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Bend Aero Modelers

Flight Report

June, 2016

Next Meeting

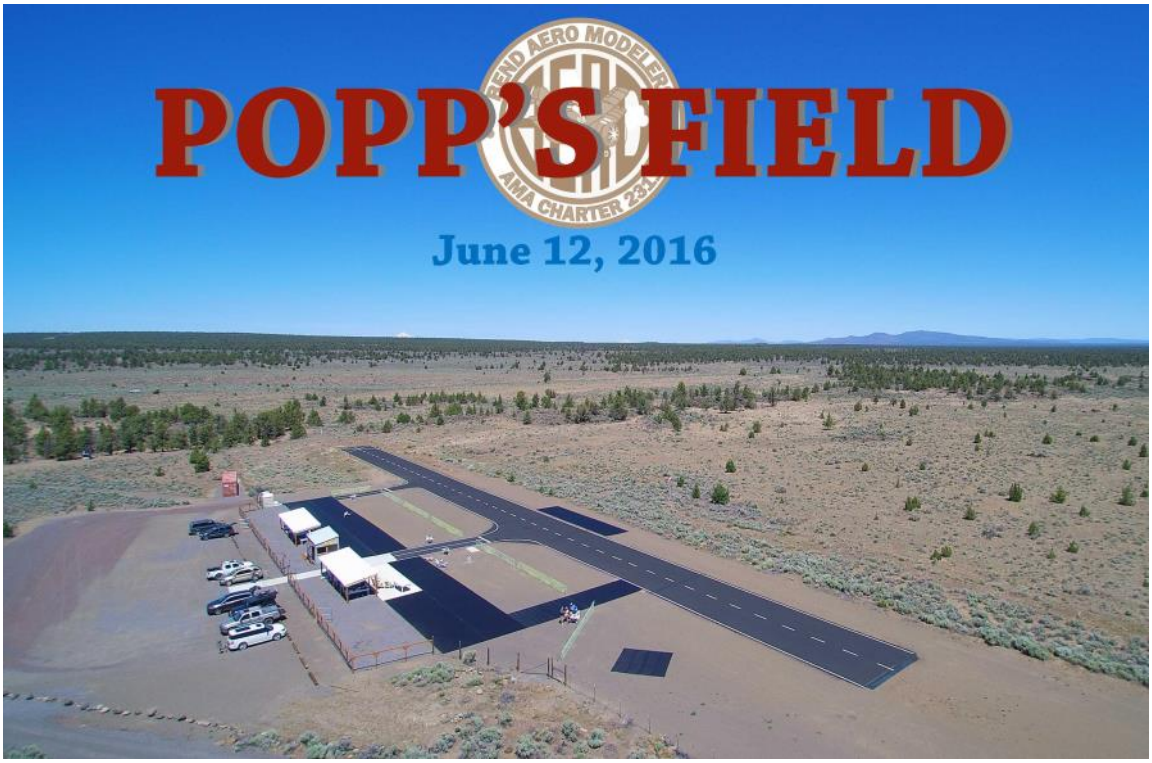
June 22, 2016
6:30pm At Black Bear Diner
Food Available
Come early to visit and eat!

FROM THE PRESIDENT

Message from the President

Dear Members & Interested Readers:

A lot has happened with Popp's Field since I last contributed to our monthly newsletter (back in March). We now have a 40' steel container, our runway has been repaired (annual maintenance and crack repair), our old and tired fabric has been replaced with new and improved (UV protected) fabric from US Fabrics, a handicap porta-pottie has been added and several yards of gravel have been added to our pits and parking areas. Now that is a lot of improvements if you ask me. Popp's Field continues to look better and better these days! I want to thank everyone that made these improvements possible. Several members contributed their time and resources to make our vision a reality. We still have some fabric painting to do, but we are really pretty much finished for the year. Now it is time to enjoy our excellent flying field. When I look at our current roster, so many folks on the roster made contributions. I would try to name everyone that contributed, but I don't want to leave anyone out. You know who you are. Thank You so very much! I will go as far as identifying the **Six Amigos** that seemed to be there every step of the way. **Dave Reiss, Tom Schramm, Terry McDaniel, Tom Rose, Tim Peterson and Steve Younger** make up the Six Amigos and I want to thank them very much for all that they did. We can all be proud of how Popp's Field looks today. I get compliments all of the time from people inside and outside of our club.



