

# YAWSTRING

NEWSLETTER OF THE BOEING EMPLOYEE'S SOARING CLUB

Volume XV

April / May 2005

Issue #3

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Think about the lift and drool!



Pix by S. Kasprzyk

## All Members Meeting

Our Annual *All Members Meeting* was held on Tuesday March 22, 2005 at the *Seattle Opera Scenic Studios* in Renton, WA 98055. Even though the meeting was well publicized, only about 30 folks showed up, which left us short of a quorum. The issues discussed were:

1. Adjustment of our rates & dues to reflect current costs,
2. Constitutional amendment to reduce the duration of our trial memberships from 1 year to 90 days,
3. A general discussion regarding the club, its operations, and future possibilities.

The official minutes of that meeting are available to all members on the member-section of our Web page at <http://www.boeingsoaring.com/> (On the left hand side of that page, follow down to "Members Area", click on that and log-in per the directions on the next page. It is simple. I will summarize the issues and their discussion here.

### 1. Adjustment of our rates & dues to reflect current costs, and

Marty Gibbins reviewed our financial condition showing our income and expenses, budget for 2005, and the cost of operations.

As in previous years, the big ticket items are glider parts and maintenance including annuals, insurance, fuel, and towplane parts and maintenance. Unfortunately, our an-

nual income is somewhat less than our expenses. This means that our cash balance is continuing to erode. We discussed the proposed budget for 2005. If we continue with last year's budget, the income for 2005 will just cover expenses without allowance for reserve funds. Pierre inquired about the state of the reserved funds noting that the Pawnee will reach TBO (Time Before Overhaul) in some 250 hours. We should plan for an engine overhaul or replacement at that time. It is clear that we are not funding our reserve funds adequately. Much of the increase on our costs is due to a 20% fuel increase this year. Somehow we must find a way to increase our income.

There are currently 65 members that pay active-member dues and 20 that pay inactive-member dues. We also get some income from new member initiation fees and from trial memberships.

Ways to increase our income would include a change to the credit given to trial members when they join after take their flight. But this would make a difference of only a few hundred dollars. Other suggestions include changing glider rental rates by the hour. There is no major increase in income to be had this way, and the bookkeeping required to obtain these funds would be very time consuming. Ben Harrison suggested having a premium fee for EPH flying, especially with our hi-performance gliders. Raising of all glider fees as well as tow fees would help. Pierre points out that an increase of \$1.00 a month in dues will raise almost \$800. Against all of that is the need

keep our cost to the members in line with other clubs or risk losing members.

Phil Grate brought up another approach: Get a consensus from the club regarding the direction it wants to go and raise money from the membership for that shared vision. Michael Moore noted that the first order of business is budget stabilization. This could be achieved with the current proposal of rate increases. Once stabilization is reached, we then must grow the club membership. This would give us more flexibility. If rates go up too much, people will leave. If we keep the monthly dues low, it will be easier to grow the club. And that could be done by holding open houses once or twice a year. They were very effective for increasing membership in earlier years. It was determined that it is the prerogative of the board to adjust fees. The board should use the results of these discussions as a sense of direction during its deliberations, as a sense of the room when the issue is discussed at the board meeting. [Ed: See the next article for the Board results ]

### 2. Constitutional amendment to reduce the duration of our trial memberships from 1 year to 90 days.

Tony Puglisi explained a proposal that would limit the trial membership to either 90 days or thirty days after the member takes their flight, whichever is shorter. The reason for the change is to minimize bookkeeping, accept the realization that those serious about joining will do so sooner rather than later, and minimize mailing expenses to those people in the event they do not have e-mail. Making a change to our Constitution is a 3-step process:

1. Make a proposal and submit it to a General- or a Board-Meeting for a vote (simple majority) to submit the change to the general membership.
2. Discuss the change at a general membership meeting.
3. Submit the change to a write-in vote to the membership, with a 2/3 yes-vote of the members choosing to vote.

The members present supported the Board-brought measure, thus items 1 & 2 were met and a write-in election will be held to make the change.

*(Editor's Note: Subsequent to that decision, while preparing for the mail-in vote, our Secretary found several items in our constitution, where real events and circumstances have overrun the written word, requiring additional updating in several other places. This updating is in work and will be processed in accordance with our current constitution (as outlined in steps 1 – 3 above)*

### 3. General discussion regarding the club, its operations, and future possibilities...

- A. Keith noted that the encampment would be from 6 to 10 June. Also, help would be needed to host the nationals and region 8 competitions in late June/July. Both BESC tow planes will be used during the con-

tests. This will help the contest as well as provide income for us.

- B. Heinz mentioned that the folks should not place our canopy covers on the ground. Any wind or prop-wash will cause them to pick up dirt which will then get ground into the Canopy.
- C. Tow pilots are also reminded that that our insurance says that no passengers are allowed in the tow-plane during glider-towing operations; however, licensed pilots who are trying to qualify as tow pilot are permitted to occupy the 2<sup>nd</sup> seat.

## Board Decisions

### Flying Rates and Charges Are Going Up!

At the April 5, 2005 BESC Board Meeting, the board took up the thorny issue of Club finances. After long, and at times heated debate about the state of affairs the a new set of *BESC Rates and Charges* was established. In summary, these charges will take effect starting May 1st, 2005:

- Glider Flight Fee - any single seat or 2-place \$10.00 per flight regardless of length
- Launch: \$10 per flight (aka hook-up fee)
- Tow: \$0.80 per 100 ft
- Tow Membership \$3.00/day
- Tow Plane Fee: \$9.00 per 10th hour tachometer time for retrieves and other reasons.
- Block time: \$150.00 for one calendar year (beginning in January), for unlimited number of flights in any Club **single seat** glider

See the full-details Page at

<http://www.boeingsoaring.com/rates.html>.

