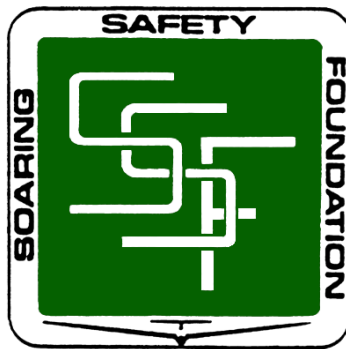


SAFETY OFFICER TRAINING GUIDE



Soaring Safety Foundation SAFETY OFFICER TRAINING GUIDE

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Compiled by Burt Compton JAN 25, 2007



“Who’s In Charge Here?”

Indeed, who takes the responsibility of managing a modern soaring club?

Each entity below takes a part in managing the club:

- Club Board of Directors
- Safety Officer
- Chief Flight Instructor
- Chief Towpilot
- Maintenance Director
- Ground Operations Director
- Glider Pilots

The Safety Officer is designated by the club Board of Directors to develop a safety program, interact with club members and cultivate a positive safety culture, in order to prevent accidents.

Let’s look at each entity in a soaring club and how the effective Safety Officer must interact with them.

Club Board of Directors

The Board creates the management position of Safety Officer.

The Board must support the Safety Officer’s authority in order for the Safety Officer to remain credible and effective.

The Board is ultimately responsible for the “safety culture” of the club because the Board must answer inquiries about incidents and accidents from:

- The individuals directly involved, their families and perhaps, their attorneys
- FAA / NTSB
- Insurance Underwriters / Adjusters
- The State Airport Commission / County or City Airport and Zoning Authorities
- Neighbors around the soaring site
- The Media
- All Club Members

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Club Safety Officer

Reports to the Board of Directors, which grants the Safety Officer the authority to implement safety programs, intervene as needed, and require remedial ground and flight training to glider pilots and towpilots who do not comply with FAA regulations or the club rules.

The Safety Officer coordinates safety aspects with
Flight Instructors
Tow Pilots
Ground Operations Director and Line Crew
Maintenance Officers
Glider Pilots, flying both club gliders or privately owned gliders

With this team of management individuals and / or a club safety committee, the Safety Officer accomplishes the following:

Develops a club operations manual, which includes the designated glider and towplane ground and flight patterns, ground vehicle movements and routes as well as a plan to control spectators and other individuals on the ground near the assembly, landing and takeoff areas.

Diagrams, to be posted and handouts of safety materials will be provided to all members, not just students or new pilots, on a regular basis.

Facilitates a consistent, site-specific Training Program with the Chief Flight Instructor.

Manages the condition of the taxiways, runways, and tiedown areas.

Identifies the launch and landing areas and establishes a fence or definite marked area for containing the movement of visitors and spectators with adequate signs and appropriate barriers.

Creates a safe environment for glider rides. Checks pilot certification and currency to give rides, whether "for hire" or for free. Gives guidance to the nature of the ride, especially for "first-timers".

Collects factual incident and accident reports, and attempts to measure the effectiveness of the safety program, operations manual, training syllabus, launch procedures and maintenance.

Maintains readable signs near the airport entrance road to guide emergency vehicles to the site.

Develops an Emergency Response Plan both as a document and with specific equipment to assist at an accident scene, such as crash tools, fire extinguishers and an adequate First Aid kit.

Plans daily safety briefings and periodic safety meetings, based on research of available materials such as:

Safety programs on the Soaring Safety Foundation website www.soaringsafety.org
Safety articles in "Soaring" magazine
FAA Safety publications provided by the local FSDO FAA Safety Team (FAAST) Manager
The FAA website www.faa.gov
FAA Regulations – a current copy of FAR's part 1, 43, 61, 91, 830.
Club Insurance Policy with pilot requirements, allowed use of the gliders and towplanes.
Aircraft Flight Manuals

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“Insurability” and the Well-Managed Club – the Safety Officer’s Role

Entities such as the FAA, the local airport owner, board or manager, the club members and the club’s insurance underwriters expect a soaring club to be well-managed.

What can this mean? Let’s go right to the bottom-line.

Insurance underwriters expect good management and are pleased to know that the club board has assigned specific jobs to the Safety Officer, Maintenance Officer, Chief Instructor and Chief Towpilot.

The insurance folks don’t necessarily need to see your operations manual or your training syllabus, but if they ask for it – perhaps after a loss – it is not only the quality of the club procedures they are measuring, but also the attitude of the club board about their safety culture.

Insurance companies want to know that the club is pro-active about preventing losses and genuinely interested in maintaining the club’s insurability.

Insurers want to do business with your club. They want to provide coverage in case of a loss. That’s what they do! However they are finding disturbing indications that some clubs are not pro-active about maintaining insurability, and a good safety culture.

For instance, imagine that a club filed a claim for damage to a glider after the pilot made a hard landing. Several questions may be asked by the insurance adjuster regarding the full name of the pilot, the towpilot, their FAA pilot certificate number, total flight time in the make and model aircraft, recent currency (per FAR’s) of the pilot (and the towpilot), the date of the pilots’ last flight review, name of the passenger, and contact information for the pilot, towpilot and passenger.

As Safety Officer, can you answer these questions about every glider pilot and towpilot in your club? Do you know the full name and contact information for every passenger given a glider ride?

Note: If your club is offering glider rides “for hire”, then the club may be holding itself out to the public like a commercial ride operator. Confirm your coverage for rides with your insurance broker.

Pilot Records. Maintain on file a pilot data form that is easily updated and easily retrieved.

Minimum information would include the glider pilot’s and towpilot’s

1. Name (full name as shown on their FAA pilot certificate).
2. Address (all pilots are required to update their address with FAA within 30 days of change).
3. Telephone numbers including cellphone – handy when overdue on a cross country flight.
4. Emergency contact information – who to call when they are overdue, sick or injured.
5. FAA Pilot Certificate number, ratings held and date issued.
6. A copy of their photo ID (now required by FAA) and if a foreign pilot, their passport.
7. Total glider and airplane pilot time including number of glider flights (type specific).
8. Currency, in recent flight time required for carrying passengers, or flying the towplane.
9. Flight Review, date and endorsement per the requirements of FAR 61.56 – in gliders.
10. Checkouts in club gliders including back-seat authorization, written tests accomplished.

“Insurability” and the Well-Managed Club
– the Safety Officer’s Role, *continued*

Pilot Records, *continued*.

Towpilots must have the appropriate pilot certificate, medical certificate, have a logbook endorsement for towing and be current for towing gliders by accomplishing at least 3 tows while accompanied by another current towpilot, or have been pilot in command of a glider being towed by an airplane. This is per FAR 61.69 and currency for the towpilot who is not glider rated or has not flown a PIC in a glider in the past 12 months is often overlooked.

Who’s Responsible? The FAR’s clearly state how each towpilot and glider pilot must maintain their own currency. It is sometimes heard “a pilot is responsible for maintaining currency, not the club!”