I also want to thank **Waldemar Frank** for filling-in for me these past few months. As most of you know, I have had several "Family" challenges over the past few months. Some of the challenges have been resolved but others remain. Thank you Waldemar and thank you to all of you who have given me support during these challenging times!

I look forward to seeing you at Popp's Field in the near future.

Greg McNutt

From the Editor

By Bob Ingram

June

Appreciate the contribution of pictures and articles that I have been getting … so continue to feel free to submit pictures and stories during 2016. Without your contributions the BAM Newsletter would not exist at the level you expect it.

So do not be shy, lets see those pictures and stories.

Remember the Editor can't be everywhere but someone is usually there to report that CRASH (take pictures, and tell who made it happen) or some other event.

Sometimes there are too many articles, so don't be discouraged, they will appear in future issues.

A Contribution by a BAM Member …

Sometimes it does take a rocket scientist!

Scientists at NASA built a gun specifically to launch standard 4 pound Dead chickens at the windshields of airliners, military jets and the space Shuttle, all traveling at maximum velocity. The idea is to simulate the frequent incidents of collisions with airborne fowl to test the strength of the windshields.

British engineers heard about the gun and were eager to test it on the Windshields of their new high speed trains. Arrangements were made, and a gun was sent to the British engineers.

When the gun was fired, the engineers stood shocked as the chicken hurled out of the barrel, crashed into the shatterproof shield, smashed it to smithereens, blasted through the control console, snapped the engineer's back-rest in two, and embedded itself in the back wall of the cabin, like an arrow shot from a bow.

The horrified brits sent NASA the disastrous results of the experiment, along with the designs of the windshield and begged the NASA scientists for suggestions.

NASA responded with a one-line memo: "defrost the chicken."

Welcome to BAM

Let's give a **BIG WELCOME** to our latest new BAM member— Jerry Alexander who comes to us from La Pine, Oregon.

Jerry and his wife have been retired since 2002, or semi-retired as he then worked for the Oregon State Parks system fulltime until 2010 as a campground host in several state parks.

Jerry and his wife finally bought a home in La Pine 5 years ago.

Jerry is just recently back into RC after having quit 38 years ago.

Jerry currently flies a Yuneec Q 500+ quad and several indoor quads, heli's and airplanes. He also flies a Dehavilland Beaver float plant, Electrify Super Sport, Flyzone Tidewater, Hummer 3-D, Polaris scratch build, Sig Kadet nitro, Tundra snow ski, Ugly Stik electric and UMX Pitts. Jerry is using a Spektrum DX-9, as well as a new Futaba 10 channel.

Welcome to BAM … all of us look forward to seeing you and your planes at Popp's Field.

Popp's Field improvement

Improvements continue at Popp's Field … last month there were pictures of New Signs and the Cargo Container. The field and parking lot were leveled and cinders from ODOT was used to cover the parking lot. More pictures and details in the July 2016 issue of BAM Flight Report.

From a BAM Member on FAA Card / Number

Being PREPARED …

Do you keep a hard copy of your FAA number with you?

Did you copy your FAA number to your smart phone (take a picture)?

Great idea, ……. As long as you bring the copy and/or smart phone with you

During a recent out of town (550 miles) RC event, a participant left his smart phone on the kitchen counter at home.

He did not have a hard copy, although his models did have the FAA number plainly visible.

Needing to have his models safety inspected, proof (FAA issued) of the number was a re-quirement.

What to do???????

You borrow a friends smart phone, and like ET call home.

Wiffie finds your phone, (laughing) agrees to send a text and photo of your FAA issued copy to your friends smart phone.

You show inspectors your friend's smart phone with the text and photo of your FAA number and they chuckle.

Inspection completed, you are allowed to fly.

Making Decisions …

"should I go or should I stay (on the ground) …..

Flying at BAM: Protecting Our Club

In this issue of our newsletter, I would like to comment on an observation that we recently confirmed at our flying field. We routinely have non-members and spectators stop by who inquire about our club and flying site. Most of them are genuine visitors who express their interest in the hobby and some even become members.

