CKMM / photographic

Submission to Transport Canada

NOTICE OF PROPOSED AMENDMENT (NPA)
CARAC ACTIVITY REPORTING NOTICE #2015-012

UNMANNED AIR VEHICLES

Prepared by ckmmphotographic
Mike Campbell, P. Eng.
August 17, 2015
Submission # 15-002
Submitted via email to: carrac@tc.gc.ca

EXECUTIVE SUMMARY

ckmmphotographic welcomes the opportunity to provide feedback and comments on the notice of proposed rules related to Small UAVs in Canada. We offer comments from an Operator perspective. In our opinion, there has been continuing confusion and lack of clarity with the current Small UAV rules. This area of regulation is overdue for update.

The current rules and exemptions, coupled with high overhead costs of compliance for commercial operations, has lead to a regulatory Small UAV environment that is difficult to implement, manage and enforce. At the same time, when making changes to these rules, Transport Canada needs to carefully weigh the risks and cost balance to make sure whatever changes are introduced, Canada does not lose the lead that has been achieved in Small UAV expertise.

We would go as far as to state that viewing the struggles that TC has today with current processing delays, the proposed rules as they are currently appear would increase workloads, not reduce them.

After reviewing the NPA, it is our opinion that the Complex, Limited and Very Small subcategories proposed by TC would still unreasonably confuse operators and the public, due to the amount of overlap and exceptions that exist amongst the subcategories. These subcategories will not serve the purpose of keeping the public safe and informed about Small UAV operations nor ease the current burdens placed on Operators and Transport Canada.

We recommend that TC consider implementing only two distinct categories in Small UAVs under 25Kg.

The first, and likely the most common, is **Recreational Use**. This category would encompass the UAVs flown under the auspices of the Canadian aeromodelling association, MAAC, subject to their rules and protected by their insurance coverage. This should be independent of the payload carried by the Small UAV, camera or otherwise.

The second category would be **Commercial Use**. This would cover both large, medium and small operators and would be regulated under the rules proposed by TC, with appropriate consideration be given regarding size of the operation and the number of Small UAVs flown when assessing the Operator Certification.

The complexity of compliance for Commercial Use needs to be sensitive to organizational size, but the basic requirements in all cases need to be straightforward to communicate, implement and to enforce.

CKMM | PHOTOGRAPHIC SUBMISSION TO TRANSPORT CANADA

For each category, guidelines for compliance would need to be provided, similar to TP 15263E, and would allow recreational users, Operators, Pilots, crew and training organizations to clearly understand what is needed to obtain certification, licensing and to conduct safe operations in the Small UAV space in Canada.

INTRODUCTION

ckmmphotographic appreciates the opportunity to comment on Transport Canada's Notice of Proposed Amendment (NPA) on the use of Small UAVs.

Small UAVs and their associated use in a wide range of industries across the country are an increasingly important segment of the economic landscape of Canada. And Canada has proven to be a current world leader in this space.

Until now, the rules and regulations applied to Small UAVs in Canada have been complex, confusing, time and cost intensive and are not well understood by the majority of the public, recreational users and businesses purchasing these small aerial platforms.

Canada's national aeromodellers association, MAAC, has not been able to connect in any significant way with many recreational users about flying their drones safely. It's also clear that a significant number of commercial operators of Small UAVs either are confused about the current rules or are just ignoring them.

News articles continue to appear daily about Small UAVs interfering with emergency responders, fire fighters or flying too close to aircraft landing at our major airports. Or even more concerning, there are examples of Operators flying believing they are subject to the current UAV exemptions when they are not.

It is becoming even more important to implement changes to regulations to prevent more serious incidents from occurring.

For those operators who are knowledgable and looking to be compliant, the current SFOC Application process as it applies to Small UAVs is unsustainable; issuance of SFOCs in timely fashion across Canada is highly variable and inconsistent. Members of industry groups complain that the delays in issuance of SFOCs are putting them out of business.

We applaud Transport Canada's initiative to revise the rule regarding the use of Small UAVs, but urge that the regulations be crafted in such a way that they meet a number of key goals.

The new regulations, (once thoroughly reviewed by the community and TC) need to:

- Be enforceable by the appropriate authorities.
- Be understandable and straightforward to communicate to industry and the general public.
- Not impose a costly regulatory burden on small and medium operators in commercial operation.
- Provide a set of guidelines that the commercial industry and recreational users can use and cost-effectively implement.

We would also stress at this point that TC should develop and offer online capabilities to submit applications for licensing, registration of small UAVs as well as Pilot Permit and Licensing in order to expedite the various new processes that will come with these new regulations.

The use of such online services would go a long way to reduce or eliminate the current issues in timely processing of these new proposed requirements contained in the new rules.

