

July 2014
KQCM(FM) Channel 286A
North Shore, California
Section 307(b) Analysis Engineering
Statement Regarding Amendment

The instant amendment makes no change to the transmitter site coordinates of the proposed operation. The only change to the requested technical parameters is a reduction in the antenna height by 26 meters. The proposed ERP will remain at 6 kW.

Footnote 70 of the Second Order on Reconsideration in MB Docket No. 09-52 *Policies to Promote Rural Radio Service and to Streamline Allotment and Assignment Procedures* allows “parties with pending change of community applications as of the release date of this order the option of...proceeding based on the reception service counts in their already-filed technical showings.” The application which is the subject of this amendment was filed on March 16, 2012, and the Second Order on Reconsideration was released seven months later on October 12, 2012. The applicant elects to proceed based on the reception service counts in the already-filed technical showing. The height reduction incorporated in this amendment would not change the results of that analysis, other than to slightly reduce the proposed facility’s coverage of the Indio-Cathedral City-Palm Springs Urbanized Area below the 47% figure quoted in the following exhibit.

April 2012
KRSX-FM Channel 286A
North Shore, California
Section 307(b) Analysis Engineering

Hybrid Application and Rulemaking Filing

The instant application is being filed as a part of a hybrid application and rulemaking proposal.

KRSX-FM is presently authorized for operation on Channel 287A at Twentynine Palms, California. It is herein proposed to modify KRSX-FM to specify operation on Channel 286A at North Shore, California. Simultaneously, it is proposed by a rulemaking filing to substitute Channel 228C2 for vacant Channel 286C2 at Ehrenberg.

North Shore Channel 286A Spacing Study

The allocation study exhibit included in this Form 301 application demonstrates that the proposed North Shore Channel 286A allotment site meets the domestic co-channel and adjacent channel spacing requirements for Class A stations as prescribed in §73.207 of the Commission's Rules. The spacing study also demonstrates that this proposal is mutually-exclusive with retention of the licensed operation of KRSX-FM at Twentynine Palms.

The proposed Channel 286A allotment site is located 12.5 kilometers from the far side of North Shore. The standard 70 dBu contour distance for a Class A facility is 16.2 km. Therefore, and as depicted on the contour map exhibit, the proposed allotment will provide 70 dBu service to 100% of North Shore.

Service Will Be Provided to Existing Gray and Underserved Areas

As is detailed in the gain area study included below, the proposed allotment of Channel 286A at North Shore will provide new service to a gray area encompassing 2,388 persons (Priority 2), and new service to underserved areas encompassing 8,443 persons.

No white, gray, or underserved areas will lose service as a result of the proposed reallocation.

North Shore Will Receive Its First Local Service

This proposal will provide the first local service to North Shore (Priority 3), a Census Designated Place in Riverside County, with a 2010 Census population of 3,477 persons. The FCC considers a town or city to be a community for allotment purposes when it is either incorporated or listed in the US Census.

North Shore is a growing community. The 2000 Census population of North Shore was 1,379 persons, while the 2010 Census reports the population of North Shore as 3,477 persons, an increase of 152%.¹

Twentynine Palms, meanwhile, will retain local service from FM station KCDZ on Channel 299B1, as well as from a new FM station authorized on Channel 270A (see BNPH-20110630AJD).

Urbanized Areas

The community of North Shore is not located within any Urbanized Area. Furthermore, the 70 dBu contour from the North Shore Channel 286A facility will not encompass more than 50% of the nearby Indio-Cathedral City-Palm Springs UA.²

The Second Report and Order in MB Docket No. 09-52, *Policies to Promote Rural Radio Service and to Streamline Allotment and Assignment Procedures* (“Rural Radio”), sets forth procedures to be used to rebut a presumption that a proposed change in community of license is intended to serve a nearby urbanized area. Specifically, the urbanized area service presumption may be rebutted if it can be demonstrated that the proposed facility could not be modified to cover over 50% of an urbanized area.

The determination of whether a proposed facility “could be modified” to cover 50 percent or more of an urbanized area will be made based on an applicant’s certification that there are no existing towers in the area to which, at the time of filing, the applicant’s antenna could be relocated pursuant to a minor modification application to serve 50 percent or more of an Urbanized Area.³

Specifically, a proponent would need to certify that there could be no rule-compliant minor modification on the proposed channel to provide a principal community signal to over 50 percent or more of an Urbanized Area, in addition to covering the proposed community of license. In doing so, proponents will be required to consider all existing registered towers in the Commission’s Antenna Structure Registration database, in addition to any unregistered towers currently used by licensed radio stations. Furthermore, we expect all applicants and allotment proponents to consider widely-used techniques, such as directional antennas and contour protection, when certifying that the proposal could not be modified to provide a

¹ North Shore was not included as a CDP in the 2000 Census. The 1,379 person population noted above is the 2000 Census population corresponding to those block centroids which are within the 2010 Census North Shore CDP boundary.