However, it has also become apparent that a few of these folks are not the type of folks who we would consider genuine visitors. In fact, some of them have turned around and left immediately when they saw us at the field while others stayed and indirectly implied that they have used our flying field when no one from the club was present. In fact, I had a recent talk with a group of people who showed up during our work party to fly a few of their airplanes. They were not shy at all about admitting that they have used our flying site in the past when nobody was around.

This observation and their bold behavior raise several red flags because it has an impact on our club and our ability to remain the responsible tenants that we have been for more than two decades now.

First, our flying site is not a public site that anybody can use at their own discretion. Our members finance and maintain the field through their membership and personal effort. It would be unfair to the members to have some unaffiliated folks get a regular free ride.

Second, unauthorized access to the flying site is trespassing. There is a reason why we have locks on the gates and anybody with some sense would get the message: When the site is locked, nobody should access it. Moreover, people would have to climb over the fence or walk all the way around the main fence to access it from the electric fence that we installed to prevent open range cattle from accessing and damaging our flying site.

Third, there is a safety and liability concern when unauthorized folks access and use our flying site while no members are present. Because we won't be able to verify whether they are AMA members or even qualified to safely fly their equipment, we have no guarantee that these trespassers adhere to our field safety rules and the AMA safety code. Essentially their activity could result in damage to the flying site, other equipment such as cars parked by hikers, or worse, injuries to innocent bystanders.

And because such unauthorized activity would likely be associated with our club, we could be made liable for the outcome and potentially lose our flying site or deal with complaints from hikers and bystanders. We actually have received calls and emails from hikers who found crashed model airplanes near our flying site that did not belong to any of our members. The issue is that we wouldn't even be aware of any incidents because these activities usually take place without our presence.

Long story short, we will need to be more vigilant about this sort of activity and understand that we cannot completely prevent it. However, we can add some additional improvements to make it more challenging for people seeking unauthorized access to our flying site (we have some ideas for improvements, which we will discuss at the club meeting).

I would like to remind members and provide the following set of recommendations:

- Always be vigilant when at the field if you see strange behaviors or people
- Any flying by visitors at our field requires the presence of a current member
- Never give away the lock combination to non-members (this includes people you know—once we give away the lock combination, we have no control over how it is used and distributed to other non-members).
- When unlocking the gates, change the numbers immediately so the lock does not show our current lock combination (it would be very easy to steal it that way)
- If non-members show up to fly, verify their AMA status (if they can't confirm it, they can't fly) and make sure that they understand our club and safety rules (take the time to walk them through it—the rules and fly-zone map are posted in the cub house)
- If visitors are interested in the club, answer any questions as best as you can and/or refer them to one of the club officers (e.g., Greg or me, or point them to our club website if no club officer is at the field)

Please keep us safe and protect our club's integrity!

Waldemar Frank

Planes Worth Modeling:
Tallahassee Lassie, Paul Allen's P-47D

This article is the beginning of what I hope will be an ongoing series on planes that are worth modeling. This can mean a plane built from scratch or plans, a kit build, or painting and detailing an ARF. No matter what route you choose for your masterpiece, having good documentation for the plane you are modeling is important. I'll try and include a walk-a-round of a particular plane but also give some references on where to find plans, 3-views and other information on the plane.

I was recently in Seattle and had a chance to revisit Paul Allen's Flying Heritage Collection (FHC) again (http://www.flyingheritage.com/) . This collection is mainly of WWII aircraft. The thing that makes the Flying Heritage Collection unique is that all the planes are all in flyable condition. FHC has free flying days providing a rare opportunity to see some classic,valuable big iron in the air.

The Tallahassee Lassie
Republic P47D Thunderbolt or Jug.

Tallahassee Lassie is a Republic P-47D Thunderbolt also known as the Jug. The P47 was built in both Razorback and Bubble-top versions and the D-model is the latter bubble version.