## FAA News

### FAA's AeroSafe Newsletter

Be sure to register your email-address with the FAA at <http://faasafety.gov/> and look for the *Register-link* in the top left-hand side of the page. Once you register and fill out your Preferences List, the FAA will keep you informed about the Safety effort. This replaces the *AeroSafe Newsletter* which is no longer being mailed by the FAA (Cost redux effort). In addition to being able to register at that site, you will also find a lot of other interesting safety items on that page.

### Electronic Version of FARs

I have run across an electronic Version of the FAR's. Actually this internet address

<http://www.gpoaccess.gov/ecfr/> covers all the Federal Regulations, but it is not quite the official version: They say: "The Electronic Code of Federal Regulations (e-CFR) is a prototype of a currently updated version of the Code of Federal Regulations (CFR). The e-CFR prototype is a demonstration project. It is not an official legal edition of the CFR. The e-CFR prototype is authorized and

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maintained by the National Archives and Records Administration's (NARA) Office of the Federal Register (OFR) and the Government Printing Office (GPO). The OFR updates the material in the e-CFR on a frequent basis."

Try it, you might like it.

## Airmen and DUIs

If you have been caught driving under the influence (DUI) or it happens to you in the future you should know that the DUI/DWI Enforcement Program requires airmen to report alcohol and related motor vehicle actions (MVA) to the FAA. It also provides authority for an enforcement action to be issued against airmen who receive multiple MVA's within a three year period.

The final rule can be found in Title 14, Code of Federal Regulations (CFR), Part 61. {Editor Note:Try the URL-address from the above article} For more information on this subject visit <http://asi.faa.gov/duidwi/>.

## Contests at EPH

The Region 8 Soaring Championships will be held in Ephrata from June 27 - July 2, 2005, and the U.S. National Open Class Soaring Championships at the same place from June 28 - July 7, 2005.

Raylene and Jay Todd are the Contest Managers. Even if you don't fly in the contest, participation in a national-level contest is great fun, gets you up close and personal with the movers of our sport, and you will be able to listen in on all the tall tales.

So, please mark several days on your calendars somewhere along June 26 to July 7, email or call Raylene or Jay and tell them you want to be a part of the contest. They will need all the help they can get. And you won't regret it. For further information contact Jay & Raylene Todd at: [glider3d@msn.com](mailto:glider3d@msn.com).

## BESC Newsbytes

### Welcome New Members!

The last several month have been great for soaring. So great, that BESC has gained several new members. Please welcome H. Peter Gschwender, James La Mantia, and Rachel Zwillenberg. So if you see some one new on the flight-line, introduce yourself and welcome our new members and see that they get all their service they deserve. And, all new, or not-so-new members, if you have a question, pick on any of those folks on the field and ask. Remember, the only dumb questions are those which don't get asked and should have been.

### EPH Check-flights

All new-member pilots who are at Ephrata for the first time, will need check-flights at EPH. Please note that you will need to schedule this check-flight during encamp-

ment. This is the only time that BESC will have a two-place gliders at EPH. Check outs in tow planes is not considered an acceptable alternative by the BESC Board.

### The L-33 is going to Ephrata

David Marshall has volunteered to pull the L-33 Solo across the mountains to Ephrata. I trust he will find help to assemble her, and try her out this weekend. Drive carefully and fly safe, David.

### Flying in Ephrata is Great!

Lots of glowing reports are coming from those who were there last weekend, like Pierre Parent, Alan Kirlin and Keith Purves. Keith writes: "This last weekend I was up for a 3.5 hour flight. About 150 miles round trip. Just familiarizing myself with 2F again. I joined up with Alan Kirlin in 304AK for some fun flying from Mansfield to Steamboat Rock and off towards Wilbur. Helping each other find the good thermals.

### Glider Expo

On Saturday and Sunday, March 19 and 20, 10 AM to 5 PM, the member clubs of the Seattle Glider Council presented *Soaring Expo 2005*. BESC was well represented courtesy of a large effort by a few members. This display of our L-33 Solo Glider and the Membership-drive probably resulted in the 2 to 3 new members.

### New Web Design

Dan Teifke, the BESC webmaster has revamped the BESC Web Site in a big way. It is now a much better communications tool for the club. Go take a look at it at <http://www.boeingsoaring.com/>. Follow the navigation list on the left-hand side.

Not only does Dan maintain an accurate calendar, the web design also includes a new **Members-Only** section. It gives a clue about the way to log on to that. If you don't remember the hint, call your favorite board member.

As a result of this "Limited Access" Section the Board has decided to put the **Membership List** and the **Board Meeting Minutes** on the web. YAWSTRING will endeavor to report the board decisions, however copies of the minutes are available on the web. Thanks and a great Hurray! To Dan Teifke

### Photo Of The Month

Along with the new Web-Face, our Webmaster Dan is starting a "Photo of the Month" section. There are a lot of digital cameras out there these days, and it'd be fun to share some of the pictures that get taken by the various members of the club. So, send your favorite digital snapshot from club activities on the ground, from the air, people, airplanes, whatever. Then, once a month our Webmaster will choose one (or more if its a good month) to publish on our web site. Sometimes a photo is all you need, but if a short explanation is required (a sentence or three), send that along as well. We'll keep an archive (within reason) so over time we can build up a little photo journal of club activity. Send you digital photos to Dan Teifke at [soar@teifke.net](mailto:soar@teifke.net). And, go look at the pictures.

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## Operations Manager split in two

The current Ops Manager (and Vice President) Keith Purves noted that he expects to spend a lot of time in EPH this summer and was concerned that not enough attention will be paid to AWO operations. Therefore, the Board decided to divide the Ops Manager position into an AWO and EPH operations manager. Keith Purves will be the EPH manager and Lynn Weller will be the AWO manager. Current rules will be updated to cover this change.

