



CHAPTER 613

March 2006

(Chapter 613 web site)

www.eaa-chapter613.org

News and Views: Tom Edwards

The pancake breakfast is moving! If you haven't heard, it's moving to Atlantic Aviation @ BTV on Sunday March 19th, 2006. We wanted to make it more convenient for our southern contingency to join us. It's the usual day and time, 9-11 with a meeting to follow, but if a few show up early to help set up I'm sure you will be put to work. Pull into the parking lot and go around to the back hangar door. It used to be Innotech and FBO Avcenter. I'm sure everyone has been by it several times. Fly-ins also welcome! If you get there early, a few extra electric skillets or griddles will be appreciated. We won't have 220 volts available for the regular cook stove.

I had to go out and fly today as the weather was beautiful. I shook out the cobwebs and got current again. Winter wasn't too bad this year and I'm everyone is looking towards flying on a regular basis. With this nice weather I can't decide if I should get in a few last days of skiing or a couple of flights. Bill Yendrzski and I were debating and hangar flying each time I passed him on the lift line at Smuggs.

On the TV side of things. I was veggin' out on the treadmill, watching Timothy Dalton as 007 in *License to Kill*. If you need a little entertainment, watch 007 lasso a C-172 from a helicopter and water-ski behind a float equipped Stationair. Perhaps TSA and the Air Force could have taken the errant C-152 out of the Washington ADIZ with a little help from Bond, James Bond!

I also want to ask everyone's help. When you are out flying around, boring a hole through the skies to that favorite place, how about passing a few tips over to me so I can pass it along to others. Good or bad, I'm sure other flyers would like to know about the great hamburger or camping area!

FEBRUARY MINUTES BY TOM EDWARDS

The February meeting was called to order at 09:51 by president Tony Speranza. Minutes of January's meeting was accepted and approved as published in last month's newsletter.

Tony Speranza and Moe Boisvert were thanked for their first attempt for thrilling us with their culinary skills. They fed us a pile of pancakes and plenty of sausages. Aside from a little help with the cantankerous grill they did a great job and decided to try it again next month. That idea was killed when George Coy said



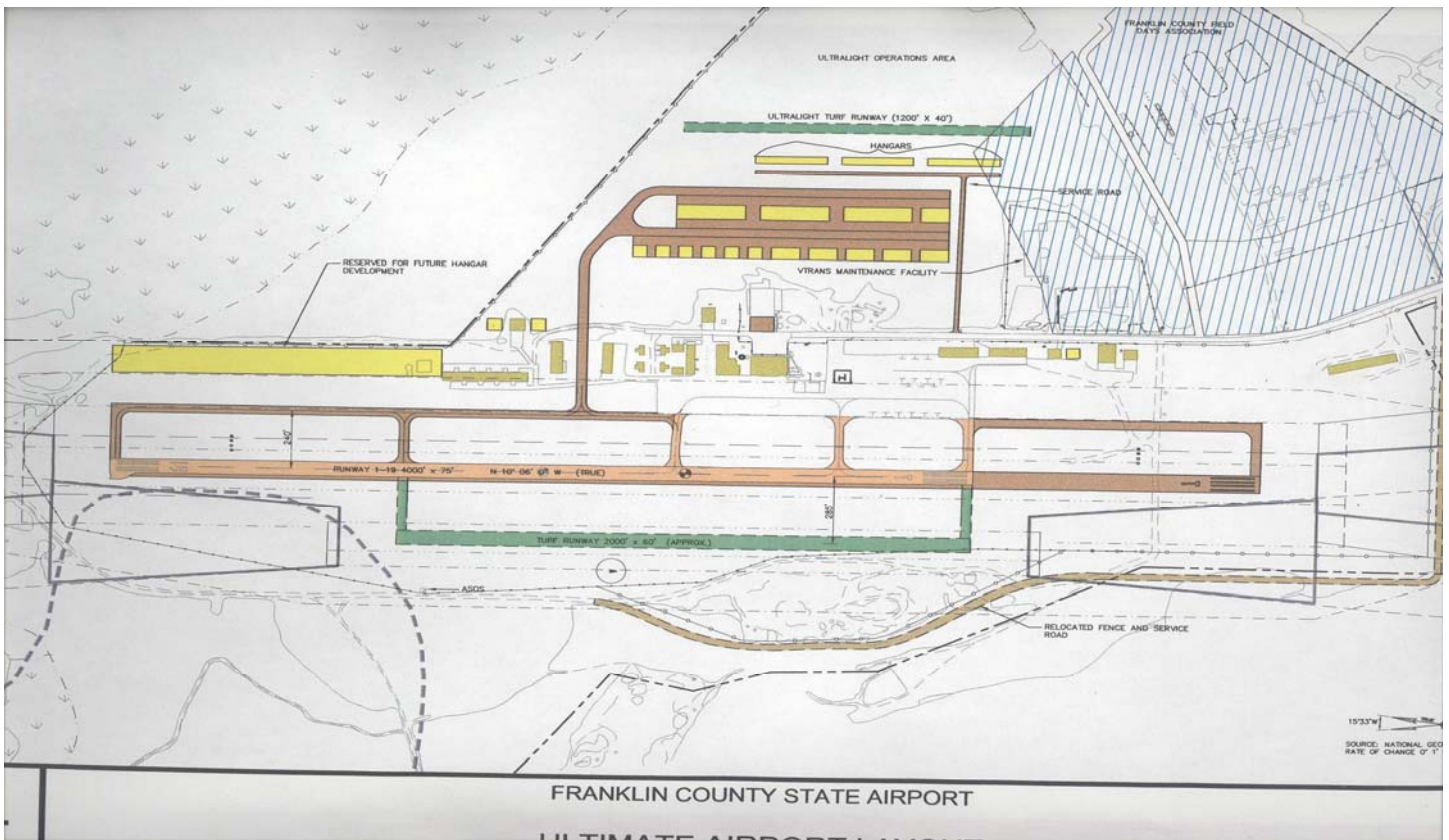
the March breakfast was his for St. Patrick's Day! Can anyone say Green Pancakes? George will be joined by Don Taylor for March's meeting.