Think of it this way: If good “club management” is highly regarded by your insurance underwriters, the FAA, the airport owner, the club members, shouldn’t a monitoring system be in place to verify all the club pilots are “current”?

The Safety Officer must persuade the club board (secretary or treasurer) to update pilot records so the club members and managers have a high confidence level that all pilots are current and proficient.

Bottom-Line: A well managed club can maintain “insurability” with the insurance underwriters.

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Compiled by Burt Compton JAN 25, 2007

Safety Officer Coordination with the Chief Flight Instructor

Flight Reviews. Since all pilots must receive initial glider training, they tend to be the most informed about procedures and skills when studying for their Pre-Solo or FAA practical tests.

Certificated glider pilots are required to only have a flight review every 24 months, and not necessarily in a glider, by FAA Regulation CFR 61.56.

Therefore a gap in glider-specific proficiency develops when a certificated glider pilot flying club gliders or their private glider does not fly with a glider flight instructor on a regular basis to review glider-specific procedures.

A club program to have all glider pilots flying at the club, including visiting pilots, fly with a glider flight instructor at least once a year is a proactive method of improving pilot proficiency.

In addition, the flight instructors may identify weak points in the club pilots' depth of knowledge and glider-specific skills. This helps the Safety Officer modify the procedures and training topics that may need to be emphasized in the club operations manual and at safety meetings.

Training Syllabus. It is important that initial through recurrent training be consistent. One flight instructor teaching the old "square pattern" versus another flight instructor teaching the new "goal oriented approach to landing" may cause confusion in the mind of the pilots.

A "national" training syllabus (like in Britain) has not been viable due to the varied conditions across the USA, which lead to different techniques and procedures being taught. Local weather, flight patterns and airport operations vary greatly between soaring sites across the USA, so it is up to the Safety Officer and flight instructors to develop a working syllabus that is unique to the site, local weather and airspace, airport operations and flight manuals of the club gliders.

Several good books contain a model pre-solo to certificate syllabus, such as Tom Knauff's "Glider Basics" or "Transition to Gliders", as well as Bob Wander's "Learning to Fly Gliders" and "Guide to Flight Review" books. Bob also has a "Checkride Made Easy series for Private, Commercial and CFI candidates. The FAR's provide guidance for required training, and the FAA Practical Test Standards (PTS) clearly define the knowledge required and the maneuvers to be flown for the checkride.

Training Books and Resources. A list of all available training books is found in the bibliography section of the Soaring Safety Foundation website at www.soaringsafety.org

Training Log or Record. Besides the glider pilot's logbook, a training record should be developed so each instructor and the Safety Officer can track the progress of each student or "transition" pilot receiving training.

All student pilots must receive ground and flight training listed in FAR 61.87 in specific maneuvers and aeronautical knowledge for gliders BEFORE SOLO. Ground and Flight Training after solo is required by the FAA to prepare for the FAA Written and Practical Test. The appropriate FAA Practical Test Standards (PTS) must be part of the training course or syllabus.

All "transition" pilots (with FAA Private or Commercial fixed wing ratings) must also receive specific training before solo and before the Practical Test, per the FAA PTS.

Soaring Safety Foundation SAFETY OFFICER TRAINING GUIDE

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Compiled by Burt Compton JAN 25, 2007

Safety Officer Coordination with the Chief Flight Instructor, *continued*

Training Endorsements. In recent years, the FAA has been strict about the written form of the flight instructor's endorsements given for ground and flight training. The old days of a scribbled "OK for solo" in a student's logbook are gone. Specific endorsements have been developed and are listed in the new SSA/SSF Glider Pilot Logbook, available from the SSA merchandise department. Note that required ground training must be logged, and a space for logging this training time is provided in the new logbook. Also see FAR 61.39, which requires an endorsement recommending an applicant for the Practical Test. Pilot Examiners often call this "the hidden endorsement".

Launch Endorsements. Glider pilots must show an endorsement for the Type of Launch per FAR 61.31(j), or a logbook entry of a flight made by the specific type of launch made prior to August 4, 1997. This launch endorsement is often overlooked by glider flight instructors prior to first solo, and before recommending applicants for an FAA Practical Test.

FAA Advisory Circular AC-61-65 contains information on Practical Test prerequisites, and the recommended endorsements for ground and flight training for glider pilots and towpilots.

Pre-Solo Written Tests. Prior to solo flight, FAR 61.87 (b) requires that all Student Pilots pass a "Pre-Solo Written Test" created and administered by their flight instructor that includes testing that is specific to the airport, airspace, weather, and flight manual of each make and model of the glider to be flown solo.

Technically, a "transition" pilot need not take this test, as they already hold an FAA Airplane rating and therefore are not a "student pilot". However, the prudent glider flight instructor administers a glider type-specific Pre-Solo Written Test" to EVERY pilot before allowing first solo in any glider.

"Supervised Solo". In addition to the FAA requirements in FAR 61.195 (d), insurance underwriters have made it clear that they want the supervising flight instructor present – on the ground – before every student solo flight to supervise that student, check the pilot's logbook, analyze the weather, airport environment, and the aircraft.

Checkouts. A written test is common practice on "checkouts", and necessary to measure the pilot's knowledge of the airport procedures, airspace, local weather and the flight characteristics of the glider the pilot is about to solo. For single-seat glider checkouts, training based on the glider flight manual (POH) followed by a written test is very prudent. While field checks or glider specific checkouts of glider-rated pilots are not required by the FAA, administering and keeping a file of written testing may be regarded as good management by your insurance underwriters.

Checklists. Flight Instructors should agree upon a consistent form of pre-takeoff and pre-landing checklists. CDSIFTCBE is becoming the dominant pre-takeoff checklist. USTALL is becoming the dominant pre-landing checklist, best accomplished before entering the landing pattern.

Exceeding FAA Minimum Training Requirements. A review of the FAA regulations reveals that glider training requirements are minimal. A club (and flight instructor) that sets a reasonable high standard for proficiency of the pilots they train may reduce incidents and accidents. Maintaining a higher level of knowledge and skill is a prudent goal. Again, it is not the FAA who expects you to exceed the minimum standards, it may be your insurance underwriter. Club members may also appreciate that all of the club pilots are trained to a high standard of proficiency and confidence.

A well-written and updated operations manual, a site specific training syllabus, along with recurrent training, safety meetings and club imposed flight reviews help maintain this higher standard.

Soaring Safety Foundation SAFETY OFFICER TRAINING GUIDE

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Compiled by Burt Compton JAN 25, 2007

Safety Officer Coordination with the Chief Towpilot

Regulations. A Safety Officer should have a current copy of the FAA Regulations including Parts 1, 43, 61, 91, 830 and the Aeronautical Information Manual. In addition to the towpilot training and currency requirements in FAR 61.69, the Safety Officer should also be familiar with FAR 91.309, which discusses towline breaking strengths, weak links, communications requirements for towing in certain airspace, and rope drop management.

