

**MINOR AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT CH 12 1 kW
NON-DIRECTIONAL MOUNT WILSON FM BROADCASTERS, INC. FACILITY ID 181664
BNPDVL-20090825AAU
BELLINGHAM, WASHINGTON
ENGINEERING NARRATIVE AND RF RADIATION ENVIRONMENTAL ANALYSIS APRIL 2019**

Mount Wilson FM Broadcasters, Inc. (“MWFMB”) has an application pending for operation on CH 12 at Bellingham, Washington. That application is mutually exclusive with one co-ch application. The mutual exclusivity is discussed at the end of this narrative.

This application proposes a minor change to the pending application, BNPDTL-20090825AAU. The proposed facility is believed to qualify as a minor change as there is no change in the channel of operation, there is significant overlap of the present and proposed LPTV service contours and the proposed site and RC AMSL are unchanged from the application site all showing compliance with 74.787 (b) (iii). The ERP is increased from 0.3 to 1.0 kW and the polarization is changed from H. Pol. to elliptical. FCC TVStudy software was utilized to determine the interference levels associated with the proposed CH 12 facility and they are pasted in below.

The proposed antenna system consists of Kathrein 75010290 V. pol. and TVO-2 components. The antenna is elliptically polarized without beam tilt. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 0.5 has been used to calculate the power density 2 meters above ground. The antenna RC is 30 M AGL. The maximum power density is 21.3 uw/cm squared calculated for an ERP of 1,000 watts H. polarization and 1,000 watts V. polarization. This value is 10.7% of the Public Exposure MPE per section 1.1310. Based on this analysis, it is believed that the proposed facility follows OET-65 Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 Guidelines.

The proposed antenna support is existing along with the transmitter building, access road and power.

Below is a copy of the TVStudy interference analysis for CH 12 based on the facilities described above. **As can be seen at the conclusion of the report there is no impermissible ISIX interference.**

The sole mutual exclusivity is discussed as follows:

1. Mutual interference with co-channel and co-located application BNPDTL-2009082AKT is the only impediment to this application becoming a singleton. MWFMB is working toward that resolution.

TVStudy Report: Proposed facility

Study created: 2019.04.18 17:25:21

Study build station data: LMS TV 2019-04-18

Proposal: NEW D12 LD APP BELLINGHAM, WA
File number: BNPDVL20090825AAU
Facility ID: 181664
Station data: User record
Record ID: 223
Country: U.S.

Search options:
Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	KSTW	D11	DT	LIC	TACOMA, WA	BLCDT20091117AAX	124.8 km
Yes	KPTV	D12	DT	LIC	PORTLAND, OR	BLCDT20090612ADH	351.2
No	K12BF-D	D12	LD	LIC	ARDENVOIR, WA	BLDTV20120619AAZ	210.8
No	K12RD-D	D12	LD	LIC	COULEE CITY, WA	BLDTV20140903AFZ	280.6

No	K12LV-D	D12	LD	LIC	DRYDEN, WA	BLDTV20120619AAI	210.5
No	KWVG-LD	D12	LD	LIC	MALAGA, ECT, WA	BLDTV20110222AAE	237.5
No	K12CW-D	D12	LD	LIC	MALOTT WAKEFIELD, WA	BLDTV20110824ACU	234.3
No	K12BE-D	D12	LD	LIC	ORONDO, ECT, WA	BLDTV20120619AAW	226.6
No	K12AV-D	D12	LD	LIC	PATEROS, MANSFIELD, WA	BLDTV20120618ABW	223.7
No	K12CV-D	D12	LD	LIC	RIVERSIDE, WA	BLDTV20110824ACX	245.4
Yes	NEW	D12	LD	APP	SEATTLE, WA	BNPDVL20090825AKT	0.0
Yes	KUSE-LD	D12	LD	APP	SEATTLE, WA	BLANK0000052542	145.8
No	K12CX-D	D12	LD	LIC	TONASKET, WA	BLDTV20120131ADO	253.4
No	K12BA-D	D12	LD	LIC	WINTHROP-TWISP, WA	BLDTV20120123AFV	204.7
Yes	KCPQ	D13	DT	LIC	TACOMA, WA	BLCDT20090918ABR	125.9
No	CH4293	D12	DC	LIC	ALLISON CREEK, BC	BLANKCANLP20	198.4
No	CHAC-TV-1	D12	DC	LIC	CACHE CREEK, BC	BLANKCANLP47	260.3
No	CH2043	D12	DC	LIC	GREEN LAKE, BC	BLANKCANLP151	320.9
Yes	CKKM-TV	D12	DT	LIC	OLIVEROSOYOOS, BC	BLANKCANADA71	237.1
No	CIPV-TV	D12	DC	LIC	PAVILION LAKE, BC	BLANKCANLP256	258.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D12
Mask: Full Service
Latitude: 48 40 49.40 N (NAD83)
Longitude: 122 50 26.40 W
Height AMSL: 722.0 m
HAAT: 0.0 m
Peak ERP: 1.00 kW
Antenna: Omnidirectional
Elev Pattn: Generic

