

FIELD SAFETY MANUAL 2021

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CHATFIELD RADIO CONTROL MODEL AERODROME

FUNDED, OPERATED & MAINTAINED BY THE MEMBERS OF THE

JEFCO AEROMOD'LERS RC CLUB

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A Gold Leader Club Member of the Academy of Model Aeronautics (AMA) Jefco Aeromod'lers RC Club #0176

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THE PURPOSE

The purpose of this manual is to outline the rules and procedures at the flying field so that your experience will be safe, positive and fun.

FLYING FIELD PROTOCOLS & SAFETY KNOW BEFORE YOU GO

Before flying at the Jefco Aeromod'lers Aerodrome, you must read and understand the following mandatory safety and procedural rules:

- Follow the Rules All RC pilots using the Chatfield Aerodrome will abide by the Colorado Parks & Wildlife rules and regulations, the Academy of Model Aeronautics (AMA) Safety Code AND the flying field safety rules and guidelines outlined in this manual. Under a current agreement between the Jefco Aeromod'lers RC Club and the Colorado Parks & Wildlife (CPW), CPW will provide rule enforcement support.
- 2. AMA & Club Memberships Any RC pilot using the Chatfield Aerodrome MUST be a current AMA member. Your AMA card must be conspicuously displayed on your person at all times while flying at the field. If you are not a current AMA member, you must fly with, and under the supervision of an experienced club member, until you obtain your AMA membership. Club membership is not required to fly at Chatfield, but club membership is strongly encouraged. Your Jefco Aeromod'lers name badge should be worn at all times at the field.
- FAA Registration The FAA requires that all operators of remote controlled Unmanned Aircraft Systems (UAS) be registered as either a recreational or commercial pilot. FAA registration is recommended, but not required nor enforced by our club. Register at: <u>https://www.faa.gov/uas/getting_started/register_drone/</u>
- AMA National Model Aircraft Safety Code All AMA members must follow the current AMA Safety Code, as published by AMA. A copy of this document can be found on the AMA website at www.modelaircraft.org.
- 5. New and Student Pilots If you are new to the hobby and/or learning to fly RC, you must be supervised by someone who is able to maintain control of your aircraft at all times and familiar with the field operating rules. Our club has an excellent instructional program. Experienced pilots are usually present during operational hours and generally are willing to help, however it is advisable to prearrange instruction with an experienced pilot, or request free, professional flight training through our club website.
- Park Hours & Entrance Fees Chatfield State Park is open 5am 10pm with 24-hour access for campers. Park entrance fees are required. An annual State Park pass is the most cost effective. For entrance fee info, visit https://cpw.state.co.us/placestogo/parks/Chatfield/Pages/Fees.aspx

- 7. Chatfield Aerodrome Hours The Aerodrome is open during all regular park business hours, however out of respect for other park users, NO flying or engine start-up may take place prior to 7am or 30 minutes after sundown. This rule is strictly enforced by park rangers!
- Alcoholic Beverages Alcoholic beverages are prohibited on the flight line side of the spectator fence. Possession of alcoholic beverages by anyone under 21 years of age is prohibited.
- Radio Frequencies The current preferred operating system at the Chatfield Aerodrome is 2.4 GHz. Pilots using any other system must "pin" up (explained under the Flying Field Basics section).
- Sound Limits Any model flown at the Chatfield Aerodrome must not exceed the suggested sound level limit of 90 dB. It is the pilot's responsibility to comply with this requirement. The club will periodically monitor sound levels and notify pilots who are exceeding the sound level limit.
- 11. Turbine Pilots All pilots operating a turbine-powered aircraft, fixedwing or helicopter, must have a current AMA Turbine Waiver and have it in their possession (as required by the AMA). They must follow all AMA safety rules for handling and flying turbine aircraft, including but not limited to having a qualified spotter and a working/up-to-date fire extinguisher at the designated turbine start-up location. A qualified spotter is defined as someone who is familiar with the flying operations at the flying field and is a current AMA member. The turbine start-up area for Helis is the designated helipad.
- 12. Large Model Aircraft RC pilots flying aircraft between 55 and 125 lbs. must have a current AMA Large Model Airplane Program Waiver and have it in their possession when flying these aircraft.
- 13. **Helicopter/Multirotor Flying** is allowed at the Chatfield Aerodrome. All multi-rotor aircraft must be flown only in the areas designated for this purpose. The terms Heli, Helicopter and Multirotor are used interchangeably throughout this safety manual.
- 14. First Person View (FPV) Flying is allowed at the Chatfield Aerodrome. The same flight patterns and boundaries apply to FPV aircraft as specified for other RC aircraft. See FPV section of this manual.
- 15. Sailplane Hi-Start Launch Systems are not allowed at the Chatfield Aerodrome due to incompatible space requirements.
- 16. Control Line Flying is not allowed at the Chatfield Aerodrome.
- 17. **Assembly Tables** There are several assembly tables conveniently located along the edge of the parking lot and in the pit area. These

