

BELIZE:

ORDER made by the Public Utilities Commission (hereinafter referred to as "the Commission") in exercise of the powers conferred upon it by Sections 3, 6 and 12 of the Belize Telecommunications Act, Chapter 229 of the Laws of Belize, and all other powers thereunto the Commission enabling.

Short title. 1. This Order may be cited as the:

**BELIZE RADIO FREQUENCY CHANNELIZATION FOR
POINT-TO-POINT LINKS**

Interpretation. 2. (1) In this Order, unless the context otherwise requires:

“channelization” means the mode by which specified radio frequency bands are arranged into smaller distinct radio frequency channels for assignment;

“radio frequency channel” means, for the sole purpose of this Order, part of the radio frequency spectrum intended to be used for an emission and which may be defined by two specified limits, or by its centre frequency and the associated bandwidth, or by any equivalent indication;

“radio frequency channel separation” means the bandwidth equal to the frequency separation, defined in Recommendation ITU-R F.746, of adjacent channels of the relevant radio frequency channel arrangement established within the allocated radio frequency band;

“written direction” means any written instructions given to or any written obligation placed on or written thing required of licensees.

(2) A word or phrase not defined in this Order but defined in the Belize Telecommunications Act shall have the meaning assigned to it in the Act.

Determination. 3. The Commission hereby deems it to be in the public interest to establish channelization plans for the deployment of point-to-point radio links by licensees to provide for the efficient use and management of the Radio Frequency Spectrum.

General Provisions. 4. This Order shall apply to the deployment of point-to-point radio links by licensees in the 6 giga-hertz band, the 7 giga-hertz band, the 8 giga-hertz band and the 11 giga-hertz band, as described in the Schedule to this Order.

5. The channelization plans provide for radio frequency channel sizes of 7 mega-hertz, 14 mega-hertz, 28 mega-hertz and 40 mega-hertz only, provided that where network coordination permits and with the approval of the Commission, the use of two adjacent radio frequency channels may allow for a larger radio frequency channel size, with the centre frequency lying in the central point between the adjacent radio frequency channels.

6. Applications for Frequency Authorization for the deployment of point-to-point radio links by licensees shall be made in accordance with any relevant Byelaws made under the Belize Telecommunications Act.

7. The Commission shall grant Frequency Authorization for the deployment of point-to-point radio links by licensees according to any relevant Byelaws made under the Belize Telecommunications Act, and subject to the following:

a) Frequency Authorization granted by the Commission shall assign a single radio frequency channel pair in accordance with the channelization plans described in the Schedule to this Order.

b) The following ITU-R F.1101 capacity categories apply:

i) Low capacity fixed wireless systems for the transmission of digital signals with gross bit rates up to and including 10 Mbit/s;

ii) Medium capacity fixed wireless systems for the transmission of digital signals with gross bit rates ranging from 10 Mbit/s up to about 100 Mbit/s;

iii) High capacity fixed wireless systems for the transmission of digital signals with gross bit rates greater than 100 Mbit/s.

c) Frequency Authorization for the assignment of a radio frequency channel pair per location shall be on a first come, first served basis.

d) Licensees who have point-to-point links previously deployed may be required to adjust operating frequencies in order to comply with the applicable channelization plan and to avoid potential overlap due to present non-compliance with the applicable channelization plan.

e) Licensees are required to deploy authorized point-to-point links in compliance with recommended polarization plans provided for in the ITU-R recommendations.

f) ITU-R non-compliant radio frequency plans are not allowed.

**Written
direction.**

8. Licensees shall comply with any written direction given to him by the Commission in relation to the exercise of his rights and obligations under this Order.

Effective date. 9. This Order shall come into effect on the date of its making.

MADE by the Public Utilities Commission this 15th Day of January, 2020.



(JOHN P. AVERY)

Chairman, Public Utilities Commission



SCHEDULE

CHANNELIZATION PLANS – POINT-TO-POINT LINKS

Frequency Assignment Plan	Lower 6 GHz Band – 5925 to 6425 MHz
Designated Use	High Capacity P2P links
Applicable Channelization	ITU-R F.383-9 <i>Recommends 1</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 259.45 + 29.65 n$
Upper half of band	$f_n = f_0 - 7.41 + 29.65 n$
<i>n</i>	<i>n</i> = 1, 2, 3 8 in both the lower and upper bands
<i>f</i>₀ (MHz)	6175
Duplex (MHz)	252.04
Channel Separation (MHz)	29.65
Notes	<ol style="list-style-type: none"> 1. Adjacent Channel use allowed on a case by case basis following <i>Recommends 5</i> 2. Spectral efficiency encouraged as per <i>Recommends 4</i>

Frequency Assignment Plan	Upper 6 GHz Band – 6425 to 7125 MHz
Designated Use	High Capacity P2P links
Applicable Channelization	ITU-R F.384-11 <i>Recommends 4</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 340 + 30 n$
Upper half of band	$f_n = f_0 + 30 n$
<i>n</i>	<i>n</i> = 1, 2, 3 11 in both the lower and upper bands
<i>f</i>₀ (MHz)	6770
Duplex (MHz)	340
Channel Separation (MHz)	30
Notes	<ol style="list-style-type: none"> 1. Adjacent Channel use allowed on a case by case basis following <i>Recommends 4.2</i> 2. Spectral efficiency encouraged as per <i>Recommends 4.1</i>