It is considered a fighter bomber and was used in both air-to-air combat as a short-to-medium range escort fighter but also as a fighter bomber for ground support. Heavily armored and huge by the standards of any fighter, it mounted eight .50-caliber machine guns and was capable of carrying five-inch rockets or a bomb load of 2,500 pounds, half the bomb load of a B-17. The heavy armor and lack of a radiator gave a P47 pilot a real chance of making it back home if the plane was shot up. It was used in both Europe and the Pacific by the USA, but was also flown by French, British, Russian, Mexican and Brazilian squadrons.

The plane was so large that British pilot used to their very tight fitting Spitfires were afraid of falling off the seat into its cavernous fuselage. The German Fighter General, Adolf Galland on examining a captured P-47 felt it was large enough to walk around inside. Weighing eight tons, the Tallahassee Lassie is big girl by any measure.

The first time I visited the FHC a year ago, the Lassie was missing a bit of her clothing as you can see in this photo of her twin row, Pratt and Whitney R2800 (that is a lot of cubic inches) twin-row Twin Wasp engine, the same engine used in the Navy's Hellcat and Corsair fighters.

The Lassie was manufactured by Republic Aviation in Evansville, Indiana, and delivered to the USAAF on June 27, 1945. Placed in storage until March, 1948, it never made it into the war but ended up being assigned to an Air National Guard squadron. When FHC got the plane they repainted it in the colors of the "Tallahassee Lassie," flown by Seattle-born Colonel Ralph C. Jenkins, who led the 510th Fighter Squadron, initially in England and later all the way through Europe to Germany at the end of WWII. Colonel Jenkins may be the pilot who attacked the staff car of Field Marshall Erwin Rommel, wounding the German commander.

Let's do a quick walk-a-round of this colorful plane. Other photos and additional stories about the plane are on the FHC website.

The first thing you notice about the P47 is that enormous snout that cowls the P&W R2800.

Lassie's landing is commensurate with her size, massive and looks for all the world like something the tin man from the Wizard of Oz might have created. As you can see by this detail, this plane is in great shape.

Another view from this angle shows the four .50 caliber guns in each wing.

Here is a full side view of the plane.

I was not able to walk around to the tail of the plane but if this is a plane you want to make a modeling copy of contact the FHC and arrange in advance to shoot detailed photos and video of it. Most museums are all too willing to assign a docent escort to you and let you shoot photos of the plane**.** A good day to shoot images would also be during one of FHCs flying days. Contact FHC to find out when the P47 will be in the air.

The first P47D I ever built was in the 1950's from a Berkeley kit. If this kind of construction interests you, the Berkeley plan and about twenty others are available as free downloads from at Outerzone (http://www.outerzone.co.uk/) a wonderful free plan service with thousands of plans available on it. Brian Taylor has a great looking RC plan for the P47D and Top Flite sells several versions of both kits and ARFs.

3-View Documentation

If super-detailing your model with panel lines and weathering, you'll want a good 3-view and a color rendering of the P-47. An obvious source for P47 3-views, drawings and color renderings is a Google image search. Put in the search string of "Republic P47D drawings" and you will have a ton of stuff like this drawing.

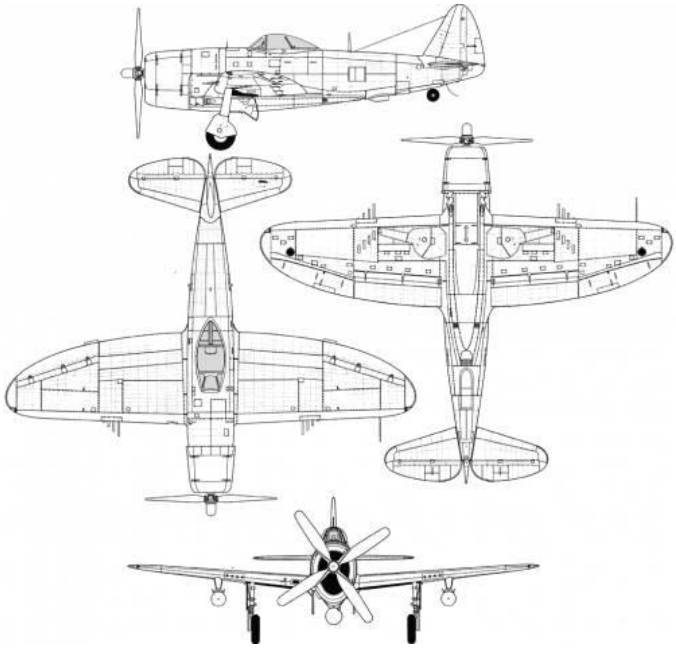


Image courtesy of The-Bluprints.com. In order to use this for panel lines, blow up the wing or fuselage to the same size as your model.

