

**November 2008
New FM Channel 205A
Allocation Study**

Request of Reconsideration and Reinstatement *nunc pro tunc*

The instant amendment is being filed to amend the proposed directional antenna pattern, and to request reconsideration of the November 4, 2008 dismissal of BNPED-20071018ARZ. In the letter dismissing the application, the Audio Division stated that its analysis of the overlap area with CBUX-FM-1 (on Channel 205C1 at Victoria, Canada), following the instructions of Annex III of the US-Canada Agreement, indicates that interference will occur over Canadian land area. As is demonstrated by the allocation study below, the revised directional antenna pattern eliminates any Annex III interference over Canadian land area and therefore fully satisfies the interference protection requirements to Channel 205C1 at Victoria. Therefore, it is respectfully requested that BNPED-20071018ARZ be reinstated *nunc pro tunc*.

Description of Amendment

In October 2008, the applicant filed an amendment to BNPED-20071018ARZ which returned the proposed technical facilities to those originally filed during the October 2007 filing window for new non-commercial FM stations in the reserved band. A June 2008 amendment had reduced the directional pattern at certain azimuths in order to eliminate a mutual exclusivity.

The original Sedro-Woolley 205A proposal BNPED-20071018ARZ was mutually-exclusive with an application for Monroe 206C1 (BNPED-20071019BDA) filed during the October 2007 filing window by Spirit Communications, Inc. ("Spirit"). The Sedro-Woolley 205A application was included in MX Group #442 on the June 18, 2008 Public Notice.¹ While that MX group includes 13 applications, the only known conflict for Sedro-Woolley 205A was with the Monroe 206C1 application.

While the June 2008 amendment at Sedro-Woolley employed a revised directional antenna pattern which eliminated the conflict with Monroe 206C1, that restriction towards Monroe 206C1 was rendered unnecessary when the Monroe 206C1 application was dismissed by delegated authority

¹ "Media Bureau Identifies Groups of Mutually Exclusive Applications Submitted in the October 2007 Filing Window for Noncommercial Educational FM Stations", DA 08-1437, June 18, 2008.

on August 20, 2008 owing to a violation by Spirit of the 10-application limit.² That action is now believed to be final. It is therefore believed that the instant amended Channel 205A proposal for Sedro-Woolley is a singleton and can proceed expeditiously toward grant.

The instant November 2008 amendment makes a further revision to the directional antenna pattern in the direction of Canada, such that no interference will occur to Victoria Channel 205C1 over Canadian land area.

The attached spacing study shows the co-channel and adjacent channel spacing between stations and demonstrates that the proposed operation meets the adjacent channel spacing requirements to existing stations on IF channels as prescribed in §73.207 of the Commission's Rules. The attached allocation study exhibits demonstrate requisite contour protection for the following domestic stations:

First-adjacent:	New	206C1 Skykomish	BNPED-20071012ATS
Second-adjacent:	KPLU-FM	203C Tacoma	
	KUGS	207A Bellingham (License)	
	KUGS	207A Bellingham (CP)	
Third-adjacent:	KNHC	208C1 Seattle	

CBUX-FM-1 Channel 205C1 Victoria, British Columbia

The proposed operation is short-spaced to Canadian station CBUX-FM-1 which operates on Channel 205C1 at Victoria, British Columbia. Under the terms of the Working Arrangement for the Allotment and Assignment of FM Broadcasting Channels Under the Agreement Between the Government of Canada and the Government of the United States of America Relating to the FM Broadcasting Service, as amended in 1997 ("Working Arrangement"), the required cochannel Class A to Class C1 spacing is 243 kilometers, whereas the distance between the proposed New 205A site and the CBUX-FM-1 site is 92 kilometers.

Because the proposed New 205A 34 dBu F(50,10) contour will overlap the CBUX-FM-1 54 dBu F(50,50) contour over Canadian land areas, a detailed study of the interference zone has been

² See Letter to A. Wray Fitch III, Esq., and John Shumate, Sr., DA 08-1936, released on August 20, 2008.

conducted following the instructions in Annex III of the Working Arrangement. This analysis included consideration of CBUX-FM1 as if it were operating with maximum omnidirectional Class C1 facilities of 100 kW ERP at 465 meters AMSL, which parameters were provided to this firm in an email from Audio Division staff.³ This study utilizes a 20 dB D/U ratio, and depicts the 86 km radius protected service area of the Victoria 205C1 allotment.

The results of that study are depicted on the attached map exhibit, and demonstrate that no interference will be caused to CBUX-FM-1 over Canadian land areas. (It should be noted that interference is predicted to islands on the United States side of the water border with Canada, but not on the Canadian side.)

Waiver Requested re Overlap Received From CBUX-FM-1

The proposed Sedro-Woolley Channel 205A facility will receive overlap from the CBUX-FM-1 40 dBu F(50,10) contour, amounting to 100% of the proposed Sedro-Woolley 205A 60 dBu F(50,50) contour land area.