Aerobatic Flight. Most pilots will quickly quote an FAR about a maneuver that exceeds a bank of 60 degrees or a pitch up or down of 30 degrees. WRONG. This refers to the wearing of parachutes.

In FAR 91.303, FAA states that “aerobatic flight means an intentional maneuver involving an abrupt change in an aircraft’s attitude, an abnormal attitude, or abnormal acceleration, not necessary for normal flight.”

This correct definition of aerobatic flight may be used to modify the behavior of aggressive towpilots, especially those who feel a need to dive sharply or even roll into a split-S maneuver after (hopefully) the glider has released. The chance for a mid-air collision with another aircraft is higher when flying aggressively.

That understood, we should consider that our towpilots are often bored, tired, dehydrated, underfed and generally not appreciated for the fine job they do. Sometimes to fight the boredom, a bit of “fun” creeps into their descent back to the pattern. Unfortunately, as fun and speed increases, the chance of a collision increases and it can be fatal. Glider pilots usually experience close calls with diving towplanes (and their ropes) while the glider pilot is trying to locate a thermal below the release altitude. Although no statistic is created (by a near-miss), close-calls are happening far too often when towpilots fly aggressively. Further, by FAR 91.113, the towpilot must yield right-of-way to all gliders.

The “Rush” to Tow, and Pre-Tow Briefings. In the effort to serve the glider pilots, towpilots often feel a pressure to “hurry up”. Why? We are not flying the mail! There is no profit in rushing if it leads to an accident due to partially completed checklists, no positive control checks, or no briefing between glider pilot and towpilot.

FAA regulation 91.309(a)(5) clearly states that the towpilot and glider pilot have “agreed upon a general course of action, including takeoff and release signals, airspeeds and emergency procedures for each pilot.”

How does your club satisfy this regulation before every tow? Some say that because of our SSA Standard Signals, we do not have to accomplish the “agreed upon” part of this regulation, but where is that in writing from the FAA? Do you require a briefing of glider pilots and towpilots at the start of every day instead of every tow? What if one pilot misses the briefing? What is your responsibility under the FAA regulation, and possibly more important, to your insurance underwriter?

Glider pilots often (usually unintentionally) consider the tow as a means to an end. “Get me up there so I can go have some fun.” Like a ski lift to a skier, and the towpilot is the lowly ski lift operator.

The inconvenient, brutal dragging of a glider up to release point is hard work for both pilots. Lack of concentration can have fatal results for either pilot.

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Compiled by Burt Compton JAN 25, 2007

Safety Officer Coordination with the Chief Towpilot, *continued*

Proper Glider Tow Position. Just slightly above the towplane's wake is safest and most efficient. A glider pilot who gets dangerously high on tow causing the towplane to be tipped nose down and out of control is usually distracted by adjusting an air vent, setting a GPS, turning on an oxygen system, needlessly chatting on the radio or reaching for a water bottle, is a potential killer of towpilots.

Glider pilots who insist on zooming up to gain a few more feet of altitude just at release create a very dangerous situation for towpilots, by lifting the towplane tail and creating excessive drag.

Remember, towpilots rarely try to kill themselves, but some glider pilots, due to their inattention to their tow position, try to kill towpilots every time they launch. As Safety Officer, encourage your towpilots to report glider pilots who cannot stay in proper tow position, or release under excessive rope tension trying to "zoom" up for a few more feet. Glider pilots may need more ground and flight training on the dynamics of the aerotow, which can be provided by the club flight instructors.

SSA Standard Signals. There are 18 signals that a pre-solo pilot must know, and every glider and towpilot must know and use, according to FAA regulations.

A DVD available for free from the Soaring Safety Foundation is essential in training towpilots, glider pilots and ground crew. Use this DVD as a basis for a safety meeting, and actual practice, on all of the SSA Standard Signals.

Radio Calls Between Glider and Towplane. Gremlins creep into radio transmissions, eroding the effectiveness of using the radio instead of using the SSA Signals simultaneously. Stuck microphone switches, squelch turned up too high, volume too low, being "stepped on" by another transmission, and switching from local airport frequencies to the "glider" frequencies can lead to an important radio call being made, but never received. Use the SSA Signals simultaneously with the radio.

"Canopy and Airbrakes Closed and Locked" is a radio call the glider pilot should make to the towpilot just before takeoff. Towpilots may repeat back, "Understand your airbrakes are closed and locked." This exchange builds another barrier (after checklist is complete) that the glider pilot has indeed closed and locked these two checklist items which could cause a serious accident.

When transmitting on the radio, especially at an airport where airplane or helicopter traffic share the airport and radio frequency, the glider pilot should identify themselves as (for example) "Cirrus GLIDER four echo". This might alert the transient pilot (possibly of the new type "Cirrus" airplane) that there is glider activity around the airport, and perhaps the airplane pilot might yield right-of-way to the glider per FAR 91.113.

Towplane radio procedure, for example: "Piper TOWPLANE six xray departing runway nine, glider in tow." Again, this alerts transient aircraft – and gliders aloft – that a local aerotow is commencing, followed by a descent of a towplane trailing a 200 foot rope.

Safety Officer Coordination with the Chief Towpilot, *continued*

Towplane Pattern – Airborne. Generally, glider pilots prefer to be towed upwind of the airport. Tows downwind to a cloud that may be dissipating leave the glider pilot with only one option, a straight glide back to the airport. A tow upwind allows the glider pilot to explore in several directions after release, while drifting back towards the airport. Note that cumulus clouds may represent the “history” of lift. They are only the water vapor that was lifted aloft with the thermal, and now that thermal is gone, but the cloud remains for a while, giving false hope to the glider pilot.

Glider pilots also like to be towed to lift, but this is not an obligation of the towpilot. Towpilots must be alert for all air traffic and yield to gliders aloft. “Thermaling” the towplane in a steep turn in an attempt to remain in lift is possible, but sometimes takes the glider pilot by surprise. It is difficult – if not practiced – for the glider pilot to remain safely behind the towplane in a steep (more than 30 degrees) turn. The glider usually accelerates “high and wide” on the towplane, a position that is very difficult to resolve, except by premature release from tow.

If a towpilot wants to take a glider back to a thermal they have just passed, the towpilot may try a normal banked (20 degree) 270 degree turn, which may bring the towplane and glider back to the center of the thermal. In any case, the outcome of the tow should be based on safety, not seeking lift.

Towplanes returning to the airport must yield to the gliders aloft, and not dive the towplane or fly aggressively. A slow, cautious descent will also avoid “shock cooling” of the engine cylinders, which may lead to a loss of power on the subsequent tows, or down time for the towplane awaiting repairs.

Towplane Route – On the Ground. Towpilots must continuously look for obstacles, aircraft, people when taxiing the towplane. Looking away for just a moment to update the aircraft tow log is just not worth it. Stop the airplane, complete the task and be sure there is nothing in front of the towplane.