We wish to thank Transport Canada in advance for their consideration of these comments and look forward to future consultations as the Rule Making process unfolds.

SPECIFIC SECTION COMMENTS

Given the above, we would also offer the following commentary on specific sections of the NPA.

1. Applicability

The proposed application of these regulations to Small UAVs under 25kg is appropriate.

Splitting the commercial portion into further subcategories is not needed as we will discuss further. From a risk management perspective, any aircraft with useful lift capability for reasonable payloads and duration of flight will possess enough energy to potentially cause reasonable damage. We think the differentiation between the various categories is not enough to warrant separate categories.

If used commercially, all Small UAVs should be included under one blanket category.

It seems reasonable to exempt indoor and underground usage from these regulations as the risk to the general public and commercial aviation seems very small for those specific types of operations.

2. Model Aircraft

As many of our pilots start out flying recreationally, we would like to offer comments on RC model category.

We would suggest that, to be complaint with recreational use, hobbyist users be required to be members of MAAC as a way to have access to and learn the proper operational and safety rules for model aircraft use.

This would provide a better risk profile for these users and would definitely reduce the current public perception of “drones” or Small UAVs as dangerous, privacy invading toys. MAAC has a well defined structure and organizational presence across Canada to provide the needed framework to teach new entrants to the hobby. In addition, we suggest that any MAAC initiative should also include an introduction to privacy guidelines to ensure that recreational users are properly informed of these requirements.

As an example, this would help reduce the need for Civil Aviation Alerts, such as the one recently issued for Small UAVs and Forest Fires.

We also suggest that Hobby Stores/Manufacturers of Small UAVs sold to the public be required to provide information about safety and regulations and the need to join MAAC in Canada.

To address one of Transport Canada's questions, we suggest that Small UAVs with camera payloads used specifically for recreational purposes should still be considered "recreational". To consider otherwise is similar to considering users of cellphones with video capability as cinematographers and requiring a permit to "shoot".

When flown under the auspices of MAAC and their competent trainers, this is often a lower risk and lower cost option to learn proper flying techniques with Small UAVs, and is suitable for individuals looking to assess whether they want to proceed into commercial operation.

3. Terminology and Definitions

No issues with the terminology to be used. As a general principle, we suggest that Transport Canada needs to define the appropriate terms and ensure that the industry moves to a common vocabulary that all stakeholders and the public will recognize.

4. Categorization of the Regulatory Structure

The structure of Limited and Complex Operations for Small UAVs as well as a Very Small UAV category is unnecessary and will only serve to continue the confusion that exists in the operation of Small UAVs.

5. Small UAV with Complex Operations

Small UAV Operator Certificate Requirements

While in principle we agree with the need for Small UAV Operator certification and registration, this proposed regulation needs to carefully balance the risk management requirements with the very real overheads involved to ensure a safe, cost effective integration into the Canadian Airspace.

In our experience, it takes months of dedicated effort (un-billed time) to generate the required initial Operational System for UAVs (with the information set required), to take the training and then obtain liability insurance. This is a significant impact to small and very small operators. Standing SFOCs, which offer to reduce the overhead once granted, still take significant time and effort and only are valid for a limited time.

In addition, the cost of developing and maintaining such a system for Compliant Operators is not at all well understood by clients nor are they willing to support the overheads that this incurs.

Each of the requirements listed in the NPA for a compliant operator make sense, as a general rule, and should not be based on size of operation. For specific operators however, particularly for smaller operators, due consideration for the size, expertise and complexity need to be provided during the certification process when assessing the organizations readiness against these requirements for Operator Certification. Make it reasonable and cost effective to become Certified and more organizations will do so.

Aircraft Market and Registration

Registration and marking of aircraft is a reasonable requirement to add to the regulations, with two comments.

First, as mentioned, the space for registration numbers is somewhat limited on Small UAVs, so this would need to be taken into consideration. Second, the process to obtain registration numbers needs to be time guaranteed and simple. One upside to this requirement is that it will hopefully make it easier to identity lost or missing aircraft and to identify miscreant operators.

Personnel (Pilot, VLOS, Crew) Licensing and Training

We strongly endorse the concept of personnel licensing, with caveats around the fact that the Operators involved are not flying full scale commercial aircraft.

As many UAV pilots have been flying smaller RC aircraft for an extended period time, recognition for properly logged flight time or SFOC related flying should be permitted towards any new requirements. Log books from Small UAV operations should be permissible as an proof of experience for PICs.

Credit should also be given for courses taken previously, for example, those existing courses offered that meet the current TP15263E syllabus.

Training should be possible via a number of avenues, including Operator developed courses as well as courses provided by competent training organizations for smaller operators who do not want to set up their own in house training. In either case, TC needs to provide a set of syllabi, similar to TP15263E to define requirements in each area to ensure that training is consistent, no matter how obtained.