## Tow Lines

Keith organised 1250 feet of quarter inch polypropylene line, but had a hard time finding Tost rings. He found 4 in the hangar and 12 Schweitzer rings. The line was cut to lengths and new four ropes are now available. Thanks, Keith!

## Missing License Plate

The missing Plate for the L-23 trailer is has been replaced with a new one. It is temporarily mounted on the trailer. Heinz will bring a drill with rivets, and fix affix it permanently..

## X-Country Seminar

The SGC is working to organize the *First Annual Cross Country Seminar* over the Memorial Day weekend. The seminar will consist of classroom time followed by assigning students to a mentor pilot. The student and mentor pilot will accomplish a cross country flight together using team flying. If you can contribute or if you would like to participate, contact Ron Bellamy.

## Encampment

The BESC Ephrata Encampment is scheduled for 6/4/05 - 6/12/05. Who wants to organise some fun stuff to do?

## Soaring Safari to Alvord Oregon

The Soaring Safari to the desert at Alvord, Oregon, organized by Bob Duncan, is coming along well. Alvord is about a 2-hrs drive east of Burns, OR (20 miles from Fields, OR) It is scheduled for July 7-19. Your editor guesses that it's designed for the really tough Glider Pilots. You either bring your sleeping bag and sleep on the ground, in a tent, your car or someone's motor home. But it is CHEAP: about \$5.00 per person/day for the BLM permit. Plus chip in for gas for the tow car (each person brings 5 gallons) and you have to provide your own food. But the soaring is supposed to be great.

Bob mentions that those of you who have never been to the Alvord and/or who are unable to get away for a week, you might consider getting together with your power friends and fly down for the day. Split the rental on a C-172 or something. If you have any interest, please contact Bob Duncan at [n6tu@comcast.net](mailto:n6tu@comcast.net).

## State Records in the News

Did you see the April 2005 issue of Soaring? Ten New Washington-State were records set. By whom and where, you ask. Well it was done in June 2004 at Ephrata by Tom Kryche, Nelson Funston, John Gilbert, and Jean-Claude Hauchecorne. Great going guys!

## AWO Airport News

Most of you are aware that the Arlington airport has a major project going on. That project will finish extending Bravo to the end of R/W 16 and construct a new taxiway (Echo) that will connect R/W 16 and R/W 11. The contract has been awarded to NW Construction. Both runways may be affected one day or another when the work is being done. The majority of the time the impact will consist of a displaced threshold.

We will only close the runway as a last resort. All ultralight traffic will be using the turf on the north side of the X off runway rather than the south side. For detailed information about the plans, or current impacts, please stop by the office.

## Dates of interest

- XC Seminar at EPH (TBD) May 28 – 30 (Memorial Day)
- BESC Encampment at EPH June 4 - 12
- Apple Cup Aerobatic Contest June 17 - 19
- National & Region 8 Competition June 27 - July 7
- Alvord Safari: July 9th – 17th
- Evergreen Encampment at EPH July 8-15
- Evergreen Montana Expedition July 16 – 26
- EPH Club House Clean-up: May 28/29; June 4/5; during encampment; June 11/12; September 17/18.

## Safety

### Sleeping & Alertness

*From Fatigue Countermeasures Group web site*

#### Good sleep habits

- Keep a regular sleep and wake schedule as much as possible; protect sleep time.
- Develop & practice a regular pre-sleep routine to teach your mind and body that it is time to relax and fall asleep.
- Use the bedroom only for sleep-- avoid work, worry, or exercise.
- If hungry, eat a light snack; don't eat or drink much before bedtime.
- Avoid alcohol and caffeine before bed.
- Use physical and/or mental relaxation techniques as needed to fall asleep.
- If you don't fall asleep in 30 minutes, get out of bed and do something boring, then try again.

#### Create a good sleep environment, including:

- Darkness (use an eye mask or heavy curtains if needed)
- Quiet (turn off phone, use earplugs)
- Comfortable temperature (cooler tends to be better than warmer, but people differ)
- Comfortable sleep surface (bed)

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## Lifestyle tips for good sleep:

- Exercise regularly (but not too near bedtime -- no less than 4 hours prior)
- Eat a balanced diet

## Why should naps be of certain lengths?

When taking a nap just before flying, it is important to minimize the chances of going into deep NREM sleep (stages 3 and 4). If awakened out of deep sleep, you may continue to feel groggy, sleepy, or disoriented for 10-15 minutes. This phenomenon is called sleep inertia.

Therefore, limiting a nap duration to 45 minutes or less will decrease the chances of entering deep sleep.

When you nap at times (other than immediately before flying), then the nap can be longer. In this case, a nap longer than 2 hours is likely to get an individual through at least one NREM/REM cycle.

## Links:

For other information concerning the Group, research, and policy issues in alertness management:

<http://human-factors.arc.nasa.gov/zteam/fcp/FCP.pubs.html>  
<http://human-factors.arc.nasa.gov/zteam/fcp/sleep2.html>

National Sleep Foundation for information on various issues related to sleep and alertness management:

<http://www.sleepfoundation.org/>

Medical Facts for Pilots from the Federal Aviation Administration Office of Aerospace Medicine Civil Aerospace Medical Institute:

<http://www.cami.jccbi.gov/AAM-400A/400brochure.html>

Aircraft Owners and Pilots Association Air Safety Foundation Safety Pilot Articles:

<http://www.aopa.org/asf/subjectidx.html>

Flight Safety Foundation link to publications concerning accident prevention, airport operations, human factors and aviation medicine, and other related topics:

[http://www.flightsafety.org/pubs\\_home.html](http://www.flightsafety.org/pubs_home.html)

National Business Aviation Association Safety News:

<http://www.nbaa.org/safety/>

NASA Aviation Safety Reporting System for information on purpose, policy, and aviation incidents submitted and entered into their database:

<http://asrs.arc.nasa.gov/>

National Transportation Safety Board information on aviation accidents, statistics, reporting procedures:

<http://www.nts.gov/aviation/aviation.htm>

## Training

### CFIG Scholarship Program

BESC is continuing the offer of a CFIG Scholarship Program. To qualify for application to the Scholarship Program, you must

1. have been a member of BESC for 1 year or more, and
2. have a Glider commercial rating.