tables are for assembly/disassembly of airplanes, NOT FOR STORAGE. When your airplane is assembled, move it to the pits and clear the table for use by other pilots. Fueling/defueling must be done in the pit area only and is not allowed on the assembly tables. Spillage leaves fuel, oils and other contaminants behind where others have to place their aircraft.

- 18. Pavilion Tables & Liquid Fuel the picnic tables under the pavilion are for member and spectator comfort and are intended for the consumption of food and beverage. They are not to be used for aircraft assembly/disassembly. Further, liquid fuel is prohibited anywhere in the pavilion. Spillage could contaminate the table tops where food is served and consumed. Fueling/defueling is not allowed on the assembly tables and is allowed in the pit area only.
- Armed Electric Planes Electric models must be armed on the designated electric arming tables, in the start-up area for gas or glow airplanes, or on the start-up tables. Armed electric models are prohibited in the pavilion and in the pits.
- 20. **Battery Disposal** Discard LiPo's and other old batteries in the designated battery-disposal barrel, not in the trash cans or fire pits.
- 21. **Trash Clean-Up** Please clean up your trash on the pavilion tables and in the pits. Do not leave your trash for someone else to clean-up or to blow around in the wind. Trash containers are conveniently located. Please use them.

FLYING FIELD BASICS

- Fly Safe All RC pilots must fly in accordance with, and adhere to the current AMA Safety Code, and must follow the posted flying field safety rules and guidelines outlined in this manual. No reckless or unsafe flying is ever allowed. All RC pilots are required to operate their aircraft in a safe manner at all times. If unsafe flying is observed, it is the policy of the club that two club members (if present), should approach the offending pilot in a calm and controlled manner, explain the rule violation and ask for the pilot's cooperation. It is preferred to do this in a manner that is as unobtrusive as possible. If the offending pilot becomes aggressive and/or uncooperative, park policy requires that park rangers are to be called for enforcement.
- 2. Flight Orientation Do not orient your aircraft in sustained flight toward the pits and/or spectator area.

All pilots must fly and stay in the designated pattern except for takeoff, landing and aerobatic maneuvers. If you intend to leave the pattern, for

example, to do a loop or other maneuver, tell the other pilots what you are doing. Call it out so the other pilots know to stay out of your way.

Land your aircraft straight out from the pilots' box or further down the runway. Do not land behind a line straight out from the pilots' box. If your aircraft runs off the runway, it could put other pilots with their backs turned in harm's way.

Do not fly a trainer, 3-D aerobatic, micro or any other slow-moving airplane in or through the pattern when it may interfere with a turbine jet, pylon racer or other fast-moving airplanes. Wait until they land. When there is a mix of airplane types and sizes either in the air or waiting to fly, pilots should discuss and agree among themselves what the safest "mix" of aircraft should be to avoid conflicts.

Taxi only in the designated "Taxi Areas". Reminder, the old N/S runway is now a taxiway only. Takeoffs and landings are prohibited on this taxiway.

3. Active Runway – Only ONE runway will be the "active" runway at any given time. The Active Runway shall be determined by fixed-wing pilots according to the current wind conditions. The intent is to have all fixed-wing pilots operating out of one pilots' box so communication and safety can be maintained. This pertains to all fixed-wing, hand-launched powered gliders, sailplanes and park flyers.

Helicopter pilots shall use one of the three designated helicopter/drone areas. Only one helipad may be "active" helipad at any given time. (Refer to diagrams in this manual and on the kiosk).

No more than 5 aircraft are allowed in the air at any one time, except when authorized by the Contest Director at an event.

As a courtesy, limit "Touch 'N Go's" to 2 or 3 times per flight when the fight line is busy.

