

PLEASE CONTACT <u>WWW.MAAC.CA</u> FOR ADDITIONAL INFORMATION



#### This site is in controlled airspace – strict compliance with these rules is required.

**Lake of The Woods Aeromodellers** (LOWAM) is a MAAC Sanctioned Club. As such, all pilots shall operate within the applicable areas of the MAAC safety code, according to the type of aircraft that is permitted to operate at our sanctioned flying field.

In addition to the MAAC Safety Code, LOWAM imposes site specific requirements on pilots based on our club location, that shall be followed.

It is worth reminding everyone, that in the event of an accident, it is the individual pilot who will have to explain and/or justify what they did or were doing at the time of the accident. Not knowing the rules/requirements will not be an excuse for an accident, and could vary well mean denial of insurance benefits, and/or suspension of MAAC, and or club membership.

MAAC's safety code is made up of multiple documents. These documents include:

- MAAC Safety Documents (MSD's)
- MAAC Advisory Publications (MAP's)
- MAAC Policy and Procedures Documents (MPPD's)
- The most up to date version can be found here: MAAC Safety Code

Not all the requirements and guidelines found in the safety code apply to the type of flying you may be doing, at any one time. It is the individual pilot's responsibility to know which apply to them at the time, location, type of aircraft and airspace they are operating in.

#### 1.0 Definition Glossary of Terms:

The following are MAAC definitions used in this document:

**Model Aircraft** – means any non-RPAS flying model which includes Free-Flight (F/F), Control Line (C/L) and Space Modelling categories.

**Remotely Piloted Aircraft (RPA)** - means a navigable aircraft, other than a balloon, rocket, or kite, that is operated by a pilot who is not on board.

**Remotely Piloted Aircraft System (RPAS)** - means a set of configurable elements consisting of a remotely piloted aircraft, its control station, the command-and-control links and any other system elements required during flight operation. For all purposes the terms "RPAS" and "model aircraft" are no longer interchangeable (previously referred to as radio control or R/C aircraft).

**Visual Observer** – means a person assigned the sole task of watching for and ensuring RPAS or model aircraft activities are safely separated from full-scale aviation activities.

#### 2.0 Administrative Rules

2.1 The LOWAM flying site located north of Hwy 17, approximately 9 kms east of the City of Kenora, ON in unorganized territory. Further, the site is situated 5.25km (2.83 NM) south of the Kenora Aerodrome. (Fig 1)

2.2 The LOWAM Site is located within **Class E Controlled airspace** of the Kenora Aerodrome CYQK. There is no on-site Air Traffic Control rather it is managed by NAV CANADA Flight Service Station (FSS) 24/7 at Kenora Aerodrome, commonly called Kenora Air Radio on frequency 122.2. ATC control service is provided remotely by Winnipeg Area Control Center (ACC) in Winnipeg

2.3 All RPAS operations at LOWAM are to be conducted during daylight hours only. Daylight hours shall be determined using appropriate weather services for the Kenora.

2.4 The flying field is for the use of paid members in good standing of the Lake of The Woods Aeromodellers (LOWAM) Inc., their invited guests and MAAC members in good standing attending scheduled events organized and/or supported by club.

2.5 Pilots must have a valid MAAC membership and abide by the applicable provisions of the MAAC Safety Code and LOWAM Site specific rules found in this document.

2.6 Club member pilots in training shall not operate RPAS unless the pilot is under the direct supervision of a club instructor.

2.7 It is the responsibility of members to ensure that their invited guests are aware and understand LOWAM Site specific rules.

2.8 During flying activities, non-flying member's guests and/or spectators should not enter the designated pit area unless accompanied by a member.

2.9 A weatherproof container shall be maintained at/within the LOWAM site containing required documentation, including approved accident / incident reporting forms.

- 2.10 All members shall abide by any lawful federal, provincial, or municipal emergency measures that include the LOWAM flying site.
- 2.11 Any Social media posts by LOWAM members are expected to be positive in nature and not reflect negatively on the club in any fashion. Members must understand that all social media content can be accessed by any person, official, media or government agency. It is to our benefit that any social media content reflects a culture of responsible fun and safety.
- 2.12 This document shall be reviewed and revised annually as required and provided to all active members prior to the start of the spring flying season.
- 2.13 New and renewing members shall declare they have reviewed the MAAC Safety code and LOWAM rules with declaration record retained for the active calendar year.