Once approved for the program, you will qualify for reimbursement after you have passed:

3. the Fundamentals of Instruction knowledge test;

4. the CFIG knowledge test; and

5. the CFIG practical test.

You will then be reimbursed, up to a combined total limit of \$500, for your CFIG Knowledge and Practical Test fees, and BESC glider and tow fees incurred during the pursuit of the CFIG rating. In return, you are obligating yourself to be the flight instructor on the field for a minimum of 12 days over the next two years. Eligible members may apply to our Vice President Michael Moore. The BESC Executive Board will award the scholarship.

## In the Lee of Giants

### Riding high on mountain waves

From *AOPA Pilot*, December 2001

BY NATHAN A. FERGUSON

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Strapped in a fiberglass glider, the pressure demand oxygen system is forcing air into our lungs. We are climbing on the lee side of the snow-capped Sierra Nevada at the end of a 200-foot tow rope and a question comes to my mind as we're heading for the rotor zone: When do I release?

Normally, this isn't a difficult question. There are three rules at Soar Minden, the current Mecca of mountain wave soaring in Minden, Nevada. You should yank the release knob if either the towplane or the glider rolls inverted; the tow pilot and the glider pilot get so mish-mashed in the horizontal tornado that they end up looking at each other; or when you connect with glass-smooth mountain wave — what Minden is famous for.

On a mid-April morning, as the melting snow is trickling down the peaks and the ski resorts are closing, we're flying a Grob 103, a type of glider I have a lot of faith in

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from many hours of flying one above the mountains in Utah. Andrew McFall, Soar Minden's operations manager, sits in the rear seat. He is a veteran of some 25,000 glider flights and he has that construction-worker tan from spending much of his life under a plastic canopy. Most of the time the rotor here is benign, but it has been known to generate forces of plus or minus 15 Gs. "There are probably three days a year that it will knock your teeth out," McFall says. "You have to attack rotor with a certain amount of fear." He ought to know. He's been rolled over twice in the towplane but never in a glider. Tow pilots try to tow above and perpendicular to the rotor so that the glider pitches instead of rolls. Sometimes you can see the air churning where rotor usually resides at the mountain-peak level, but it also likes to move around. The location of the rotor is established on the first flight of the day, or what McFall calls the test flight. Last year two days were deemed too wild to fly, even for Minden.

As we near the rotor zone, McFall tells me to forget about maintaining precise formation and concentrate on keeping the towplane in sight. A key is to keep slack out of the towline. If things go awry, loops can form and work their way back, threatening to squeeze the life out of the glider like a boa constrictor. My left hand is on the dive brake lever to slow the slippery craft and carefully take out the

slack if things get interesting. Surprisingly, we only get knocked around slightly, not like having your shins battered by the bottom of the instrument panel as your feet fly off the rudder pedals in rough air. When we connect with the wave, it's unmistakable and so perfectly smooth. There's no feeling, no sudden rush in airspeed, just the instruments indicating a climb. No question. It's time to release.

We head toward Heavenly Valley Ski Resort and climb through a hole in the clouds, trying to remain within the lift band. When low in wave you have to circle or make turns back and forth to stay above a reference point on the ground until you get high enough and the winds aloft equalize your forward speed. Climbing at 400 to 500 fpm — weak for wave — we quickly make our way through 12,000 feet when McFall notices something peculiar. The clouds are closing — our hole, our escape hatch, is disappearing. I open the dive brakes, point the nose down, and descend at the optimum rate. We shoot back through it just as it closes.

*Continued on page 11*

## Our Airplane Fleet Status

Check BESC Fleet Status on the BESC Web at <http://www.boeingsoaring.com/>, on the *Members Area*

<b>Aircraft</b>	<b>Current Location</b>	<b>Maintenance Manager</b>	<b>Next Annual Due</b>	<b>Status</b>
Pawnee N6917Z	Arlington	Pierre J. Parent	2/28/05	Available for towing servive
Super Cub N7474D	Arlington	Michael E. Moore	1/31/05	Available for towing servive
Schweizer 1-26 N7742S	Ephrata	Heinz Gehlhaar	1/31/06	On the ramp ready for use
Schweizer 1-34 N7644	Arlington	Harlan G. Albee	1/31/06	On the ramp ready for use
Blanik L23 N264BA	Arlington	Bruce Byrnett	1/31/06	On the ramp ready for use
Blanik L23 N265BA	Arlington	David Marshall	1/31/06	On the ramp ready for use
Blanik L33 N355BA	Ephrata	Craig Funston	1/31/06	In the trailer ready for use
Grob Astir N141SS	Ephrata	Keith C. Purves	1/31/06	In the trailer ready for use
Parachutes	Arlington	Michael D. Clarke	May 2005	Available for use
Golf Cart	Arlington	David L. Owen		Available for use

Last updated May4, 2005.

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## BESC Board

Here is the BESC Board. These folks spend a lot of their time to keep us all flying. Now is your opportunity to participate in this effort by offering your help to one our Officers. Step up and volunteer to be an understudy, or be **bold** and take the whole job. Surely, there is an area of the Club which you can improve. Please come forward. The Club can use all the help it can get.