Propeller safety is essential. If anyone approaches the towplane, the towpilot should immediately shut down the engine. Bystanders think they see the prop, but are often injured by walking into it while bringing the towpilot a bottle of water, or chasing their hat into the propeller vortex. Leaving the engine running while the towpilot gets out of the airplane is absolutely forbidden. No excuses.

Towplane Fueling. Follow recommended fueling procedures to assure that the aircraft is grounded, and that the tanks are filled to the expected amount per the flight manual. A working, currently certified fire extinguisher inside the towplane and at the fuel pumps is important.

Running out of fuel is a common incident in glider towing. In the rush to make “one more” tow, towpilots sometimes forget to check fuel quantity by counting tows and by “dipsticking” the tanks. Fuel gauges are worthless. Dip the tanks. Keep count of the tows since last fueling, and note that for every VFR flight, the towplane must have a 30 minute fuel reserve per FAR 91.151.

Towropes. FAR 91.309 describe the breaking strength, but how do you know how strong a well-used towrope really is? You don't. A daily routine of inspecting and discarding towropes must be in place. This can be part of the towpilot's job, as well as the Ground Operations Director.

Safety Officer Coordination with the Chief Towpilot, *continued*

Towplane Maintenance. The club Safety Officer may not be an A & P mechanic, but obvious signs of wear, a rough running engine, a binding flight control are relatively easy to note. The towpilots must be encouraged to report discrepancies or “squawks” of any kind to the club Director of Maintenance, and given a means to do so. A “Squawk Sheet” in the towplane, and a chalk board in the hangar can be used to monitor items that need attention, and keep track of periodic maintenance dates or times.

Towpilots should always be given the discretion whether make the next tow if they are not completely satisfied with the towplane.

A clean towplane climbs better. Daily preflight inspection and cleaning the windshield are important to the safety of flight. Cleaning oil streaks from the belly can help locate an oil leak. Cleaning the bugs off of the leading edge and back side of the propeller, as well as the leading edge of the wings will give better climb performance. We clean every bug off our gliders for maximum performance, so why not the towplane as well.

Supervise Cleaning. When washing the towplane, use do not allow water into the fuel tanks, pitot and static system, or anywhere inside the airplane structure, where it might freeze overnight. Working around the propeller is very dangerous. Even with the prop stopped and the engine magnetos off, turning the prop just a bit may cause a magneto to fire, starting the engine. Cleaning must be supervised if not done by a towpilot.

Passengers in the Towplane. Many towplanes have seats for passengers. Your insurance policy may have restrictions about passengers riding in the towplane, especially if they pay a fee for the flight. For the towpilot, a passenger may be a distraction to the job of safely towing gliders.

Formation Flight. Occasionally an airplane is sent aloft to take photos of a glider in flight. If that glider (or towplane) has a paying (for hire) passenger aboard, then formation flight is not allowed by FAR 91.111.

If the airplane used to take a photographer or sightseer aloft still has a towrope attached, this creates an additional hazard, as the towpilot’s mind is no longer in “tow mode” and so they may forget that the towrope is still attached.

Towpilot Training and Currency. Complying with the initial towpilot training and currency requirements of FAR 61.69 is mandatory. Note that your non-glider rated towpilot must fly with another towpilot every 12 months. Read the regulation! Initial towpilot training requires glider training with a glider flight instructor, to see the signals and positions from the glider pilot’s point of view. Read the regulation! One book, the “Towpilot Manual”, written by Burt Compton and published by Bob Wander, is available to help train towpilots and keep them current.

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Compiled by Burt Compton JAN 25, 2007

Safety Officer Coordination with the Ground Operations Director

The G.O.D. is usually a job done by a rotating pool of qualified club members. They are qualified by knowing the club operations manual, the SSA Standard Signals and how to delegate duties to the Line Crew, which are the future G.O.D. candidates.

Line Crew. Should be trained in a classroom environment, using the operations manual and a diagram to describe operations from all launch and landing areas on the airport. "On the job training" of the line crew is not effective.

Line Crew must know the SSA Signals, so use the Soaring Safety Foundation DVD for training. Line Crew should also know proper radio terminology for glider launch and landing operations, but usually only the G.O.D. should be making the radio transmissions to advise glider pilots and towpilots of landing traffic and wind conditions.

Launch Point Organization. The Pilot In Command of the towplane is the towpilot, and the Pilot In Command of the glider is the glider pilot, even while on tow. Asking a towpilot or glider pilot to land downwind for the convenience of the operation is only a suggestion, and the G.O.D. should make it clear that each pilot of the aircraft must make the final decision.

Staging gliders for launch and clearing gliders after landing is part of the G.O.D. job. Delegation is the key, along with coordination of ground retrieve vehicles with landing aircraft. The runway should never be blocked by a landed glider or a ground vehicle.

The Ground Operations Director must make runway safety the priority, and have the authority to insist that adhering to club procedures for all pilots is mandatory. Rushing to launch, distractions such as logging launch times, or using non-standard signals may lead to confusion and an accident.

Weight and Balance. Per the Flight Manual of each glider, proper weight in the glider for solo flights by light pilots is essential for safe, stable flight characteristics. Light weight pilots in training must be taught early to lug the ballast weights and install them properly on every flight, even with an instructor onboard (as long as total weight and balance is within limits.) This consistent routine will impart upon the student how important installing the ballast weight can be, especially when sharing club gliders.

Ballast weights, drinking water, sun screen, weak links, ground and aero towing ropes, spare radios and batteries are part of the G.O.D.'s equipment on hand at the launch point.

Preflight Actions. The G.O.D. will conduct Positive Control Checks before the first launch of a glider. The SSF DVD has a good demonstration of a Positive Control Check and Critical Assembly Check. The G.O.D. should insist on proper preflight inspections per the checklist provided in the glider flight manual. Towplanes must also be checked before first flight with a good preflight inspection.

Checklists. The CBSIFTCBE pre-takeoff checklist is becoming prevalent in the USA and overseas. (Controls, Ballast, Seatbelts, Instruments, Flaps, Trim, Canopy, Brakes (airbrakes), Emergency plan.)

Hookup. Line Crew must never hook the towrope to the glider if the checklist has not been completed. Line Crew can also backup the checklist by not hooking up until airbrakes are closed and locked.

Crew Resource Management. The Line Crew takes direction from the glider pilot, regarding clearing the traffic pattern, and hookup (after checklist is complete and airbrakes are closed and locked.)

Safety Officer Coordination with the Ground Operations Director, *continued*

Clearing the gliders off the runway. After landing glider pilots should get out of the glider immediately and move it clear, never by pulling on both wingtips, but by pulling on a seat belt or harness. Pulling simultaneously on the wingtips to move a glider, especially in rough ground, puts unnecessary loads on the wing structure and attach points.

Gliders should not be left unattended or unsecured as a slight wind can lift an empty glider airborne. Gliders should not be left unattended with tail dolly attached, as they can swing in the wind.

Ground towing ropes should be at least one wingspan long. Moving gliders on a smooth surface that has a slight downslope can result in the glider catching up with the tow vehicle and causing damage. A second crewperson walking in front of the rudder alongside the fuselage can slow the glider and keep it from turning in a crosswind.