Treasurer, Steve Couzelis, was not in attendance but submitted the treasurer's report for this issue's publication: General fund balance of \$9661.83, Roberti Scholarship Fund \$1085.21, Mary J. McGrath of \$39,723.61.

There was no scholarship committee report due to **Frank Gibney's** absence.

Don Taylor reported no Young Eagle Flights this year.

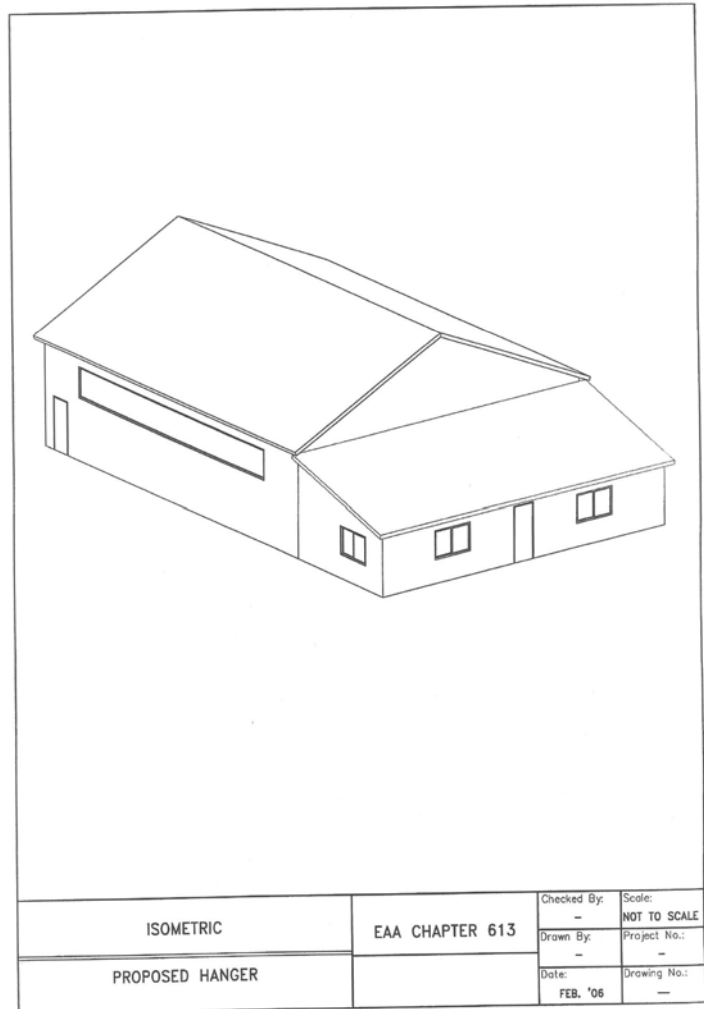
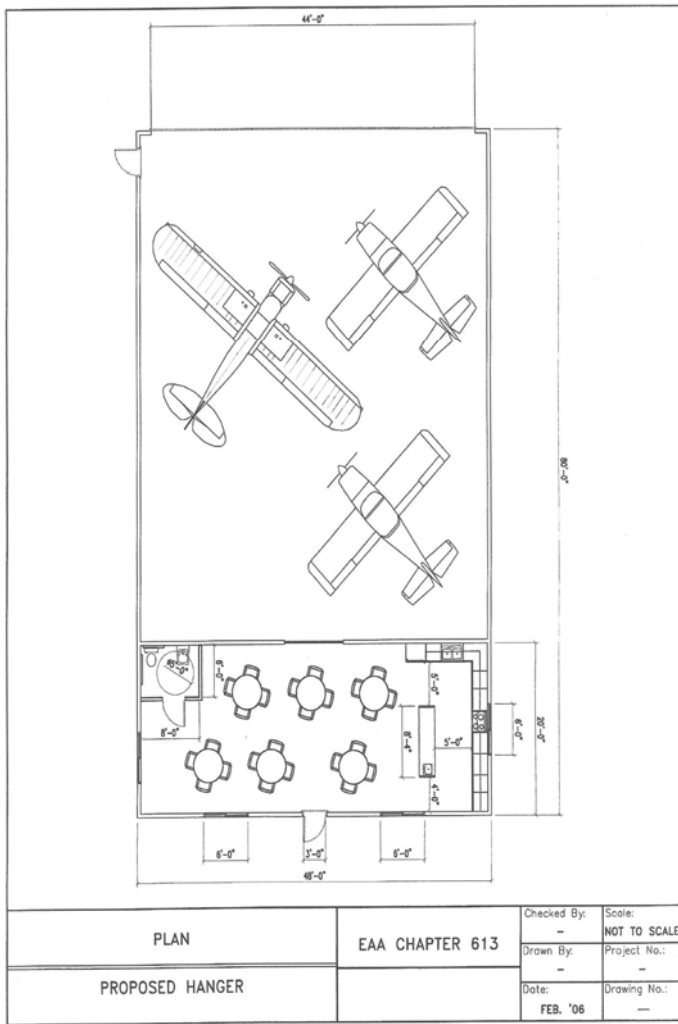
George Coy commented on the Dufresne-Henry meeting on the future of FSO. They presented a new layout of the airport, including a full length parallel taxi way and relocation of the turf runway and the ultra-light field. There are also several areas left for hangar growth. I have scanned in a copy of what the intended look of the airport might be. Organizing the airport to keep in line with the FAA Design Standards was taken into consideration.



The club hangar was the next order of business. The lot has increased in size to 64 x 150 feet. Tony is expected to sign the no-cost lease with the state before the March meeting. Tony will also contact Tyler Hart to start the permitting process. It was brought up that for some reason the hangar was not built, the permit could be sold to someone else to regain these expenditures.

Jim Baker presented some drawings on the proposed hangar. The hangar is basically 48' x 60' with an extra 20' addition to add a classroom and kitchen facilities. See the scans on the next page! There was a discussion

about having the hangar built with storage trusses. Due to the long span it was felt the trusses could not hold the extra load but we will have an engineer look into the design problems.



Don Taylor and **Tom Edwards** will look into designing a brochure to help raise 501-c3 tax free donations for the hangar. We decided to name the hangar the “**EAA Chapter 613 Aviation Education Center.**” We have the possibility of free fill for the cost of fuel to move it into the lot. We need to raise areas of the lot almost 5 feet!



We also need to for a committee to come up with a plan for the use of the **AEC**. Who can use the hangar and for what period of time? How about non-aviation groups? We are contacting other clubs with hangars to see what their regulations are. **Tony Speranza** gave me an article from Bill Hanna from EAA Chapter 55, *A Primer on Chapter Hangars* to share with everyone. Due to the length, I will bring copies to the next meeting to share and I will have Dick Bayer put a copy on the website. I can also mail a copy to anyone interested. This article asks a lot of questions of us to help us decide on our hangar.