#### In the event of an emergency, call 911 – The fire road No. is - 3500.

#### 3.0 Normal operating procedures and Club safety rules - mRPAS

The LOWAM site is for **the exclusive use of MAAC RPAS Operations up to 25kgs Only**. mRPAS may be flown at this site per the following.

- 3.1 Per the CAR, mRPAS do not require an RPAS operators' certificate and cannot be registered with Transport Canada. mRPAS are however regulated under CAR900.06 and part VI of the CAR.
- 3.2 mRPAS operation inside controlled airspace cannot use and do not need NAV DRONE for permission.
- 3.3 Per MAAC policy, operating mRPAS inside controlled airspace is only permitted where MAAC has issued an SOC that determines CAR900.06 has been met. This site meets those requirements.

NOTE – The MAAC Manufacturer Declaration policy does not permit "drone" operation in controlled airspace. A "drone" is not defined by propulsion system (i.e., multi-rotor) but rather whether there is any type of onboard semi-autonomous flight control systems such as "return to home". All MAAC mRPAS must be flown by the pilot – basic stability gyros or simple stability systems like SAFE are allowed. Please read MAAC policy or contact MAAC for additional information.

- 3.4 Therefore, members may operate mRPAS at this site without any RPAS pilot certification, registration or additional airspace permission provided the following conditions are met:
  - 3.4.1 All mRPAS must be flown in direct control mode only. "Drones" are prohibited.
  - 3.4.2 All mRPAS must have a label affixed to them stating the weight in grams. This must be the ready to fly weight including fuel and batteries.
  - 3.4.3 Any Member caught using any aircraft over250 grams without the proper CAR requirements may be banned from use of the field.
  - 3.4.4 There are no age restrictions on mRPAS operation.
  - 3.4.5 mRPAS do not require a MAAC "manufacturer operations manual" or similar.
  - 3.4.6 Visual observers are optional for mRPAS.
  - 3.4.7 mRPAS will be operated in accordance with all site and MAAC rules such as honouring the flight line. Spotters are at member discretion.

NOTE - if a member has obtained NAV DRONE permission to operate an RPAS for a given day/session, they may also fly a mRPAS at any time during or outside the NAV DRONE permission time limits without any further permission.

MAAC members conducting mRPAS activities shall give way or otherwise immediately get out of the way of all full-scale aircraft – **no exceptions.** 

#### 4.0 Normal operating procedures and Club safety rules - RPAS

- **4.1** "Model aircraft"/RPA must be registered with Transport Canada under the MAAC RPAS Manufacturer Declaration to operate at this site. Members may operate other types of RPAS under existing manufacturer declarations where they exist (DJI, etc.).
- **4.2** Members responsible for RPAS operation must have an Advanced RPAS Pilot certification to operate RPAS at the site.
- **4.3** Conformance to MAAC RPAS Manufacturer Declaration **is mandatory for all "model aircraft/RPAS".** The MAAC RPAS Manufacturer Declaration policy items are appended to this rules package.
- **4.4** Each individual RPAS flying session **must** have an appropriate NAV DRONE permission/approval.
  - 4.4.1 Please refer to the MAAC tutorial on what values to enter in NAV DRONE for a MAAC SOC flying site.