### Officers:

Office	Name	Phone	Mail	E-mail
President	Mike Moore	H (206)-790-7949	--	mmore@attglobal.net
Vice President	Keith Purves	W (206)-296-0647 H (425)-255-7452	--	purvesk@quixnet.net
Secretary	Tony Puglisi	W (425)-294-8140 H (206)-367-6980	03-RE	tonypam@comcast.net
Treasurer	Martin Gibbins	W (206)-655-2727 H (425)-644-4696	4E-11	martin.n.gibbins@boeing.com
C.F.&S.O.	Ron Bellamy	W (425)-338-5175 H (425)-827-8672	--	ronbellamy@msn.com
Operations-EPH New division	Keith Purves	W (206)-296-0647 H (425)-255-7452	--	purvesk@quixnet.net
Operations-AWO New division	Lynn Weller	(425) 235-1610		williamlynnw@msn.com
Pawnee Manager	Pierre Parent	H (360)-653-2613	--	pierrejparent@earthlink.net
Super Cub Manager	Mike Moore	H (206)-790-7949	--	mmore@attglobal.net

### Sailplane Managers

Glider	Name	Phone	E-mail
N7742S, 1-26	Heinz Gehlhaar	H (206)-932-5428	heinz@foxinternet.net
N7644 (1-34)	Gene Albee	H (253)-350-9793	phlyre@comcast.net
N355BA (L-33)	Craig Funston	H (360)-671-8913	cfunston@geigerengineers.com
N264BA (L-23)	Bruce Byrnett	H (425)-222-6895	byrnett@yahoo.com
N265BA (L-23)	David Marshall	H (206)-406-8046	david.s.marshall@boeing.com
N141SS (Astir)	Keith Purves	W (206)-205-8554 H (425)-255-7452	purvesk@quixnet.net

### Non-Officers:

Office	Name	Phone	E-mail
Chief Tow Pilot	Pierre Parent	H (360)-653-2613	pierrejparent@earthlink.net
Bookkeeper	Neil Householder, Ast	H (425)-382-5435	householderneilf@qwest.net
Flight Log Keeper	Dan Teifke	W (425)-201-2022 H (425)-483-9347	treehouse@teifke.net
Newsletter	Heinz Gehlhaar	H (206)-932-5428	heinz@foxinternet.net
Golf Cart Manager	David Owen	H (360)-654-0462	mylodao@yahoo.com
Webmaster	Dan Teifke	W (425)-201-2022 H (425)-483-9347	treehouse@teifke.net
Librarian	Tony Puglisi	W (425)-342-0501 H (206)-367-6980	tonypam@comcast.net

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## Instructors & Tow Pilots

### **BESC Instructors**

This is a list of our Instructors. When you fly with them, worry about their well-being; like getting a break, getting something to drink and getting lunch. If it were not for the CFGs almost none of us would be flying.

Steve Baker  
Ron Bellamy  
Rich Blow  
Chuck Flora

Al Gregg  
Skip Gregorie  
John Hope  
Stan Kasprzyk @

Kapi Parks  
Dave Reusch  
Lynn Weller

@ Denotes SSA Instructor

Thanks a lot to all those CFGs who sign-up weekend after weekend. The students do appreciate your time and effort.

### **BESC Tow Pilots**

Remember the last time when soaring was grounded until a tow pilot could be found to replace the one who did not sign up or forgot to show up? Then you really find out how much our tow pilots mean to us!

While they do love and live to fly, we subject them to long hours in often not too nice conditions, and we grumble when they take a break to take on fuel, food and to exchange liquids. Because our tow pilot pay schedule is quite low (very close to zero, I'd say) we BESC members surely want the below-named folks to know that we have high regard for your skill and your contribution to BESC. May you always be 200 feet ahead of us!

### **TOW Pilots**

Allan, Bill  
Bellamy, Ron+  
Blow, Rich+  
Chism, Linda  
Flora, Chuck\*\*  
Funston, Nelson

Hope, John+ \*\*  
Johnson, Eric+  
Kasprowicz, Krzys  
Koehn, Mike  
McNeil, Jim

Moore, Michael+ \*\*  
Niedermeyer, Carl \*\*  
Northcraft, Steve\*\*  
Parent, Pierre\*\*  
Todd, Jay\*\*

+ Denotes Commercial Power Rating, \*\* Denotes BECS Check Pilot

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## YAWSTRING Masthead

### YAWSTRING

Newsletter of the **Boeing Employees Soaring Club**

Available at <http://www.boeingsoaring.com/yaw.html>

Newsletter editing and layout: Heinz Gehlhaar, [heinz@foxinternet.net](mailto:heinz@foxinternet.net)

The newsletter is published whenever the editor gets "a round tuit". Serious attempts are being made to publish it once a month. Usually it gets out sometimes in the middle of the month. Please send round tuits!

Also, **Please Please** send me any errors you see in the Newsletter. Call me at 206-932-5428.