Tom Edwards also asked about a “Reason to Fly Challenge.” Last year there was an article in Sport Aviation about a club that had an informal fly-out contest. The flights challenged pilots to learn new skills by flying to

different airports sharpen skills. Tom asked Chuck Robiltaille to ask the Shelburne armchair coffee flyers to come up with some challenges. We could offer certificates to meet a certain challenge and present awards at Cabin Fever Frolic for those unusual flight stories!

Finally the 50-50 drawing was held. Since Steve missed the meeting we had no tickets to sell and since **Marge Butterfield** would have won it anyway we unanimously decided to awards a 50-50 split with Marge and the club a grand total of NADA!

The meeting was adjourned at 10:57

Favorite Links

www.vermontairports.com www.greenmountainflyers.org
www.aflyer.com www.eaa.org

Flight Advisor Corner: Hobie Tomlinson Flying with Skis

Last Month we finished our series on **Night Operations**. This month I thought I would start a series on **Flying with Skis**. I debated this a bit, as this as been a very mild winter in Northern Vermont. I don't remember a year with as little ice on the lake, or so little snow. But, when it comes to Vermont winters I try to remember that famous quote of Yogi Berra, "*It ain't over till it over*". So, I decided to go ahead.



Skiplanes are normally single engine, conventional gear (tailwheel) airplanes to which skis have been added, so we will assume this type of aircraft for our discussion. Skis affect the operation and performance of these aircraft during ground handling, taxi, takeoff, flight operations and landing.

Airplanes skis can be made of wood, composites or aluminum, with some having a polyethylene plastic sheathing bonded or riveted to the bottom. A long, wide ski type works best on powdery, light snow, while a narrower ski is best for hard-packed snow or ice. The most common type is a wide, flat ski with aluminum or steel runners on the bottom.

Ski designs are of two categories, **Plain** and **Combination**. Plain skis only allow the aircraft to be used on snow or ice, while the combination ski allows the wheels to also be used for plowed runway operations.

- **Plain Ski Types:**
 - **Wheel Replacement Skis** are mounted on the wheel axils after the wheels have been removed.
 - **Clamp-On Skis** attach to the airplane tires, benefiting from the extra shock absorbing effect of the tire.
 - **Roll-On or Full Board Skis** are similar to the clamp-on type, except the mounting bypasses the tires which no longer carry any side loads. Tire cushioning effect remains, however.
- **Combination Ski Types:**
 - **Retractable Skis** are extended into place for operation on snow or moved to the retracted position for operation on plowed runways. The retraction mechanism is usually powered by a hydraulic pump although some use a crank.
 - **Penetration Skis** have the wheel partially extending through an opening in the ski. This allows the aircraft to be operated from both snow and plowed surfaces. Although it is less expensive and lighter than the retractable ski, it gives poorer performance. The extended wheel causes extra drag when operating on snow and the ski has poor ground clearance on plowed surfaces.

To start with, let's look at some of the various kinds of operating conditions which we can encounter while flying on skis. These are: **Types of Snow**, **Types of Ice**, **Surface Environments** and **Lighting Conditions**.

- **Types of Snow:**
 - **Powder Snow** is what eastern skiers read about. It is a “dry” snow with a low water content occurring at low ambient temperatures.
 - **Wet Snow** is more common in New England and has high moisture content, occurring during warmer temperatures near the freezing point.
 - **Granular Snow** occurs when wet snow is subject to a temperature drop, causing it to “ball up” and/or Crust over.
- **Types of Ice:**
 - **Glaze Ice** is what eastern skiers know about. It is wet snow that has been packed down and frozen, sometimes forming an ice pack.
 - **Clear Ice** occurs when liquid water freezes smoothly over a surface with a transparent appearance. This can occur during freezing rain or by water leaching over a surface area.
 - **Glare Ice** is the ice boaters dream. It is a smooth sheet of ice with no deformities, cracks or other irregularities to the surface. It is exceeding slippery with a coefficient of friction near zero. This usually occurs when lakes freeze over under zero wind conditions with no precipitation occurring. It can also form if a thin layer of water occurs on frozen lakes (due to rain or melting), then refreezes. (Natures Zamboni machine).
- **Surface Environments:**
 - **Glaciers** are sloping snow or ice packs occurring in the far north (or far South) and/or at high elevations. The last ones disappeared from New England thousands of years ago.
 - **Tundra** is a large area of grass clumps supporting snow cover, mostly occurring in Northern Canada and Alaska.
 - **Frozen Lakes** are frozen bodies of water (with or without snow cover) and are the staple of New England. As is often said, Vermont is one of the few places where ordinary men can walk on water 4 months of the year!
- **Lighting Conditions:**
 - **Flat Light** occurs during an overcast or broken cloud condition with intermittent sunlight. Terrain features take on varying shades of white and may appear taller, shorter or wider than they really are. (Anyone who has skied in these conditions knows how difficult it is to judge the trail.) The danger in flying is not realizing that your depth perception has been compromised, which can have serious consequences in hilly terrain. Takeoffs or landings should not be attempted in flat light conditions, especially at unfamiliar strips.
 - **Whiteout** conditions exist when visual references to the horizon cannot be established. This can occur (even during clear skies) when flying in valleys where the walls are obscured by snow or fog. Maintain controlled flight by reference to the flight instruments and climb out of the valley. Needless to say, takeoff and landings should not be attempted under whiteout conditions.
 - **Night** is the last condition and its implications are obvious. Night operations from unlighted airstrips or surfaces are not recommended.