Because the received overlap in this case is not from a domestic station or allotment, the received overlap prohibitions of §73.509 are not strictly applicable to the overlap received by Sedro-Woolley 205A from CBUX-FM-1. Application of §73.509 is limited to “overlap of signal strength contours with any other station *licensed by the Commission* and operating in the reserved band...” (emphasis added). Therefore, waiver of the received overlap prohibitions of §73.509 is not believed to be an absolute requirement. However, if the staff determines that a waiver of the applicable portions of §73.509 is required, it is explicitly requested for the contour overlap which would be received by the proposed Sedro-Woolley 205A facility.

The predicted interference received from CBUX-FM-1 would limit the new non-commercial service which the applicant proposes, but not eliminate it. Much of the Sedro-Woolley 205A coverage area would be preserved despite the predicted interference (much of which would in any case occur over water areas of the Strait of Juan de Fuca). Furthermore, the attached map exhibit demonstrates

³ According to the Canadian broadcast facilities database, CBUX-FM-1 actually operates directionally with 6.7 kW ERP at 615 meters AMSL.

that 90% of the city of Sedro-Woolley is calculated per the Annex III methodology to receive interference-free service, despite the predicted interference from CBUX-FM-1.

In Northern Sound Public Radio, 4 FCC Rcd 5495 (1989), the Commission permitted the creation of a new non-commercial educational FM station, receiving interference from an operating Canadian station, despite 100% overlap from a Canadian station's interfering contour. The 100% overlap sought herein is substantially identical to the 100% waiver granted in Northern Sound Public Radio.

Similar waivers (either explicit or implicit) in the Puget Sound area have been subsequently granted to KBCS 217C3 Bellevue for co-channel interference (see BPED-19880712MW, BPED-19960520MA, BPED-20000721ABJ, BMPED-20010119AFC, and BPED-20020816AAM), to KSER 214A for first-adjacent-channel interference (see BPED-19970515MB), and to KEXP 212C3 for first-adjacent-channel interference (see BPED-20011016AAR and BPED-20050331BCK).

Based on the foregoing, grant of the waiver requested in this application would be consistent with precedent established in the Northern Sound Public Radio, KBCS, KSER, and KEXP cases, and should be granted for precisely the same reasons that the previous waivers were granted. Therefore, the applicant respectfully requests waiver, if required, of the received interference provisions of §73.509 of the Commission's Rules with respect to CBUX-FM-1 Channel 205C1 Victoria.

Channel 205C at Saturna Island, British Columbia

The spacing study indicates an apparent short-spacing to a vacant Canadian allotment on Channel 205C at Saturna Island, British Columbia. That short-spacing is moot, however, as that allotment has been deleted by Canadian authorities in connection with its relocation to Victoria, where it now operates as CBUX-FM-1. Interference protection vis-a-vis CBUX-FM-1 is discussed above.

TV Channel 6

Section 73.525 of the Commission's Rules specifies a threshold distance of 225 kilometers for FM stations operating on Channel 205. There are no domestic TV Channel 6 stations located within this threshold distance.

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SEARCH PARAMETERS

FM Database Date: 081009

Channel: 205A 88.9 MHz
 Latitude: 48 32 30
 Longitude: 122 17 43
 Safety Zone: 32 km
 Job Title: SEDRO-WOOLLEY 205A

Page 1

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
CIVL-FM	ABBOTSFORD		203A	0.300	49-03-48	5.7	58.31	51
	BC -		88.5	337.0	122-12-55	SS	7.31	CLOSE
	CHILLIWACK		203A	0.000	49-06-36	27.3	71.28	51
	BC RM-		88.5	0.0	121-50-47		20.28	CLEAR
	CHILLIWACK		203A	0.000	49-06-36	27.3	71.28	51
	BC -		88.5	0.0	121-50-47		20.28	CLEAR
KPLUaux	TACOMA		203C	30.000	47-28-50	188.6	119.31	0
LIC	WA BMLD-900402KD		88.5	189.0	122-31-58		0.00	AUX
KPLU-FM	TACOMA		203C	68.000	47-30-14	168.2	117.84	95
LIC	WA BLED-080715ADJ		88.5	707.0	121-58-29		22.84	CLEAR
KPLU-FM	TACOMA		203C	58.000	47-30-14	168.2	117.84	95
LIC	WA BLED-890925KA		88.5	714.0	121-58-29		22.84	CLEAR
NOTE: SUPERSEDED BY BLED-20080715ADJ, ABOVE								
KPLUaux	TACOMA		203C	50.000	47-32-35	172.7	111.92	0
LIC	WA BXLED-010126AAO		88.5	388.0	122-06-25		0.00	AUX
NEW	ABBOTSFORD		204D	0.004	49-04-16	358.6	58.90	0
	BC -		88.7	13.0	122-18-54		0.00	CLS=D
	NEW WESTMINSTER		204D	0.000	49-12-43	328.5	87.71	0
	BC -		88.7	0.0	122-55-32		0.00	TRANS
NEW	NEW WESTMINSTER		204D	0.004	49-12-43	328.5	87.71	0
	BC -		88.7	18.0	122-55-32		0.00	CLS=D
K204BI	BELLINGHAM		204D	0.030	48-48-04	337.2	31.33	0
CP	WA BPFT-041213ABN		88.7	194.0	122-27-40		0.00	TRANS
K204BI	BELLINGHAM		204D	0.019	48-48-04	337.2	31.33	0
LIC	WA BLFT-891127TA		88.7	188.0	122-27-40		0.00	TRANS
CBTKFM	KELOWNA		205C	4.700	49-58-00	50.7	256.34	247
	BC -		88.9	511.0	119-31-40		9.34	CLOSE
	SATURNA ISLAND		205C	0.000	48-46-28	292.3	69.41	247
	BC -		88.9	0.0	123-10-10		-177.59	SHORT