² The “uniform terrain” 70 dBu contour (16.2 kilometer radius) from the allotment site will encompass no portion of the UA. The standard 70 dBu contour from the proposed transmitting facility, which will be on a new tower constructed for this station, will encompass just 47% of the UA.

³ Rural Radio at paragraph 35.

*principal community signal over the community of license and 50 percent of more of an Urbanized Area.*⁴

A comprehensive study has therefore been undertaken, following these guidelines. This study included consideration of licensed radio stations and registered towers within 40 kilometers of the center of North Shore. Beyond this distance, in our engineering judgment there are no towers from which a Class A FM station could cover North Shore with a 70 dBu contour. Operation was assumed from the top of each tower studied, and in the interests of efficiency maximum Class A power for the resulting 8-radial HAAT was utilized at each tower regardless of any short-spacing issues which might exist.⁵ Most of these towers are short communications towers on the valley floor, and do not come close to providing 70 dBu service to North Shore.⁶ A list of the towers studied is included as an attachment to this exhibit.

The results of this study demonstrate that there is a) no existing registered tower and b) no unregistered tower currently used by a licensed radio station which could be used to provide a principal community signal over both North Shore and 50 percent or more of the Indio-Cathedral City-Palm Springs Urbanized Area. Consequently the instant proposal does not trigger the requirement of a "Tuck" study.

Gain and Loss Areas

There is no overlap of the Twentynine Palms loss area and the North Shore gain area.

The gain area directly associated with the reallocation of KRSX-FM encompasses an area of 2,516 sq km and a population of 86,973 persons.

The loss area directly associated with the reallocation of KRSX-FM encompasses an area of 2,516 sq km and a population of 64,086 persons.

There will be a net increase of service provided by KRSX-FM to 22,887 persons.⁷

⁴ Rural Radio at footnote 97.

⁵ In other words, if a short-spaced tower studied could not provide 70 dBu service to North Shore and 70 dBu service to 50% or more of the Urbanized Area with maximum Class A power for the HAAT, there was no need to waste effort designing a directional antenna pattern which would satisfy either §73.215 or the US-Mexico FM Agreement.

⁶ It should be noted, as well, that many of these towers are sited at locations below sea level. Indeed, several of these towers top out at a height which is below sea level.

⁷ Unless otherwise noted, all population figures quoted in this study are based on 2010 Census block-level data.

Twentynine Palms Loss Area Remaining Services Analysis

All of the Twentynine Palms loss area⁸ will remain well-served, i.e. with at least five aural services remaining. Indeed, five existing stations each provide service to 100% of the loss area. As is depicted on the attached map exhibit, the following stations each provide service to all or a portion of the Twentynine Palms loss area.⁹

A	KRTM	201A	Yucca Valley
B	KPSC	203A	Palm Springs
C	KCRI	207B1	Indio
D	KLRD	211B	Yucaipa
E	KVLA-FM	212A	Coachella
F	KPSH	215A	Coachella
G	KWTH	217B	Barstow
H	KHCS	219A	Palm Desert
I	KKUU	224A	Indio
J	KCLB-FM	229B	Coachella
K	KLOB	234A	Thousand Palms
L	KQCM	238A	Twentynine Palms Base (100%)
M	KAJR	240A	Indian Wells
N	KXCM	242A	Joshua Tree (100%)
O	KUNA-FM	244A	La Quinta
P	KRCK-FM	249A	Mecca
Q	KDES-FM	253B	Cathedral City

⁸ Significant portions of the loss area are uninhabited, including 549 sq km which are located on the extensive grounds of the Twentynine Palms Marine Corps Base (Marine Corps Air Ground Combat Center) and 822 sq km which are located within Joshua Tree National Park.

⁹ In determining reception service provided by FM stations, the area of service circumscribed by the station's 1.0 mV/m signal contour was considered, assuming 1) actual facilities for non-commercial stations operating on reserved channels, 2) maximum facilities for the class of station for stations (other than Class C stations) operating on non-reserved channels, and 3) minimum or existing Class C facilities, whichever is greater, for Class C stations. For clear channel Class A AM stations, the service area was defined by the station's 0.5 mV/m groundwave contour, based on its licensed facilities. For all other classes of full-time AM stations, reception service was defined as that service received within a station's nighttime interference-free contour. See Meeker and Craig, Colorado, 15 FCC Rcd 23858 (2000), Stamps and Fouke, Arkansas, 14 FCC Rcd 10533 (1999), Silverton and Bayfield, Colorado, 14 FCC Rcd 4071 (1999), Malvern and Bryant, Arkansas, 13 FCC Rcd 8426 (1998), and others.

