

Operational Overview

The following document is a general overview of glider operational procedures developed by the Red Wing Soaring Association with the assistance of the LO Simenstad Airport Commission. This document will aid glider and power pilots alike to gain a better understanding of how gliders, aero tow and ground tow activities will be performed. These procedures are subject to change, most significantly to accommodate upcoming airport construction activities.

Ground Operations

Ground Vehicles

- The club currently has 2 golf carts to assist with moving gliders and people
- The carts are equipped with flashing amber beacons and aviation radios, monitoring CTAF (122.9)
- The golf carts are also used to ferry pilots, passengers and ground crew to and from the flight line. The carts at times will be parked in 'staging areas' near the end of the runways.
- All drivers of the golf carts are instructed on ground procedures and collision avoidance.

Taxiing

- The gliders are normally towed with golf carts by a 50 foot rope
- A glider's wings are kept level by a wing walker. The wing walker also steers the gliders path.
- Gliders are towed in the grass areas to the sides of runway 10\28 and on the grass taxiway on the east side of 04\22
- Ground towing stops when landing or departing aircraft approach. Typically the wing closest to the runway is lowered, and the ground crew moves as far as possible from the runway center line.
- On occasion, carts and gliders may need to cross a runway. Ground crews are instructed to monitor CTAF and scan the traffic pattern before crossing any runway.

Take-Off

Staging

- Inactive gliders and the tow plane are staged on the grass off to the side at the threshold of the active runway.
- The runway is left unobstructed for landings.
- Prior to take-off, the glider is maneuvered to the threshold of the active runway. If the area is large enough, the glider will be positioned to one side, to limit the obstruction to the runway.
- The tow plane then taxis in front of the glider.

Take-Off

- The glider is manned with pilot (and passenger if applicable)
- A 'wing runner' connects the tow rope to both the tow plane and glider.
- The 'wing runner' then instructs the tow plane via hand signals to remove slack in the rope.
- The traffic pattern is then visually scanned.
- The tow pilot announces on CTAF the departure of the tow plane with glider on tow.
- All pilots should allow for a minimum of 1 runway length separation between departing aircraft to allow for emergency procedures (see 'The Tow – Emergency Procedures')

The Tow

Altitude gain

- Once airborne the tow proceeds straight ahead until the at least 300 feet AGL is gained.
- The tow plane then turns into the wind but remains close to the airport in the event the tow rope breaks or other emergencies occur, giving the glider the opportunity to return safely to the airport.
- Once above 1000' AGL the tow proceeds upwind, in search of thermals if available to assist in altitude gain.

Emergency procedures

- Tow rope break
 - If the tow rope breaks or fails in some way when the glider and tow plane are below 500' AGL, the glider pilot may elect to turn 180° and land downwind on the same runway as departure. If the rope fails above 500' the glider will most likely be able to fly an abbreviated pattern and land normally.
 - Note: Simulated tow rope breaks are practiced during flight instruction activities. The instructor will announce intentions on CTAF prior to performing maneuver.
- Tow plane power loss
 - If the tow plane loses power during the initial phases of tow, the glider may release and perform a similar maneuver as described in the 'Tow rope break' emergency procedure.

Release

- The standard tow is to 3,000' above ground, however lower tows occur when thermals are active or take-off/landing practice is needed.
- The tow ends when the glider checks traffic, releases the rope, and turns right. The tow plane turns left to increase the separation distance with the glider.
- The tow plane reduces altitude as quickly as possible and enters the standard airplane patterns for landing.

Landings

Pattern Entry

- In most cases, gliders tend to want to extend the duration of their flights by utilizing thermals up to the point of committing to land. Glider pilots are instructed to not thermal when in the landing pattern.
- The pattern dimension at OEO has been defined as a 1 ½ mile radius of the airport. Glider pilots are instructed to not thermal when below 1500' AGL within 1 ½ mile of the airport. See appendix for diagram.
- Larger aircraft such as the King Air and Citations fly their downwind leg at approximately 1 ½ miles from the airport at 1500' AGL. Glider pilots should be aware this can occur and should monitor CTAF for approaching aircraft of these types.