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Page 2

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
NEW	SURREY BC -		205D 88.9	0.034 73.0	49-02-24 122-45-28	328.7	65.01 0.00	0 CLS=D
	VICTORIA BC -		205C1 88.9	0.000 0.0	48-35-41 123-32-37	274.1	92.32 -150.68	243 SHORT
NEW	VICTORIA BC -		205D 88.9	0.050 41.0	48-25-21 123-21-46	260.8	80.02 0.00	0 CLS=D
CBUXFM1	VICTORIA BC -		205C1 88.9	5.900 DA 454.0	48-35-41 123-32-37	274.1	92.32 -150.68	243 SHORT
NOTE: LICENSED WITH 6.7 KW ERP								
KMIH CP	MERCER ISLAND WA BPED-060327AIM		205D 88.9	0.030 69.0	47-34-21 122-13-05	176.9	107.92 0.00	0 CLS=D
KMIH APP	MERCER ISLAND WA BMPED-071228ABS		205A 88.9	0.030 69.0	47-34-21 122-13-05	176.9	107.92 -7.08	115 SHORT
NEW APP	SEDRO-WOOLLEY WA BNPED-071018ARZ		205A 88.9	2.500 DA 29.0	48-32-30 122-17-43	0.0	0.00 -115.00	115 SHORT
K206DO LIC	CAPE GEORGE WA BLFT-060727AAU		206D 89.1	0.002 DA 687.0	48-00-58 122-55-32	218.8	74.86 0.00	0 TRANS
K206DL LIC	GRANITE FALLS/EVERET WA BLFT-050314AAS		206D 89.1	0.005 DA 639.0	48-03-06 121-51-37	149.3	63.33 0.00	0 TRANS
K206CU LIC	MOUNT VERNON WA BLFT-051121AIC		206D 89.1	0.008 DA 505.0	48-22-03 122-16-55	177.1	19.39 0.00	0 TRANS
NEW APP	SKYKOMISH WA BNPED-071012ATS		206C1 89.1	23.000 DA 306.0	47-45-25 121-05-28	133.9	125.07 -7.93	133 SHORT
	CHILLIWACK BC -		207A 89.3	0.000 0.0	49-06-35 121-50-52	27.2	71.21 20.21	51 CLEAR
	CHILLIWACK BC -		207A 89.3	0.000 0.0	49-06-36 121-50-47	27.3	71.28 20.28	51 CLEAR

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SEARCH PARAMETERS FM Database Date: 081009

Channel: 205A 88.9 MHz Page 3

Latitude: 48 32 30

Longitude: 122 17 43

Safety Zone: 32 km

Job Title: SEDRO-WOOLLEY 205A

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
KUGS	BELLINGHAM	207A	0.100	48-44-11	328.0	25.57	31	
LIC	WA BLED-880613KA	89.3	117.0	122-28-47		-5.43	SHORT	
KUGS	BELLINGHAM	207A	0.700 DA	48-44-11	328.0	25.57	31	
CP	WA BPED-060809AJX	89.3	147.0	122-28-47		-5.43	SHORT	
	CHILLIWACK	208A	0.000	49-06-36	27.3	71.28	42	
	BC -	89.5	0.0	121-50-47		29.28	CLEAR	
NEW	CHILLIWACK	208A	1.600 DA	49-06-36	27.3	71.28	42	
	BC -080123CAN	89.5	188.7	121-50-47		29.28	CLEAR	

44444 END OF FM SPACING STUDY FOR CHANNEL 205 44444

Tabulation of Sedro-Woolley 205A 60 dBu F(50,50) Contour Distances

30 second terrain database

DISTANCES TO CONTOURS (Kilometers):