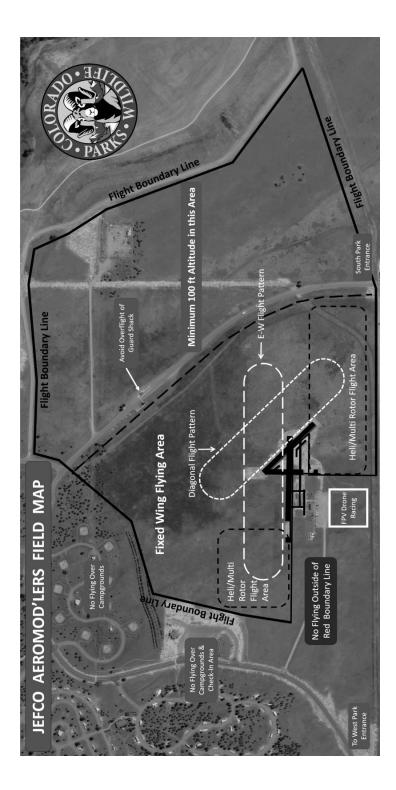
- 4. Personal Safety No person shall position themselves on or near the flying field in a manner that would be obstructive or hazardous to themselves or others flying. When retrieving your aircraft from an active flight area, make sure all pilots flying are aware of your intentions, retrieve the aircraft quickly, and inform other pilots when you are clear of the danger areas. Remember COMMUNICATE! Pilots should be aware of what's happening on the ground as much as possible. It is suggested that every pilot have one observer/spotter with them while on the fight line. Spectators and small children must remain behind the spectator safety fence at all times, unless personally escorted by a club member.
- 5. **Emergencies** see back page of this safety manual for quick reference.

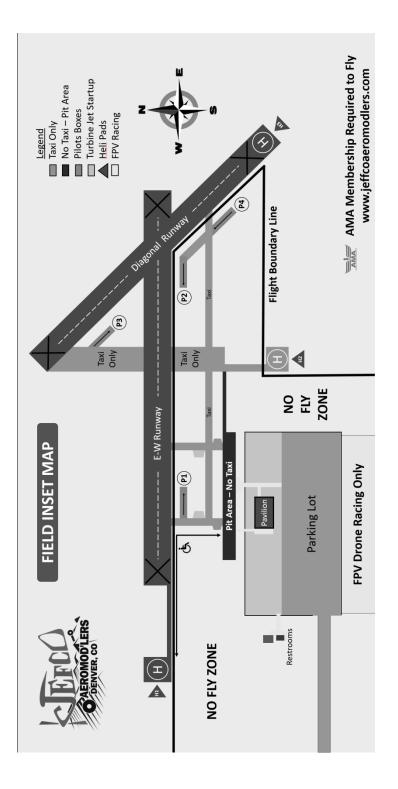
PIT PROTOCOL & TAXIING

- 1. In the Pits No Taxiing in the pits or in any other areas where taxiing is prohibited. Reminder the old N/S runway is now a taxiway only. Takeoffs and landings are prohibited on this taxiway.
- Start Up Stands –These are shared and intended for short term use to fuel/defuel, start up, work on or tune your aircraft engines. They are available on a first-come, first-served basis, but not intended for longterm storage. When the field is busy, be considerate and move your plane to the pits so other pilots can use the stand.
- 3. **Engine Run-Ups** No sustained, high-speed engine run-ups are allowed in the pits. Tables are provided off the SE corner of the parking lot for engine run-ups.
- 4. **When Taxiing** The pilot must be able to maintain complete and safe physical control of the aircraft at all times. Do not be afraid to ask for help/assistance in physically controlling an aircraft.
- 5. **Helicopters/Multirotors** Helis must be hand-carried or carted to the Heli Areas. No "air" taxiing is allowed.

TIME TO FLY!

- 1. **Flight Time** Field courtesy requires pilots to limit flight times to no longer than 20 minutes per flight when other pilots are present.
- Flight Patterns All aircraft will be flown within the designated flight patterns, and all pilots must fly from the designated pilots' box as shown in this safety manual and as posted on the field kiosk. Pilots may briefly step forward out of the pilots' box for takeoffs and landings, but not to exceed 5 feet in the direction of the runway.
- 3. **Communicate**!! Communication is the key to safe flight line operations. <u>Ask permission</u> rather than make an "announcement": Example: "OK to takeoff? "OK to land?" The same goes for "Low pass" and "Touch 'n Go". The only urgent "announcement" should be "Dead Stick", to gain immediate access to the runway and to warn other pilots that you are landing without power. Communicate with your fellow pilots at all times and ask for help or assistance if you need it!