Preflight for skiplanes include all the things you would do any flight, plus some extra considerations. Some of these are: **Cold Weather Gear**, **Survival Equipment**, **Aircraft Equipment** and **Ski Preflight**.

- **Cold Weather Gear** should be carried for all winter, single engine operations, but is especially important in skiplane flying when off/remote airport operations are contemplated. Ensure everyone has adequate cold weather gear to remain outside for extended periods, including winter footwear. Sunglasses are a must in bright light and are recommended even on cloudy days. Snow blindness is real and the glare can destroy depth perception.
- **Survival Equipment** is advised and may be required by law in some locations. A local hiking store can help put a good, cold weather kit together and there are some excellent books/videos on the subject. If any remote location flying is contemplated, one of the new “406” satellite based ELTs would be a very prudent investment.
- **Aircraft Equipment** will depend on the type of operations planned. If the aircraft is going to be parked outside for any length of time, portable tiedowns, a camping shovel and some wooden slats to keep the skis from freezing to the surface are recommended. If outside overnight, add flashlight, a set of aircraft covers and for very cold temperatures (below 10 degrees F) an engine cover and catalytic heater.
- **Ski Preflight:**

- **Skis** should be examined for damage, delamination, security, condition of any polyethylene sheathing and general condition.
- **Hardware** should be checked for security and condition. Ensure that cables and bungees are properly adjusted.
- **Retracting Mechanism** (on skis so equipped) should not be cycled on the ground. Check hydraulic fluid level, hydraulic lines for leaks, cables for fraying and cable ends for security.
- **Tire Pressure** should be checked on installations where the wheels are not removed. This is especially true when the aircraft is moving from a heated hangar to cold ambient temperatures.
- **Tailwheel** inspection is important when not using a tail ski, as the tailwheel and rudder can be easily damaged. Pay special attention to the tailwheel spring and rudder cables. If using a tail ski, check for security.
- **Ski Freedom** is the last one to not overlook. It is easier to free the skis now than after start. If they are frozen to the surface, first try gently swinging the tail at the rear fuselage or rocking the wings at the struts. If this does not work, the skis will need to be dug out with the camping shovel which we brought.

Starting requires some extra thought in skiplanes, as there are no brakes. If the aircraft is one which needs to be hand propped, it should be tied down during start and propped from behind the propeller, as a seaplane. Other aircraft may be tied down or have the skis chocked for engine start, warmup and runup. Insure the area in front of the airplane is clear, in case it starts moving forward after start!

If chocks or tiedowns are unavailable, snow mounds may be built in front of the skis for starting. They should be high enough to hold the aircraft at low power, but be able to be taxied over when ready to depart. Normal cold weather starting techniques should be used. Consider preheat, as a cold soaked engine can require three times the normal amperage to crank the engine, not to mention the excessive wear caused poor initial lubrication.

If the battery should become depleted in an unsuccessful start, it needs to be removed and/or recharged immediately. The electrolyte will freeze in a discharged battery. If the engine is subsequently started and the battery subjected to charging, it could explode.

This looks like a good place to break for this month and we will wrap up with flight operations next month. The thought for this month is: “Every prudent man dealeth with knowledge.” So until next month, be sure to **Think Right to Fli-Rite.**



2006 Skiplane fly-in by Hugh Schoelzel

Safety Tip by Don Taylor

This tip is intended for aircraft that are certified for flight into known icing conditions. Non-certified aircraft must exit any icing conditions immediately.