Frequency: 88.9000 MHz

Coordinates: N 48 32 30.00 W 122 17 43.00

F(50,50) Curves Number of Contours: 1

AZ (deg)	HAAT (m)	ERP (dBk)	CONTOUR LEVELS (dBu): 60.0
.0	-35	-4.02	8.0
1.0	-40	-3.80	8.1
2.0	-49	-3.58	8.2
3.0	-55	-3.37	8.3
4.0	-63	-3.17	8.4
5.0	-77	-2.97	8.5
6.0	-96	-2.77	8.6
7.0	-119	-2.58	8.7
8.0	-144	-2.39	8.8
9.0	-168	-2.20	8.9
10.0	-189	-2.02	9.0
11.0	-205	-1.80	9.1
12.0	-223	-1.58	9.2
13.0	-244	-1.37	9.3
14.0	-260	-1.17	9.5
15.0	-264	-.96	9.6
16.0	-258	-.77	9.7
17.0	-245	-.57	9.8
18.0	-221	-.38	9.9
19.0	-194	-.20	10.0
20.0	-164	-.02	10.1
21.0	-134	.20	10.2
22.0	-107	.42	10.4
23.0	-78	.63	10.5
24.0	-48	.83	10.6
25.0	-21	1.04	10.7
26.0	4	1.23	10.8
27.0	25	1.42	11.0
28.0	43	1.61	13.2
29.0	57	1.80	15.3
30.0	65	1.98	16.6
31.0	65	2.20	16.9
32.0	57	2.42	16.0
33.0	41	2.63	13.7
34.0	19	2.83	11.9
35.0	-6	3.04	12.0
36.0	-32	3.23	12.2
37.0	-59	3.43	12.3
38.0	-86	3.61	12.5
39.0	-113	3.80	12.6
40.0	-140	3.98	12.7
41.0	-168	3.98	12.7
42.0	-195	3.98	12.7
43.0	-218	3.98	12.7
44.0	-236	3.98	12.7
45.0	-250	3.98	12.7
46.0	-258	3.98	12.7
47.0	-260	3.98	12.7
48.0	-261	3.98	12.7
49.0	-263	3.98	12.7
50.0	-269	3.98	12.7

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51.0	-276	3.98	12.7
52.0	-283	3.98	12.7
53.0	-285	3.98	12.7
54.0	-287	3.98	12.7
55.0	-291	3.98	12.7
56.0	-300	3.98	12.7
57.0	-312	3.98	12.7
58.0	-324	3.98	12.7
59.0	-333	3.98	12.7
60.0	-337	3.98	12.7
61.0	-334	3.98	12.7
62.0	-325	3.98	12.7
63.0	-316	3.98	12.7
64.0	-314	3.98	12.7
65.0	-321	3.98	12.7
66.0	-331	3.98	12.7
67.0	-341	3.98	12.7
68.0	-345	3.98	12.7
69.0	-350	3.98	12.7
70.0	-357	3.98	12.7
71.0	-366	3.98	12.7
72.0	-374	3.98	12.7
73.0	-377	3.98	12.7
74.0	-374	3.98	12.7
75.0	-361	3.98	12.7
76.0	-342	3.98	12.7
77.0	-324	3.98	12.7
78.0	-308	3.98	12.7
79.0	-291	3.98	12.7
80.0	-266	3.98	12.7
81.0	-236	3.98	12.7
82.0	-205	3.98	12.7
83.0	-171	3.98	12.7
84.0	-132	3.98	12.7
85.0	-95	3.98	12.7
86.0	-61	3.98	12.7
87.0	-30	3.98	12.7
88.0	1	3.98	12.7
89.0	32	3.98	13.0
90.0	61	3.98	18.1
91.0	72	3.98	19.8
92.0	84	3.98	21.4
93.0	95	3.98	22.8
94.0	105	3.98	23.9
95.0	113	3.98	24.7
96.0	119	3.98	25.3
97.0	124	3.98	25.7
98.0	127	3.98	26.0
99.0	128	3.98	26.2
100.0	129	3.98	26.2
101.0	130	3.98	26.3
102.0	130	3.98	26.3
103.0	130	3.98	26.3
104.0	130	3.98	26.3
105.0	130	3.98	26.3
106.0	130	3.98	26.3
107.0	130	3.98	26.4
108.0	131	3.98	26.4
109.0	131	3.98	26.4
110.0	131	3.98	26.4
111.0	131	3.98	26.4
112.0	132	3.98	26.5
113.0	132	3.98	26.5
114.0	132	3.98	26.5

Hatfield & Dawson Consulting Engineers

115.0	131	3.98	26.4
116.0	128	3.98	26.2
117.0	125	3.98	25.8
118.0	121	3.98	25.4
119.0	115	3.98	24.9
120.0	107	3.98	24.1
121.0	99	3.98	23.2
122.0	88	3.98	22.0
123.0	76	3.98	20.3
124.0	62	3.98	18.2
125.0	45	3.98	15.5
126.0	28	3.98	12.7
127.0	10	3.98	12.7
128.0	-9	3.98	12.7
129.0	-30	3.98	12.7
130.0	-51	3.98	12.7
131.0	-67	3.98	12.7
132.0	-74	3.98	12.7
133.0	-74	3.98	12.7
134.0	-69	3.98	12.7
135.0	-61	3.98	12.7
136.0	-51	3.98	12.7
137.0	-41	3.98	12.7
138.0	-33	3.98	12.7
139.0	-26	3.98	12.7
140.0	-18	3.98	12.7
141.0	-8	3.98	12.7
142.0	5	3.98	12.7
143.0	18	3.98	12.7
144.0	34	3.98	13.4
145.0	49	3.98	16.1
146.0	64	3.98	18.6
147.0	79	3.98	20.6
148.0	93	3.98	22.5
149.0	106	3.98	24.1
150.0	118	3.98	25.2
151.0	127	3.98	26.1
152.0	133	3.98	26.6
153.0	135	3.98	26.8
154.0	136	3.98	26.8
155.0	136	3.98	26.9
156.0	136	3.98	26.9
157.0	137	3.98	26.9
158.0	137	3.98	26.9
159.0	137	3.98	27.0
160.0	137	3.98	27.0
161.0	137	3.98	27.0
162.0	137	3.98	27.0
163.0	138	3.98	27.0
164.0	138	3.98	27.0
165.0	138	3.98	27.1
166.0	139	3.98	27.1
167.0	139	3.98	27.1
168.0	138	3.98	27.0
169.0	136	3.98	26.9
170.0	136	3.98	26.9
171.0	137	3.98	26.9
172.0	137	3.98	27.0
173.0	137	3.98	26.9
174.0	136	3.98	26.9
175.0	136	3.98	26.9
176.0	136	3.98	26.9
177.0	137	3.98	26.9
178.0	138	3.98	27.0