- 4.4.2 There is no group ability or sharing of a NAV DRONE approval or similar every pilot must submit their own individual request for each flying session.
- 4.4.3 Please refer to the NAV CANADA website for more information and instruction on the use of NAV DRONE.
- 4.4.4 Please direct all NAV DRONE usage questions to NAV CANADA via their feedback channels.
- **4.5** The weather minimums for RAPS operations are:
  - 4.5.1 no cloud is present below 1000' above the model flying area, and
  - 4.5.2 a horizontal visibility requirement of 3sm (5km) or more around the flying area, and
  - 4.5.3 no other obscuring conditions (fog, smoke, haze etc.) which could make spotting full-scale aircraft difficult.
- **4.6** Prior to a flying session, a site survey shall be completed and made available to each pilot who intends to fly during that session. (once per day). A group site survey is permitted, provided the information is readily available to all RPAS pilots, including weather and NOTAM information.
  - 4.6.1 It is recommended that pilots utilize the RPAS Wilco site survey tool as all requirements of the CARs for a site survey are met using that tool. In addition, the electronic copy / record of this tool can be forwarded to all pilots participating or printed off and posted prior to the session.
- **4.7** All pilots are required to review all pertinent NOTAMS issued for the Kenora (CYQK) prior to their first flight of any flying session.
- **4.8** All RPAS flying activities shall remain within the <u>designated LOWAM Airspace</u> <u>Boundaries</u> up to **400'** above ground level (AGL) as referenced from the highest point of the surface of the runway area. Members **shall not** make individual requests for higher altitudes through NAV CANADA – those requests must be processed by MAAC under the MAAC manufacturer declaration.
- **4.9** The tallest tower located southwest of the flying site and highway can be used by pilots as a simple height reference. The tallest tower is reported to be 320 feet tall. See Fig 2 for reference.
- **4.10** Refer to the attached map for normal site operating procedures depicting site set-up areas such as parking, spectator areas, pit, or assembly areas, and start-up/run-up areas including the MAAC required buffer distances.

- **4.11** Except for 2.4 GHZ transmitters, all pilots shall use frequency pins on the MAAC approved frequency board.
- **4.12** No flying activity shall take place while field maintenance / grass cutting is being conducted within the designated flying area.
- **4.13** No powered RPAS shall be taxied within the designated "<u>Pit Area</u>". Pilots should use designated arming / start up stands or areas outside safety barriers for starting/arming.
- **4.14** Pilots are responsible to ensure their RPAS is properly restrained during all startup procedures.
- **4.15** When extended ground running is necessary, pilots should secure their RPA in a safe start-up area. No extended ground running shall be done while any RPAS is airborne.
- **4.16** Pilots at the commencement of a flying session shall complete a range check of their RPA as per manufacturer's instruction.
- **4.17** Pilots at the commencement of a flying session shall ensure that the failsafe has been set for each RPA to be operated during the session.
  - 4.17.1 It is recommended that the failsafe should be set so that an interruption in radio control will result in throttle moving to minimum power, the rudder inducing a gentle orbit to left or right with the remaining control surfaces moving to a neutral position.
  - 4.17.2 If the pilot loses direct control of an airborne RPA through electronic or mechanical failure, or any other reason, such as loss of orientation, the pilot shall initiate the failsafe of the RPA by shutting down their transmitter.
- **4.18** Pilots should remain behind provided pilot barrier protection, as much as practicable, while operating RPAS or model aircraft.
- **4.19** Agreement among pilots present at the field on any given day should be obtained prior to hand or Bungee launching any RPA.
- **4.20** Prior to launching / taking off, Pilots shall always confirm it is safe to do so with any pilot(s) operating airborne RPAS or model aircraft.

- **4.21** The flying pattern of any flying session should be agreed upon by the present pilots as well as agreement on any subsequent changes to the pattern during that flying session.
- **4.22** Prior to any person moving forward of the pilot station area, and into the <u>designated flying area</u>, for any reason, always confirm it is safe to do so with any pilot(s) operating airborne RPAS.
- **4.23** Pilots should always clearly announce intentions to launch, take-off, land, or situations of engine failure where a "dead-stick" landing is imminent.
- **4.24** In the event where a pilot has lost control of a moving or airborne RPAS, an immediate and clear announcement should be made to make other pilots and persons on site aware and alert to potential danger.
- **4.25** Recovery of downed / disabled aircraft that are within the designated flying area should only be recovered with the agreement of any pilots with aircraft that are still airborne.
- **4.26** Pilots should not fly over/near any persons recovering downed / disabled aircraft.
- **4.27** At any time that an RPAS is airborne, one "visual observer" shall be present on the flightline in a position that allows an unobstructed view, free from the sun's glare and close enough to the pilot stations to provide reasonable verbal warning to active pilots of any potential conflicts with manned aircraft in the area.
  - 4.27.1 Visual observers should be a certified RPAS pilot. (basic or advanced).
  - 4.27.2 The visual observer (or other non-flying pilot/delegate) should be assigned responsibility for ensuring "communication capability" is maintained with Air Traffic Control per the approval notice.
  - 4.27.3 A visual observer, if not already familiar, shall be briefed by any member pilot on this rules package and his primary duties prior to serving in this role.
  - 4.27.4 The <u>sole role</u> of a visual observer is to scan the sky for approaching manned aircraft, paying particular attention to direction manned aircraft generally approach the area. A visual observer should <u>not</u> be watching the RPA.