Frequency Assignment Plan	Lower 7 GHz Band – 7125 to 7425 MHz
Designated Use	Low Capacity P2P links
Applicable Channelization	ITU-R F.385-10 <i>Recommends 1</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 154 + 7n$
Upper half of band	$f'_n = f_0 + 7 + 7n$
<i>n</i>	<i>n</i> = 1, 2, 3 20 in both the lower and upper bands
<i>f</i>₀ (MHz)	7275
Duplex (MHz)	161
Channel Separation (MHz)	7

Frequency Assignment Plan	Lower 7 GHz Band – 7125 to 7425 MHz
Designated Use	High & Medium Capacity P2P links
Applicable Channelization	ITU-R F.385-10 <i>Recommends 1</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 157.5 + 14n$
Upper half of band	$f'_n = f_0 + 3.5 + 14n$
<i>n</i>	<i>n</i> = 1, 2, 3 10 in both the lower and upper bands
<i>f</i>₀ (MHz)	7275
Duplex (MHz)	161
Channel Separation (MHz)	14

Frequency Assignment Plan	Lower 7 GHz Band – 7125 to 7425 MHz
Designated Use	High & Medium Capacity P2P links
Applicable Channelization	ITU-R F.385-10 <i>Recommends 1</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 164.5 + 28n$
Upper half of band	$f'_n = f_0 - 3.5 + 28n$
<i>n</i>	<i>n</i> = 1, 2, 3 5 in both the lower and upper bands
<i>f</i>₀ (MHz)	7275
Duplex (MHz)	161
Channel Separation (MHz)	28
Notes	1. Adjacent Channel use allowed on a case by case basis following <i>Recommends 6</i>

Frequency Assignment Plan	Upper 7 GHz Band – 7425 to 7725 MHz
Designated Use	Low Capacity P2P links
Applicable Channelization	ITU-R F.385-10 <i>Recommends 1</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 154 + 7 n$
Upper half of band	$f'_n = f_0 + 7 + 7 n$
<i>n</i>	<i>n</i> = 1, 2, 3 20 in both the lower and upper bands
<i>f</i>₀ (MHz)	7575
Duplex (MHz)	161
Channel Separation (MHz)	7

Frequency Assignment Plan	Upper 7 GHz Band – 7425 to 7725 MHz
Designated Use	High & Medium Capacity P2P links
Applicable Channelization	ITU-R F.385-10 <i>Recommends 1</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 157.5 + 14 n$
Upper half of band	$f'_n = f_0 + 3.5 + 14 n$
<i>n</i>	<i>n</i> = 1, 2, 3 10 in both the lower and upper bands
<i>f</i>₀ (MHz)	7575
Duplex (MHz)	161
Channel Separation (MHz)	14

Frequency Assignment Plan	Upper 7 GHz Band – 7425 to 7725 MHz
Designated Use	High & Medium Capacity P2P links
Applicable Channelization	ITU-R F.385-10 <i>Recommends 1</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 164.5 + 28 n$
Upper half of band	$f'_n = f_0 - 3.5 + 28 n$
<i>n</i>	<i>n</i> = 1, 2, 3 5 in both the lower and upper bands
<i>f</i>₀ (MHz)	7575
Duplex (MHz)	161
Channel Separation (MHz)	28
Notes	1. Adjacent Channel use allowed on a case by case basis following <i>Recommends 6</i>

Frequency Assignment Plan	Lower 8 GHz Band – 7725 to 8275 MHz
Designated Use	High Capacity P2P links
Applicable Channelization	ITU-R F.386-9 Annex 2 <i>Section 1.1</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 281 + 28 n$
Upper half of band	$f_n = f_0 + 2.5 + 28 n$
n	$n = 1, 2, 3 \dots 9$ in both the lower and upper bands
f_0 (MHz)	8000
Duplex (MHz)	283.5
Channel Separation (MHz)	28
Notes	<ol style="list-style-type: none"> 1. Adjacent Channel use allowed on a case by case basis following <i>Recommends 4</i> 2. Spectral efficiency encouraged as per <i>Recommends 3</i>

Frequency Assignment Plan	Upper 8 GHz Band – 8275 to 8500 MHz
Designated Use	Medium Capacity P2P links
Applicable Channelization	ITU-R F.386-9 Annex 2 <i>Section 2.1</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 108.5 + 7 n$
Upper half of band	$f_n = f_0 + 17.5 + 7 n$
n	$n = 1, 2, 3 \dots 12$ in both the lower and upper bands
f_0 (MHz)	8387.5
Duplex (MHz)	126
Channel Separation (MHz)	14

Frequency Assignment Plan	11 GHz Band – 10700 to 11700 MHz
Designated Use	High Capacity P2P links
Applicable Channelization	ITU-R F.387-12 <i>Recommends 1.1</i>
Assignment Plan formulae:	
Lower half of band	$f_n = f_0 - 525 + 40 n$
Upper half of band	$f_n = f_0 + 5 + 40 n$
n	$n = 1, 2, 3 \dots 12$ in both the lower and upper bands
f_0 (MHz)	11200
Duplex (MHz)	530
Channel Separation (MHz)	40
Notes	<ol style="list-style-type: none"> 1. Adjacent Channel use allowed on a case by case basis following <i>Recommends 1.3</i> 2. Spectral efficiency encouraged as per <i>Recommends 6</i>