R	KMRJ	258A	Rancho Mirage
S	KHWZ	261B1	Ludlow
T	KPSI-FM	263B1	Palm Springs
U	KJJZ	272A	Indio
V	KEZN	276A	Palm Desert
W	KPLM	291B	Palm Springs
X	KDGL	295B	Yucca Valley (100%)
Y	KCDZ	299B1	Twentynine Palms (100%)
Z	KFI	640 kHz	Los Angeles (100%) Class A 0.5 mV/m
AA	KNWH	1250 kHz	Yucca Valley NIF = 18.5 mV/m

The following populations will lose an existing service:

Services Remaining	Population
5	zero
6	103
7	8,001
8	8,371
9	8,152
10	10,487
11	11,022
12	3,282
13	12,394
14	1,553
15	309
16	zero
17	412

Gain Area Existing Service Analysis

The proposed allotment at North Shore will provide new service to a gray area encompassing 2,388 persons, and new service to underserved areas encompassing 8,443 persons.¹⁰

As is depicted on the attached map exhibit, the following stations each provide service to all or a portion of the North Shore gain area.

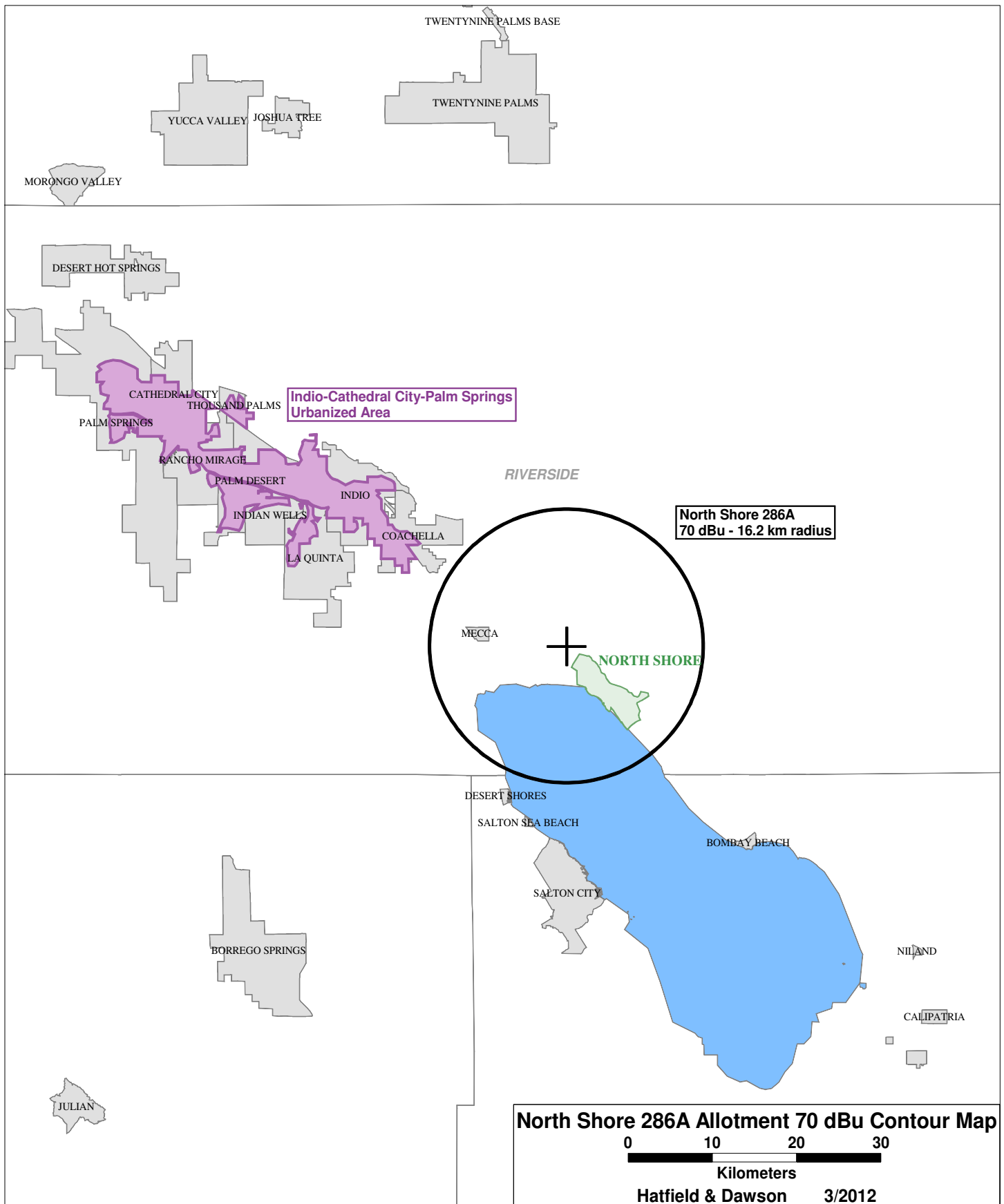
A	KCRI	207B1	Indio
B	KVLA-FM	212A	Coachella
C	KKCM	221A	Thermal
D	KKUU	224A	Indio
E	KCLB-FM	229B	Coachella
F	KLOB	234A	Thousand Palms
G	KAJR	240A	Indian Wells
H	KUNA-FM	244A	La Quinta
I	KRCK-FM	249A	Mecca
J	KDES-FM	253B	Cathedral City
K	KMRJ	258A	Rancho Mirage
L	KPSI-FM	263B1	Palm Springs
M	KJJZ	272A	Indio
N	KEZN	276A	Palm Desert
O	KPLM	291B	Palm Springs
P	KDGL	295B	Yucca Valley
Q	KFI	640 kHz	Los Angeles (100%) Class A = 0.5 mV/m
R	KNWZ	970 kHz	Coachella NIF = 10.2 mV/m
S	KESQ	1400 kHz	Indio NIF = 21.5 mV/m