FLY ZONES ~ TAKEOFFS ~ LANDINGS

- 1. **Fly Zones** Refer to diagrams and rules regarding "fly zones" and "no fly zones" as display in this manual and on the field kiosk.
- 2. PRIMARY RULE Except for landings and takeoffs, all flying must take place a minimum of 25 feet in front of the line formed by the far edge of the active runways extended to the field boundaries in both directions. Pilots must fly using an 'oval' or 'rectangular' race track pattern, regardless of the direction of takeoff and landing. This rule applies whether helicopters are flying or not. At no time is it permissible to fly behind the active runway pilots' box, or behind a line formed by the near side of the active runway, extended to the field boundaries in both directions.
- 3. **SECONDARY RULE** Under special circumstances, the authorized flight area may be modified only by a Contest Director during an event.
- NO FLY ZONES For safety reasons, several areas are designated as No Fly Zones. These No Fly Zones are designated in the diagram in this safety manual and also on the field kiosk.
- 5. FIXED-WING FLYING AREAS Fixed-wing aircraft are allowed in designated areas only. No fixed-wing aircraft are allowed in an active multirotor airspace at any time, with the exception of micro electric airplanes. Micros must fly in helicopter/multirotor areas only, and must yield to heli/multirotor pilots wanting to use the space. Micro electric airplanes may be flown in the active multirotor areas if no multirotors are present.
- BE AWARE! Park campgrounds are located to the north and west of the field – in close proximity of the runways. The campground office is also located to the west. DO NOT FLY NORTH OF THE PINE TREES or WEST OF THE WHITE MARKER SIGNS.
- FLIGHT PATTERNS All take-offs, landings and hand launches will be in the direction of the established flight/traffic pattern using the active runway. Fixed-wing pilots flying will determine the active runway. Heli pilots refer to Special Interest Group section labeled Helicopters, Multirotors & Others #3.

EAST-WEST RUNWAY

- A. If the active runway is EAST (takeoffs and landings to the East), the flight pattern is LEFT HAND turns only.
- B. If the active runway is WEST (takeoffs and landings to the West), the flight pattern is RIGHT HAND turns only.

DIAGONAL (NORTHWEST - SOUTHEAST) RUNWAY

C. If the active runway is NORTHWEST (takeoffs and landings to the Northwest), the flight pattern is RIGHT HAND turns only.

- D. If the active runway is SOUTHEAST (takeoffs and landings to the Southeast), the flight pattern is LEFT HAND turns only.
- 8. THE PILOTS' BOX When flying, all pilots must stand in, and fly from the designated Pilots' Box nearest the approach end of the active runway. EXCEPTIONS: Pilots are allowed to be on the runway briefly for takeoffs, maiden flights, hand launches and in any situation where you are uncertain about the control of the aircraft. Also, after receiving permission to land from the other flying pilots and/or their spotters, you may step forward out of the Pilots' Box, but no more than 5 feet toward the runway. This still keeps you in a safe location and is appropriate for visual communication. Other pilots can see your movement forward so if they don't hear your voice communication, they may cue on your movement.

NOTE! The reference diagram shows all Pilots' Boxes – North, South, East and West. Do not remain out of the pilot's standing area for extended periods of time. Flying from any area other than the designated Pilots' Box is dangerous and therefore prohibited. Only one Pilots' Box may be active at any one time. Courtesy Alert: DO NOT block the view of wheelchair pilots.

- 9. COMMUNICATIONS Communication is the key to safety at all times on the fight line! Pilots must always communicate their intentions so that other pilots are aware of general flight activity. Generally, do not just announce you are going to do something. ASK PERMISSION to do something on the flight line rather than announcing your intentions. This gives other pilots a chance to acknowledge and respond.
 - A. OK TO COME OUT? If a pilot is ready to come out onto the runway for takeoff, the pilot MUST ask the pilots that are already in the air if it's "OK TO COME OUT?" – and must wait for a response.
 - B. READY FOR TAKEOFF => TAKING OFF <u>After</u> the other pilots respond "Clear", you can proceed to taxi (or place) your aircraft on to the runway. When your aircraft is in the 'ready for takeoff' position, you must announce *"TAKING OFF*".
 - C. CLEAR once the aircraft has successfully taken off, the pilot must announce *"RUNWAY IS CLEAR"* and then quickly move into the Pilots' Box.
 - D. **TOUCH & GO** If a pilot wants to do a Touch 'n Go, the pilot must ask, "OK to TOUCH 'N GO?".
 - E. **DEAD STICK** If your aircraft engine dies in the air, you must announce "*DEAD STICK*" and then you are given priority over all other aircraft in the air, or on the runway to try to land on the runway or other close vicinity.
 - F. LOW PASS Pilots who wish to do a low pass, must do so at least 25 ft. off the far edge of the runway, no lower than 25 ft. above the ground, and must ask the other pilots *"OK to LOW PASS?"* prior to their pass approach.