Patterns

- Gliders fly standard patterns, downwind, base and final.
- Gliders will fly left hand patterns. Separation from airplane traffic is aided by gliders entering the pattern lower and nearer to the runway than airplanes. See appendix for diagram.
- Gliders will monitor and announce their landing intentions on CTAF when entering downwind.
- All landing aircraft are asked to maintain a 2,500' separation on final.
- Pattern entry altitude for gliders is 700' to 1,000' AGL
- Gliders will be below 800' AGL when passing abeam of the runway threshold before turning base.
- Patterns are typically flown closer to the runway than power planes.
- Note: Gliders may fly a right-hand pattern when circumstances or safety concerns prevent a standard left-hand pattern being flown.

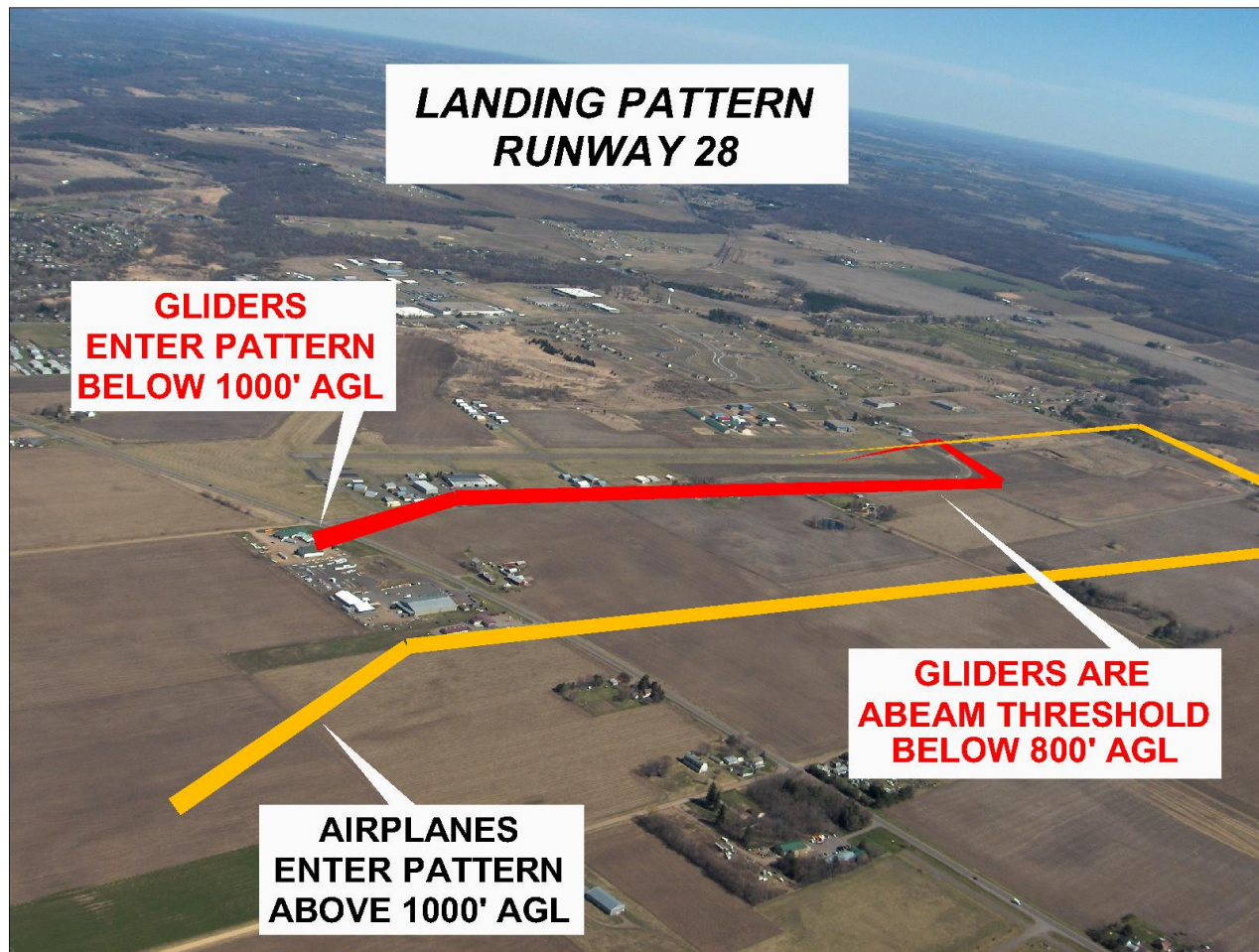
Touchdown

- Gliders prefer to land on the grass.
- After landing, the glider will normally clear the runway by either rolling off, or quickly pushing off after coming to a stop.

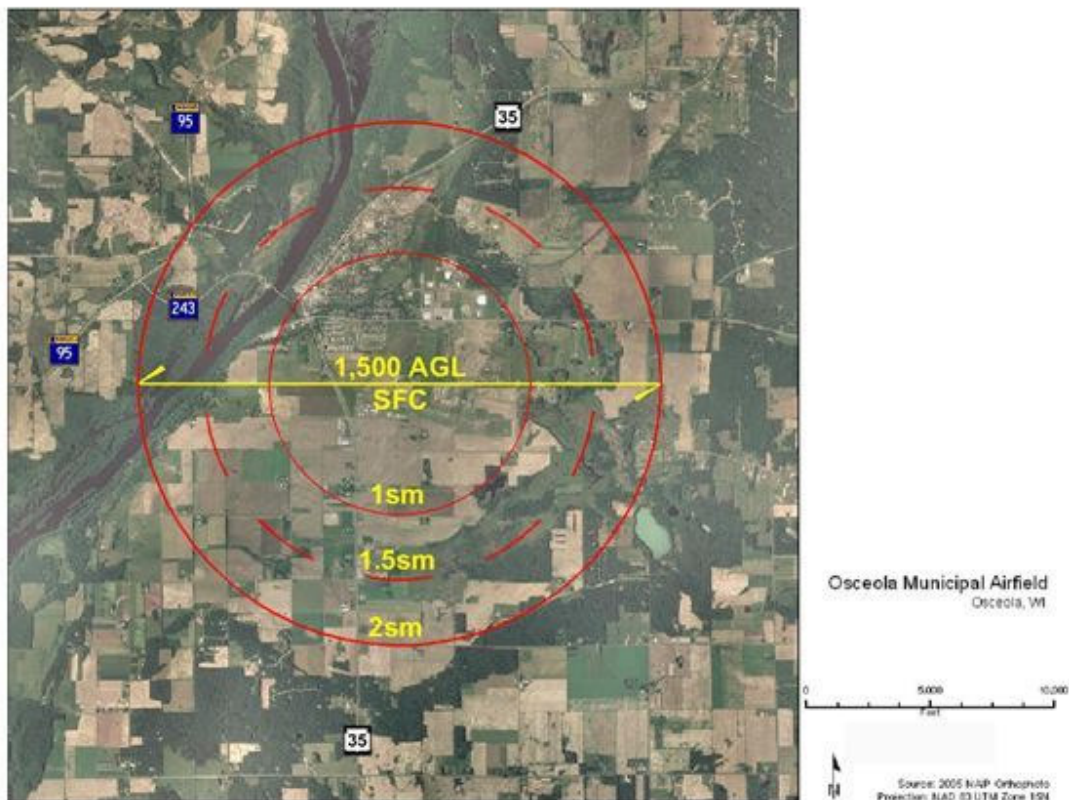
Back Taxi

- A golf cart will proceed to the landed glider and tow the glider back to the staging area.
- See *Taxiing* under *Ground Operations*

Appendix
Landing Patterns



Appendix
Thermaling Restrictions



RESTRICTED THERMALING AREA

(No thermaling below 1500' AGL within 1 ½ miles of airport)