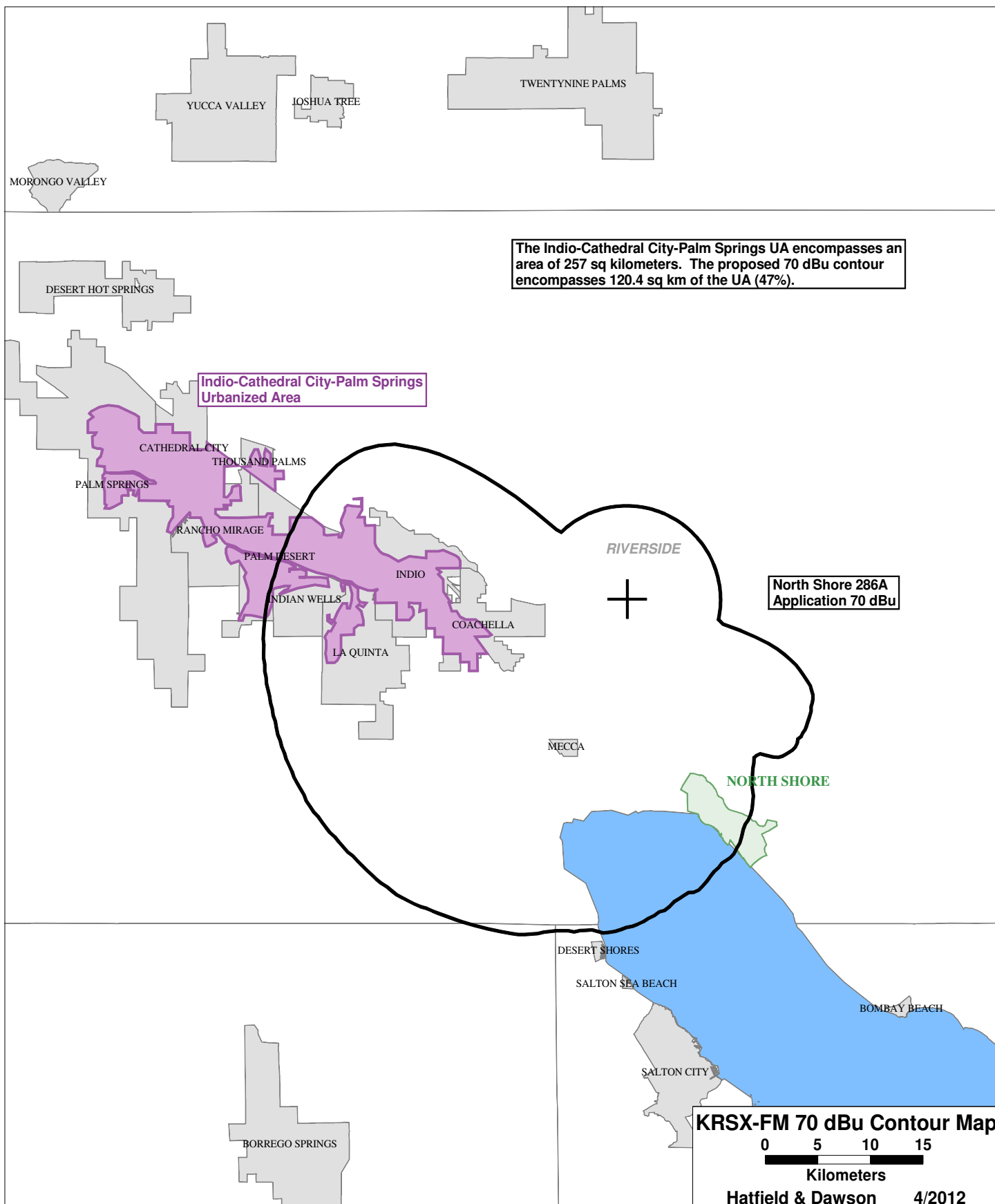
The following populations will gain an additional service:

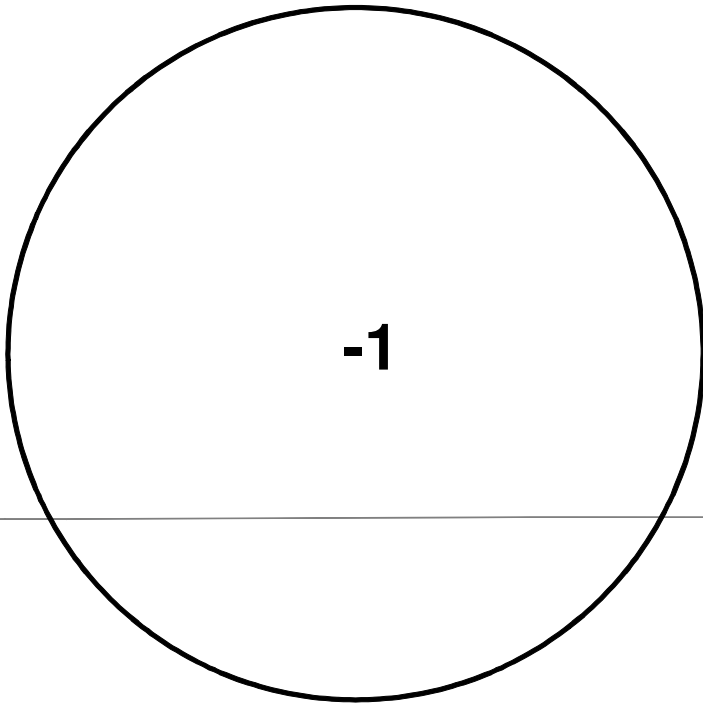
Services Existing	Population
1	2,388 currently gray & underserved
2	849 currently underserved

¹⁰ The underserved area population quoted includes the gray area population.

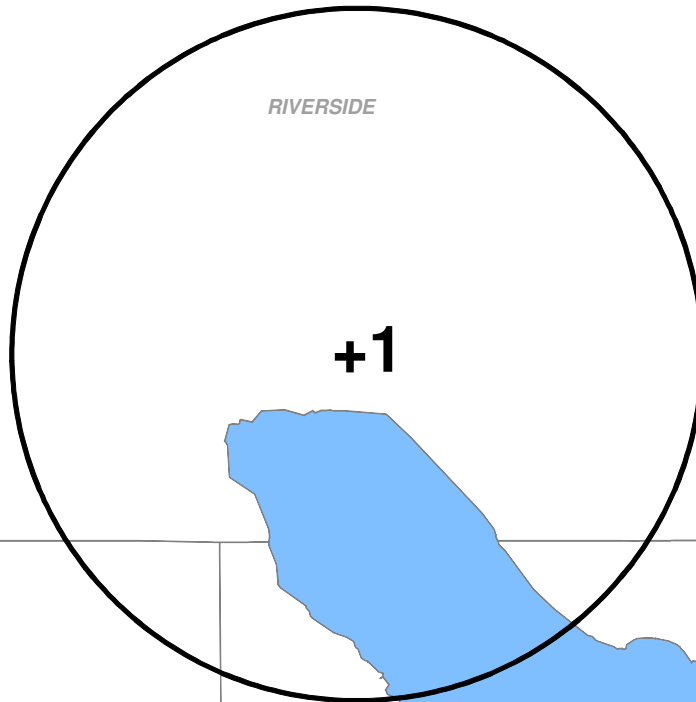
3	829	currently underserved
4	4,377	currently underserved
5	1,102	
6	7,341	
7	4,481	
8	zero	
9	2,612	
10	5,164	
11	zero	
12	8	
13	2,155	
14	317	
15	1,834	
16	40,456	
17	380	
18	12,179	
19	501	







Twentynine Palms 287A
Loss Area
60 dBu - 28.3 km radius
2,516 sq km
64,086 population