# YAWSTRING

April / May 2005

## BESC Schedule

### May

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Field Mgr - Marshall Instructor - Baker Tow Pilot - Kasprwicz	2	3	4	5	6	7 Field Mgr - Albee Instructor - Hope Tow Pilot - Blow
8 Field Mgr - OPEN Instructor - OPEN Tow Pilot - OPEN	9	10	11	12	13	14 Field Mgr - OPEN Instructor - Bellamy Tow Pilot - McNeil
15 Field Mgr - Owen Instructor - Kasprzyk Tow Pilot - P. Parent	16	17	18	19	20	21 Field Mgr - OPEN Instructor - Weller Tow Pilot - OPEN
22 Field Mgr - OPEN Instructor - Flora Tow Pilot - Koehn	23	24	25	26	27	28 Field Mgr - W. Moore Instructor - Reusch Tow Pilot - M. Moore
29 Field Mgr - OPEN Instructor - OPEN Tow Pilot - OPEN	30	31				

### June

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4 BESC EPH Encampment
5 BESC EPH Encampment	6 BESC EPH Encampment	7 BESC EPH Encampment	8 BESC EPH Encampment	9 BESC EPH Encampment	10 BESC EPH Encampment	11 BESC EPH Encampment
12 BESC EPH Encampment	13	14	15	16	17 Apple Cup Aerobatic Contest, EPH	18 Apple Cup Aerobatic Contest, EPH
19 Apple Cup Aerobatic Contest, EPH	20	21	22	23	24	25
26	27 Region 8 Contest, EPH	28 Region 8 Contest, EPH	29 National Open Championship - EPH Region 8 Contest, EPH	30 National Open Championship - EPH Region 8 Contest, EPH		

Do you see all the **OPEN** boxes? Please contact Michael Moore and tell him that you would like to see your name in one of those boxes. For updated schedules see the BESC Website.

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## Instructions for Field Managers:

Field managers have the following duties and responsibilities.

- Show up on time at the start of operations (9:30 am at the latest). Please obtain your own substitute if unable to support the schedule.
- Coordinate with the towpilot and instructor to determine details of operations for the day.
- Start and maintain the Flight Operations List, track aircraft, times, etc.
- Ensure all paper work is in order, especially waivers for trial membership flights.
- Ensure trial members pay in advance prior to launching.
- Crack the whip if necessary, to have the glider ready to launch when the towplane arrives.
- Keep vigilance on the changing conditions and ensure safe operations are being practiced.
- Ensure that Canopy Covers are properly stowed. (Not on or near the ground. Wind will blow sand and dust into the soft inside fabric, which then will scratch our \$1000+ Canopies.) Be sure they are folded up carefully and put in back of a car or in the Golf-cart.
- Ensure the gliders are properly tied down and secured at the end of the flying day. (This means simply dou-

ble check the gliders after they have been secured. Check for flight control locks, proper tie down practice, etc.)

- Ensure the hangar lights are turned off and the hangar is secured.
- Ensure all combination locks are hangar are reset to 0-0-0-0.
- Using the stack of addressed, postage paid envelopes available in our hanger at Arlington (on top of the filing cabinet and well marked), mail the Flight Operations List and the Tow Cards (from the Towpilots) to:  
Dan Teifke  
17110 105th Ave NE  
Bothell, WA 98011
- Report any incidents, accidents or unsafe activity to a board member as soon as practicable.
- Notify the next-scheduled towpilot and instructor & Field Manager, the Maintenance Manager and other relevant person(s) of issues which affect the operations of the following day or weekend; e.g. the towplane suffers a mechanical breakdown, or some glider is not flyable.

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## For Sale / Want to buy

*Members can post ads here. Send them to Heinz*

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### **Glider Partnership for Sale**

For Sale: Half partnership in Grob G-102 Astir "Unicorn". Asking \$9,000 OBO.  
Check out the photo in the BECS web site photo gallery.  
For more information call Steve Baker at 425-226-8207.

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### **Wanted: Canopy Slider Window**

The slider window is missing in one of our L-23s. If you have an old canopy with a slider window, please donate it to BECS. Just any of the pices would be good enough. I will re-build anything missing.  
Please send it to Heinz.

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### **Wanted: YAWSTRING Proofreaders**

Your editor is looking for some good proofreaders. The pay is good (Volunteer Union Scale). And the working conditions are great. You work at the place of your choice and spend as much time as you need.  
Please apply at [heinz@foxinternet.net](mailto:heinz@foxinternet.net). (We are a nondiscriminatory employer)

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### In the Lee of Giants

*Continued from page 6*

McFall's concern is well founded. He had been caught above the gray abyss before when he was with a student. (Gliders normally don't pack IFR equipment.) They used the standard time-tested procedure to get down: Call ATC, trim for 50 knots, put the glider in a 10-degree bank, hold on to the shoulder straps, and stay off the controls. Since the controllers were able to get a radar paint, they gave McFall updates on his position so he would know where he was when they broke out. It worked perfectly. McFall is careful not to let this happen to us, though.

I have come to Minden to learn about these powerful forces that can bring down even the largest of airliners, hoping the wave will carry me up into the flight levels. For centuries mountain waves were shrouded in mystery as people gazed toward the heavens at eerie lenticular clouds that remained stationary above the peaks unlike other clouds that made smooth tracks across the sky. Gliders were the first to fully explore this phenomenon in a scientific way. They say that when you get high enough over the Carson Valley you can see the Pacific Ocean glistening in the distance some 200 miles away. It becomes all the more alluring.

The Sierra Nevada is an old mountain range that has been shaped over time by high winds into an aerodynamic structure like the top half of an airfoil. The range obstructs the wind — similar to a large boulder in a fast-moving stream — and sends it moving in a wavelike manner on the lee side of the range. Ideally, an inversion layer forms over the valley and the winds reach 25 knots at 10,000 feet, then pick up to 100 knots from the west at 30,000 feet. If the wind blows from roughly the same direction at different levels in a stable atmosphere, the wave will oscillate between the in-version layer and the jet stream. Glider pilots ride the wave crests while avoiding the tremendous downdrafts in between. The wave season typically starts in the fall and runs through spring. Just to show how powerful waves can be, McFall, while shooting a video about the sport last year, shut down the engine in a Piper Pawnee towplane and was able to climb at 400 fpm.