Hatfield & Dawson Consulting Engineers

179.0	138	3.98	27.1
180.0	140	3.98	27.2
181.0	141	3.98	27.3
182.0	142	3.98	27.4
183.0	143	3.98	27.5
184.0	145	3.98	27.7
185.0	148	3.98	27.9
186.0	151	3.98	28.1
187.0	152	3.98	28.3
188.0	154	3.98	28.4
189.0	155	3.98	28.5
190.0	156	3.98	28.6
191.0	157	3.98	28.6
192.0	157	3.98	28.7
193.0	158	3.98	28.7
194.0	158	3.98	28.7
195.0	158	3.98	28.7
196.0	157	3.98	28.7
197.0	157	3.98	28.7
198.0	157	3.98	28.7
199.0	158	3.98	28.7
200.0	160	3.98	28.9
201.0	161	3.98	29.0
202.0	163	3.98	29.1
203.0	164	3.98	29.2
204.0	165	3.98	29.3
205.0	165	3.98	29.3
206.0	165	3.98	29.3
207.0	165	3.98	29.3
208.0	166	3.98	29.3
209.0	166	3.98	29.4
210.0	167	3.98	29.4
211.0	167	3.98	29.4
212.0	167	3.98	29.5
213.0	168	3.98	29.5
214.0	168	3.98	29.5
215.0	168	3.98	29.5
216.0	168	3.98	29.5
217.0	168	3.98	29.5
218.0	168	3.98	29.5
219.0	167	3.98	29.5
220.0	167	3.98	29.5
221.0	167	3.98	29.4
222.0	166	3.98	29.4
223.0	166	3.98	29.4
224.0	166	3.98	29.4
225.0	166	3.98	29.4
226.0	166	3.98	29.4
227.0	166	3.98	29.4
228.0	166	3.98	29.3
229.0	165	3.98	29.3
230.0	165	3.98	29.3
231.0	164	3.98	29.2
232.0	164	3.98	29.2
233.0	164	3.98	29.2
234.0	163	3.98	29.2
235.0	164	3.98	29.2
236.0	164	3.98	29.2
237.0	164	3.98	29.2
238.0	164	3.98	29.2
239.0	164	3.98	29.2
240.0	164	3.98	29.2
241.0	163	3.98	29.1
242.0	162	3.98	29.0

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243.0	161	3.98	29.0
244.0	161	3.98	29.0
245.0	161	3.98	28.9
246.0	161	3.98	28.9
247.0	161	3.98	29.0
248.0	162	3.98	29.0
249.0	162	3.98	29.1
250.0	163	3.98	29.1
251.0	163	3.98	29.1
252.0	163	3.98	29.1
253.0	163	3.98	29.2
254.0	163	3.98	29.2
255.0	164	3.98	29.2
256.0	164	3.98	29.2
257.0	164	3.98	29.2
258.0	164	3.98	29.2
259.0	165	3.98	29.3
260.0	165	3.98	29.3
261.0	166	3.98	29.3
262.0	166	3.98	29.4
263.0	166	3.98	29.4
264.0	166	3.98	29.4
265.0	166	3.98	29.4
266.0	166	3.98	29.4
267.0	166	3.98	29.4
268.0	166	3.98	29.4
269.0	166	3.98	29.4
270.0	166	3.98	29.4
271.0	166	3.80	29.1
272.0	166	3.61	28.9
273.0	167	3.43	28.6
274.0	167	3.23	28.3
275.0	167	3.04	28.1
276.0	167	2.83	27.8
277.0	167	2.63	27.5
278.0	167	2.42	27.2
279.0	166	2.20	26.9
280.0	166	1.98	26.5
281.0	166	1.80	26.3
282.0	165	1.61	26.0
283.0	165	1.42	25.7
284.0	165	1.23	25.4
285.0	164	1.04	25.1
286.0	164	.83	24.9
287.0	163	.63	24.6
288.0	163	.42	24.3
289.0	162	.20	23.9
290.0	162	-.02	23.6
291.0	162	-.20	23.3
292.0	161	-.38	23.1
293.0	161	-.57	22.8
294.0	160	-.77	22.5
295.0	160	-.96	22.2
296.0	159	-1.17	21.9
297.0	159	-1.37	21.6
298.0	158	-1.58	21.3
299.0	157	-1.80	21.0
300.0	156	-2.02	20.6
301.0	155	-2.20	20.4
302.0	153	-2.39	20.0
303.0	151	-2.58	19.7
304.0	148	-2.77	19.3
305.0	142	-2.97	18.6
306.0	131	-3.17	17.6