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1.00 kW	721.0 m	73.8 km
45.0	1.00	722.0	73.9
90.0	1.00	672.1	72.4
135.0	1.00	638.9	71.4

180.0	1.00	686.1	72.8
225.0	1.00	636.7	71.3
270.0	1.00	699.0	73.2
315.0	1.00	716.0	73.7

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 686 m

**Proposal 21.00 dBu contour crosses Canadian border, coordination required
Distance to Canadian border: 15.6 km

Distance to Mexican border: 1843.9 km

Conditions at FCC monitoring station: Ferndale WA
Bearing: 34.2 degrees Distance: 37.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 117.7 degrees Distance: 1681.2 km

Study cell size: 1.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

**MX with BNPDVL20090825AKT APP scenario 1, 90.40% interference caused

---- Below is IX received by proposal BNPDVL20090825AAU ----

**MX with scenario 1, 91.05% interference received

TVIX

tvstudy v2.2.5 (4uoc83)
Database: 127.0.0.1, Study: BNPVVL20090825AAU #314, Model: Longley-Rice
Start: 2019.04.18 17:25:21

Study created: 2019.04.18 17:25:21

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Yes	NEW	D12	LD	APP	SEATTLE, WA	BNPVVL20090825AKT	0.0
Yes	KUSE-LD	D12	LD	APP	SEATTLE, WA	BLANK0000052542	145.8
No	K12CX-D	D12	LD	LIC	TONASKET, WA	BLDTV20120131ADO	253.4
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Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
 Maximum new IX to LPTV: 2.00%

 Interference to BLCDT20091117AAX LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance		
Desired:	KSTW	D11	DT	LIC	TACOMA, WA	BLCDT20091117AAX			
Undesireds:	NEW	D12	LD	APP	BELLINGHAM, WA	BNPDVL20090825AAU	124.8 km		
	KFFX-TV	D11	DT	LIC	PENDLETON, OR	BLCDT20140424AHO	386.1		
	Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
	32225.3	4,265,521	28788.6	4,170,517	28781.5	4,170,517	28629.7	4,168,325	0.53 0.05
Undesired				Total IX	Unique IX, before	Unique IX, after			
NEW D12 LD APP			151.8	2,192	151.8	2,192			
KFFX-TV D11 DT LIC			7.1	0	7.1	0			

 Interference to BLCDT20090612ADH LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance		
Desired:	KPTV	D12	DT	LIC	PORTLAND, OR	BLCDT20090612ADH			
Undesireds:	NEW	D12	LD	APP	BELLINGHAM, WA	BNPDVL20090825AAU	351.2 km		
	KOAB-TV	D11	DT	LIC	BEND, OR	BLEDT20060823AAP	195.5		
	KDRV	D12	DT	LIC	MEDFORD, OR	BLCDT20090303ACL	316.9		
	KVAL-TV	D13	DT	LIC	EUGENE, OR	BLCDT20090612AGY	171.4		
	Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
	43034.8	2,999,478	32453.1	2,841,381	32053.2	2,805,573	32047.2	2,805,573	0.02 0.00
Undesired				Total IX	Unique IX, before	Unique IX, after			
NEW D12 LD APP			6.1	0	6.1	0			
KOAB-TV D11 DT LIC			2.0	0	2.0	0			
KDRV D12 DT LIC			274.9	10,647	201.8	7,097	201.8	7,097	
KVAL-TV D13 DT LIC			196.1	28,711	123.0	25,161	123.0	25,161	

 Interference to BNPDVL20090825AKT APP scenario 1

**MX: 90.40% interference caused

Call	Chan	Svc	Status	City, State	File Number	Distance
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Desired:	NEW	D12	LD	APP	SEATTLE, WA	BNPDVL20090825AKT				
Undesireds:	NEW	D12	LD	APP	BELLINGHAM, WA	BNPDVL20090825AAU	0.0 km			
	KUSE-LD	D12	LD	APP	SEATTLE, WA	BLANK0000052542	145.8			
	Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX		
	7610.5	389,477	7162.9	371,650	6872.7	358,024	1096.7	34,363	84.04	90.40
	4731.6	1,875,433	4441.3	1,850,436	4386.8	1,828,740	520.5	172,983	88.14	90.54 (in Canada)

Undesired		Total IX	Unique IX, before	Unique IX, after	
NEW D12 LD APP	6066.2	337,287		5776.0	323,661
NEW D12 LD APP	3920.8	1,677,453		3866.3	1,655,757 (in Canada)
KUSE-LD D12 LD APP	290.2	13,626	290.2	13,626	0.0
KUSE-LD D12 LD APP	54.5	21,696	54.5	21,696	0.0

Interference to BLANK0000052542 APP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance			
	KUSE-LD	D12	LD	APP	SEATTLE, WA	BLANK0000052542				
Undesireds:	NEW	D12	LD	APP	BELLINGHAM, WA	BNPDVL20090825AAU	145.8 km			
	KSTW	D11	DT	LIC	TACOMA, WA	BLCDT20091117AAX	28.3			
	KPTV	D12	DT	LIC	PORTLAND, OR	BLCDT20090612ADH	228.3			
	NEW	D12	LD	APP	SEATTLE, WA	BNPDVL20090825AKT	145.8			
	KCPQ	D13	DT	LIC	TACOMA, WA	BLCDT20090918ABR	63.1			
	Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX		
	17327.2	3,757,963	15483.6	3,722,328	14698.0	3,647,563	14246.3	3,600,017	3.07	1.30

