June 12, 2012

Manager, Mobile Systems
Industry Canada
300 Slater Street, 19th Floor
Ottawa, Ontario K1A 0C8

Dear Sir:

SUBJECT: Notice No. SMSE-010-12 — Consultation on Changes to the Canadian Table of Frequency Allocations and to RBR-4 to Allow for Amateur Radio Service Use in the 5 MHz Band

Emergency Management BC (EMBC), B.C. Ministry of Justice, is pleased to offer comments to Industry Canada in response to the consultation paper referenced above. This consultation process provides an opportunity to highlight recent cross-border efforts in BC, including the identification of gaps and the need for a regulation change. Specific answers to the consultation questions are attached in Appendix A.

EMBC ensures public safety through the coordination of timely emergency response and recovery activities. EMBC collaborates with stakeholders including ministries, local authorities, fire services and First Nations on emergency management practices to enhance public safety and reduce property and economic loss.

In preparation for a significant emergency or disaster, EMBC maintains six Provincial Regional Emergency Operations Centres (PREOC’s) and a Provincial Emergency Coordination Centre (PECC). Each of the Province’s six PREOC and PECC facilities are equipped for high frequency (HF) amateur radio communication using voice and data. Frequency bands include 40 meter (7 MHz) and 80 meter (3 MHz).

To staff these facilities, EMBC supports radio volunteers through the Provincial Emergency Radio Communications Service (PERCS). PERCS addresses the following operational objectives:

- To provide alternate communication between activated municipal Emergency Operations Centre’s (EOC’s) and PREOC’s in situations where other modes of radio communication (such as VHF or UHF) may not be effective due to distance, geography or other factors;
- To provide alternate communication between the 5 remote PREOC’s (Surrey, Kamloops, Nelson, Prince George, Terrace) and the Provincial Emergency Coordination Centre (PECC) in Victoria;
- To provide communication between the PECC and neighboring provinces and US states;
- To engage the assistance of converging amateur radio operators on-air to gather situational awareness and damage assessment information and support message relays due to unfavorable propagation.

In short, amateur radio is a recognized and valued component in British Columbia's emergency preparedness/response strategy. EMBC strongly supports measures, particularly regulatory changes, that will strengthen amateur radio's ability to provide emergency communication services.

**Cross Border Cooperation**

EMBC must work effectively with other jurisdictions, including Washington State Emergency Management Division (WEMD), in order to maximize its effectiveness. EMBC and WEMD recently completed an exercise that tested our communication and assistance protocols. The exercise highlighted cross-border communication issues – one of which EMBC would like to bring to your attention – i.e., regulation alignment.

In the event of a disaster, WEMD will utilize commercial HF radio systems including:

- FEMA National Radio System or FNARS linking state and Federal Emergency Management Agency regions and headquarters;¹
- State Area Command or STARC net linking the Washington State Emergency Operations Centre at Camp Murray and Army/Air National Guard units throughout Washington and neighboring states.²

In addition, United States government entities and industrial partners will utilize the SHAre RESources (SHARES) HF radio network in the event of a catastrophic disaster.³

These commercial radio systems rely on 5 MHz frequencies.⁴ For example, 5.211 MHz is one of the SHARES frequencies monitored by the National Coordinating Center for Telecommunications (NCC) on a 24/7 basis.⁵ SHARES is a commercial system however SHARES radio operators who have amateur radio licenses are expressly permitted to

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⁴ Benevente, Roy, Washington Military Department Emergency Management Division to A.J. Bryan, EMBC; 11/06/2012
⁵ Auxiliary Communications Service (ACS) of the California Governor's Office of Emergency Services; FNARS and SHARES; [http://www.qsl.net/n7fn/emcomm/96-97/emc086.htm](http://www.qsl.net/n7fn/emcomm/96-97/emc086.htm). accessed 09/06/2012
contact amateur stations on air to request assistance with the relay of "official government" traffic."}

\textbf{Cross Border Regulation Alignment}

As noted earlier, there is inconsistency in the regulations governing amateur radio in Canada and the US in regards to emergency communication.

In the US, under the Title 47, Part 97 Regulation Subpart E provides specific direction with respect to emergency communication. Under section 97.403 (safety of life and protection of property) an amateur radio operator in the US is advised:

"No provision of these rules prevents the use by an amateur station of any means of radio communication at its disposal to provide essential communication needs in connection with the immediate safety of human life and immediate protection of property when normal communication systems are not available."\textsuperscript{7}

Similar content does not appear within the regulations governing amateur radio in Canada. Additionally, this omission appears inconsistent with the International Telecommunications Union (ITU) Radio Regulations which state:

"administrations are encouraged to take the necessary steps to allow amateur station to prepare for and meet communication needs in support of disaster relief. (WRC-03)\textsuperscript{8}

Industry Canada is proposing that access to 60 meter frequencies by Canadian amateur radio operators be provided on a "no interference, no protection" basis. EMBC does not believe this statement provides adequate protection for emergency communication in the absence of specific regulatory support for emergency communication.