Excellent 3-views are available in a book called *Fighters of World War II, Volume 1*, which is a Squadron / Signal Publication. It is out of print but Amazon sells it used for $3.22. The *Illustrated History of Fighters* edited by Bill Gunston and US Fighters by Lloyd S. Jones have good write-ups on the P47. an Amazon search will reveal literally hundreds of books on the T-bolt and a reading of the Bibliography on Wikipedia is a great starting place to learn more.

If you have a plane you are interested in let me know and I will look at the possibility of doing an article on it.

Article submitted by Jon Putnam

Show & Tell

There was NO Show and Tell for the May 2016 BAM club meeting

Crash Trophy

Everyone 'evidently' flew safe since the last club meeting as there were no reported crashed. Therefore, Tom Rainwater who currently has the 'crash trophy' from the May meeting, will retain possession of the crash trophy. I am sure that Tom will bring the crash trophy to the June meetings for someone else to take home.

Castle—Giant Scale Fly-In

Each year there is a Giant Scale Fly-In over the Memorial Day weekend at the old Castle AFB (now the Castle Airport), this was the 19th year for the event. This year there were 3 from BAM (Tom Rainwater, Tom Schramm and Bob Ingram) that went (last year there were 5). We joined ranks with War Birds West from San Diego, California—2nd year we did that (they had 6 members there. We all had a GREAT time and many flights were flown. It was reported that there were 162 registered pilots and it was easy to see that the average person brought 3 to 4 planes … THAT is a lot of planes. People and planes started arriving on Thursday—pilots registered and planes were inspected (required). Most people left Sunday AM, however there were many who flew again on Sunday and left on Monday.

It would be nice if more could make the trip … if not to fly but to enjoy the event. Basically Giant Scale is defined as a 80" or more wing span, bi-planes need 60" or more or if a plane is a true 1/4 scale plane it is accepted. There are jets / 3D planes / racers too.

Tom and I both took pictures (Tom took 158 and Bob took 43) There isn't enough space to include all the pictures but some have been selected to give you an idea of the type of planes that were displayed and flown.

There were many travel trailers / fifth wheels / motor homes / plane haulers. How many—well there were 3 rows covering the entire length of the runway that was used. Some people (those that brought plane haulers) stayed in motels and others just stayed in their travel trailers / fifth wheels / motor homes.

To bring it all to an end … the 8 from War Birds West from San Diego and the 3 from BAM went out to dinner at an Italian restaurant and had a GREAT visit and dinner.

The following pictures cover some of the pictures (17 of the 201) that were taken. It was difficult to make a selection.

First things first … you have to put the planes together …

Then get them registered … those are Tom Rainwater's 2 planes lower left … or do a run up before you can fly.

Then you can fly …

The line up to fly … only 5 flew at a time … there was an ‘Air Boss’ that controlled all the activities on the flight line. Also, each pilot had to have a spotter to fly.

Planes came in all sizes … 80” minimum up to VERY LARGE SCALE … RC or Real???

Team Jantz, a Central California RC race team with 5 large scale P47's. The planes were loud and fast—until one did a half roll to the right …

And then there were 'different' planes too … plus jets … and some were for sale

What else is happening

Bend Aero Modelers - 2016 Event Calendar

Last Update: 1/24/2016

Club Meeting
Pylon Race Practice
Contest Pylon Race
BAM Renewal Deadline
Last Chance to Renew
Pine Nursery Park Fun-Fly
National Holiday
BAM Christmas Party
Family BBQ & Scale Fun-Fly
Annual National Model Aviation Day

January

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1						1	2
2	3	4	5	6	7	8	9
3	10	11	12	13	14	15	16
4	17	18	19	20	21	22	23
5	24/31	25	26	27	28	29	30

