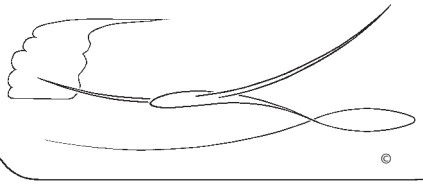
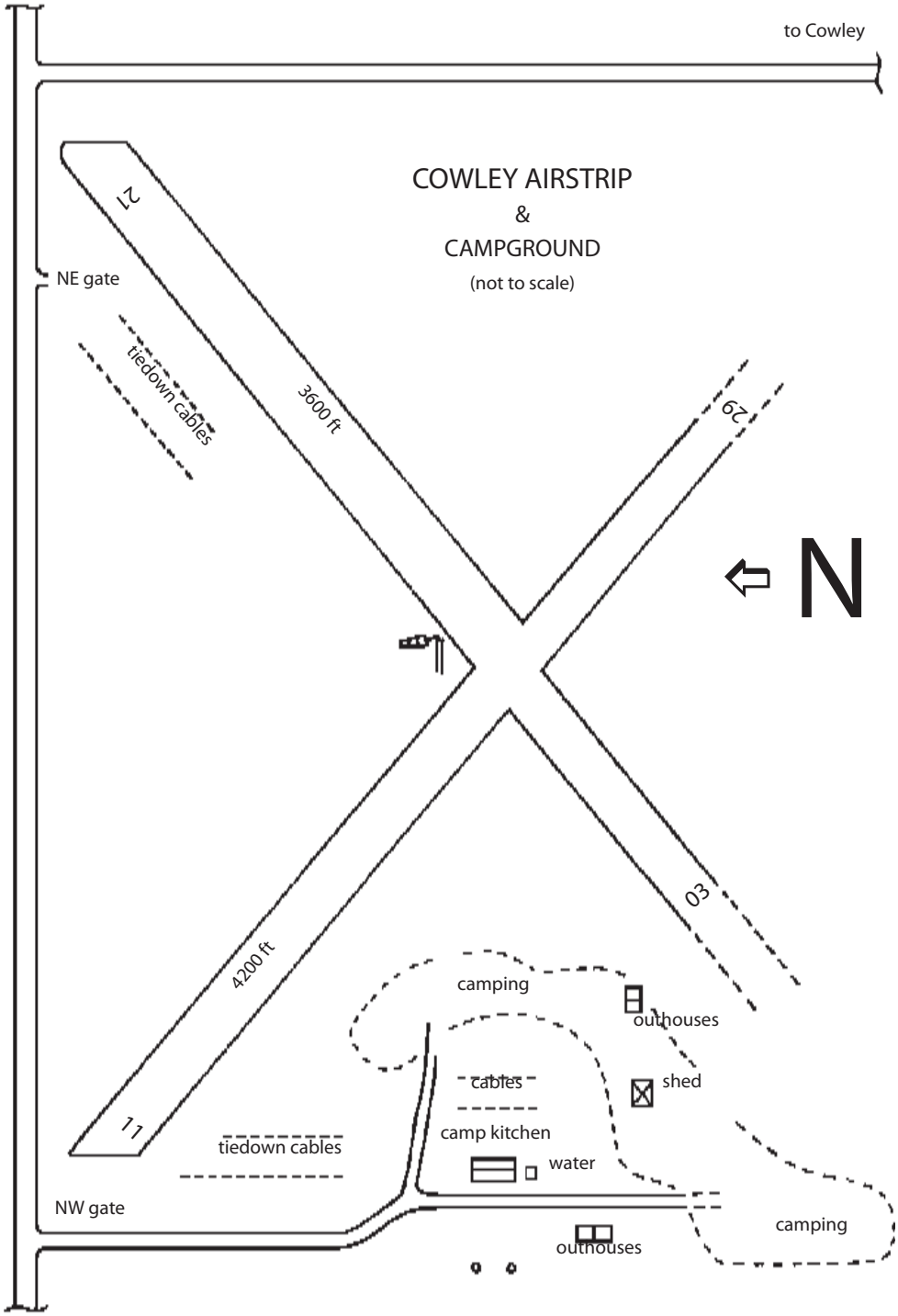


Alberta Soaring Council

Cowley Camp & Flying Guide

2011

CO-OP member number
Pincher Creek 12060


to Cowley
COWLEY AIRSTRIP
&
CAMPGROUND
(not to scale)
21
NE gate
tiedown cables
3600 ft
29
N
03
4200 ft
11
camping
outhouses
cables
shed
camp kitchen
tiedown cables
water
NW gate
camping
outhouses

Welcome to Cowley

The Alberta Soaring Council sponsors two Cowley camps – the summer camp and the wave camp.

