

## Skydive Arizona: Known Landing Hazards

### *All wind conditions*

RISK: Collisions between canopies.

Statistically you are as likely to die from a canopy collision as a low turn. This trend is doubly alarming because unlike a low turn, a collision may not be your fault. No one type of canopy or pilot is more or less likely to be involved in a collision. They can occur between any combination of fast and slow parachutes, in light or heavy traffic, to experienced and novice jumpers alike.

MANAGEMENT: Never assume that you see all traffic. We all have a blind spot behind us, especially below and behind. We can all be distracted by other traffic or too focused on our landing spot. Landing pattern collisions or turns to avoid them have killed seven jumpers here and sent 12 more away in helicopters. Clearly they did not see all of the traffic. **This risk can only be reduced by flying in a manner that minimizes potential collisions.**

**Every turn increases collision risk.** Your turns may not be expected or anticipated by other pilots. They always create changes in speed and descent rates. Finally, any turn over 90 degrees will take you to some degree into the “blind spot” that you have behind and below you.

Jumpers with **slower parachutes** should be aware that faster parachutes will be overtaking them from above and behind in the pattern. For this reason it is imperative to fly a straight, intelligible pattern and keep your canopy speed up. “S” turns, flight in deep brakes, or spiraling create a major collision hazard.

Just as the custom on the highway splits the lanes into fast (left) and slow (right), the custom at Skydive Arizona is for fast parachutes to land close to the buildings in the North Landing Area. Slower parachutes should stay more to the middle and outside of the landing area.

Jumpers with **faster parachutes** need to recognize that slower canopies below them in the pattern have the right of way even if the faster canopy will overtake them and land first. Fast parachute pilots need to be careful not to cross in front of slower canopies, which can present wake turbulence to them or be perceived as an impending collision.

### *With light or calm winds, or direct cross wind in the North Landing Area*

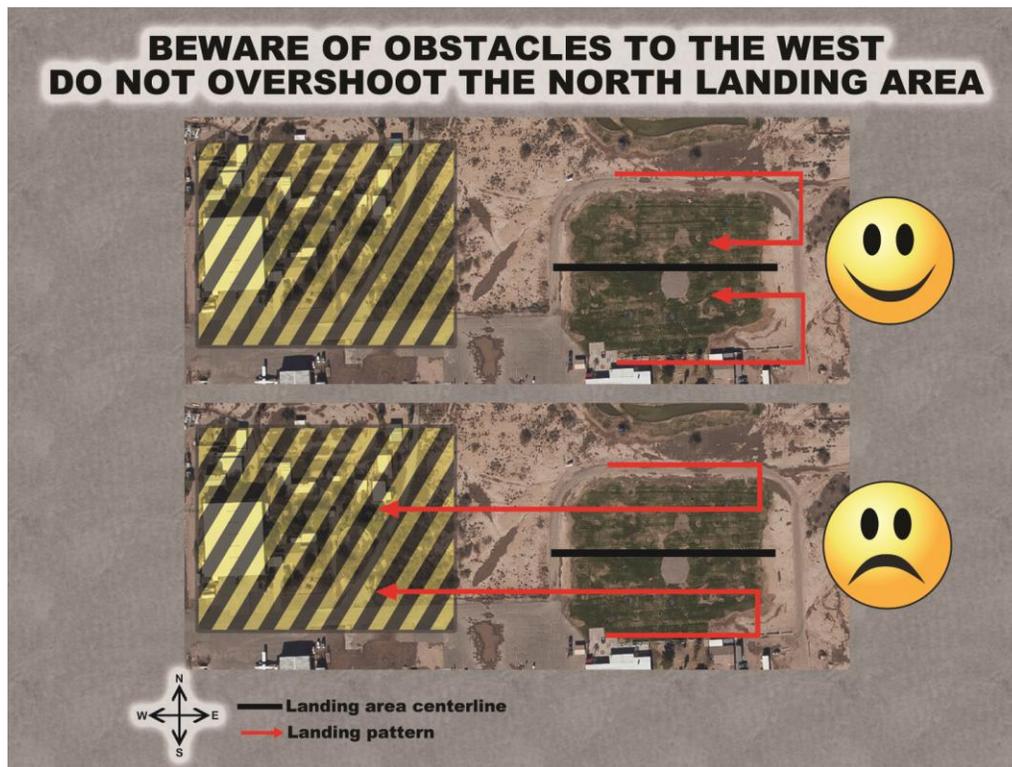
RISK: The number one landing risk at Skydive Arizona is overshooting to the west in our North Landing Area.

In this situation all of your options are bad: crash into obstacles, land on the taxi-way with the possibility of vehicle or aircraft traffic, do a low turn across the pattern, or do S turns greatly increasing the risk of canopy collision.

MANAGEMENT: If you are new to Skydive Arizona, jumping a new canopy, or simply uncurrent, you are at risk of overshooting the landing area. Even experts can be surprised,

especially in summer when we experience high density altitude conditions. Until you know how your parachute will fly in ambient weather conditions, plan to land on the easternmost side of the landing area in case you overshoot. An alternative is to land in the South Landing Area, where there are open areas at both ends of the field should you overshoot the landing.

**Because of the high risk and frequency of this problem, if you have less than 100 jumps you must land in the South Landing Area.**



RISK: Traffic landing in opposite directions.

MANAGEMENT: Avoid committing too far to one end or the other of the landing area. This puts you in a position where you cannot do a normal approach if the traffic pattern develops opposite to what you anticipated. A position well off to the side of the landing area, roughly perpendicular to the center line, allows you to adopt either pattern easily. Never assume that the pattern will be the same from jump to jump!

