating
- You just turned a corner
- Emergency services are responding to a call down the road
- You need to go to the restroom

Listen. Listen. Listen.

Recovery Net Procedures

- All Recovery personnel meet at staging location
 - Wind dependent
 - Garden Ridge – Ave K and Spring Creek
 - PISD – Shiloh and 14th Street



Garden Ridge



PISD

Recovery Net Procedures

- **Recovery Nets**
 - **Condition 3 ARES Directed Net**
 - **Permission needed to speak to other Operators direct**
 - **Net Control is in charge**
 - **Provides assignment**
 - **Two Recovery Nets**
 - **May be in operation simultaneously**
 - **You may be asked to transfer to the other Net**
 - **Field Marshals**
 - **May help direct operations in the field**
 - **Do not clump together**
 - **Are all balloons covered? Listen and Log...**

Recovery Net Procedures

- **Not A Contest**
 - Be a gentleman (or lady)
 - Operator under a balloon; verify if they are assigned it.
Do not rob them, relay it is down and drive away
 - Listening and logging is the key
 - Ask Net Control if not sure
 - “Net Control, is 32 assigned?”
- **Malicious Interference**
 - Do not acknowledge it on the air
 - Ignore it and work through it
 - Net Control will advise how to proceed if necessary
- **Plan for delays**

Recovery Net Procedures

- A “Downed” Balloon
 - When the envelope is deflated and flat on the ground
 - Confirm that balloonists are in contact with their crew
 - Verify the number
 - Has someone already called it in?
 - Short list of numbers
 - Call NCS with more than one at a time



Photos: Chadwick Stelzl- KDSUMO



Recovery Net Procedures

- **Not “Down”**
 - Balloonist sometimes touch down and make adjustments or switch out crew
 - It is okay to ask the Pilot if they intend to continue flying
 - Is anyone else assigned this balloon?
 - Listen and logging...



Photo: Chadwick Steitzl- KD5UMO

Which Balloon Is Down?

Photo: Chadwick Steizl- KD5UMO



**Look for clues and never
assume...**

Photo: Chadwick Steizl- KD5UMO



Which Balloon Is Down?