January 1st - New Year's Day

February

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
6		1	2	3	4	5	6
7	7	8	9	10	11	12	13
8	14	15	16	17	18	19	20
9	21	22	23	24	25	26	27
10	28	29					

March

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
10			1	2	3	4	5
11	6	7	8	9	10	11	12
12	13	14	15	16	17	18	19
13	20	21	22	23	24	25	26
14	27	28	29	30	31		

April

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
14						1	2
15	3	4	5	6	7	8	9
16	10	11	12	13	14	15	16
17	17	18	19	20	21	22	23
18	24	25	26	27	28	29	30

April 5th - Easter Day

May

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
18	1	2	3	4	5	6	7
19	8	9	10	11	12	13	14
20	15	16	17	18	19	20	21
21	22	23	24	25	26	27	28
22/23	29	30	31				

May 10th - Mother's Day / May 25th - Memorial Day

June

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
23				1	2	3	4
24	5	6	7	8	9	10	11
25	12	13	14	15	16	17	
26	19	20	21	22	23	24	25
27	26	27	28	29	30		

June 21st - Father's Day

July

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
27						1	2
28	3	4	5	6	7	8	9
29	10	11	12	13	14	15	16
30	17	18	19	20	21	22	
31	24/31	25	26	27	28	29	30

July 4th - Independence Day

August

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
31		1	2	3	4	5	6
32	7	8	9	10	11	12	13
33	14	15	16	17	18	19	20
34	21	22	23	24	25	26	
35/36	28	29	30	31			

September

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
36					1	2	3
37	4	5	6	7	8	9	10
38	11	12	13	14	15	16	17
39	18	19	20	21	22	23	24
40	25	26	27	28	29	30	

September 7th - Labor Day

October

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
40							1
41	2	3	4	5	6	7	8
42	9	10	11	12	13	14	15
43	16	17	18	19	20	21	22
44	23/30	24/31	25	26	27	28	29

November

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
45			1	2	3	4	5
46	6	7	8	9	10	11	12
47	13	14	15	16	17	18	19
48	20	21	22	23	24	25	26
49	27	28	29	30			

November 24th - Thanksgiving Day
NOTE: Due to Thanksgiving the November meeting is a week earlier.

December

Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
49					1	2	3
50	4	5	6	7	8	9	10
51	11	12	13	14	15	16	17
52	18	19	20	21	22	23	24
53	25	26	27	28	29	30	31

December 24th - Christmas Eve
December 25th - Christmas Day
December 31st - New year's Eve
January 1st - New Year's Day

Bend Aero Modelers

Bend, Oregon | AMA District XI

Field Safety Guidelines

A. GENERAL

1. All pilots shall be current members of AMA. Proof of current AMA membership is required prior to flying at BAM.
2. Visiting AMA pilots and new members of BAM shall receive a safety orientation by one of BAM's members prior to their first flight.
3. Pilots shall ensure flight operations in accordance with AMA's Safety Code and these Field Safety Guidelines at all times.
4. Pilots are responsible for the safe operation of their aircraft at all times.
5. All guests, spectators, children, and pets shall be supervised by a BAM member at all times while inside the flying field (fenced area) and are encouraged to remain behind the pit tables.
6. Pilots shall always secure/restrain running or armed aircraft.
7. R/C cars and other surface vehicles are prohibited anywhere inside the flying field (fenced area) during active flight operation.
8. Smoking is prohibited anywhere inside the flying field (fenced area).
9. The consumption of alcoholic beverages before or during flight is prohibited.