Soar Minden is one of two glider FBOs at Minden-Tahoe Airport. There is a buzz of foreign accents on the ramp, around the glider trailers, and over the airwaves. On a board in Soar Minden's operations building under the heading "Great Soaring Flights" Ed Peerens entered his 1988 field record set by taking a Grob 103 to 45,000 feet:

*"OVR Jack's Valley 100 percent O<sub>2</sub> whole FLT,"*

he wrote. And on April Fools' Day this year Steven L. Thornton gained 17,800 feet from his release at 9,000 feet:

*"Blown off tow in rotor, climbed in and notched in rotor — a really memorable flight,"* he wrote. This is no joke.

At 81, Hod Taylor still gives glider rides and lives for soaring. In 1967 he took a Standard Austria up to 42,800 feet over Colorado. Taylor says he was just *"goofing off."* Considering his age and susceptibility to decompression sickness, his personal limit is now 30,000 feet. *"I need a fix every once in a while,"* he says. Having experienced everything firsthand during 10,000 hours in gliders and 28,000 in airplanes, he's the obligatory old man at the airport who can sense disasters coming, representing an important body of knowledge that is rapidly disappearing from the soaring scene.

While hoping the wave will return, even though the timing has been off all year, I prepare for some lower-altitude thermal soaring in a single-seat Grob 102 as the cumulus cotton balls are starting to pop all over the valley in the unstable atmosphere — the antihero, so to speak, of wave development. Although Minden is known for going high in wave, it's also an excellent place for thermal soaring once the snow melts, the valley heats up, and the cloud bases rise with the burgeoning summer. Taylor is on the flight line, freely offering wisdom, wearing Nomex fighter-pilot gloves to keep his hands from being further ruined by the Nevada sun. Forget your oxygen mask? Just suck through the oxygen tube if you get high. No parachute? That's OK, you'll just be more vigilant in the pattern looking for traffic. You're not going to wear that hat, are you? The brim is too wide; you might miss a speck of sky that turns out to contain a fast-moving jet.

Minden has three adjacent wave windows — west, central, and east. Gliders are free to climb to 17,999 feet without ATC permission. When pilots in Minden are nearing the flight levels, Soar Minden calls Oakland Center and asks to have one of the windows opened. Once it's opened, all the gliders are cleared under VFR. Generally, the controllers give the gliders higher ceilings as needed. The window remains open unless things get backed up in the San Francisco Bay Area because of weather. When the wave is cooking in Minden, the small airplane pilots stay on the ground to avoid the high winds and turbulence, while commuter airline traffic shifts to the east. Many controllers have taken advantage of Soar Minden's open invitation that allows them to go on free wave flights. For high-speed cross-country flights in wave that have taken glider pilots nearly to Mexico from here, they stay below 18,000 feet so that they won't need clearances. Experienced wave pilots learn to read the clouds and can jump from one wave system to another. McFall calls it *"following the visible highway."*

As with most endeavors, the knowledge behind wave soaring builds on itself and the legends are not forgotten. Hans Deutschmann and Wolf Hirth discovered waves by accident in 1933 while soaring in the lee of Germany's Riesengebirge Mountains. Four years later, Joachim Kuettner, flying an open-cockpit Rhone Buzzard glider, broke a world record by climbing to 22,300 feet. Kuettner

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was hardly dressed for the conditions and narrowly survived frostbite with temperatures of 50 degrees Fahrenheit below zero. Not only did he experience the power of waves, further igniting his curiosity, he was an early survivor of oxygen deprivation. His fingers turned blue and he saw two suns, according to *Exploring the Monster* by Robert F. Whelan. Kuettner later left Germany to pursue his passion as a meteorologist in the United States. He would assume the role of project scientist for the Air Force-sponsored Sierra Wave Project, the first comprehensive study of mountain waves in Bishop, California. Glider pilots at that time had ventured into thunderheads, but the turbulence associated with rotor was found to be worse. Paul MacCready Jr., world champion, a three-time U.S. national soaring champion, and pioneer of human and solar-powered flight, was flying in Bishop before the Sierra Wave Project got under way. In a phone interview, MacCready reflected on one flight where he saw the wings on his Orlik II glider bend 6 feet from a brief 8-G encounter.

In 1951 and 1952 a small group, including such soaring legends as Bob Symons and John Robinson, modified two Pratt-Read gliders and routinely exceeded 40,000 feet as part of the project. They literally gave meaning to the words applied science. The pilots flew in a frigid, unpresurized environment in meteorological conditions that were not fully understood. But in a follow-up popularly called the Jet Stream Project, where glider pilots studied the jet stream with the assistance of B-29 and B-47 bombers, Larry Edgar found out what rotor can do. On April 25, 1955, his glider quickly disintegrated around him at 17,000 feet as he tried to avoid a swelling roll cloud. Then things became quiet. All he heard was wind noise, and he felt as if he were suspended in space, but he couldn't see because of the G forces, he wrote in *Soaring* magazine shortly after the experience. He pulled the ripcord and started to worry about being pulled into the upper flight levels. He had lost his helmet, boots, gloves, and oxygen mask, and the hose was broken off of his bailout oxygen bottle. As his vision slowly came back in one eye, he saw pieces of fabric and plywood from the Pratt-Read being carried up past him, disappearing in the roll cloud.

Miraculously, he survived the parachute landing without breaking any bones and fully recovered. As Whelan pointed out in his book, doctors determined that Edgar experienced a force of 20 negative Gs for 0.4 seconds in order to induce the damage to his eyes. While this event punctuated the power of rotor and raised awareness, it also gave scientists data to further explain the way waves function. They later determined that Edgar had experienced a rare kind of rotor where the wave dissipates all of its energy in one horrific oscillation.