- G. **LANDING** All pilots preparing to land an aircraft, must request permission to land by loudly saying "OK to LAND?"
- 10. EMERGENCY AND "DEAD STICK" LANDINGS The urgent need to land an aircraft, for example if your engine quits, is called "Dead Stick". When a pilot calls out "Dead Stick", it takes priority over all other aircraft in the air, or on the runway.
- 11. HIGH SPEED LOW PASSES High speed, low passes are allowed if at least 25 ft. off of the far edge of the runway and no lower than 25 ft. above the ground.

SPECIAL INTEREST GROUPS

HELICOPTERS, MULTIROTORS & OTHERS

Includes Vertical Take-off and Landing (VTOL) aircraft

- 1. **TERMS** The terms Heli, Helicopter, Multirotor, VTOL are all used interchangeably throughout this safety manual and must follow the same rules. All vertical takeoff/landing aircraft must be flown from the active designated Heli area.
- TAXIING Helicopters/Multirotors must be either hand-carried or carttransported on the ground to the designated flying area. No "Air-Taxiing" allowed.
- FLYING AREAS the designated Heli/Multirotor flying areas are WEST (H1) and SOUTH (H2), OR SOUTHEAST (H3), and are identified with the letter "H" in a circle on the diagram map.
 - When the East/West runway is the active runway, Helis/Multirotors must be flown from the designated Heli/Multirotor area either on the SOUTH end of the old North/South runway (H2), or from the SOUTHEAST end of the new diagonal runway (H3). If the flight pattern is to the east, then flying must take place from (H3) and (H2) shall not be used.
 - B. When the new diagonal is the active runway, Heli/Multirotors must be flown from the designated Heli/Multirotor area at the WEST end of the EAST/WEST runway.
 - C. Helicopters must fly and stay within the designated Heli/Multirotor areas shown in this safety manual and on the field kiosk.
 - D. Only ONE designated Heli/Multirotor area is allowed to be active at any one time.
 - E. All VTOL aircraft must follow the rules for Helis/Multirotors.
 - F. Micro electric airplanes are allowed to fly in the Helis/Multirotor areas, when no helis or multirotors are present.

FIRST-PERSON VIEW (FPV) FLYING

- AMA RULES FOR FPV & sUAS FPV/sUAS pilots must be aware of and adhere to the requirements of AMA Document #550, Unmanned Aircraft Operation Utilizing First-Person View.
- 2. FPV/sUAS FLY ZONES While flying your FPV/sUAS aircraft, you are required to fly within the designated flight boundaries of the airfield as shown in this safety manual and on the field kiosk. FPV pilots must maintain a safe distance from non-FPV/sUAS aircraft at all times. Only FPV Racing Drones are permitted to fly in the area designated for that purpose, located south of the flying field parking lot.
- 3. **SPOTTER** Any pilot flying an FPV/sUAS aircraft of any kind, absolutely must have a qualified spotter with them on the flight line while flying. Qualified spotter is defined as someone who maintains the aircraft in visual line-of-site at all times, and is fully capable of taking control of the aircraft if necessary.
- COMMUNICATIONS & PROCEDURES It is the FPV/sUAS pilot's responsibility to coordinate their intended use of FPV video frequency with other FPV pilots at the Aerodrome, PRIOR to powering up their FPV equipment or taking flight.
 - A. When ready to fly an FPV/sUAS aircraft, the pilot is required to notify the pilots on the active flight line by asking "OK TO FLY FPV?"
 - B. Prior to walking, taxiing or carrying your FPV/ sUAS aircraft on to the runway, you are required to clearly request and obtain permission to go on the runway from the other flight line pilots. You may enter the active runway only after the all pilots on the flight line acknowledge your request and all acknowledge by saying "CLEAR".
 - C. Once ready for takeoff, the FPV pilot is required to notify the flight line pilots by asking "OK TO TAKEOFF FPV?"
 - D. Once the FPV/sUAS aircraft and the pilot have cleared the runway, the FPV pilot is required to notify the fight line pilots that the "*RUNWAY IS CLEAR*", and the pilot must quickly move into the pilots' box.
 - E. If for some reason the runway is not cleared, the FPV pilot (or spotter), is required to notify the flight line pilots of the location of their aircraft immediately and take whatever action is required to quickly and safely clear the runway. The pilot must clearly notify all pilots of their intentions to clear the runway.