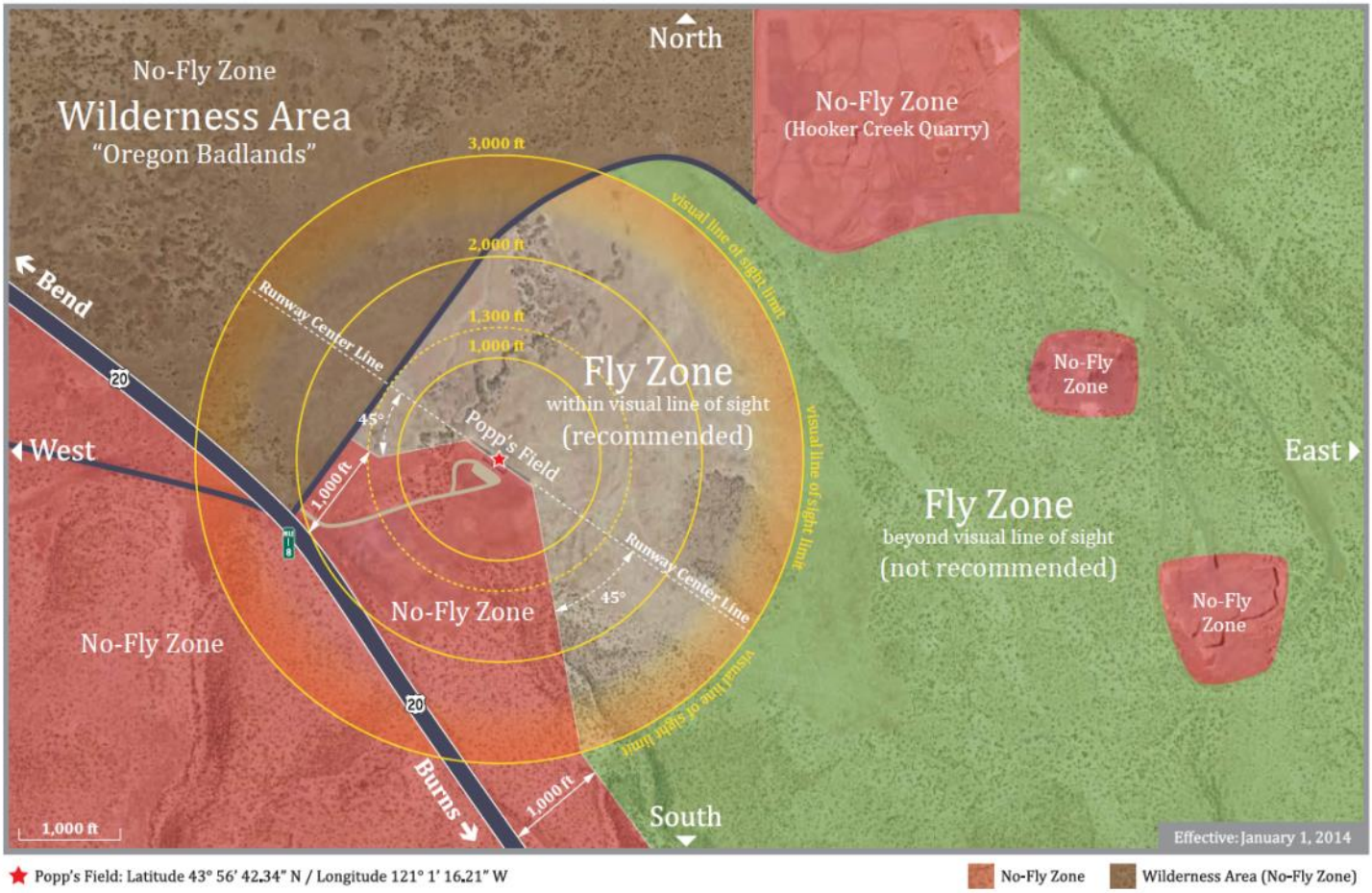
B. PRE-FLIGHT OPERATION

1. Pilots that use AM/FM radio equipment (50 MHz, 53 MHz, and 72 MHz) shall possess the appropriate frequency pin.
2. Pilots shall place their AMA card on the respective channel pin on the frequency board. This does not apply to pilots using 2.4 GHz transmitters.
3. Pilots shall not start/run their aircraft in the pit area.
4. For extended engine tuning and troubleshooting procedures (e.g., more than usually needed to start the engine), pilots shall use the marked areas designated for tune-ups, break-in and troubleshooting.
5. Pilots shall never leave their aircraft unattended while the aircraft is running or armed even if it is secured and restrained.