Besides the risks of rotor encounters, any time a glider pilot ventures past 30,000 feet the danger increases dramatically. All you have to do is the simple math to arrive

at the potential conclusions. At 35,000 feet the FAA figures the pilot has 30 to 45 seconds to react coherently without oxygen. At 45,000 feet the time of useful consciousness is more like five to 15 seconds. Assuming there is an oxygen failure and your glider has, say, a maximum descent rate of 1,000 feet per minute, you won't get anywhere near a safe altitude in time. That's where the bailout bottle or a backup oxygen system comes in handy, as long as you notice the failure immediately and can react before the narrow window slams shut. If that's not enough, at these altitudes  $V_{NE}$  and stall speed come together in the thin air, creating a narrow edge the glider pilots have to ride. They call it the coffin corner.

The forecast continues to look less conducive for wave development over the next couple of days, and I begin to realize that my initial contact with the wave might be all that I'll see. After chasing some hawks and other gliders around the valley, I pay a visit to High Country Soaring across the street from Soar Minden. Mike Bradford, a regular who sits in the office, owns a casino but realizes extreme wave soaring can be a gamble where the odds are in favor of the house. Once when he was at 38,800 feet he noticed his friend in the rear seat was unconscious because the oxygen mask was leaking around his beard and they were at the limits of the diluter demand oxygen system. They descended to 25,000 and his friend went into convulsions. At 14,000 he was semiconscious. After they landed the man was groggy for hours and Bradford said his friend now has slight memory problems. Given the risks and cold temperatures, Bradford only goes wave soaring once a year.

Yet the statistics bode well for wave pilots who care to wager. A review of NTSB accident reports back to 1983 showed no fatalities that were attributed to waves. Besides Edgar's famous in-flight breakup, there was one death during but not associated with the Sierra Wave Project and that was because of an oxygen problem. But there's another factor that Bradford brings up — the potential damage to expensive racing gliders. When wave pilots want to come down, they come down fast, and the gel coat finish cools at a faster rate than the fiberglass, eventually causing cracking. While Soar Minden and High Country Soaring have brought a degree of professionalism and added safety to the area by offering wave checkouts, they are also the ones who end up with the expensive repair bills from pilots who don't want to risk their own craft.

Outside High Country's hangar is a huge Stemme-size box, fresh from the factory, owned by global adventurer Steve Fossett — another regular. Fossett himself plans to leave a mark in the world of soaring by going after the altitude record that currently stands at 49,009 feet, set by Robert Harris in 1986. To take things to the next level requires a quantum leap in technology and expense. An ambitious team with help from NASA is planning to build a glider capable of soaring to the far reaches of the strato-

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sphere, possibly beyond 100,000 feet. The project was dreamed up by retired test pilot Einer Enevoldson after high-altitude research confirmed the existence of stratospheric waves. The project's goal is purely scientific; to figure out the complex atmosphere by making the turbulent transition from mountain to stratospheric waves, while Fossett's record attempt will remain a sidebar to the mission. Called Perlan, the 95-foot-wingspan glider is named after rare mother-of-pearl clouds. It will require spacesuits (the team has acquired five from the Air Force used in the SR-71 and U-2 programs), an autopilot to keep the glider on course in the thin air, and a drogue chute to allow it to descend to a lower altitude so that it can regain control if it gets upset by turbulence. Fossett is putting up funding and will act as a pilot along with Enevoldson for the first phase. The team has modified an existing two-place Flugzeugbau 505M glider and will use it to study stratospheric waves over either New Zealand or Sweden. The glider has been outfitted with a 24-hour oxygen supply and full IFR avionics. The team hopes that by drumming up enough attention, it will ensure funding for Perlan.

For the past year Fossett has been learning about mountain waves over the Sierra Nevada by flying with Carl Herold, known locally as "Mr. Wave." Herold probably has more wave cross-country time than any other pilot in the world and has been conducting wave camps for decades. A retired aerospace engineer, Herold once managed

an average groundspeed of 190 knots in high winds while flying a glider from Mojave, California, to Minden. He also is no stranger to Flight Level 400 and believes he has personally experienced stratospheric waves. Herold flies with a transponder in his Schempp-Hirth Nimbus 3D glider and has no problem getting block altitude assignments from controllers when he's not in wave windows. Besides training Fossett, Herold is specializing in avionics and aircraft controls on the Perlan project. "Steve's not a daredevil. He really puts the faith in the people he's working with to fly safely," Herold says.

After five days of waiting and hoping, the wave doesn't come back. As I head from Reno to Las Vegas on an airliner, conforming to the seat in a puddle of disappointment, we cruise above 30,000 feet, precisely where I had wanted to be in a glider. The stories, the scientific discoveries that lay ahead, the brief meeting with the powerful wave intrigues me even more as I gaze out the window at the inhospitable environment. But as I look around at the other passengers I realize that they have no idea that engineless craft have been even higher than this. As Herold, who occasionally uses mathematical terms to describe such things as cumulus clouds, puts it, "People don't know how much energy is up there." My work here is not done. Minden, I shall see you again.

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*E-mail the author at [nate.ferguson@aopa.org](mailto:nate.ferguson@aopa.org).*

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## **What's Billion**

A billion seconds ago it was 1959.

A billion minutes ago Jesus was alive.

A billion hours ago our ancestors were living in the Stone Age.

A billion days ago no-one walked on two feet on earth.

A billion dollars ago, at the rate our government spends it, was only 8 hours and 20 minutes ago.

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## **Quotable Quotes**

"Flying the airplane is more important than radioing your plight to a person on the ground incapable of understanding or doing anything about it."

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"When a flight is proceeding incredibly well, something was forgotten."

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"Just remember, if you crash because of weather, your funeral will be held on a sunny day."

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If you leave me hanging on this limb, and don't send me any better stuff, it **will** get worse.

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