In 1972, the Livingstone Block reservation was successfully negotiated with flight-following responsibilities by ASC in 1996.

The first official Cowley summer camp was held in 1973 following the official approval by the Province of Alberta to ASC to use the former Cowley emergency airstrip.

In 1994, ASC became the operator of the Cowley airstrip and adjacent land.

In 2003, the Livingstone Block was extended south of the V300 airway to allow transition from the block to uncontrolled airspace to the south at 18,000 feet.

The Cowley summer campis the largest annual Canadian soaring event and has international status. The site is one of the best and safest in North America for mountain lee wave soaring.

The Cowley wave camp in October is a major soaring event in often difficult weather conditions requiring extra diligence in all phases of the operation, but ...

... the rewards are exceptional.

Our Environment : elevation 3876 feet (all heights given in ASL)

This is the Chinook belt, a moderate and semi-arid climate on the eastern slopes of the Rocky Mountains. The humidity is low in Alberta's southwest corner — 20-40%. Fluids and sun protection are a must as dehydration is a constant threat. Nights are cool and clear.

Heavy thunderstorms and outbursts can occur mid to late afternoon and can present an extreme hazard to aircraft in the air and on the ground. When a storm approaches, please help to tiedown and derig. Wind shear, heavy winds and gusts have caused sailplanes to land short of runways or call for precautionary landings. Anticipate this and plan your circuit accordingly. There are ample landing fields in the Cowley valley and to the east on the prairies. Farmhouses are not always close or inhabited. To a downed pilot, a working radio or cell phone is most helpful to call for retrieve. Water, emergency food, walking shoes, sun and cold protection are minimum requirements in the outdoors. Do not fly without a tiedown kit.

Flights in the Cowley valley are enhanced by the Livingstone Range to the west and the Porcupine Hills to the east. They offer excellent thermal, ridge and mountain soaring, and about a 30% chance of wave in the summer. Cloud bases may reach 12,000 feet on the flat, and 16,000 feet over the mountains. Evening flights can be enjoyed near the Livingstone Range as adiabatic cooling takes place, or ridge soaring if the easterlies are favourable.

The primary wave is often just east of the Livingstone Range over the foothills. The secondary wave can often be found in the middle of the valley just west of the airfield; a 2000 foot tow to the secondary wave may suffice without contacting a rotor and penetration from 14–16,000 feet to the primary is achievable. A tertiary wave may be found over the Porcupine Hills, again from a 2000 foot tow.

The Camp

Our camps are organized by volunteers and run by everyone there. All participants are expected to do their share of helping when necessary and when asked.

The camping and tiedown areas for Cowley are shown on the map of the airport layout on the inside front cover. Club two-seaters and towplanes have priority on the tiedowns.

When driving into the campground, please restrict speed to 15 km/h for safety and to minimize dust.

When travelling from the camping area and west tiedowns (rwy 11) to the northeast corner of the field (rwy 21), drive via the road to the north of the field and the NE gate (see airport layout).

Phone The phone is normally in the storage shed with emergency numbers attached to it. 911 service is available. Please charge long distance calls to your own number.

Water Potable water is available from the cistern near the cookhouse.

Electricity none

Pets to be kept under control at all times and on the leash in the campground and in the vicinity of the flight-line. They are not allowed on any runway. Use your pooper-scooper after them!

Smoking – open fires Because of the presence of aircraft and the dryness of the grass in the fields, open fires are not permitted and smoking is restricted to inside cars, trailers and buildings. A fire blanket, first aid kit and fire extinguishers are on the flightline and the refuelling area; fire brooms and burlap rags for beating out grass fires are in the storage shed.

Cleanliness Please see that the camping area and airfield (tiedowns, runways) are kept clean and tidy. Your cooperation is very much appreciated.

The Organization

Please register yourself and your family and friends upon arrival. All club ships and towplanes are to be registered. A small fee for the pilot is levied.

Every pilot is required to attend the daily camp meeting held in the morning before flying. Cowley can generate a de-manding flight environment with sig-nificant hazards. The pilot meeting provides the opportunity to discuss and convey these and other issues. Other meetings may follow to cover specific topics in detail.

The person responsible for airfield and flight safety is

YOU

If you see what you think is an unsafe situation developing on the line, for example, you can stop the operation until things are sorted out.