C. FLIGHT OPERATION

1. Pilots shall only taxi aircraft on the taxiways and runway. No taxiing is permitted in the pit area.
2. While flying, pilots must remain behind the safety fence.
3. Pilots shall verbally communicate their intentions during takeoffs, landings, low passes, touch-and-gos, and emergencies.
4. Pilots shall always fly their aircraft north of the centerline of the runway and remain within the approved fly zones (see fly zone map for details).
5. Only pilots and a supervised helper are permitted beyond the safety fence (e.g., to retrieve an aircraft).
6. Landing aircraft have the right of way. Dead-stick landings shall be called as such and given immediate right of way.
7. Aircraft shall not take off from the taxiways south of the safety fence.
8. Aircraft shall not land on the taxiways at any time.
9. Pilots shall call all maiden flights prior to flight. All other aircraft shall be grounded until the maiden flight has been completed.

Fly / No Fly Zone's for Popp's Field



Academy of Model Aeronautics National Model Aircraft Safety Code

Effective January 1, 2014

A. **GENERAL**: A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. It may not exceed limitations of this code and is intended exclusively for sport, recreation, education and/or competition. All model flights must be conducted in accordance with this safety code and any additional rules specific to the flying site.

1. Model aircraft will not be flown:
   (a) In a careless or reckless manner.
   (b) At a location where model aircraft activities are prohibited.
2. Model aircraft pilots will:
   (a) Yield the right of way to all human-carrying aircraft.
   (b) See and avoid all aircraft and a spotter must be used when appropriate. (AMA Document #540-D.)
   (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport without notifying the airport operator.
   (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
   (e) Not exceed a takeoff weight, including fuel, of 55 pounds unless in compliance with the AMA Large Model Airplane program. (AMA Document 520-A.)
   (f) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft. (This does not apply to model aircraft flown indoors.)
   (g) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
   (h) Not operate model aircraft while under the influence of alcohol or while using any drug that could adversely affect the pilot's ability to safely control the model.
   (i) Not operate model aircraft carrying pyrotechnic devices that explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property.
   Exceptions:
   - Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
   - Rocket motors (using solid propellant) up to a G-series size may be used provided they remain attached to the model during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code but may not be launched from model aircraft.
   - Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document. (AMA Document #718.)

   (j) Not operate a turbine-powered aircraft, unless in compliance with the AMA turbine regulations. (AMA Document #510-A.)
3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:
   (a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event.
   (b) An inexperienced pilot is assisted by an experienced pilot.
4. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

B. **RADIO CONTROL (RC)**

1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
2. A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
3. At all flying sites a safety line(s) must be established in front of which all flying takes place. (AMA Document #706.)
   (a) Only personnel associated with flying the model aircraft are allowed at or in front of the safety line.
   (b) At air shows or demonstrations, a straight safety line must be established.
   (c) An area away from the safety line must be maintained for spectators.
   (d) Intentional flying behind the safety line is prohibited.
4. RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
5. RC model aircraft will not knowingly operate within three (3) miles of any pre-existing flying site without a frequency-management agreement. (AMA Documents #922 and #923.)
6. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flightline.
7. Under no circumstances may a pilot or other person touch an outdoor model aircraft in flight while it is still under power, except to divert it from striking an individual.
8. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times. Hand-held illumination systems are inadequate for night flying operations.
9. The pilot of an RC model aircraft shall:
   (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
   (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.
   (c) Fly using the assistance of autopilot or stabilization system only in accordance with the procedures outlined in AMA Document #560.

C. **FREE FLIGHT**

1. Must be at least 100 feet downwind of spectators and automobile parking when the model aircraft is launched.
2. Launch area must be clear of all individuals except mechanics, officials, and other fliers.
3. An effective device will be used to extinguish any fuse on the model aircraft after the fuse has completed its function.

D. **CONTROL LINE**

1. The complete control system (including the safety thong where applicable) must have an inspection and pull test prior to flying.
2. The pull test will be in accordance with the current Competition Regulations for the applicable model aircraft category.
3. Model aircraft not fitting a specific category shall use those pull-test requirements as indicated for Control Line Precision Aerobatics.
4. The flying area must be clear of all utility wires or poles and a model aircraft will not be flown closer than 50 feet to any above-ground electric utility lines.
5. The flying area must be clear of all nonessential participants and spectators before the engine is started.