Postflight Actions. The G.O.D. should supervise the securing of all aircraft at tiedowns or in a hangar at the end of the flying period. This is also an opportunity to do a postflight inspection of the gliders, towplanes and the towrope, in order to note items that need to be fixed before the next flying day.

Cleaning the glider and towplane. Cleaning at the end of the day may be easier while dirt, mud or bugs are not yet "baked on" and still fresh. Cleaning the aircraft helps detect any items that may need to be addressed, and expedites launching on the next flying day. When cleaning the towplane propeller, always assume the magnetos are "hot" and do not turn the prop. Cleaning the back side of the prop is especially important. The leading edges of the prop and wings should be cleaned, and this will result in better climb performance. Cleaning should be supervised and crew properly trained about propeller safety, keeping wash water out of the fuel tanks, fuel vents, pitot tube and static ports.

Plexiglas canopies should be cleaned gently. Water and a clean hand should be used to slowly remove dust and dirt, then a very gentle drying with chamois or a soft, clean cloth. See the glider manual for suggestions.

Runways and the launch point should be cleared of all equipment including taildollies, ropes, personal items and trash that can blow onto the runway. Ropes and small items left on the airport may also be found later by the mowing tractor.

Training a future G.O.D. Designate an assistant G.O.D. to learn the procedures and how to anticipate problems or conflicts while staging, launching and clearing gliders. A properly trained G.O.D. will develop "eyes in the back of their head" to watch for developing situations which may lead to an accident.

Safety Officer Coordination with the Maintenance Director

Aircraft maintenance includes annual and 100 hour inspections, preventive maintenance, airframe repairs and engine overhauls.

Preventive maintenance takes time and money, but leaving a “squawk” to the annual or 100 hour inspection usually results in more down time, and is dangerous if the item becomes unairworthy before the next periodic inspection.

Each aircraft should have a designated “crew chief”. This person can monitor the squawks and coordinate the timing of regular maintenance or repairs with the Maintenance Director. Assuring that the aircraft remains airworthy takes priority over minimizing down time.

Keep spare parts in inventory, especially the consumable items such as air filters, hydraulic fluid, engine oil, oil filters, tires, brake pads, batteries, skids, tow rings and weak links. Reorder items as needed.

Towplane engine oil, oil filters and air filters should be changed as recommended by the engine manufacturer. Operations in dry, dusty conditions may require accelerated oil, oil filter and air filter changes, usually at 25 hours.

100 Hour Inspection Criteria. In addition to the annual inspection, if a club aircraft is used to carry passengers for hire, or for flight instruction for hire, then that aircraft will require an inspection every 100 hours per FAR 91.409.

Unauthorized Maintenance. Beware of the well-intentioned pilot who may begin a minor repair or modification to a glider or towplane, without notifying the crew chief or the director of maintenance. Perhaps they want to rewire the radio speaker, or make the wheel brake work a bit better.

Imagine our handyman pilot tinkering with a simple item but to reach it he must remove a safety pin from a bolt, or even disable a flight control connection. His cellphone rings – an issue at home takes him away – and the towplane or glider is left unairworthy, unbeknownst to the next pilot. A casual preflight inspection misses the hidden items and an accident occurs. Yes, it has happened, and more than once.

Non-Flying Club Equipment. The Safety Officer should delegate maintenance of other club equipment, especially if it affects safety. Ground launch equipment (winches), fuel pumps, fire extinguishers, towropes and tiedowns are among these items. Golf carts and ground towing vehicles should be safe and reliable.

Fences, signs and spectator barriers contribute to safety, so they must be maintained and upgraded as required. Shade tents or picnic shelters should be secure in the wind and kept in good repair.

Safety Officer and the Glider Pilots

Mentor new members and pilots. Pilots must be mentored and briefed by regular safety meetings. They must be provided with diagrams and handouts on club procedures and asked for their input on making club operations safer. As Safety Officer, do not isolate yourself from the pilots' suggestions. Then again, with your FAR book, club operations manual, and aircraft flight manuals in hand, you can advise pilots to comply with the rules.

Club Pilots Flying Club Gliders. Minor damage to a club glider may take it out of service for the season, inconveniencing other club members. Multiple insurance claims over a short period of time might affect the club's future premiums and possibly the club's insurability. Each club member should regard the club glider as "my glider" and not have a false comfort level based on "whatever, it's insured". Make sure that club members do not take a casual attitude towards the club aircraft, especially about the lower performance gliders.

Club Pilots Flying Private Gliders. Club members with their own gliders may take a relaxed view to the club rules and even the FAA regulations. All gliders being towed by your club towplane (or launch by your club winch) must be in compliance with the applicable regulations. A pilot in compliance should not have a problem if asked to check the aircraft logbook for annual inspections, AD notes, the registration and insurance documents. The pilot's logbook should be checked to confirm currency. Know who you are launching with your club towplane or winch!

Visiting Glider Pilots. Pilots with and without their own gliders will participate in club flying. They must comply with all club rules, but can only do so if informed. Give them a good briefing. Check their logbooks for currency and endorsements for the type of launch the club will give them. Your insurance policy may say that a club member must be at the controls for takeoff and landing in the club gliders.

Low-time glider pilots or those not familiar with local airspace and weather conditions should take a "field check" with a club flight instructor.

Confirm Currency. Keep the pilot records up to date. If a pilot has not flown a towplane or glider in a few weeks or months, challenge them to take some flight instruction. Know whether the club pilots, private glider owners, and visiting pilots are current not only to FAA regulations, but to the higher club standards as well.

Airline and corporate pilots understand the importance of recurrent training in their professional flying jobs. Smart glider pilots and towpilots welcome the opportunity to learn, review and refresh their flying skills with glider specific flight reviews, semi-annual checkouts, mandatory safety meetings and daily briefings.

Safety Briefings and Meetings. The Safety Officer, in coordination with the Chief Flight Instructor, Chief Towpilot, Director of Maintenance, and the Ground Operations Directors should inform and entertain the club members with regular safety meetings. A barbeque, a soaring film, a guest speaker can add to the variety of the regular meetings.

Safety Officer Authority

The Safety Officer **MUST** have the authority, the backbone and the backing of the club Board of Directors to enforce the FAR's and the club standard procedures.

A Board of Directors that repeatedly reverses the decision of the Safety Officer to have a wayward pilot receive remedial ground and flight training causes the Safety Officer to lose the respect of the club members, and seriously weakens the club safety culture. Without the backing of the board, the authority of the Safety Officer disappears.

A Safety Committee. In order to maintain a sense of fairness and respect for authority, the Safety Officer may convene a group of club members to discuss how to modify the behavior of the wayward pilot. This method may bring peer pressure to bear so the pilot agrees with the decision of the club Board of Directors, based on the recommendations of the Safety Officer, to receive remedial ground and flight training.