Carry extra fuel in icing conditions, extra power is needed because of increased aerodynamic drag. Additionally, since carburetor heat is used, fuel consumption will increase. Other than extra fuel, keep the aircraft as light as possible. The more weight, the slower the climb and therefore, the more time spent in ice.

Induction System Ice

Not all aircraft ice is structural; induction icing is the cause of many accidents. There are two kinds of induction system icing: carburetor icing effecting carburetor engines and air intake blockage, which effects both carbureted and fuel injected engines.

Induction icing accidents top the charts as the number one cause of icing accidents, comprising a whopping 52%. Carburetors can ice up when flying in clear air. The envelope for the most severe buildup of carburetor ice is between 60 and 70% relative humidity and 20-70 degrees Fahrenheit.

As you can see, carburetor can occur almost any time of the year!

Did you Know? By Don Taylor

A brief history of the N number

Like most things in aviation, the N number has its own story to tell. The Torrance airport in California recently chased the N number's history. Shortly after World War I, an international convention was called in Paris to assign each country a unique registration mark. The US delegation chose the letter N, perhaps to signify a national number rather than allowing each state to handle aircraft registrations. Ecuador got E-E, Greece received S-G, and Japan, J. Congress later established secondary letters such as C for commercial aircraft. Older airplanes commonly had the NC designations.

Young Eagles: Donald Taylor

We have no pilots reporting Young Eagle Flights for this year. International Young Eagles Day is Saturday June 10, 2006 at Franklin County Airport. We'll need plenty of help from pilots and ground crew. Find the details here at a later date!



EAA Young Eagles Facts

The young eagle program was launched July 30, 1992. Since then over 1.2 million have received a ride through the Young Eagles program. 1.2 Young Eagles represents approximately 240 young people for each public use airport in the country. Nearly 40,000 EAA Members have volunteered their time and aircraft to participate as Young Eagle Leaders. The average number flown per pilot is 30 and individual numbers range from 1 to over 3,400! On average 235 Young Eagles are added to the world's largest logbook every day of the year.

Flight leader experience levels range from private pilots to airline transport pilots. Young eagle flights have take place in nearly every type of aircraft including standard factory built, amateur built, antiques, classics, warbirds, aerobatic, jets, helicopters, balloons and gliders.

Children from more than 90 different countries have become Young Eagles.

More than 1,913,043 gallons of aviation fuel has been donated by EAA members, participating FBOs and associated participants. (based on 11 gallons per hour) Fuel sales generated an estimated another \$5,260,868. (based on an average price of \$3.00/gallon) These figures do not include other direct costs of flying such as oil, brakes, tires, etc.

Calendar of Events

March 18, 2006	IFR Refresher, Middlebury, 9-4, Call Dick Ferno 802-433-6691
March 19, 2006	Pancake Breakfast, Atlantic Aviation (BTV) 9-11. Meeting to follow
April 4-10, 2006	Some thing called Sun 'n Fun in Lakeland Florida
April 8, 2006	IFR Refresher, Newport, 9-4, Call Dick Ferno 802-433-6691
April 16, 2006	Pancake Breakfast, Franklin County Airport (FSO) 9-11. Meeting to follow
April 22, 2006	New England Aviation Expo, KASH, 8-5:00
June 10, 2006	International Young Eagles Day, (FSO) Details to follow

Dick Ferno is planning an IFR refresher course in Middlebury, March 18 and Newport, April 8, 2006, for those of you wishing to catch up on a few skills. The cost is \$125 and lunch will be provided. He plans on reviewing weather, regulations and clearances to name a few. He also plans on covering GPS approached and equipment. Dick plans a snow day for each class in case we have a nasty spring storm. You can call Dick to register or for more information at 802-433-6691 or email angus@innevi.com.

Please post the next page!

EAA Chapter 613

Pancake Breakfast

Sunday, March 19, 2006

Atlantic Aviation @ BTV

9:00 until 11:00

Chapter meeting to follow

We are bringing the meeting to Burlington to allow more of the southern members to join us for breakfast. We are working on several projects, the most important being the hangar we are building at FSO. Bring along a friend and your ideas!

Look for the banner in the parking lot for the entrance to the breakfast!

EAA CHAPTER 613
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FIRST CLASS MAIL



March 2006

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