North Shore 286A
Gain Area
60 dBu - 28.3 km radius
2,516 sq km
86,973 population

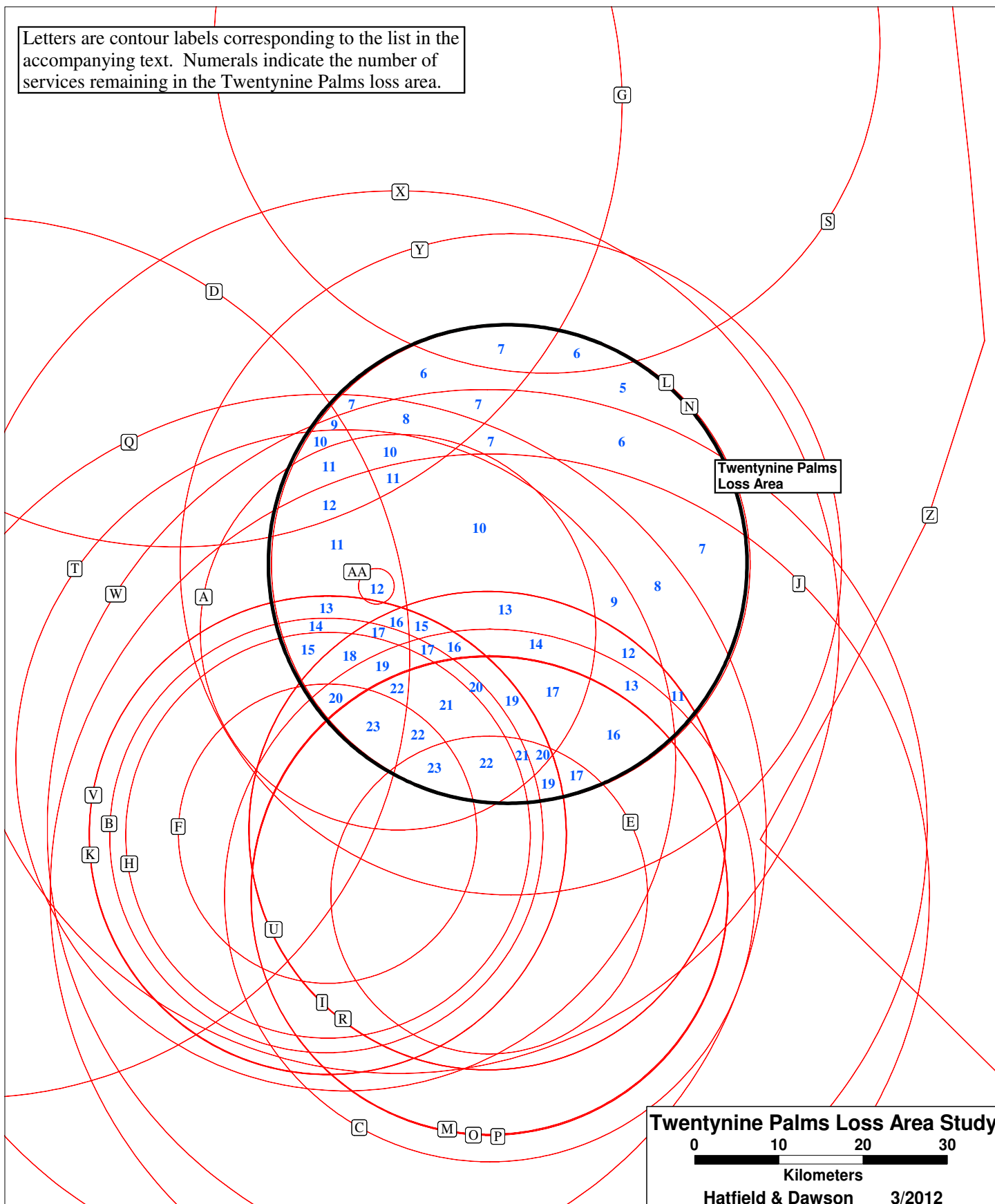
KRSX-FM Gain and Loss Area Study Map

0 10 20 30

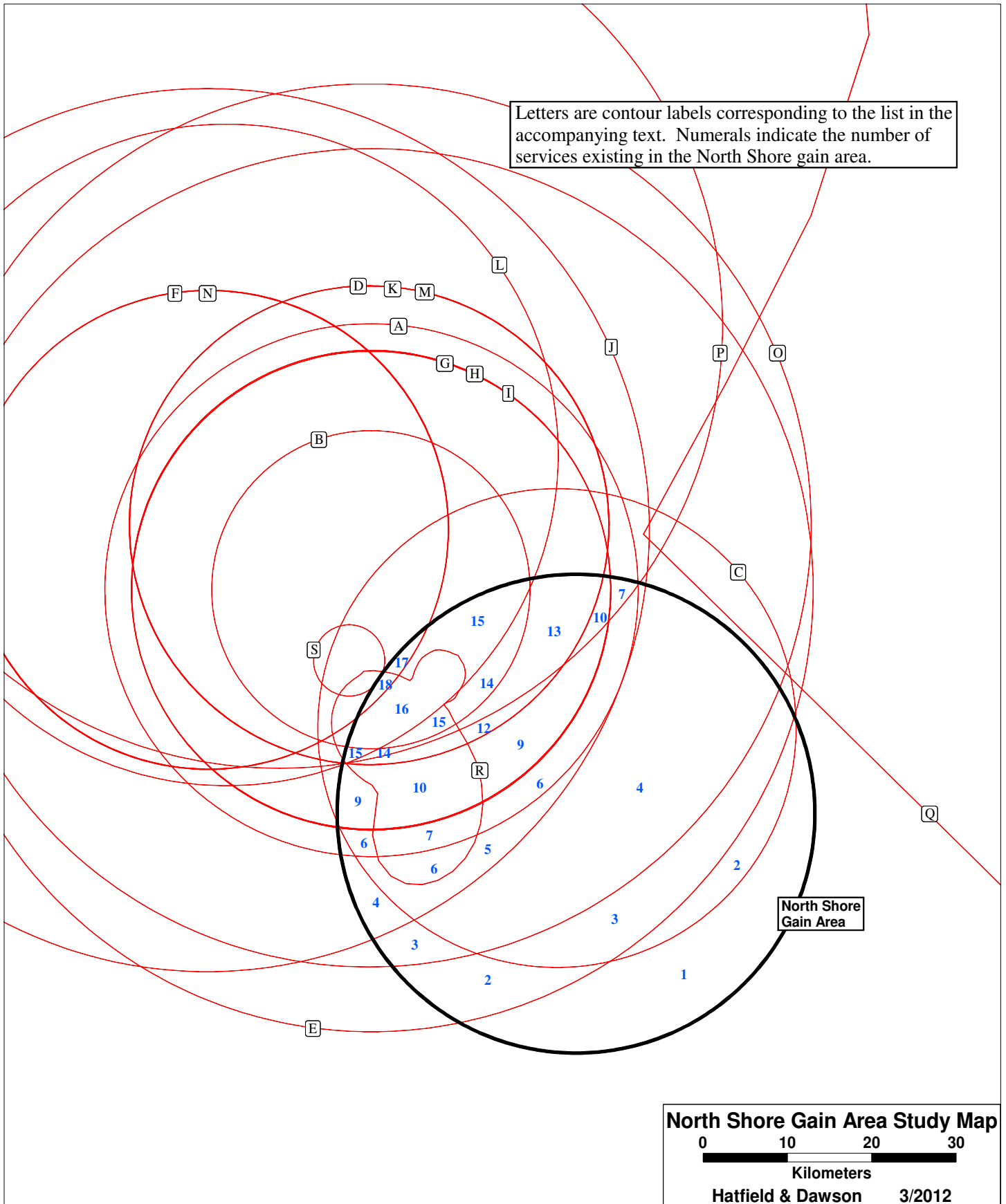
Kilometers

Hatfield & Dawson 3/2012

Letters are contour labels corresponding to the list in the accompanying text. Numerals indicate the number of services remaining in the Twentynine Palms loss area.



Letters are contour labels corresponding to the list in the accompanying text. Numerals indicate the number of services existing in the North Shore gain area.



KRSX-FM Channel 286A at North Shore, California
Towers Studied to Rebut Urbanized Area Service Presumption

Search radius 40 km around the center of North Shore

Licensed Radio Station	Technical Parameters	Conclusion
KKCM 221A Thermal Licensed	NAD27: 33-39-18 x 115-59-13 Overall height = 603 m AMSL HAAT = 218 m Maximum ERP = 1.3 kW	100% 70 dBu coverage of North Shore. Less than 50% (14%) 70 dBu coverage of UA.
KAJR 240A Indian Wells Licensed	NAD27: 33-48-04 x 116-13-28 Antenna height = 553 m AMSL HAAT = 189 m Maximum ERP = 1.75 kW	No 70 dBu coverage of North Shore. Greater than 50% 70 dBu coverage of UA. Many other FM stations at this same site, but none would be able to provide a 70 dBu contour to North Shore. No further consideration of towers at this site is necessary.
KNWZ 970 kHz Coachella Licensed	3 tower array 1212989, 1212830, 1212832 (see below)	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