Intervention. A recurring topic in talking with Safety Officers across the USA (both effective and ineffective S.O.'s) is how to intervene with the "bad apple" tow-pilot, CFI, or club pilot (usually with a private glider). The "bad apple" is perhaps too strong a term, as intervention can be done on many levels, as the Safety Officer sees a trend, hears a remark, detects an attitude, sees the pilot(s) slowly unraveling (or shall we call it sabotaging, vandalizing) the club's safety culture.

Sheriff, Lay Down the Law: Intervention Will Occur. Broadcast in your handouts, webpage, and on checkouts that glider pilots, tow-pilots and ground crew who do not comply with regulations and club rules will be informed immediately, in a quiet, professional manner, and remedial action will be taken. However if the situation appears to deteriorating, leading to an imminent accident, stop the operation and call attention to the discrepancy in a loud, authoritative manner. Holler only when necessary!

Modifying Behavior. Club members who have been consistently mentored will be familiar with all of the club rules. Handouts, diagrams, regular safety meetings reinforce the importance of the club operations manual.

Handling a "Legend of Soaring". A club member who is a founding member, contributes money to the club in excess of the dues, owns the latest high performance glider, or brings glory to the club in their racing and record setting exploits, still must abide by the FAA regulations and the club rules.

No Exceptions – Use the Bylaws. Club members who insist on breaking rules cannot be tolerated. Review and modify the club bylaws as necessary to have the protocol in place to require a club member to stop flying until they have received flight instruction, and/or be required to leave the club.

Older Pilots. We are all getting older, but sometimes not at the same rate. There are senior pilots who possess most of their flying skills, yet there are some soon-to-be-senior pilots who cannot maintain their skills, for whatever reasons. The Safety Officer should privately identify these pilots.

The Co-Pilot Solution. Instead of asking a pilot to "quit flying", consider asking them not to fly solo. This could apply to pilots at any age, as some instructors can tell you that not all people are meant to fly. Rather than turn a student pilot or an older pilot away (to golf?), provide a "co-pilot" to assure the outcome of the flight. Don't call it a "safety pilot" – that can be a bit insulting. Call it a "Co-Pilot Program", and let them continue to fly – at any age. As you get older, you might be glad this program is in place at your club!

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Compiled by Burt Compton JAN 25, 2007

Safety Officer Pro-active Programs

Safety Articles for the Club Website. The Safety Officer can write site-specific articles, or copy safety articles based on resources such as the Soaring Safety Foundation website at www.soaringsafety.org

Request a "Site Survey". The Soaring Safety Foundation offers a free, confidential site survey (safety audit) of your club. The club must invite the SSF to conduct the survey of club operations, and the independent observations (good and not so good) will be verbally reported to the Safety Officer.

Attend Seminars and Clinics. Seminars at the SSA Convention can give valuable insights to national safety trends. Interacting with other Safety Officers allows an interchange of information about how other clubs are developing their safety culture. The Soaring Safety Foundation (SSF) has a program to bring a seminar to your club, with guest speakers with fresh ideas about accident prevention. To learn more about SSF seminars, go to www.soaringsafety.org

Attend a SSF Flight Instructor Recertification Clinic (FIRC), at the SSA Convention or at one of many venues across the USA. You do not need to be a CFIG to attend! Bob Wander manages the FIRC program for the SSF, and you can arrange a FIRC for your area by request. Scheduling should be several months in advance, and coordinate with the club flight instructors so they may take advantage of the 24 month CFI Recertification option.

Your regional and local FAA Flight Standards District Office has a "FAAST" Safety Team Manager, who can host a soaring safety meeting that may qualify attendees for the FAA "Wings" award program.

"Guess the Next Accident Game". A tool used in industry is to ask all of the employees to anonymously give their prediction as to the "next accident", based on their hands-on, day to day experiences at work, as they notice trends and weaknesses develop. Ask the club members to play this game. It could prevent the next accident.

Conduct a Survey. Ask club members to participate in a periodic survey asking for their opinions and suggestions regarding the club's safety culture. This anonymous survey may uncover some weak areas in the training and safety programs, and help measure the members' "attitudes" towards safety.

Report to the Board of Directors. A Safety Officer will make decisions regarding safety, and needs to validate his/her authority to maintain the safety programs in place. Since the Board is ultimately responsible for the safety culture of the club, they must be kept informed as to the tangible and intangible qualities of the safety culture.

Safety Officer Continuity. In order that future Safety Officers may benefit from your work and do not have to "reinvent the wheel", maintain a file that includes resources and solutions to previous problems and safety issues.

Defining a Good “Safety Culture”

A good Safety Culture has many aspects, both tangible and intangible.

Tangible aspects include:

- A Board of Directors.
- A Safety Officer.
- Chiefs and Directors of flight instructors, towpilots, ground operations, maintenance.
- Operations manual.
- Training syllabus.
- A “Site Survey” safety audit by an independent consultant.

The above aspects are “good ideas”, but the Safety Culture must include **intangible aspects:**

- A Board of Directors that takes responsibility for safety, and is pro-active about managing risk.
- A Safety Officer with the backbone and backing of the Board to exercise the authority to modify behavior and to intervene when the good safety culture is threatened.
- Cooperation among Chiefs and Directors.
- An Operations Manual that is clear, comprehensive and is updated as needed.
- An Attitude among all club members that safety is the priority.
- A Training program that is consistent and promotes training to higher standards.
- Willingness of all club members to accept change in order to improve safety, such as after a “Site Survey”, or when the operations manual needs to be updated.
- “Status Quo” should not impede change.
- Respect for authority.

Facilitating Change in the Club “Safety Culture”.

(Edited from the Soaring Association of Canada website) A report on a lecture given by a Dr Hammer, a former professor of Computer Science at MIT, discussed the introduction of technology in “business process re-engineering” and the effect of cultural factors that could impede change. These factors may have an application to gliding.

In the report Dr Hammer stated “**to change underlying cultural values, leadership requires consistency, relentlessness, and commitment**”. He spoke about the climate for changes within organizations and how the culture within the group could work against change.

Some of this culture manifests itself as **resistance due to inertia of the status quo**, fear of adopting the unknown, and disruption to activities of specialized work of individuals within the group”. He made recommendations for doing a “culture audit” as a means to determine the culture climate within the organization. He pointed out that this could be accomplished by focus groups or opinion surveys.

In the report Dr Hammer’s comments indicated that there were eight mechanisms to facilitate a change in the safety culture:

- a. Information – (the cornerstone). Dissemination of safety information and requirement to sharing of factors and cause information. (Incident reporting).
- b. Involvement - this should include leadership, instructors and members.
- c. Intimacy- the need to make safety culture a personal issue for participants.
- d. Incentives - positive preferred to negative. A negative safety culture results in injury, loss of life or equipment, and higher insurance rates.
- e. Instructions - make more use of instructor cadre (safety training expanded on instructor courses, clinics, etc).
- f. Inspiration - pooling of ideas, general forum (SSF website / seminars)
- g. Impetus - selection of champions to promote safety culture. Employ members enthusiastic on safety.
- h. Indoctrination - introduction of safety culture as discussion in curriculum for ground school and initiation to clubs.