- 4.27.5 A VHF Radio monitor may be used as an additional aid <u>for the purpose of monitoring</u> full scale air traffic at/near the Kenora Airport. <u>Note</u>: It is illegal to <u>transmit</u> on aviation channels unless the operator has a Restricted Radio Operator's license. Kenora (YQK) radio frequency is 122.2.
- 4.27.6 It shall be made clear to visual observers that visual and sound monitoring will be the primary sources of manned aircraft detection used during flying operations.
- **4.28** If a visual observer, or **any other member** spots a potential conflict with a manned aircraft, the observer shall immediately yell, "AIRPLANE" in a clear voice that is loud enough to be clearly understood by any active pilots.
  - 4.28.1 Upon being notified of a potential manned aircraft conflict, all pilots flying will descend below 60 ft AGL and if need be, land as soon as safely able.
  - 4.28.2 A pilot shall not attempt to avoid a manned aircraft using lateral maneuvers. A pilot shall aways attempt to avoid manned aviation conflict with descending maneuvers.
  - 4.28.3 When the visual observer or active pilot(s) observes that a potential manned aircraft conflict no longer exists, "ALL CLEAR" shall be yelled loudly and clearly enough that all active pilots to know that flying may resume as normal.
  - 4.28.4 Members shall not make any ambient noise during RPAS operations, which could interfere with visual observer(s) aural notifications. This includes loud music or announcers, run-ups, engine tuning, loud generators near pilots or similar.
  - 4.28.5 It is expected that all pilots on site, not engaged in flying, will also collectively watch for, and help ensure RPAS or model aircraft activities are safely separated from manned aviation activities.
  - 4.28.6 Any pilot operating an RPAS who becomes aware of any potential airspace conflict with any manned aviation activities, shall retain ultimate responsibility in all circumstances to immediately take necessary action to avoid collision with any manned aircraft.

**4.29** Pilots who wish to deliberately fly RPA in formation with other RPA's shall ensure that the pilots to be involved plan the formation maneuvers prior to launch and remain in constant communication during the time in formation.

#### 5.0 Adjacent Aerodromes

This site is located within 3nm of the Kenora Airport (CERT) and is required to meet the following requirements.

- **5.1** The operators name (OPR) is Kenora Airport Authority Inc and their contact information is 1-807-548-5377.
- **5.2** The airport is located 2.83nm north of our modeling site.
- **5.3** The aerodrome has one runway (80/26), full aircraft services and is used by scheduled regional airlines as well as charter and private aircraft. The aerodrome can also be frequented by aerial fire suppression aircraft.
- **5.4** There are no CFS RPA procedures in the CFS PRO or CAUTION sections and there are no published air routes that overfly our flying site.
- **5.5** The Club executive has contacted the operator and they have expressed no issues with our RPAS site.
- **5.6** As this is a certified aerodrome (Airport), all pilots responsible for RPAS operation must have advanced RPAS certification (CAR901.47(2)).



#### 6.0 Emergency Procedures (Accidents / Incidents / Hazards)

**6.1** In the event of a person(s), <u>not connected with LOWAM flying activities</u>, inadvertently entering the designated LOWAM flying boundaries on foot or other means, pilots with airborne aircraft shall be notified immediately and land when safe to do so.

# Flying operations shall be suspended until person(s) can be cleared from the designated flying boundaries.

- **6.2** If for any reason, an RPA is experiencing a fly-away (continuing under power on a trajectory that will take it out of the designated flying area), a notification shall immediately be made to the Kenora FSS Emergency phone No. 807 548 5076.
  - 6.2.1 The report to FSS shall include the last observed position and altitude, direction of travel and the approximate duration of battery / fuel on board the RPA, when contact was lost. Provide any other information as requested.