In all cases, the level of aviation knowledge for personnel needs to be provided and assessed in a manner that will allow safe integration of Small UAVs into the airspace while avoiding the traditional aviation industry level of regulation and paperwork.

An age limit for pilots should apply only for commercial usage and should be set at 18 years of age. Non-recreational use, flown under MAAC rules, should not have an age limit, although we would suggest that anyone under 16 years of age should be supervised by an adult.

Pilot Permit

While we agree with the premise of a Pilot Permit, we have several comments to add:

Experience: Credit should be allowed for previous flight training and logged flight hours performed under current regulations. There also needs to be method to certify the initial UAV pilots in the absence of a set of already trained Operators or PICs. This is a process that TC will need to put in place.

Skill: Requirements should be stated clearly and reflect the various uses that Small UAVs are used for in common practice. These should cover safe takeoff and landing as well as emergency procedures and VLOS rules.

Testing and Issuance of Permits: Tests to prove proficiency in the various areas of Piloting need to be tested by approved agents or via online testing and once successful, issued by TC in a timely fashion. The Aviation ROC process could serve as a useful example as to how this should operate.

Flight Training to TP15263E

This is a reasonable requirement. We think that all individuals operating Small UAVs need to have a standard set of knowledge training as one of the keys ways of lowering risk in this segment.

We suggest that credit should be given for courses that have already been completed by current pilots that meet the requirement stated in TP15263E, to avoid having to duplicate training once new regulations come out.

Airworthiness/Design Standard

We suggest that any Design Standard be phased in over time, with the recognition of the impact on smaller organizations with existing purpose built aircraft and less capability to move to the standard immediately.

Our concern here is that the level of Design Standard contemplated may potentially be too complex and will make the Small UAV segment too costly to operate. It may also be difficult to obtain equipment compliant to a Canadian only jurisdiction standard. This is an area that we believe requires further industry consultation to achieve the right balance of risk management versus initial and operational cost. The main concerns cover the areas of Sense and Avoid, High Intensity Radiated Fields Protection, and Flight and Navigation Systems.

6. Small UAV with Limited Operations

We would suggest that this category is redundant due to the high degree of overlap to the Small UAV with Complex Operations. Having something similar to this in the current regulations has only confused operators and PICs who are not conversant with the underlying, detailed regulations.

Organizations such as the USC and flitelabs.com as well as more informal groups expend significant effort in attempts to educate the industry and individuals on the complexities of the current regulations. Continuation of this type of Regulatory structure will not reduce these efforts.

We recommend only one category of Small UAV for Commercial use with the appropriate balance discussed earlier.

7. Very Small UAV (Lower Threshold)

This category still has significant overlap with the previous sections as mentioned above. In addition, we take exception to the lack of requirement to have any insurance for this category. Our suggested approach is that anyone providing any type of commercial service with any size of Small UAV needs to have sufficient liability insurance for public protection.

8. SFOCs

The use of SFOCs for non standard types of operations seems to be a valid approach. It is clear that the current SFOC process as it applies to Small UAVs is really broken; issuance of SFOCs in timely fashion across Canada is highly variable and inconsistent.

When TC regions feel the need to offer fill-in-the-blank forms to assist in ensuring that the large amount of information needed is provided and commercial operators complain that the delays in issuance of SFOCs are putting them out of business, clearly something is broken.

9. Foreign Operators

We would not support the permitting of foreign operators under any mandate other than a permitted operation under an SFOC. This is consistent with our premise that all Small UAVs under should be treated as one class, and either flown as under Operator Certification or under SFOC rules.

10. Other

ckmmphotographic would recommend that an easy to use, online system or set of systems be implemented at the same time as regulatory changes to provide reporting of individuals or operators who are not operating their Small UAVs in a responsible fashion.

Once these new rules come into force, we suggest that Transport Canada needs to launch an Education and Awareness program to ensure that both commercial and recreational users, as well as other stakeholders are aware of upcoming changes and where to get more details.

ABOUT CKMM | PHOTOGRAPHIC

ckmm | photographic is a full service photography and videography production house, with expertise in commercial and corporate photo and video production for clients located mostly in the GTHA area of Southern Ontario. We have been working with clients since 2008.

ckmm | photographic has also been involved in several special projects in the aviation space, including the flight of the Aerovelo “Snowbird” and providing the majority of video and still image photography during AeroVelo’s successful attempt to win the Igor I. Sikorsky Human Powered Helicopter Competition.

We offer both traditional video and photographic services and offer aerial photography and videography as a additional capability to allow our clients to add a more distinctive look to their productions

ckmm | photographic believes in the importance of industry membership and is a member of both the USC in Canada and the UAVSI in the USA.