Yes, these are a lot of “I” words, but the inclusion of these eight items in your safety program should help you change the safety culture of your organization

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Compiled by Burt Compton JAN 25, 2007

This Safety Officer Training Guide has offered guidance and suggestions in order that the club Safety Officer can be effective through a clear understanding of the job and the responsibilities. The job requires a motivated individual who understands that personalities and politics play no part in developing and maintaining a positive safety culture.

For updates to this Guide, consult the Soaring Safety Foundation website at www.soaringsafety.org

Comments may be directed to: Burt Compton,
Trustee of the Soaring Safety Foundation,
Site Survey program manager

Email: burtcompton@aol.com
Telephone: 432-729-4292

Attachments:

- Safety Officer Library
- Index to FAA Regulations
- Information on the SSF "Site Survey" program
- Emergency Response Plan
- Pilot Record Form (sample)

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Safety Officer Library

DVD from the Soaring Safety Foundation includes SSA Signals, Positive Control Check, and Takeoff with Airbrakes Open segments. 30 minutes total time.
Free by request from the SSF at www.soaringsafety.org

FAR / AIM book. Federal Aviation Regulations / Aeronautical Information Manual
ASA Publishing updates the "FAR / AIM" book every winter.

SSA / SSF Glider Pilot Logbook. Contains pre-printed endorsements and space for the CFI to log "Ground Instruction", as required by the FAA.

FAA Practical Test Standards for Glider Ratings. Current issue, for PVT, COM, CFI.

Glider Flight Manual(s).

Make copies from the club files, keep one in the glider.

Glider and Towplane Maintenance / Parts Manuals.

Contain diagrams and schedules for regular lubrication and life limits on certain parts.
Parts manuals have exploded views of aircraft components.

Glider Flying Handbook. Published by the FAA, this is a source of questions and tasks for the FAA Practical Tests. Good review for any pilot and full of topics for a safety meeting.

"Towpilot Manual". Guide to flying towplanes by Burt Compton, published by Bob Wander

FAA Publications. Free from your FAA FSDO Safety Team Program Manager.

A range of topics in booklet form, and a selection of videos/DVD's are available for free.
Topics include Density Altitude, Weather, Airspace.

Reference Bibliography: A comprehensive list of available glider training and safety texts and Videos is posted on the Soaring Safety Foundation website: www.soaringsafety.org

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**Safety Officer Index
to Federal Aviation Regulations (FAR's)**

(Not a comprehensive list – obtain a current FAR / AIM book)

FAR Part 1.1 **Definitions** - often overlooked, this is not Webster, this is the FAA.

FAR Part 43 **Maintenance** details of Preventive Maintenance, Transponder Tests

FAR Part 61 **AIRMEN REGULATIONS**

- 61.3 Photo ID
- 61.23 Medical Certificate (glider pilot exemption)
- 61.31(d) "Transition Pilot" – endorsement for solo / PIC in Gliders
- 61.31 (i) Towpilot Tailwheel Training and Endorsement
- 61.31 (j) Glider Launch Endorsements (Aerotow, Ground, Self-launch)
- 61.39(a)(6) Prerequisites and Endorsements for Practical Tests
- 61.43 Practical Test Procedures
- 61.51 Pilot Logbooks and Logging PIC Time
- 61.53 Prohibition on Flying With a Known Medical Deficiency
- 61.56 Flight Reviews
- 61.57 Currency for Carrying Passengers, and Glider Instrument Flying
- 61.63 Additional Category Rating Endorsements / No Written Required
- 61.69 Towpilot Endorsement and 12 month Currency
- 61.75 Foreign Pilots – FAA Private Certificate
- 61.87 (b) Pre-Solo Written Test (given by CFIG)
- 61.87 (i) Pre-Solo Flight Training Requirements
- 61.89 Student Pilot Limitations
- 61.93 (j) Student Solo Cross Country Requirements (Glider)
- 61.103 Private Pilot Eligibility and Endorsements
- 61.105 Private Pilot Aeronautical Knowledge
- 61.107(b) 6 Private Pilot Flight Proficiency
- 61.109 (f) Private Pilot Aeronautical Experience
- 61.127 Commercial Pilot Eligibility and Endorsements
- 61.127 Commercial Pilot Aeronautical Knowledge
- 61.127(b)(6) Commercial Pilot Flight Proficiency
- 61.129 (f) Commercial Pilot Aeronautical Experience
- 61.183 Flight Instructor Eligibility and Endorsements
- 61.185 Flight Instructor Aeronautical Knowledge
- 61.187(b)(6) Flight Instructor Flight Proficiency
- 61.189 Flight Instructor Records
- 61.191 Flight Instructor – Additional Ratings
- 61.195 Flight Instructor – Limitations / Qualifications ("supervised solo")
- 61.197 Flight Instructors and 24 month Renewal
- 61.301 Sport Pilots and Instructors

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Safety Officer Index
to Federal Aviation Regulations (FAR's) - continued

(Not a comprehensive list – obtain a current FAR/ AIM book)

FAR PART 830 AIRCRAFT ACCIDENTS, INCIDENTS and OVERDUE AIRCRAFT

830.5 NTSB – Immediate Notification Criteria

CFR PART 1552 FLIGHT TRAINING ALIEN PILOTS, SECURITY AWARENESS TRAINING

Resources for CFI compliance with TSA registration.

“Glider Exemption” document:

http://dmses.dot.gov/docimages/pdf90/302470_web.pdf

AOPA CFI website for clarification

(also has a link to the glider exemption document):

http://www.aopa.org/tsa_rule/

TSA website for Flight Training Providers
and CFI's (powered aircraft):

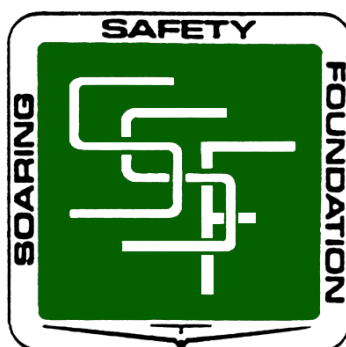
<https://www.flightschoolcandidates.gov/fsindex.html>

Note: If a Glider Flight Instructor is also a Power Instructor, they need to register with TSA, and complete Security Awareness Training once a year. See the AOPA website for details.

AERONAUTICAL INFORMATION MANUAL (AIM)

(Chapters with Glider Related Information)

Chapter 2	Airport Lighting / Marking Aids and Signs
Chapter 3	Airspace / Mode C Veil / Restricted Areas / Parachute Jump Operations
Chapter 4	Air Traffic Control / Control Towers / Flight Service Stations / Radio FCC “Glider Frequencies” (Table 4-1-3) / Unicom / Transponders / Windsocks and Segmented Circles
Chapter 7	Safety of Flight / Altimeter Setting / Wake Turbulence / Mountain Flying
Chapter 8	Medical Facts for Pilots
Chapter 9	Aeronautical Charts
Appendix	Pilot / Controller Glossary



Concept of the Soaring Safety Foundation "SOARING SITE SURVEY"

Based on the Swedish Soaring Federation Site Safety Reviews that are mandatory in that country for a club to maintain certification.