P1 – Pilot in Command is you!
If you are unfamiliar with the area, the procedures or the equipment, please ask before flying. Your added knowledge will benefit all.

The Camp Director is responsible for coordinating all non-flying activities. Any questions, concerns or comments should be directed to this individual.

Safety Officer (SO) and Chief Towpilot (CTP)
These individuals facilitate all flying activities, including general flightline operations, pilot briefings, and coordinate flying operations between member clubs. They may refuse launch privileges to pilots where deemed necessary for breach of airmanship or safety procedures and other related activities. Each club in attendance will appoint a liaison person to report to the SO.

Field manager, time keepers and other flightline volunteers as required.

Flight Operation and Safety

The Cowley flying environment requires diligence, alertness and a safety-minded attitude as the chapter Environment tries to explain. Checkflights for newcomers and thorough briefings by the SO are required.

If the ground softens, flying is to stop.

This is necessary to protect the fragile surface of the runways.

Tow tickets are available only in the morning before and after the pilots meeting. A ticket allows for a 2000 foot tow; a 1000 ft sticker pays for an additional 1000 foot. Only one (1) sticker may be used per launch.

Please fill out your tickets completely, including date, tow altitude, tow speed in miles per hour. Incomplete data can make the necessary accounting difficult.

Day members (introductory flights) require a special tow ticket (available at the flightline) which has a waiver on the back. It must be filled in by the signer.

Stay clear at least 50 feet of any runway. Obstructions such as vehicles, sailplanes, oxygen cart, children, visitors can pose serious safety problems. Help us keep everyone safe and unhurt.

The flight line First come, first served. Pilots in line should be strapped in and ready to go well before their towplane arrives. Other pilots should be retrieving ropes, running wings and moving the line to the proper takeoff point. Please help to keep your flightline running efficiently and smoothly.

No towropes will be used unless they are equipped with a servicable weak link. To speed the operation, hand the tow ticket first to the towpilot, then hook up the towplane.

The runways are over 150 feet wide and are divided into three sections:

Landing
- sailplane – left side of runway
- towplane – middle part of runway

Takeoff – right side of runway

If you land on the left side of the runway, you may turn to the left to clear the runway. **If you have no choice but to land in the middle or on the right side of the runway, only a straight ahead rollout is to be done so not to interfere with other landing traffic.**

The above procedures may be modified for runway 21 if surface has damage which requires a change of launch area.

Circuits Left hand, final turn not less than 300 feet over airfield boundary. Landings on runway 21 often encounter strong wind shear during wave conditions. Caution and extra height may save you from even bigger trouble – 500 feet or more is often appropriate.

Retrieves from and across a runway by manpower only! There are no vehicles (other than ATV) at any time allowed on any runway. We have to protect the fragile surface and grass on the runways from heavy traffic at all cost.

Hangar flights may only be performed when proper traffic advisory is given and when to do so will result in no danger to other aircraft either on the ground or in the circuit.

Low level contest finish (beat-up)
This maneuver must have the prior authorization of the camp SO or his designate, with the intention of restricting this maneuver to suitable conditions and to pilots who are either already proficient at it or under the supervision of one who is. Violations will result in loss of flight privileges.

There are no low flights over the camp area at any time!

Motorglider Launch

During normal launch operations, when it is safe to do so, the motorglider will taxi toward the launch departure point and immediately following the launch in progress will be given priority to take-off. A wing runner will be provided who will upon request indicate "clear above and behind" — safe to launch. Standard radio transmissions apply.

Safe ground movement of a motorglider is the responsibility of the pilot.

Radio

Cowley Mandatory Frequency
The Cowley MF is 123.4 MHz for traffic advisories, circuit, and when above FL 280 (see also Livingstone Block procedures). Proper radio procedures are to be adhered to at all times. Air-to-air comm should be on another frequency. Avoid idle chatter on the MF!

Pilots not flying locally should transmit their location and status at regular intervals (at least hourly).

If your aircraft is flying NORDO, please make this known at the pilot meeting.

All aircraft equipped with radio will call "Cowley Ground" on 123.4 MHz when entering the circuit for landing.

Example: "Cowley traffic <message> Cowley". The repeat of the aerodrome name is recommended as a courtesy to pilots at adjacent aerodromes using the same traffic frequency.

Wave Flying

High altitude flight is common at Cow-ley (and is the reason for its existence). However, pilots not properly educated and outfitted for wave flying are a potential hazard to themselves and to others. Each pilot is responsible for being properly prepared for flying in the wave.