- 6.3 If a member is involved in any type of accident, near miss or safety concern between a full-scale aircraft and our RPA, or injuries to persons requiring medical attention, ALL FLYING SHALL cease immediately. The members involved should fill out a MAAC reportable occurrence report and submit that to MAAC and the Club executive and follow MAAC policy with the following exceptions:
  - 6.3.1 If the member(s) involved believe the risk was very minimal, they may complete their own self declaration or risk assessment using the MAAC form. Submit a copy of the form to the club executive when able and recall you must keep this form for one year (CAR901.49 (2)). Resume flying when done.
  - 6.3.2 If the member or Club executive deems the event serious, flying will not resume until members are given permission by the Club executive in writing.
  - 6.3.3 If there is actual contact between an aircraft and a MAAC RPAS all flying will cease until MAAC confirms we may resume operations.
- **6.4** In the event of any normally expected modelling mishap which requires any degree of repair to an RPA, the model may only be "field repaired" if all normal modelling supplies and tools are present and used in accordance with established modeling practices or manufacturer instructions.
  - 6.4.1 Any repair other than minor (replacing broken propeller etc.) shall be treated as a maiden flight. Ensure logbook entries are made.
  - 6.4.2 Any repair that cannot be fixed at the field, shall only be repaired at the modellers/owner's shop or other repair facility.
  - 6.4.3 Ensure logbook entries are made for repairs that cannot be completed on site.
- **6.5** The above MAAC reporting process is in addition to regulatory accident/incident reporting criteria for RPA operated under the CAR 901.49. MAAC will not assume responsibility for those reporting requirements the RPA pilot must complete that process independently.

## 7.0 Diagrams/maps



Fig 1 – LOWAM to Kenor Airport



Fig 2 – LOWAM Operational Airspace



Fig 3 – LOWAM runway detail



Fig 4 – LOWAM Site Detail

#### Lake Of the Woods Aeromodellers (LOWAM) - Site Rules



Fig 5 – CFS Kenora Airport



Lake Of the Woods Aeromodellers (LOWAM) – Site Rules

Fig 6 – NavDrone Grid Map

### **8.0MAAC Manufacturer Declaration requirements**

Please refer to the full policy for additional information. The following are the core requirements of the policy that enable MAAC operation in controlled airspace.

- **8.1** To be eligible to be classified as meeting the "MAAC RPAS Manufacturer Declaration", the RPAS must meet the following technical requirements:
  - 8.1.1 The RPA must not weigh more than 25kg ready to fly (SFOC are not permitted)
  - 8.1.2 The RPA must be of a type, quality and construction or assembly method consistent with the commonly accepted definition of "model aircraft" in North America, wherein the MAAC member, using the MAAC safety code and processes, is responsible for any portion of construction or final flight ready assembly. See MAAC policy for a detailed description of the types of acceptable MAAC RPAS/model aircraft and their classifications.
  - 8.1.3 The control system and components must be of a type, and quality meeting Industry Canada approval and otherwise meet MAAC Safety Code and commonly accepted modeling and model industry standards for radio control installation and operation.
  - 8.1.4 The RPAS must not contain any type of "Human-on-the-loop" or other computer control in the control system. For clarity, deactivation, or temporary disabling of any such system is not acceptable these types of control systems must not be present in the system.
  - 8.1.5 RPA operating in controlled airspace up to 400'AGL, MAAC VLOS meets CAR922.04 requirements provided the RPAS pilot operates in accordance with MAAC VLOS.
  - 8.1.6 The RPA must have performance capability to descend from the maximum altitude approved by the controlling agency to 60'AGL at a rate of 700 feet per minute or greater.
  - 8.1.7 The RPA or RPAS must have an operable "flight termination" system or design criteria that can be reasonably expected to terminate the flight with minimal delay in the event of a control link failure.

- 8.1.8 If intended to be flown at night, or if required by the controlling agency during the day, the RPA must have a functioning lighting system to ensure MAAC VLOS requirements are met or to provide enhanced visual detection for full-scale pilots.
- 8.2 Prior to RPAS operation under the "MAAC RPAS Manufacturer Declaration", the RPAS pilot shall ensure the RPAS owner has documentation available at the site/event for each RPA which contains the following information. This may be in electronic or printed format however MAAC highly recommends this information be included in the RPA logbook, either as a separate page entry, an addendum, or as a package of info
  - 8.2.1 RPA Make or manufacturer name,
  - 8.2.2 Model the specific RPA model designation including the bound/used transmitter.
  - 8.2.3 The RPA category (MAAC Model Aircraft, MAAC Rotary Wing, MAAC Hybrid)
  - 8.2.4 The RPA maintenance program that includes:
    - 8.2.4.1 instructions related to servicing and maintaining the RPA and control system,
    - 8.2.4.2 An inspection program to maintain system readiness.
  - 8.2.5 Any weight limits or center of gravity concerns or related special requirements.
  - 8.2.6 Any RPA design features such as limitations on speed, altitude, or operational restrictions,
  - 8.2.7 Any foreseeable weather conditions or limitations affecting RPAS operation,
  - 8.2.8 Any special or unique features of the system that could result in severe injury to crew members during operation.