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307.0	116	-3.37	16.3
308.0	93	-3.58	14.5
309.0	67	-3.80	12.1
310.0	39	-4.02	9.1
311.0	17	-4.20	7.9
312.0	3	-4.39	7.9
313.0	-6	-4.58	7.8
314.0	-12	-4.77	7.7
315.0	-18	-4.97	7.6
316.0	-23	-5.17	7.5
317.0	-30	-5.38	7.4
318.0	-38	-5.59	7.3
319.0	-45	-5.80	7.2
320.0	-47	-6.03	7.1
321.0	-44	-6.21	7.1
322.0	-35	-6.39	7.0
323.0	-23	-6.58	6.9
324.0	-9	-6.77	6.8
325.0	7	-6.97	6.8
326.0	22	-7.17	6.7
327.0	36	-7.38	7.2
328.0	50	-7.59	8.3
329.0	62	-7.80	9.3
330.0	75	-8.03	10.1
331.0	86	-8.22	10.7
332.0	92	-8.41	11.0
333.0	95	-8.61	11.0
334.0	96	-8.81	10.9
335.0	95	-9.02	10.8
336.0	94	-8.81	10.8
337.0	90	-8.61	10.7
338.0	80	-8.41	10.2
339.0	59	-8.22	8.8
340.0	32	-8.03	6.5
341.0	3	-7.80	6.4
342.0	-22	-7.59	6.5
343.0	-38	-7.38	6.6
344.0	-40	-7.17	6.7
345.0	-26	-6.97	6.8
346.0	-2	-6.77	6.8
347.0	20	-6.58	6.9
348.0	36	-6.39	7.5
349.0	43	-6.21	8.3
350.0	44	-6.03	8.5
351.0	40	-5.80	8.2
352.0	34	-5.59	7.7
353.0	34	-5.38	7.8
354.0	32	-5.17	7.7
355.0	20	-4.97	7.6
356.0	5	-4.77	7.7
357.0	-8	-4.58	7.8
358.0	-21	-4.39	7.9
359.0	-30	-4.20	7.9

Tabulation of Skykomish 206C1 54 dBu F(50,10) Contour Distances

30 second terrain database

DISTANCES TO CONTOURS (Kilometers):

Frequency: 89.1000 MHz
Coordinates: N 47 45 25.00 W 121 5 28.00
F(50,10) Curves Number of Contours: 1

AZ (deg)	HAAT (m)	ERP (dBk)	CONTOUR LEVELS (dBu): 54.0
.0	315	6.67	65.8
1.0	320	6.49	65.8
2.0	325	6.31	65.8
3.0	330	6.12	65.7
4.0	331	5.93	65.3
5.0	328	5.74	64.5
6.0	323	5.54	63.4
7.0	320	5.33	62.5
8.0	308	5.12	60.7
9.0	292	4.91	58.6
10.0	279	4.69	56.8
11.0	271	4.51	55.7
12.0	267	4.33	54.9
13.0	264	4.14	54.3
14.0	261	3.95	53.5
15.0	260	3.75	53.0
16.0	265	3.55	52.9
17.0	269	3.35	52.7
18.0	271	3.14	52.4
19.0	272	2.93	51.9
20.0	277	2.71	51.8
21.0	290	2.53	52.4
22.0	311	2.35	53.5
23.0	336	2.16	55.2
24.0	355	1.97	56.2
25.0	363	1.77	56.4
26.0	366	1.58	56.1
27.0	371	1.37	56.0
28.0	379	1.16	56.0
29.0	387	.95	56.1
30.0	392	.73	56.0
31.0	392	.55	55.5
32.0	388	.37	54.7
33.0	385	.19	54.0
34.0	386	.00	53.6
35.0	391	-.20	53.4
36.0	398	-.40	53.5
37.0	408	-.60	53.7
38.0	418	-.81	53.9
39.0	430	-1.02	54.2
40.0	446	-1.24	54.8
41.0	469	-1.25	56.4
42.0	495	-1.27	58.0
43.0	519	-1.28	59.5
44.0	535	-1.29	60.5
45.0	537	-1.31	60.6
46.0	525	-1.32	59.8
47.0	501	-1.34	58.2
48.0	471	-1.35	56.2
49.0	437	-1.37	53.8
50.0	404	-1.38	51.4
51.0	375	-1.38	49.4