- F. Once the FPV/sUAS aircraft is either in the air or off the runway, the FPV pilot or spotter is required to notify the flight line by saying *"RUNWAY IS CLEAR"*. When the aircraft is in the air, the pilot must quickly move into the pilots' box.
- G. When ready to land your FPV/sUAS aircraft, the FPV pilot is required to notify the flight line pilots of their intention to land their aircraft by asking "OK TO LAND FPV?"
- H. The FPV pilot may start their final approach only after all of the flight line pilots acknowledged that they are clear.
- I. After landing the FPV/sUAS aircraft, the FPV pilot or spotter is required to notify the flight line pilots by saying *"FPV ON THE RUNWAY"*.
- J. Upon the FPV/sUAS aircraft clearing the runway, the FPV pilot or spotter is required to notify the flight line by saying *"RUNWAY IS CLEAR"*.
- K. Dead Stick landings are given top priority. When a Dead Stick occurs, FPV/sUAS pilots are required to declare dead stick by calling out, "FPV DEAD STICK". FPV/sUAS pilots must still receive the "ALL CLEAR" from the other fight line pilots or spotter before landing. If the "ALL CLEAR" is not obtained, the FPV pilot must attempt to abort the landing and direct the aircraft into the open field away from the fight line.

3-D AEROBATIC MANEUVERS

3-D pilots should perform aerobatic maneuvers in the center area of the pattern over the open field if other planes are in the air, and not in the designated pattern. Absolutely no 3-D maneuvers are allowed over the runways, pilots boxes or the pits.

Do not fly a trainer, 3-D aerobatic, micro or any other slow-moving airplane in or through the pattern when it may interfere with a turbine jet, pylon racer or other fast-moving airplanes. Wait until they land. When there is a mix of airplane types and sizes either in the air or waiting to fly, pilots should discuss and agree among themselves what the safest "mix" of aircraft should be to avoid conflicts.

OTHER TIDBITS

PETS

Dogs are not allowed in the pit areas, but are allowed in the spectator areas and must be kept on a leash at all times. Clean up after your dog when they leave a "deposit".

SMOKING

Do not light up or smoke within 25 feet of fuel storage containers. Smoking anywhere in the pit area is not recommended for obvious safety reasons. Smoking is prohibited while fueling/defueling any aircraft. Please discard smoking materials in designated containers and not on the ground for others to clean up.

FIRST AID

A First Aid Kit is located on the center column under the pavilion. Use the code #0176 to unlock the First Aid Kit. Any person removing first aid supplies from the first aid box, must report the reason and usage to the Club Safety Officer or a Board Member if present, for restocking purposes.

IN CASE OF FIRE

There are two fire carts with firefighting equipment available. They are usually in the club storage container. All Jefco Board members, and some other members have a key to the shed and can easily access the storage container. During events the fire carts will be located north of the pit area and can quickly be moved to a fire.

SNOW DAY FLYING

When there is enough snow on the ground to fly with skis, pilots may choose to fly from the west portion of the field, parallel to, and north of the E/W runway. All pilots must coordinate and fly in the same area, and from the same location. Pilots must remain in close proximity to communicate with each other at all times. When the runways are plowed and fixed wing aircraft pilots choose to use the runway, all pilots must fly from the designated pilot box and must fly in the designated pattern. Pilots flying with skis must use the far side of the runway for takeoffs and landings, and must follow all safety protocols when approaching or crossing the runway. Flying is prohibited from the infield or pits area at all times.

IN CASE OF EMERGENCY

- 1. In Case of Emergency CALL 911
- 2. Give the park address as follows: Chatfield State Park 11500 N. Roxborough Park Road Littleton CO 80125
- 3. Give your location as the Model Airplane Field on the South Side of Chatfield State Park.
- 4. Call the Chatfield State Park office at 303-791-7275 during regular business hours and let them know you called 911.

IN CASE YOU NEED MEDICAL ATTENTION, BUT IT'S NOT URGENT

Emergency Room Care is available at:

Littleton Adventist Hospital 7700 S. Broadway (Broadway & Mineral)

Swedish Medical Center – ER Satellite Clinic 6196 S. Ammons Way (Wadsworth between Coal Mine & Bowles)