



720 Belfast Road, Suite 217  
Ottawa, ON K1G 0Z5  
13 October 2017

Director General  
Engineering, Planning and Standards Branch  
Innovation, Science and Economic Development Canada  
235 Queen Street  
Ottawa, ON K1A 0H5

**Subject:** *Canada Gazette*, Part I, August 26 2017, Notice No. SMSE-005-17—Proposed Revisions to the Canadian Table of Frequency Allocations: Comments from Radio Amateurs of/du Canada

Dear Sir,

Radio Amateurs of/du Canada (RAC) wishes to submit comments on four of the proposed revisions, as follows:

**A5**, (WRC-15, Agenda item 1.18) — New primary allocation to the radiolocation service in the frequency band 77.5-78 GHz for automotive applications

This frequency band was previously allocated to the amateur and amateur satellite services on a primary basis, as well as to the radio astronomy and space research services on a secondary basis. We are pleased to note that these allocations are to continue unchanged. We believe that there will be little likelihood of interference or negative impacts of the new allocation to the radiolocation service on the use of this frequency band by amateurs, or of amateur operations on the proposed use by radiolocation service. On this basis, we have no objection to the new allocation.

**B2**, (WRC-15, Agenda item 1.4) — Secondary allocation to the amateur service in the frequency band 5 351.5-5 366.5 kHz

RAC is pleased to note the proposal to reflect in the Canadian Table of Frequency Allocations the new ITU secondary allocation to the Amateur service, which was originally proposed by Canada at WRC-15. However, we wish to point out and comment on some internal inconsistencies in the proposed revisions and suggest changes to the bandwidth and power limitations in this proposed allocation to address these. We respectfully request that the power limit in the entire 5351.5 - 5366.5 kHz band be set at 100 W PEP, and that there be no limitation on the emission modes within that band other than a general bandwidth limit. A discussion of the reasons for our request follows.

The proposal as issued simply adds ITU footnote 5.133B in addition to the existing Canadian footnote C21. Note, however, that the channel with centre frequency 5358.5 kHz, which is already allocated under Canadian footnote C21, is entirely contained within the proposed new allocation from ITU footnote 5.133B, and the power limitations in those two footnotes are in disagreement. According to ITU footnote 5.133B, the power limit in the frequency band 5351.5 - 5366.5 kHz is to be 15 W (e.i.r.p.), but according to Canadian footnote C21, the power limit in the 2.8 kHz wide channel with centre frequency 5358.5 kHz is 100 W PEP effective radiated power. This inconsistency should be resolved.

The channel in question has been in use by the amateur service in Canada since 2014 and in the US since 2012 with a 100 W PEP limit, and the other four channels in Canadian footnote C21 have been in use in Canada since 2014 and in the US since 2003, in both cases with no reports known to us of interference from amateur operations on those channels to fixed and mobile services, either within Canada and the US or in other countries. Therefore, there is no apparent compelling basis for reducing the power limitation within that channel from the current 100 W PEP.

Retaining the existing power limit within the existing channel (5357.1 - 5359.9 kHz) while applying the 15 W (e.i.r.p.) limit in the remainder of the new allocation (5351.5 - 5357.1 kHz and 5359.9 - 5366.6 kHz) would be operationally difficult for amateurs to manage, and such a rule would be difficult to enforce. It would also interfere with the ability to plan frequency usage within the band, and to coordinate band plans between Canadian and international amateur organizations.

The main justification cited for a new secondary allocation to the amateur service in the vicinity of 5300 kHz was to allow the amateur service to carry out reliable emergency and disaster-relief communications over regional distances, i.e. distances intermediate between relatively short-range (less than 300 km) and relatively long-range (greater than 1100 km). Frequencies in this vicinity have been used for this purpose by the amateur service, both in exercises and in actual emergency and disaster-relief situations. However, powers under 15 W (e.i.r.p.) are often inadequate for reliable communications at these frequencies over these distances. A 100 W PEP limit would be more appropriate if one of the main goals of this allocation is to support this kind of communications.

In this regard, we also note that several other administrations have implemented power limits for amateur communication in this frequency range that exceed the limit in ITU Footnote 5.133B (most notably, Belarus: 50 W; Bulgaria: 100 W; Denmark: 1 kW ERP; Norway: 100 W).

The proposed allocation is on a secondary (no-interference, no-protection) basis. While evidence to date suggests little likelihood of interference to other services from amateur operations within Canada in this frequency range, it is our view that the observance of listen-before-talk protocols serves to mitigate adequately any such risk of interference.

In addition to the 100 W PEP power limit, Canadian footnote C21 also imposes limitations on the modes and bandwidths to be used on the authorized frequencies. There are no mode or bandwidth limitations in ITU Footnote 5.133B. It is our view that there is no need for mode-specific limitations in the 5351.5 - 5366.5 frequency band other than perhaps a bandwidth limit (e.g. 2.8 kHz, for consistency with the existing channels). Retaining the mode limitations within the existing channel would unduly limit the ability to plan the use of the rest of the frequencies in the newly allocated band, and might lead to conflicts with internationally adopted band plans for the amateur service.

We also believe that the mode limitations in the other four channels are unnecessarily restrictive, but we recognize that the regulatory authorities in the US may take a different position on this and that any such position might have implications for the final decision in Canada with respect to those four channels.

In view of the discussion above, we propose that Canadian footnote C21 be modified to remove the channel with centre frequency 5358.5 kHz from the list of discrete channels, and to replace that channel with a band at 5351.5 - 5366.5 kHz with a power limit of 100 W PEP, a bandwidth limit of 2.8 kHz and no mode-specific limitations. The last three sentences of the existing footnote, “Such usage is not ... operations of other countries”, would apply to the new band as well as to the remaining four existing channels.

**C2, (WRC-15, Agenda item 1.12) — Extension of Earth exploration-satellite (active) service band by 600 MHz in the range 8 700-10 500 MHz**

A portion of the proposed 600 MHz extension is also allocated to the amateur service on a secondary basis. In view of the secondary status of the existing allocation to the amateur service, which it is not proposed to change, RAC believes that this change will have no significant impact on the amateur service’s use of this frequency band, and therefore we have no further comments on the new allocation.

## **F2, Inconsistencies in the Canadian Table**

Section A of this proposed change clarifies the description of the amateur allocations in the 216-220 MHz frequency band. No change is proposed to the actual allocations. RAC agrees with the clarification and proposed changes in wording.

Once frequencies have been allocated in the Canadian Table of Frequency Allocations, authorization for Canadian amateurs to use those frequencies is given in RBR-4 — *Standards for the Operation of Radio Stations in the Amateur Radio Service*, rather than in licences as in other services. Therefore, we wish to respectfully request that a revised version of RBR-4 be issued as soon as practicable after the changes are made to the Table, implementing the changed allocations for the amateur service and authorizing the use of these frequencies by Canadian amateurs. We also respectfully request that, in the interim before a revised version of RBR-4 is published, Canadian amateurs be given temporary authorization to use the new frequencies as described in the Canadian Table of Frequency Allocations.

Respectfully submitted,



Richard Ferch, VE3KI  
Regulatory Affairs Officer  
Radio Amateurs of/du Canada