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52.0	352	-1.38	47.7
53.0	329	-1.38	45.8
54.0	303	-1.38	43.7
55.0	271	-1.38	41.4
56.0	236	-1.38	38.8
57.0	201	-1.38	35.8
58.0	166	-1.38	32.7
59.0	139	-1.38	30.0
60.0	121	-1.38	28.0
61.0	115	-1.38	27.3
62.0	118	-1.38	27.6
63.0	120	-1.38	27.9
64.0	122	-1.38	28.2
65.0	123	-1.38	28.2
66.0	130	-1.38	29.1
67.0	147	-1.38	30.9
68.0	174	-1.38	33.5
69.0	215	-1.38	37.1
70.0	267	-1.38	41.1
71.0	325	-1.38	45.5
72.0	388	-1.38	50.2
73.0	446	-1.38	54.4
74.0	501	-1.38	58.1
75.0	555	-1.38	61.2
76.0	599	-1.38	63.3
77.0	630	-1.38	64.8
78.0	648	-1.38	65.5
79.0	651	-1.38	65.7
80.0	643	-1.38	65.3
81.0	631	-1.38	64.8
82.0	608	-1.38	63.7
83.0	560	-1.38	61.5
84.0	500	-1.38	58.0
85.0	441	-1.38	54.0
86.0	379	-1.38	49.6
87.0	322	-1.38	45.2
88.0	265	-1.38	40.9
89.0	210	-1.38	36.6
90.0	186	-1.38	34.5
91.0	166	-1.38	32.7
92.0	146	-1.38	30.8
93.0	127	-1.38	28.7
94.0	122	-1.38	28.2
95.0	110	-1.38	26.7
96.0	101	-1.38	25.5
97.0	88	-1.38	23.8
98.0	80	-1.38	22.5
99.0	73	-1.38	21.4
100.0	70	-1.38	20.9
101.0	66	-1.38	20.3
102.0	57	-1.38	18.7
103.0	50	-1.38	17.5
104.0	44	-1.38	16.3
105.0	36	-1.38	14.6
106.0	30	-1.38	13.3
107.0	34	-1.38	14.0
108.0	46	-1.38	16.7
109.0	59	-1.38	19.1
110.0	64	-1.38	20.0
111.0	57	-1.38	18.8
112.0	48	-1.38	17.0
113.0	44	-1.38	16.2
114.0	43	-1.38	16.0
115.0	36	-1.38	14.6

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116.0	23	-1.38	13.3
117.0	8	-1.38	13.3
118.0	-2	-1.38	13.3
119.0	-5	-1.38	13.3
120.0	-7	-1.38	13.3
121.0	-8	-1.38	13.3
122.0	-6	-1.38	13.3
123.0	0	-1.38	13.3
124.0	10	-1.38	13.3
125.0	18	-1.38	13.3
126.0	19	-1.38	13.3
127.0	13	-1.38	13.3
128.0	3	-1.38	13.3
129.0	-7	-1.38	13.3
130.0	-13	-1.38	13.3
131.0	-9	-1.38	13.3
132.0	1	-1.38	13.3
133.0	9	-1.38	13.3
134.0	11	-1.38	13.3
135.0	13	-1.38	13.3
136.0	20	-1.38	13.3
137.0	28	-1.38	13.3
138.0	37	-1.38	14.8
139.0	48	-1.38	17.1
140.0	63	-1.38	19.8
141.0	83	-1.38	23.0
142.0	106	-1.38	26.2
143.0	133	-1.38	29.4
144.0	160	-1.38	32.1
145.0	182	-1.38	34.2
146.0	194	-1.38	35.3
147.0	195	-1.38	35.3
148.0	192	-1.38	35.0
149.0	193	-1.38	35.2
150.0	201	-1.38	35.9
151.0	214	-1.20	37.3
152.0	224	-1.02	38.6
153.0	233	-.84	39.7
154.0	243	-.67	40.9
155.0	257	-.50	42.4
156.0	271	-.33	43.9
157.0	282	-.17	45.2
158.0	286	-.01	45.9
159.0	284	.14	46.2
160.0	279	.30	46.2
161.0	273	.51	46.2
162.0	259	.72	45.5
163.0	233	.92	43.7
164.0	209	1.11	41.9
165.0	194	1.30	40.7
166.0	178	1.49	39.5
167.0	167	1.68	38.8
168.0	165	1.86	39.0
169.0	170	2.03	39.8
170.0	178	2.21	41.0
171.0	191	2.43	43.0
172.0	206	2.64	45.2
173.0	209	2.85	46.0
174.0	212	3.05	46.9
175.0	214	3.25	47.6
176.0	195	3.45	45.9
177.0	172	3.64	43.7
178.0	160	3.83	42.8
179.0	144	4.01	41.2

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180.0	128	4.19	39.3
181.0	111	4.36	37.3
182.0	96	4.54	35.1
183.0	85	4.70	33.3
184.0	79	4.87	32.4
185.0	67	5.03	30.0
186.0	52	5.19	26.6
187.0	41	5.35	23.6
188.0	43	5.50	24.4
189.0	45	5.65	25.2
190.0	46	5.80	25.7
191.0	53	5.92	28.1
192.0	60	6.03	30.2
193.0	68	6.15	32.3
194.0	75	6.26	34.3
195.0	89	6.37	37.6
196.0	117	6.48	43.0
197.0	151	6.59	48.6
198.0	182	6.69	52.6
199.0	207	6.80	55.8
200.0	229	6.90	58.2
201.0	253	7.04	60.9
202.0	275	7.18	63.5
203.0	289	7.32	65.2
204.0	297	7.45	66.2
205.0	304	7.58	67.1
206.0	311	7.71	68.1
207.0	318	7.84	69.2
208.0	331	7.96	70.7
209.0	354	8.09	73.2
210.0	385	8.21	76.5
211.0	410	8.28	79.1
212.0	425	8.34	80.8
213.0	432	8.41	81.6
214.0	430	8.47	81.7
215.0	423	8.53	81.2
216.0	414	8.60	80.6
217.0	405	8.66	79.9
218.0	400	8.72	79.6
219.0	404	8.79	80.2
220.0	418	8.85	81.7
221.0	436	8.87	83.4
222.0	452	8.90	84.9
223.0	462	8.92	85.8
224.0	465	8.95	86.1
225.0	461	8.98	85.9
226.0	459	9.00	85.8
227.0	463	9.03	86.2
228.0	468	9.05	86.7
229.0	470	9.08	86.9
230.0	471	9.10	87.0
231.0	474	9.08	87.2
232.0	482	9.05	87.8
233.0	496	9.03	88.8
234.0	512	9.00	89.9
235.0	528	8.98	91.0
236.0	544	8.95	92.1
237.0	560	8.92	93.1
238.0	575	8.90	94.0
239.0	590	8.87	94.9
240.0	605	8.85	95.7
241.0	623	8.79	96.6
242.0	642	8.72	97.4
243.0	656	8.66	98.0