It is timely to align current US and Canadian Regulations to fully support emergency radio communications via amateur radio.

\textbf{Summary}

Amateur radio remains a flexible, capable and cost effective emergency communications resource for British Columbia communities. It is a critical component in EMBC’s strategy for ensuring emergency communications both internally and across national borders.

The addition of a 60 meter allocation in Canada will strengthen the ability of the Amateur Radio Service to provide effective, capable emergency communication.

\textsuperscript{4} National Communications System Manual 3-3-1; Shared Resources (SHARES) High Frequency (HF) Radio Program User Manual, Page 3-2 \url{http://www.ncs.gov/library/issuances/NCSM\%203-3-1.pdf}, accessed 09/06/2012.
\textsuperscript{7} Amateur Radio Relay League; 60-Meters A Brief History and FAQs; \url{http://www.arrl.org/part-97-amateur-radio}, accessed 09/06/2012.
\textsuperscript{8} ITU-R Radiocommunication Regulations Article 25.9A §5A; \url{http://life.itu.int/radioclub/rr/art25.htm} accessed 09/06/2012.
The creation of a 60 meter amateur allocation in 2003 by the Federal Communications Commission in the United States was intended specifically to support emergency communication:

"The Commission added the secondary amateur service allocation after determining that such frequencies could be useful to the amateur radio community for completing disaster communications links at times when existing frequencies in the 3500-4000 kHz (80 and 75 meter) and 7000-7300 kHz (40 meter) bands are not available due to ionospheric conditions. It concluded that such an allocation represented the best compromise available to give the amateur service access to new spectrum while assuring the Federal Government agencies that their use is protected."

Amateur radio operators on both sides of the Canada/US border require consistent direction and recognition through policy and regulation. Allocating the five proposed sub-bands to amateur radio and changing the Canadian Regulation will improve public safety across Canada.

Sincerely,

[Signature]

Tim Trottin
Manager, Telecommunications and Specialty Systems
Emergency Management British Columbia
Ministry of Justice
Province of British Columbia

cc.  Mr. Geoff Bawden
     President
     Radio Amateurs ofdu Canada
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     Chris D. Duffy
     Executive Director
     Emergency Coordination
     Emergency Management British Columbia
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6-1. Should Industry Canada allow amateur radio operators to use the five frequencies 5332 kHz, 5348 kHz, 5358.5 kHz, 5373 kHz and 5405 kHz, which are harmonized with U.S. amateur use, on a no-protection, no-Interference basis? Transmissions would be restricted to a 2.8 kHz bandwidth centred on each of these frequencies.

1. The Province believes that Industry Canada should approve an allocation in the 5 Mhz / 60 meter band to the Amateur Radio Service consistent with frequencies and operating restrictions in the US.

2. Further, this approval must also include a regulatory change which will establish the expectations and obligations for the Amateur Radio Service regarding emergency communication.

6-2. Should Industry Canada harmonize emission modes and designators with those specified in the United States for these five frequencies – i.e. telephony (2K80J3E), data (2K80J2D), RTTY (60H0J2B) and CW (150HA1A)?

1. The Province concurs with this approach.

6-3. Should Industry Canada specify a maximum effective radiated power of 100 W peak envelope power?

1. The Province believes that it is necessary to restrict power in order to minimize the potential for harmful interference to other spectrum users.

2. It is expected that 100 watts should be adequate in most conditions to perform the type of communication for which the 60 meter allocation is both best suited and intended. This would be described as regional communication to a range of approximately 600 km most effectively achieved using Near Vertical Incidence Skywave (NVIS) antenna technology.
6-4. **Should Industry Canada allow Canadian amateurs access to the 5329 kHz frequency for domestic communications only? (Transmissions would be restricted to a 2.8 kHz bandwidth centred on this frequency.)**

1. The Province concurs with this additional frequency allocation.

2. In addition to this domestic only frequency the following section from Part 97, Subpart E of the US amateur radio regulation is brought to your attention:

§97.401 Operation during a disaster.

A station in, or within 92.6 km (50 nautical miles) of, Alaska may transmit emissions J3E and R3E on the channel at 5.1675 MHz (assigned frequency 5.1689 MHz) for emergency communications. The channel must be shared with stations licensed in the Alaska-Private Fixed Service. The transmitter power must not exceed 150 W PEP. A station in, or within 92.6 km of, Alaska may transmit communications for tests and training drills necessary to ensure the establishment, operation, and maintenance of emergency communication systems.

3. To facilitate cross border communication between British Columbia, the Yukon Territory and the State of Alaska it is recommended that the use of 5.1675 MHz be permitted within 92.6 km of the Alaska border, consistent with the US regulation.

4. It is assumed that this unique allocation in the State of Alaska has been designed to provide increased capability in remote northern areas while limiting interference in the contiguous United States. It is suggested that Industry Canada explore a similar allocation in Northern areas of Canada.

6-5. **Should Industry Canada specify emission designators and peak envelope power for this additional frequency? If so, what should these be?**

1. The Province believes that the broader interest would be best served by maintaining consistent power and emission restrictions on all 60 meter frequencies.