Photo: Chadwick Steizl- KD5UMO



Not Down



Down

Photo: Chadwick Steizl- KD5UMO

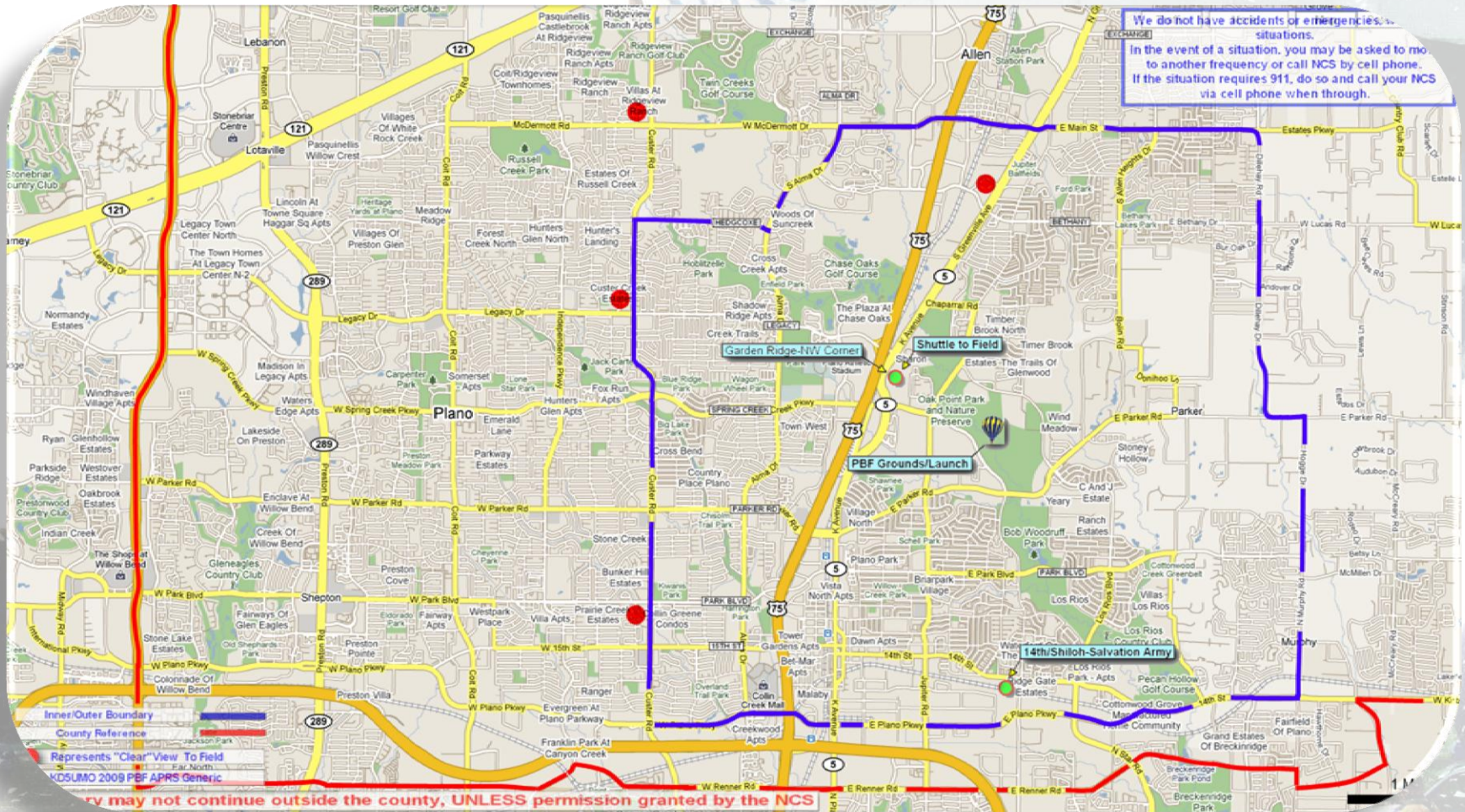
Which did you choose?...



Two-Zone Recovery

- **Based on geographical boundaries**
- **Two separate Nets are run concurrently**
 - **Advise Inner Net you are crossing into Outer Net**
 - **Wait for confirmation**
 - **Upon confirmation, check into Outer Net**
 - **Advise what balloon(s) you are assigned/tracking**
 - **Once your balloon is recovered, stand by for any additional assignment**
 - **If assignment is complete**
 - **Check out of Outer Net**
 - **Check back into Inner Net, await instruction**
- **Do not start your own Nets. ARES Condition 3**

Two-Zone Recovery



APRS

- **Used for Tracking**

- Recovery teams
- **Balloons**
 - Bearing/location
- **Use Call Sign SSID**
 - Ex: K5PRK-10
 - Do not use tactical calls