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244.0	664	8.60	98.2
245.0	668	8.53	98.2
246.0	671	8.47	98.2
247.0	676	8.41	98.2
248.0	677	8.34	98.0
249.0	674	8.28	97.6
250.0	668	8.21	97.1
251.0	660	8.39	97.3
252.0	645	8.57	97.1
253.0	619	8.74	96.2
254.0	584	8.91	94.6
255.0	544	9.08	92.5
256.0	507	9.24	90.4
257.0	471	9.40	88.0
258.0	430	9.56	85.0
259.0	388	9.72	81.5
260.0	357	9.87	79.0
261.0	345	10.04	78.3
262.0	337	10.21	78.0
263.0	337	10.37	78.6
264.0	336	10.54	78.9
265.0	327	10.70	78.5
266.0	320	10.85	78.2
267.0	319	11.01	78.6
268.0	319	11.16	79.1
269.0	319	11.31	79.6
270.0	320	11.45	80.1
271.0	320	11.58	80.5
272.0	327	11.72	81.7
273.0	335	11.84	82.8
274.0	342	11.97	83.9
275.0	348	12.10	84.9
276.0	355	12.22	85.9
277.0	361	12.34	86.9
278.0	365	12.46	87.6
279.0	372	12.58	88.6
280.0	391	12.69	90.8
281.0	409	12.77	93.0
282.0	426	12.85	95.0
283.0	446	12.92	97.2
284.0	458	13.00	98.7
285.0	459	13.07	99.0
286.0	448	13.15	98.2
287.0	429	13.22	96.5
288.0	409	13.29	94.6
289.0	394	13.36	93.3
290.0	390	13.43	93.1
291.0	397	13.45	93.9
292.0	413	13.47	95.7
293.0	429	13.49	97.4
294.0	437	13.51	98.3
295.0	438	13.52	98.5
296.0	435	13.54	98.2
297.0	427	13.56	97.5
298.0	418	13.58	96.5
299.0	406	13.59	95.4
300.0	398	13.61	94.5
301.0	389	13.59	93.5
302.0	381	13.56	92.5
303.0	373	13.54	91.8
304.0	369	13.51	91.3
305.0	367	13.49	91.0
306.0	367	13.46	90.9
307.0	373	13.44	91.4

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308.0	389	13.41	93.0
309.0	413	13.39	95.4
310.0	437	13.36	97.8
311.0	457	13.30	99.6
312.0	471	13.23	100.8
313.0	479	13.17	101.2
314.0	477	13.10	100.8
315.0	470	13.04	99.9
316.0	461	12.97	98.9
317.0	447	12.90	97.3
318.0	429	12.83	95.2
319.0	409	12.76	92.9
320.0	387	12.69	90.5
321.0	362	12.57	87.7
322.0	336	12.45	84.8
323.0	316	12.33	82.3
324.0	303	12.20	80.6
325.0	294	12.07	79.4
326.0	285	11.95	78.1
327.0	273	11.81	76.5
328.0	259	11.68	74.6
329.0	246	11.54	72.8
330.0	236	11.41	71.3
331.0	228	11.31	70.2
332.0	219	11.20	69.0
333.0	210	11.10	67.7
334.0	198	10.99	66.1
335.0	183	10.89	64.0
336.0	165	10.78	61.5
337.0	154	10.67	59.9
338.0	155	10.56	59.8
339.0	162	10.45	60.2
340.0	171	10.34	61.1
341.0	185	10.18	62.3
342.0	197	10.03	63.4
343.0	207	9.87	64.0
344.0	210	9.71	64.0
345.0	211	9.54	63.6
346.0	213	9.37	63.4
347.0	229	9.20	64.5
348.0	246	9.03	65.7
349.0	258	8.85	66.4
350.0	268	8.67	66.9
351.0	285	8.49	67.9
352.0	298	8.30	68.5
353.0	302	8.12	68.4
354.0	304	7.92	68.0
355.0	303	7.73	67.4
356.0	300	7.53	66.7
357.0	300	7.32	66.1
358.0	305	7.11	65.9
359.0	310	6.90	65.9