These safety reviews resulted in a decrease in the soaring accident rate in Sweden by more than 50%.

Since 2001, Soaring Safety Foundation "Soaring Site Surveys" have been conducted at more than 35 soaring sites across the USA, in every region.

A SSF Site Survey is free, confidential and works to prevent accidents.

- A soaring site cannot "fail" a site survey.
- It is a review of the site operations, and an update of airspace, new FAR's, safety procedures - like you accomplish in a pilot's Flight Review.
- The soaring site must invite the SSF to conduct the survey.
- A one-day survey of operations and procedures would include a club-member-only Safety Meeting to confidentially discuss club concerns.
- In many cases, non-standard or out-dated procedures are used at a soaring site because "we always did it that way". In some cases, glider pilots and towpilots at a site wish that procedures could be improved but cannot find a basis to change the "culture" of that soaring operation.

In summary, the SSF "Soaring Site Survey" would:

- Provide the club Safety Officer a basis for improving the "safety culture".
- Provide a basis for challenging the "status quo" or resistance to change.
- Reinforce a commitment to safety.
- Refresh CFG teaching techniques.
- Generate a confidential verbal report to the site managers.
- Identify your "Good Ideas" that SSF may share with other soaring sites.

Bottom Line: Save lives, prevent injury, reduce damage to aircraft and property, help maintain insurability and likely help your soaring operation save money in terms of time and expenses related to incidents and accidents.

BURT COMPTON, Site Survey Program Manager
800-667-9464 e-mail: BURTCOMPTON@aol.com

SSF Soaring Site Survey, *continued*

To understand the "culture" of your operation, we learn about the . . .

Historical Background of the Soaring Site
Management Structure
Accident / Incident History
Airport Environment
Airspace

After the survey of your operation, we will verbally report to you about . . .

Preflight Inspections
Ground Handling
Launch Point Organization
Use of Checklists
Standard Signals and Communications
Takeoff and Landing Patterns
Emergency Scenarios and Options

We observe and talk with the people . . .

Line Crew and Towpilots
Students and Instructors

*. . . these are just a few of the specific items and procedures that we survey,
then confidentially provide our observations . . .*

*Invite the SSF to your soaring site soon, for a free, confidential "Soaring Site Survey".
We will also conduct a SSF Safety Meeting for club members only, so they may express
their views, concerns and questions in confidence.*

Call toll-free: 800-667-9464.

*Burt Compton, Site Survey Program Manager
Soaring Safety Foundation*

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Compiled by Burt Compton JAN 25, 2007

Emergency Response Plan

***Suggestions for Soaring Sites by Burt Compton - Soaring Safety Foundation
(Soaring magazine – March 2007)***

How would you respond to:

1. A wingrunner falling and seriously scraping their hands and knees?
2. A serious reaction to a bee sting?
3. A glider that has landed just off the airport and has run through a fence, trapping the pilot and the passenger in the cockpit?
4. A towplane that flips over after a bad landing, and now has fuel dripping onto a hot engine?

If the accident appears to be serious, call 911 and get help on the way. Don't hesitate, as you may cancel a 911 call. Designate one person as the "Emergency Response Coordinator" to manage the situation.

Accomplish the following items simultaneously.

Care for the Injured. In the case of scraped knees, a substantial First Aid kit with large bandages and tape is necessary. The kit should be maintained with up-to-date supplies and all supplies used must be immediately replaced. Consider stocking an antihistamine for bee stings.

Knowing how to deal with shock and heat stroke is important. Is anyone at your soaring site a doctor, nurse, or paramedic?

Serious injuries require expert attention. Do not move the injured if neck and back injuries are suspected, unless a fire is imminent.

Designate one person to maintain the First Aid Kit and clearly mark its location at your soaring site. Make everyone aware of the location of the First Aid Kit.

Fight the Fire. Do you have enough Fire Extinguishers with a current recharge? Before the fire begins, try to save the pilot. Hangar fires are also a concern, as well as fires near the fuel pumps. Fuel-related fires can be terrible and almost impossible to extinguish once they start. Review your fuel handling procedures and make everyone aware of the location and use of the fire extinguishers.

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Rescue the Pilot and Passenger. That Leatherman tool or Swiss Army knife in your pocket won't do much to extract a person from a damaged aircraft. If no fire hazard, wait for the Emergency Medical Team, to avoid further injury to the pilot or passenger. If power wires are down, stay clear and wait for expert help.

Specific tools must be acquired and designated for crash use only: Axes, Crowbars (2), Wire Cutters capable of cutting control cables, Hacksaws, Metal Shears, Rope (to pull a flipped aircraft upright), Gloves. Make everyone aware of the purpose and location of the crash tools. Store in a red box that is clearly marked "Crash Tools Only".

Call for Emergency Help (911). Must be done immediately. Time is critical in getting expert help.

DOES 911 KNOW YOUR ADDRESS? Does your soaring site have a specific address listed with the 911 Operator, or are you located far out in the country, down an unmarked road? Have you maintained good directional signs to your airport, or are your signs faded or hidden behind weeds?
CAN EMERGENCY SERVICES FIND YOU WHEN TIME IS RUNNING OUT?

Invite your local emergency medical teams and the fire department to visit your airport every year. They welcome training opportunities, and if they have visited your site recently, the drivers will know exactly where to go.

Make this a regular invitation, and share your emergency response plan with them.

Secure the Aircraft and Accident Scene. Refer to FAR 830 regarding NTSB requirements for accident reporting. String up a towrope to keep onlookers far away. Ask the media to leave. If the accident meets the specifications of FAR 830, contact the NTSB, through your local FAA FSDO office.

The police and media might also call the FAA, before you do.

The Media. Expect to be interviewed by the press. Designate one person to speak to the media. "No comment" is highly recommended. Your recorded speculations or opinions may be used against you in an investigation or lawsuits. The media will try to interview "witnesses" about what happened, so ask everyone to decline interviews, no matter how flattering it might seem.

Respond only to the government authorities and only state the facts. Discretion may save you trouble if potential lawsuits or FAA actions follow.

Contact Next of Kin. Maintain a list of all glider pilots, towpilots, line crew and "regulars" at your site. Obtain their cellphone numbers and ask them to update their emergency contacts and telephone numbers often.

Review and Update Your Emergency Response Plan. Every 90 days, have your Emergency Response Coordinator update and review the existing plan with all club members. Confirm the currency of the Emergency Services contacts, next of kin contacts, First Aid Kit, Fire Extinguishers and Crash Tools.

Let everyone know that an Emergency Response Plan exists.

For a poster on Emergency Response Plans, go to the SSF website at www.soaringsafety.org and click on Publications.