- **Paths and Rates**

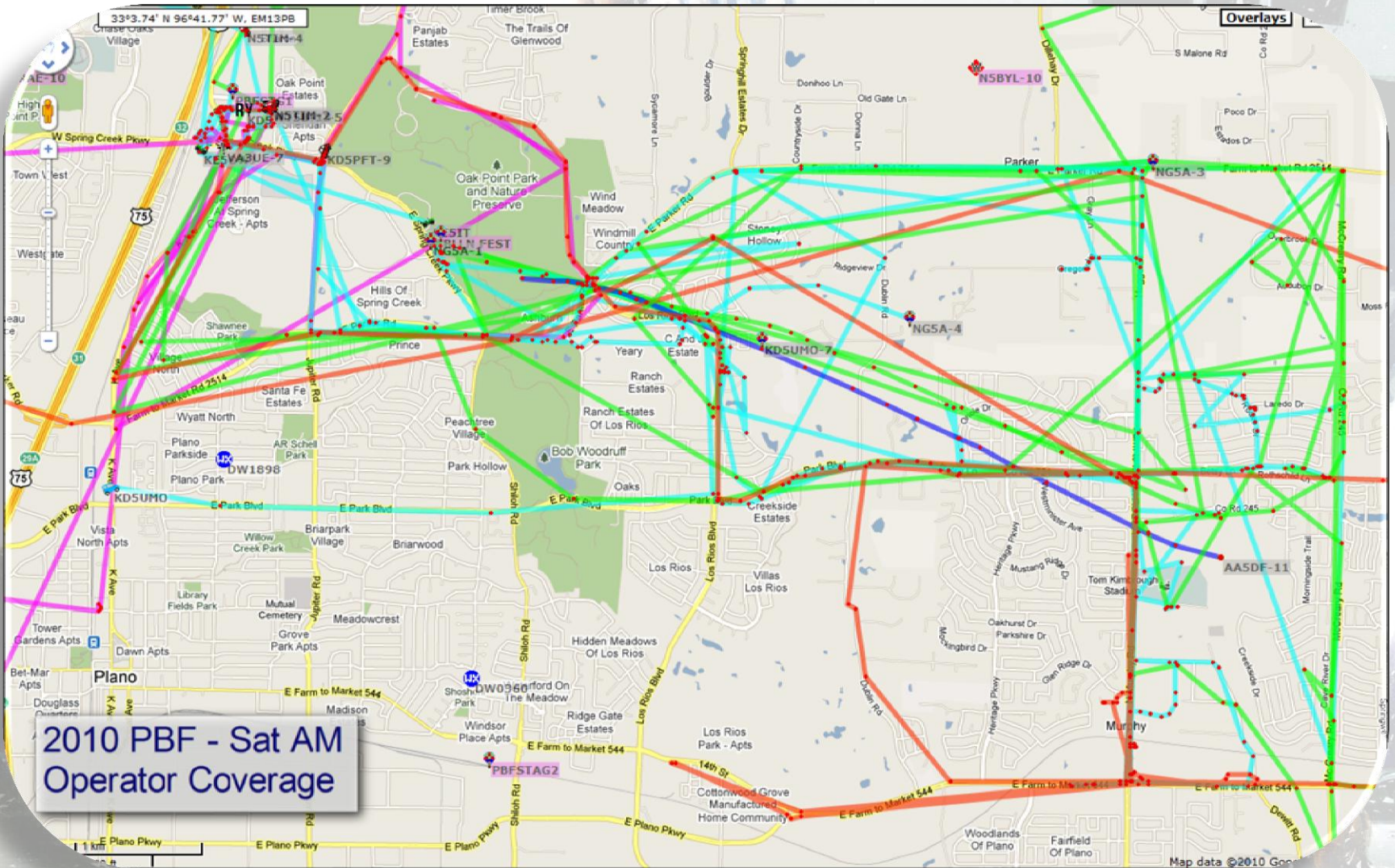
- **Balloons**
 - WIDE1-1
 - 3 minute beacon
 - 5w
- **Mobiles**
 - WIDE1-1,WIDE2-1
 - 5 minute beacon
 - 5-25w of power
 - No smart beaconing

- **UI-View Mapping**
 - Maps at w5adc.com



Photo: Chadwick Steilz- KD5UMO

APRS Tracks



Recovery Review

- **Do:**

- Drive Safely
- Obey traffic laws
- Check into/out of Nets
- Notify NCS of safety concerns
- Keep communications short and to the point
- Help the balloonists if they ask
- Listen to all traffic on the Net – Reduce doubles and heartburn

- **Do Not:**

- Drive without co-pilot
- Trespass
- Smoke around balloons
- Pester crews for giveaways
- Don't ask a balloonist if they are down
- Call a balloon down unless envelope deflated
- Call balloon down unless you know it's number
- Call/repeat other operators' balloons down

Online Resources

- Operator Information
- Sign-ups
- Training Materials
 - Recovery training video
- Maps
- Minor Waiver
- CRF (Communicator Resource Function)
<http://www.w5adc.com/PBF/PBF.html>
- Plano Balloon Festival Site
<http://planoballoonfest.org/>