Attendance at the morning's pilot meeting is mandatory if you intend to fly that day. If you have not flown at Cowley before, a wave briefing and checkflight are mandatory. See the SO to arrange this.

Through years of hard work by several wave enthusiasts, the Livingstone Block airspace reservation was established with Transport Canada for VFR flight in class A airspace (above 18,000 feet). Each pilot is responsible for following the operating rules that govern the use of this airspace and for respecting the block boundaries.

Your personal safety goes down very quickly above 25,000 ft – see the "Time of Useful Consciousness" table on page 11. A flight to 25,000 will give you your Diamond height and the scenery does not improve above this. Above this height, we strongly recommend that you carry a bailout bottle on your flight and are familiar with its operation.

If you are planning a record height attempt, consider breathing 100% oxygen up to half an hour before launch to reduce the nitrogen saturation in your body. This will further reduce a low risk of bends.

Use of Oxygen

Aviation oxygen is available at the field on a cart. Filling will be done by named individuals only or under supervision of a person familiar with the correct filling method (and preferably in the morning).

For the pilot's own safety, proper aviation oxygen is to be used to prevent possible regulator freezing at altitude; medical oxygen may contain more water vapor than aviation oxygen.

Livingstone Block

The Livingstone Block is an airspace reservation that begins at 18,000 feet and is normally capped at FL280. Flight following of flights above FL280 when a higher level airspace extension is in effect is now the responsibility of the Alberta Soaring Council. Edmonton Area Control Centre (ACC) will open the block above FL280 at the request of ASC. The opening of the block is requested only by listed ASC individuals and must be confirmed by Edmonton ACC. Dates, times, and altitude caps are specific and must be known with certainty by each pilot expecting to use the block.

Pilots are to remain clear of Class A and B airspace in the vicinity of Victor 300 and the Lethbridge Control Area Extension (from 12,500 feet to 18,000 feet) from Centre Peak at the north to about the centreline of the Pincher Creek airport runway to the south.

High level airway 500 is an IFR traffic route over Centre Peak. Sailplane flights above FL280 are prohibited unless the block has been extended by ASC.

Glider flight regimes:
(all heights ASL)

surface to 12,500
Fly under normal visual flight rules (VFR).

12,500 to 18,000
Flying VFR, stay clear of the A300 airway. If flying south out of block, cross airway above 18,000 feet to a latitude defined by the centreline extension of the Pin-cher Creek airport, then descend to below 18,000 and proceed. You may cross within the airway with clearance from ATC on 132.75 MHz. They are accommodating.

18,000 to 28,000
Block open, fly VFR. Set altimeter to 29.92" Hg (1013 mm) when climbing through 18,000 feet indicated and back to local pressure when descending through 18,000.

above 28,000
Airspace above the usual FL280 may be opened by the camp director for record attempts. The pilot must have a functioning radio. Contact Cowley Ground on 123.4 MHz prior to climbing through 28,000 giving altitude, location and time intended to be above FL280 and stay in radio contact at all times.

At regular intervals Cowley Ground will poll sailplanes flying above FL280 for altitude and location data which will be entered on a specific flight log. In the event of a radio failure, the pilot shall land immediately and notify Cowley Ground that he has cleared the airspace. Every pilot is to be conversant with the geographical locations.

In the event that the block is closed by the Area Control Centre, pilots must comply with Cowley Ground to immediately descend to the specified altitude.

Warning — Violation of Livingstone Block and FL 280

Breach of Transport Canada (Nav Can) and Alberta Soaring Council agreed procedures for use of the Livingstone Block.

A pilot who violates clearance limits may be suspended from all ASC sponsored functions (Cowley summer and wave camps, provincial contests, etc.) for not less than one year.

Any pilot who has knowledge of such violation and fails to report it to ASC may also be subject to suspension.

The lateral dimensions of the Livingstone Block are shown on the chart on the back page. Reporting points are designated as

The Gap	(north portion — west) where the Oldman river and a secondary road cross the break in the Livingstone Range.
Centre Peak	(centre portion -– west) The highest peak in the Livingstone Range, often capped by snow.
The Pass	(south portion — west) Crowsnest Pass, the general area of Coleman/Blairmore/Frank Slide.
The Porcupine Hills	(centre portion — east) Eastern boundary of the Block
Coordinates	49°28'N 114°00'W to 49°28'N 114°30'W to 50°02'N 114°30'W to 50°05'N 114°20'W to 50°05'N 113°45'W to 49°43'N 113°45'W to 49°43'N 114°00'W to point of beginning
Note	V300 and G1 airway and Lethbridge Control Area extension cut into the southern portion of the Livingstone Block as shown in the map. Flight from 12,500 asl to 18,000 asl within this air-way is not allowed without Edmonton ACC clearance to each pilot.