KESQ 1400 kHz Indio Licensed	NAD27: 33-43-37 x 116-15-10 Overall height = 65 m AMSL HAAT = -54 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
ASR Number and Status	Technical Parameters	Conclusion
1007863 Terminated	Terminated, no further consideration necessary.	Terminated, no further consideration necessary.

Hatfield & Dawson Consulting Engineers

1013321 Constructed	NAD27: 33-43-07 x 116-12-31 Overall height = 49 m AMSL HAAT = -83 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1013433 Terminated	Terminated, no further consideration necessary.	Terminated, no further consideration necessary.
1014441 Constructed	NAD27: 33-38-07 x 116-09-43 Overall height = -16 m AMSL HAAT = -92 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1014802 Granted	NAD27: 33-16-49 x 116-05-04 Overall height = 247 m AMSL HAAT = 32 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. No 70 dBu coverage of UA.
1016230 Constructed	NAD27: 33-29-05 x 115-51-55 Overall height = 82 m AMSL HAAT = 12 m Maximum ERP = 6 kW	100% 70 dBu coverage of North Shore. No 70 dBu coverage of UA.
1016231 Constructed	NAD27: 33-14-34 x 115-30-02 Overall height = 30 m AMSL HAAT = 23 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. No 70 dBu coverage of UA.
1016233 Constructed	NAD27: 33-40-15 x 116-09-25 Overall height = 38 m AMSL HAAT = -61 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1055920 Cancelled	Cancelled, no further consideration necessary.	Cancelled, no further consideration necessary.

