



Hawaiian Hang Gliding Association

## SITE REGULATIONS

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### GENERAL REGULATIONS

All pilots must hold current USHPA membership.

All pilots must be current Hawaiian Hang Gliding Association members.

All visiting pilots must show proof of required USHPA or foreign equivalent ratings when required by site regulations.

All visiting pilots must be accompanied on at least their first flight at all sites. Thereafter specific site regulations must be followed. All pertinent FAR's must be adhered to.

### Makapu'u

No one is permitted on the site or to leave equipment (including vehicles) after 18:00 hours.

Keys are assigned only to ridge qualified pilots and are not transferable.

Visiting pilots must be Advanced rated and have an AWCL signoff to fly this site. The following regulations apply to resident pilots.

Spectators are not allowed to be unescorted near gliders in the setup area. They should be asked to remain near the "knob" to the east of launch.

The following regulations apply to resident pilots.

#### Beginner

May not fly this site.

#### Novice

May not fly this site.

#### Intermediate

Must obtain HHA approval before flying this site

Pilot's first five flights (at least) must be carried out as supervised flights.

May fly this site without supervision only after obtaining HHA approval.

May fly only when wind direction is between 000° and 080°.

May fly only when maximum wind speed is no greater than 23 MPH and gust factor is less than 8 MPH.

Ideal launch conditions are a wind direction of 050° and wind speed of 15 MPH.

### Advanced (recommendations)

Should not fly when wind direction is less than 340° or greater than 080° or maximum wind speed exceeds 28 MPH or gust factor exceeds 15 MPH.

## MAKAPU`U SITE GUIDE

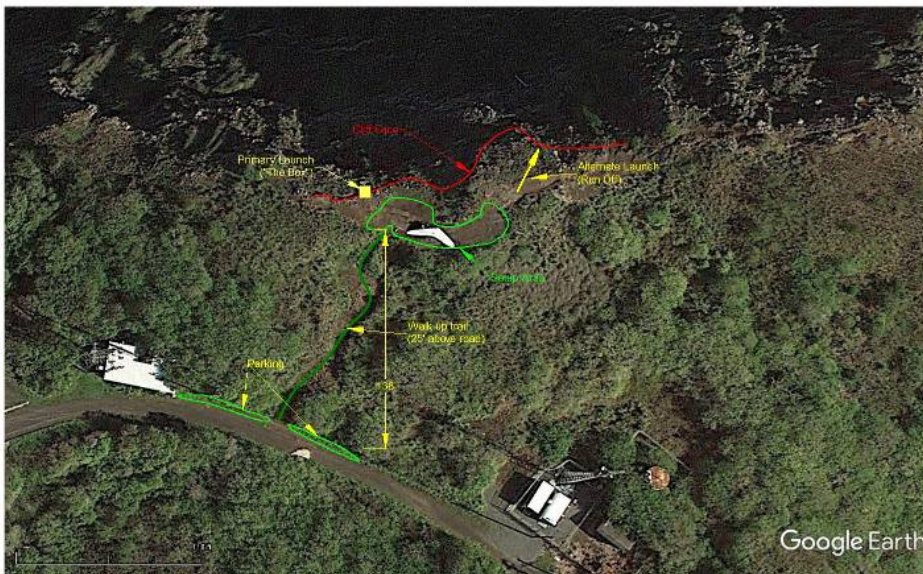
This flying site has adopted the name of the easternmost point on the island of Oahu. It is the beginning of the Koolau mountain range which it stretches for thirty miles toward the west and reaches heights of more than 2,500'. Facing the prevailing tradewinds, it offers unparalleled ridge soaring conditions.

### LAUNCH CONDITIONS & HAZARDS

Sitting on the edge of a 1,200' vertical cliff, "The Box" presents a launch scenario seen at few if any other flying sites. This is an extremely vertical cliff launch, under nearly all flyable conditions nose wire assist is required to safely get into the air. Launch assistance should be provided only by experienced pilots or trained assistants. Since the vertical component of the wind predominates, launches occur with the nose of the glider with a negative attitude (relative to the horizon). This can be disconcerting for those who are unfamiliar with the situation. It can also make it physically challenging to get into launch position; getting both feet behind the control bar and lifting the control bar off of the Box.

Once the awkwardness of readying for launch is dealt with, the event itself goes easily as long as the pilot concentrates on what is happening. The wire man will raise the nose until the wing starts lifting at which time the glider is released. While this is happening it is crucial that the pilot keep the wings level. If this cannot be done the glider should be set back down and the process restarted.

Upon release the pilot should keep the bar pulled in a bit to maintain airspeed and not be in any hurry to kick into their harness. There is no need to execute a turn immediately after launch, the lift band is very wide.



## LANDING CONDITIONS & HAZARDS

### Primary LZ

The primary LZ is situated to the east of launch (and not visible from launch), near the shoreline. As with any LZ it is a good idea to get good look at it from the ground before seeing from the air. Although there are no obstructions, it is a somewhat restricted area. There is a highway paralleling one side and a public parking area on the other.

A “standard” landing pattern is recommended, with the downwind leg being slightly off the shoreline. Undershooting is a rarity and poses no real hazard unless severe (which could result in a swim). Overshooting is another matter. The access road for the parking area runs along the upwind end of the LZ.

If the wind direction becomes more north than east, landing here can become problematic. This should be carefully considered before launch.



### Primary Landing Zone

Pilots on landing approach should be highly aware of spectator activity. Pilots on the ground should warn spectators of gliders on approach and direct them to safe areas.



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## Sandy Beach

Under some conditions it may be desirable to use the alternate LZ near Sandy Beach. This is a large, grassy area which poses no real difficulty for landing. But, it is downwind of the main ridge and crossing the ridge to get to it should only be done with sufficient altitude to avoid turbulence.



Alternate Landing Zone - Sandy Beach



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# MAKAPU`U RISK MANAGEMENT

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Most risks to pilots flying at Makapu`u are covered in the Site Guide. Because the launch site is behind two locked gates, No Trespassing signs, and at the end of a long uphill road, spectators are rare. In contrast, the LZ is easily accessible to the public, potentially creating risks to them and their vehicles

## RISKS AT LAUNCH

Occasionally hikers show up at "The Box". If this happens pilots should first be sure that the visitors understand that this site is on private property and that public access is not allowed. Confrontation is to be avoided but they should be requested to leave the area. If gentle persuasion is not effective the safety of the spectators becomes a concern. Getting whacked by a wingtip (even if you're just shifting your glider's position, much less launching) can result in an injury to any or all involved.

Spectators usually have no notion of what's happening during setup and launch. They can wind up inadvertently being a danger to pilots and themselves. They should not be allowed to wander around the setup area unless being carefully observed. In no case should spectators should be allowed within 30 feet of a launching glider. The farther from "The Box", the better.

The best location for spectators is the "knob" to the east of "The Box." This location is a safe distance from active launches and allows them to observe both setup and launches without getting in anyone's way.

## RISKS AT THE LZ

The LZ is fully open to public access. A highway runs along one side and a parking lot with driveways line two other sides.

A poorly executed landing approach can put a glider and pilot in the parking lot or driveway. Final approaches should be aligned with the LZ. No part of the landing pattern should place a glider over the highway at any time.

When on approach, the pilot should be on the lookout for people who may be traversing the LZ and may be unaware of the situation. Pilots on the ground should alert any such people and have them clear the area.

There are glider tie-downs in the breakdown area. While the in the LZ is normally quite predictable and gliders can be situated such that a blow over is unlikely, it is recommended that the tie downs be used.