Guide to Oxygen emergencies

Hypoxia and hyperventilation

Hypoxia results from an inadequate supply of oxygen necessary for normal bodily function.

Hyperventilation may result directly from hypoxia, or under other conditions, from an increase in the rate and/or depth of breathing. This causes a depletion of carbon dioxide in the blood resulting in symptoms of hypoxia.

Types of hypoxia

Hypoxic	due to direct reduction of atmospheric oxygen pressure at altitude.
Stagnant	due to pooling of blood from pos-itive G forces.
Histotoxic	due to an inability of body cells to utilize available oxygen through cell poisoning (example – alcohol, certain drugs such as sulfa derivatives).
Hypemic	due to an inability of red blood cells to carry sufficient oxygen (ex. – carbon monoxide poisoning, anemia).

Symptoms

Be suspicious of any unusual feeling. Any of the following symptoms may indicate a hypoxia or hyperventilation problem —

air hunger	tunnel vision
apprehension	tingling
fatigue	numbness
nausea	muscle spasms
dizziness	euphoria
hot/cold flashes	blue fingernails
blurred vision	

For most people, the very first symptom to appear is an pbvious degradation of hand/eye coordination. This is easily tested in flight above 10,000 feet. Place the hand that you are most accurate at pointing with on your lap, then quickly raise it and put the tip of the index finger on the centre of one of your instuments. If you miss your aim on your first try, suspect the onset of hypoxia and take appropriate action.

Oxygen System Checklist

P R I C E

Pressure	1500–1800 psi check oxygen bottle fully ON
Regulator	Selector to 100% With mask disconnected from regulator, perform blow-back check on regulator hose. Little or no resistance indicates leaky hose or defective regulator. Selector to NORMAL. Repeat blowback check.
Indicator	Selector 100%. Check blinker for operation. Return selector to NORMAL for takeoff.
Connections	Connection secure at regulator. Check hose for kinks, cuts or fraying. Check quick-disconnect is not warped and rubber gasket in place. Check mask hose is properly connected.
Emergency	Check bailout bottle pressure, should read 1800 psi. Check hose properly connected to "quick disconnect".

Action

When hypoxia or hyperventilation is suspected, immediately:

Press to test momentarily –

if no pressure is felt in mask
- pull emergency bottle
- descend to 10,000 feet altitude

if pressure is felt in mask
- select 100% oxygen
- select Safety
- breathe normally

if no improvement is felt
- activate emergency oxygen bottle
- descend to 10,000 feet altitude

Minimize the following:
- extreme head movement
- positive G
- straining maneuvers
- breath holding

Land at nearest suitable airfield

Loss of all oxygen pressure

Activate emergency oxygen bottle and descend to 10,000 feet.

Difficulty in breathing

Likely causes
- disconnection
- blockage in tube or mask
- extremely depleted oxygen supply

Check all connections, quantity gauge, press test mask to ensure adequate supply (kinked hose), select 100% oxygen, take several normal breaths, hold breath and quickly disconnect, unkink, re-connect hose, then flood mask with oxygen by pressing test mask momentarily. Breathe normally and re-select normal oxygen.

A leaking inhalation valve causes difficulty in exhalation. This is not an emergency since the oxygen flow is not affected and exhalation is possible around the mask. The mask must not be loosened to assist in exhalation. Usually the valve can be cleared by taking several short breaths or a couple of sharp exhalations.

A gushing or run-away regulator may not be an urgent emergency although it is uncomfortable. It may be overcome by flipping the test mask lever.

Self-imposed stresses

These are stresses the pilot imposes upon himself and reduces flying performance.

Tobacco	Nicotine	Carbon monoxide
Caffeine	Alcohol	Hypoglycemia

Time of useful consciousness (TUC)

This is the time interval between inter-ruption of oxygen supply and loss of useful mental function. Essentially, this is the time available to detect and correct for oxygen deficiency before unconsciousness results. TUC decreases very rapidly at high altitude. The following times are average figures for a fit, warm, unstressed, non-smoking, young pilot (probably not you):

Altitude feet	Time seconds
25,000	180
28,000	90
30,000	75
40,000	30
46,000	12

Source:
"Aeromedical handbook for jet personnel".

The Livingstone Block Airspace