Undesired		Total IX	Unique IX, before	Unique IX, after	
NEW D12 LD APP	911.6	91,008		451.7	47,546
KSTW D11 DT LIC	135.8	22,264	96.5	13,483	89.5
KPTV D12 DT LIC	2.0	0	0.0	0	0.0
NEW D12 LD APP	434.8	43,251	394.6	34,634	0.0
KCPQ D13 DT LIC	269.3	19,000	243.1	17,085	227.1

Interference to BLCDT20090918ABR LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KCPQ	D13	DT	LIC	TACOMA, WA	BLCDT20090918ABR	
Undesireds:	NEW	D12	LD	APP	BELLINGHAM, WA	BNPDVL20090825AAU	125.9 km
	KVAL-TV	D13	DT	LIC	EUGENE, OR	BLCDT20090612AGY	394.9

Service area	Terrain-limited	IX-free, before		IX-free, after		Percent New IX			
46061.1	4,439,938	37540.0	4,328,947	37523.9	4,328,870	37433.1	4,327,860	0.24	0.02
1680.2	310,043	213.4	38,963	213.4	38,963	212.4	38,963	0.47	0.00 (in Canada)

Undesired	Total IX	Unique IX, before		Unique IX, after	
NEW D12 LD APP	90.8	1,010		90.8	1,010
NEW D12 LD APP	1.0	0		1.0	0 (in Canada)
KVAL-TV D13 DT LIC	16.1	77	16.1	77	16.1

Interference to BLANKCANADA71 LIC scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: CKM-TV	D12	DT	LIC	OLIVEROSOYOS, BC	BLANKCANADA71	
Undesireds: NEW	D12	LD	APP	BELLINGHAM, WA	BNPDVL20090825AAU	237.1 km
KUID-TV	D12	DT	LIC	MOSCOW, ID	BLEDT20060804AFK	339.0
CHNJ-TV-1	D11	DC	LIC	APEX MOUNTAIN, BC	BLANKCANLP22	30.3
CHKC-TV-5	D11	DC	LIC	KEREMEOSOLALLA, BC	BLANKCANLP180	13.9
CH4293	D12	DC	LIC	ALLISON CREEK, BC	BLANKCANLP20	66.5
CHBC-TV-9	D13	DC	LIC	APEX MOUNTAIN, BC	BLANKCANLP23	30.2

Service area	Terrain-limited	IX-free, before		IX-free, after		Percent New IX			
11715.3	35,948	7628.8	19,214	7568.3	19,148	7568.3	19,148	0.00	0.00 (in U.S.)
17298.7	255,609	10840.0	79,754	10453.9	79,754	10453.9	79,754	0.00	0.00

Undesired	Total IX	Unique IX, before		Unique IX, after	
NEW D12 LD APP	1.0	0		0.0	0
KUID-TV D12 DT LIC	53.5	66	52.5	66	52.5
KUID-TV D12 DT LIC	2.0	0	2.0	0	2.0
CHNJ-TV-1 D11 DC LIC	3.0	0	2.0	0	2.0
CHNJ-TV-1 D11 DC LIC	282.0	0	15.1	0	15.1
CHKC-TV-5 D11 DC LIC	1.0	0	1.0	0	1.0
CH4293 D12 DC LIC	133.6	0	29.4	0	29.4
CHBC-TV-9 D13 DC LIC	5.0	0	5.0	0	5.0
CHBC-TV-9 D13 DC LIC	335.5	0	64.6	0	64.6

Interference to proposal scenario 1

**MX: 91.05% interference received

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: NEW	D12	LD	APP	BELLINGHAM, WA	BNPDVL20090825AAU	

Undesireds:	NEW	D12	LD	APP	SEATTLE, WA	BNPDVL20090825AKT	0.0 km
	KUSE-LD	D12	LD	APP	SEATTLE, WA	BLANK0000052542	145.8

	Service area		Terrain-limited		IX-free		Percent IX	
	9571.2	458,808	8873.1	441,688	1573.8	39,515	82.26	91.05
	7089.0	2,787,451	6558.7	2,645,375	979.6	325,929	85.06	87.68 (in Canada)

Undesired				Total IX		Unique IX	Prcnt Unique IX	
NEW D12 LD APP			7299.2	402,173	6861.7	373,410	77.33	84.54
NEW D12 LD APP			5579.2	2,319,446	5545.8	2,312,627	84.56	87.42 (in Canada)
KUSE-LD D12 LD APP			437.5	28,763	0.0	0	0.00	0.00
KUSE-LD D12 LD APP			33.3	6,819	0.0	0	0.00	0.00 (in Canada)

The foregoing was prepared on behalf of Mount Wilson FM Broadcasters, Inc. by Clarence M. Beverage of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



Clarence M. Beverage
for Communications Technologies, Inc.
Marlton, New Jersey
April 18, 2019