- 8.2.9 Any special or unique design features of the system, and the operating procedures, that are intended to protect against injury any person not involved in the operation,
- 8.2.10 Any warning information provided to the pilot notifying any degraded system performance,
- 8.2.11 Any special or procedures for operating in normal or emergency conditions,
- 8.2.12 Any special assembly, adjustment, or post flight inspection requirements, and
- 8.2.13 Any available manuals or component operating instructions.
- 8.2.14 The above records shall be kept by the owner, and any subsequent MAAC owner for the life of the RPAS, or until two years after the RPAS is withdrawn from service and de-registered.
- **8.3** To operate a RPAS under the "MAAC RPAS Manufacturer Declaration", the **RPAS pilot shall** ensure the following requirements are met:
  - 8.3.1 All other relevant sections of the CAR are met,
  - 8.3.2 The RPAS is operated in compliance with the MAAC Safety Code and any category specific rules or requirements.
  - 8.3.3 The RPAS meets the technical requirements of MAAC policy,
  - 8.3.4 The RPAS shall not be operated in any mode other than "direct manual control"
  - 8.3.5 The pilot shall not operate more than one RPAS at a time.
  - 8.3.6 The pilot shall not operate the RPA unless any equipped onboard flight termination system is operable,
  - 8.3.7 The RPA shall not be operated within 30 meters of any bystander or spectator, under any circumstances and **regardless of altitude**.

- 8.3.8 The pilot shall not operate an RPAS unless at least one visual observer is present Note, unless required by the controlling agency or stipulated in the site SOC, mRPAS do not require a visual observer.
- 8.3.9 The RPAS shall not be operated in any weather condition, near terrain or any other condition which could:
  - 8.3.9.1 reduce or negate visual detection of approaching full scale aircraft or bystanders,
  - 8.3.9.2 interfere with radio control link range or clarity of reception or
  - 8.3.9.3 negatively affect the performance of the RPA or the control system where safety of operation could be compromised.
- 8.3.10 The pilot shall only operate a RPA of a type, size or performance capability that can realistically be expected to maintain controlled flight within the lateral and vertical flying area confines specified in the SOC or by the controlling agency,
- 8.3.11 The RPAS pilot shall report to MAAC without delay any defect, flaw or equipment performance issue that negatively affected meeting any of the technical or operational requirements of this policy.
  - 8.3.11.1 The RPAS shall not be operated again under this declaration until both MAAC and the RPAS pilot/owner have investigated and agree the noted deficiency has been rectified.
  - 8.3.11.2 Members shall use the MAAC Reportable Occurrence form and MAAC shall respond in writing. Any such record shall be kept for two years from the date of the agreement to cause and remedy.
  - 8.3.11.3 The above records shall be kept by the owner, and any subsequent MAAC owner for the life of the RPAS, or until two years after the RPAS is withdrawn from service and de-registered.



Membership / Renewal Application

## PLEASE PRINT CLEARLY IN CAPITAL LETTERS

Name:		
Address:	M.A.A.C.#	
City/Province:	Phone:	
Postal Code:	Cell PH#	
Email		
Membership Type: (New Member) (Renewal)		
LOWAM Inc. yearly membership: \$100.00		
Method of Paym	ent: Cash Cheque#	
Treasurer: valentakj@shaw.ca		

## **Declaration:**

I acknowledge and understand that I must be a member in good standing with MAAC, and abide by the MAAC Safety Code, in order to operate RPAS or model aircraft from the LOWAM site. I further acknowledge that I have read and understand the site-specific rules of LOWAM and will always abide by them.

Signed:	Date:
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