People who find themselves landing in the wrong direction have made three mistakes. First, they were not paying attention to the pattern high enough to make an adjustment. Second, they put themselves in a position that did not allow for a change in their pattern. Third, they went ahead and flew to the grass anyway. If you are high enough to turn towards the grass, you are high enough to turn away! If you do find yourself outside of the pattern, you are obliged to land outside of the grass.

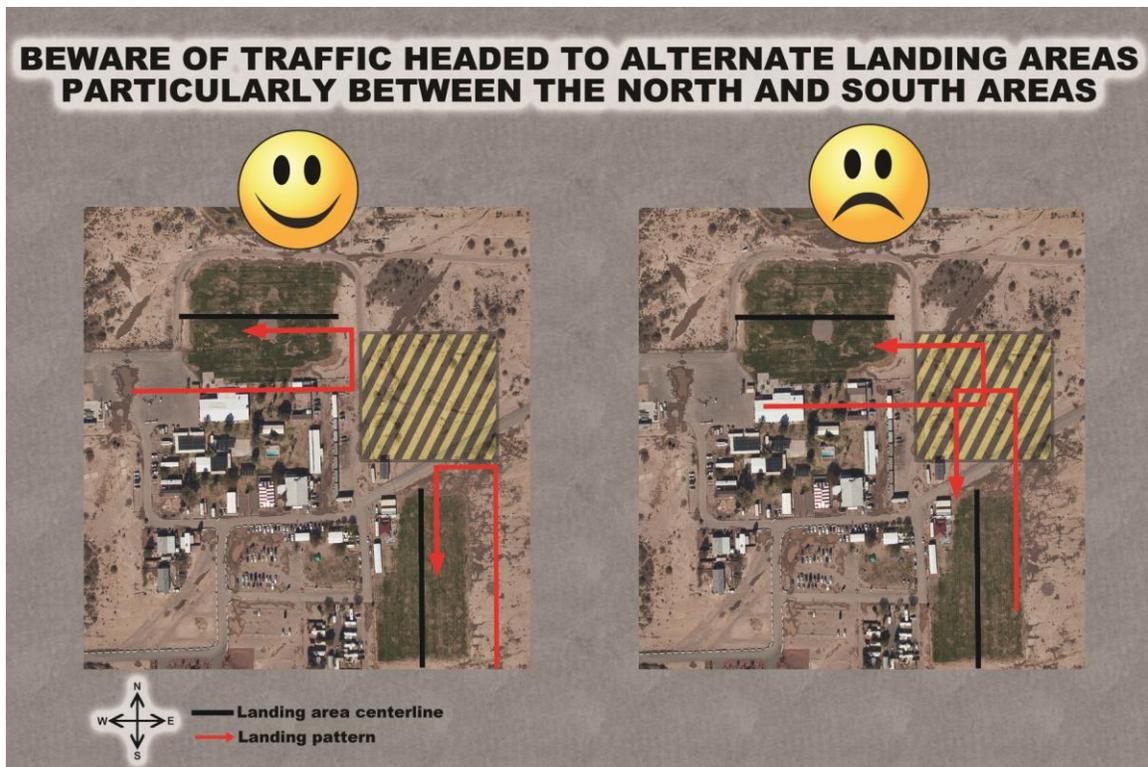
*With winds from the south or southwest in the North and South Landing Areas*

**RISK:** When the wind is from the south or southwest, there can be heavy turbulence downwind of buildings and trees in both landing areas, especially the North Landing Area. This turbulence can cause loss of lift or even canopy collapse, resulting in hard landings.

**MANAGEMENT:** Like rocks in a stream, buildings have wake turbulence directly downwind. This increases geometrically with wind speed. Avoid landing in the area downwind of buildings or trees. Moving your landing point further from the buildings and trees, to the extreme downwind section of the landing area, will reduce the risk.

**RISK:** If the landing pattern in the North Landing Area is to the west and the landing pattern in the South Landing Area is to the south, the two patterns can potentially cross each other in the area northeast of the central dropzone grounds. The crossing patterns present a significant risk of canopy collisions.

**MANAGEMENT:** Be extremely vigilant of traffic heading to the landing area you *are not* going to land at, as well as the traffic landing in the same landing area as you. For the greatest level of safety, adjust your pattern to avoid this intersection area. If landing in the South Landing Area, use a left hand pattern with a long crosswind and a relatively low turn to final rather than a long, high final that passes through this area. If landing in the North Landing Area, consider a right hand pattern, again with a long crosswind and a relatively low turn to final, instead of a high, straight final approach.



*With winds from the north in the North Landing Area*

RISK: A crosswind from the north increases the risk of being pushed across the landing area towards obstacles or other traffic, especially along the “beer line” in the North Landing Area.

MANAGEMENT: Until you develop the skill to land in a strong crosswind, choose a landing area more appropriate to your experience level. One of the two areas is always better than the other on a windy day.

*With winds from the northeast or east in the North and South Landing Areas*

RISK: Being pushed into the obstacle field west of the landing area. Both areas have significant hazards to the west.

MANAGEMENT: When the wind is from the northeast or east, be very careful to set up your base leg far enough upwind that there is no possibility of coming up short to the west in the North Landing Area. If you overshoot to the east you are in clear desert. If you come up short to the west there are no good landing options.

Inexperienced or visiting jumpers may want to watch a load or two before they jump to get an idea of the wind conditions. Stay well upwind; there are plenty of open alternative landing areas upwind – and none downwind.