1055921 Granted	NAD27: 33-18-21 x 115-59-22 Overall height = 45 m AMSL HAAT = 8 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. No 70 dBu coverage of UA.
1058803 Constructed	NAD27: 33-29-02 x 115-51-54 Overall height = 97 m AMSL HAAT = 29 m Maximum ERP = 6 kW	100% 70 dBu coverage of North Shore. No 70 dBu coverage of UA.
1061640 Constructed	NAD27: 33-37-40 x 116-04-50 Overall height = 30 m AMSL HAAT = -97 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1062055 Terminated	Terminated, no further consideration necessary.	Terminated, no further consideration necessary.
1063408 Constructed	NAD27: 33-39-18 x 115-59-16 Overall height = 597 m AMSL HAAT = 214 m Maximum ERP = 1.3 kW	100% 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1210109 Constructed	NAD27: 33-43-18 x 116-15-21 Overall height = 52 m AMSL HAAT = -68 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1210118 Granted	NAD27: 33-40-28 x 116-09-53 Overall height = 6 m AMSL HAAT = -89 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1211368 Constructed	NAD27: 33-41-08 x 116-09-06 Overall height = 25 m AMSL HAAT = -99 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.

1212829 Constructed	NAD27: 33-41-10 x 116-09-30 Overall height = 55 m AMSL HAAT = -60 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1212830 Constructed	NAD27: 33-41-12 x 116-09-28 Overall height = 55 m AMSL HAAT = -61 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1212832 Constructed	NAD27: 33-41-14 x 116-09-26 Overall height = 55 m AMSL HAAT = -63 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1214068 Constructed	NAD27: 33-39-40 x 115-43-00 Overall height = 561 m AMSL HAAT = -121 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. No 70 dBu coverage of UA.
1218285 Constructed	NAD27: 33-40-15 x 116-09-44 Overall height = 4 m AMSL HAAT = -94 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1224660 Terminated	Terminated, no further consideration necessary.	Terminated, no further consideration necessary.
1226650 Constructed	NAD27: 33-41-17 x 116-10-34 Overall height = 27 m AMSL HAAT = -78 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1230473 Cancelled	Cancelled, no further consideration necessary.	Cancelled, no further consideration necessary.

1239845 Constructed	NAD27: 33-39-11 x 116-10-50 Overall height = -6 m AMSL HAAT = -100 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1240572 Constructed	NAD27: 33-16-45 x 115-57-42 Overall height = 32 m AMSL HAAT = 33 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. No 70 dBu coverage of UA.
1244980 Constructed	NAD27: 33-37-10 x 116-08-37 Overall height = -11 m AMSL HAAT = -79 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1248665 Constructed	NAD27: 33-17-35 x 115-58-43 Overall height = 26 m AMSL HAAT = 9 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. No 70 dBu coverage of UA.
1260185 Constructed	NAD27: 33-43-38 x 116-15-10 Overall height = 67 m AMSL HAAT = -53 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1260362 Constructed	NAD27: 33-23-32 x 116-03-12 Overall height = 9 m AMSL HAAT = -121 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. No 70 dBu coverage of UA.
1261818 Constructed	NAD27: 33-43-48 x 116-11-57 Overall height = 10 m AMSL HAAT = -151 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1261984 Cancelled	Cancelled, no further consideration necessary.	Cancelled, no further consideration necessary.

1269494 Constructed	NAD27: 33-39-21 x 116-15-03 Overall height = 20 m AMSL HAAT = -166 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1269727 Constructed	NAD27: 33-42-49 x 116-13-36 Overall height = 17 m AMSL HAAT = -97 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1269734 Constructed	NAD27: 33-43-12 x 116-12-05 Overall height = 14 m AMSL HAAT = -121 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1270373 Constructed	NAD27: 33-31-23 x 115-56-16 Overall height = -39 m AMSL HAAT = -110 m Maximum ERP = 6 kW	100% 70 dBu coverage of North Shore. No 70 dBu coverage of UA.
1270385 Constructed	NAD27: 33-36-46 x 116-11-10 Overall height = -14 m AMSL HAAT = -131 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1271855 Constructed	NAD27: 33-42-33 x 116-14-27 Overall height = 22 m AMSL HAAT = -92 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1271872 Constructed	NAD27: 33-25-54 x 115-50-07 Overall height = 44 m AMSL HAAT = 65 m Maximum ERP = 6 kW	Only 60% 70 dBu coverage of North Shore. No 70 dBu coverage of UA.

1272796 Constructed	NAD27: 33-38-20 x 116-13-54 Overall height = 6 m AMSL HAAT = -187 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1275060 Granted	NAD27: 33-38-34 x 116-10-34 Overall height = -10 m AMSL HAAT = -98 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1277026 Granted	NAD27: 33-40-30 x 116-14-00 Overall height = 19 m AMSL HAAT = -120 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.
1279630 Constructed	NAD27: 33-43-47 x 116-14-06 Overall height = 21 m AMSL HAAT = -106 m Maximum ERP = 6 kW	No 70 dBu coverage of North Shore. Less than 50% 70 dBu coverage of UA.