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Engineering Statement
KMGI Channel 273C Pocatello, Idaho
Request for -10 dBc Hybrid Digital Operation
June 2019

This Engineering Statement has been prepared on behalf of Idaho Wireless Corporation ("Idaho Wireless"), the licensee of FM station KMGI, which operates on Channel 273C at Pocatello, Idaho, in support of a request to operate KMGI at -10 dBc in hybrid digital mode.

Digital operation will be via the main KMGI antenna system (see BLH-19871216KF). The KMGI analog ERP is 100 kW. Digital ERP will be 10 kW.

In support of the request to operate with -10 dBc, the undersigned conducted a study which took into account the first-adjacent channel operations in the vicinity.

Channel 272: The nearest stations are 258 kilometers away (KVUW 272C Wendover construction permit) and 255 kilometers away (KDUT 272C Randolph). The attached contour map demonstrates that the 49.5 dBu F(50,10) contour from the proposed digital operation does not overlap the 60 dBu F(50,50) contours of the first-adjacent channel stations.

Channel 274: The nearest stations are 246 kilometers away (KSL-FM 274C Midvale) and 195 kilometers away (New 274C2 Cora application). The attached contour map demonstrates that the 49.5 dBu F(50,10) contour from the proposed digital operation does not overlap the 60 dBu F(50,50) contours of the first-adjacent channel stations.

RF Exposure Considerations

Ground-level RF exposure measurements were conducted by SWE Services, LLC in December 2016, in connection with licensing of the main KZBQ antenna system at this same site. A report detailing those measurements was included in the KZBQ license application, and can be located in the Commission's Consolidated Database System under FCC File No. BLH-20161213ABJ. The following analysis is based on the results of those measurements.

The 2016 measurements identified a local maximum of 43.9% of the FCC standard for uncontrolled environments, from simultaneous operation of all stations at this site. At that location, the contribution from KZBQ alone was determined to be 16.8% of the FCC standard for uncontrolled environments. At most, then, the contribution from KMGI alone would be about 42% of the FCC standard for uncontrolled environments, if we discount the presence of the other emitters at this transmitter site.

Under this worst-case assumption, a 10% increase in the total ERP of KMGI (to account for the additional power from -10 dBc hybrid operation) would increase the total by only about 4.2 percentage points, which would not push the site over the FCC standard for uncontrolled environments.

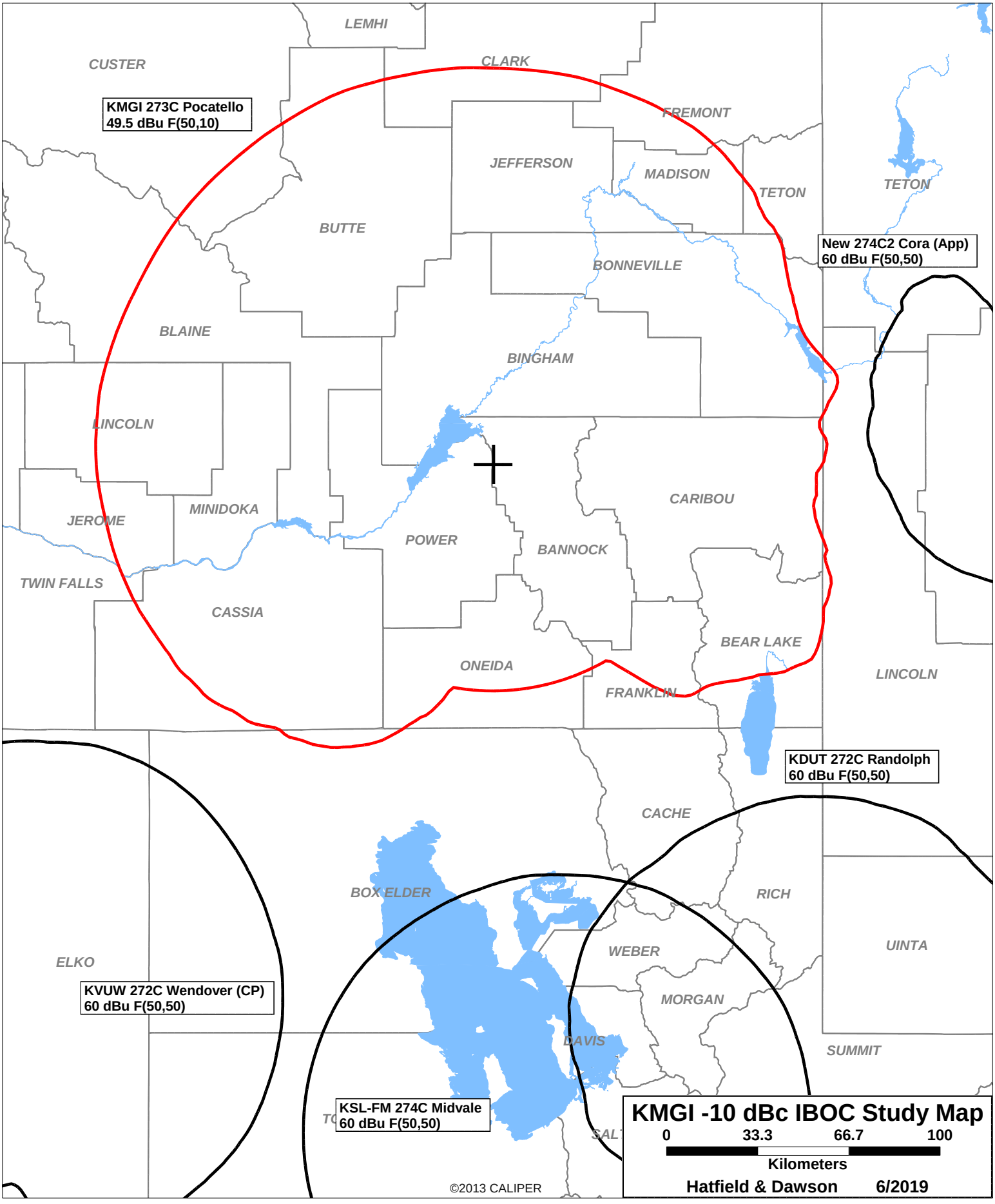
The Howard Mountain transmitter site is located in a mountainous region of eastern Idaho. The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency exposure in excess of FCC guidelines.

Statement of Engineer

This Engineering Statement has been prepared by me or under my direct supervision. I am a Partner in the firm of Hatfield & Dawson Consulting Engineers, and am registered as a Professional Engineer in the State of Washington. I hereby declare that the facts set out in the foregoing Engineering Statement, except those of which official notice may be taken, are true and correct.

Signed this 6th day of June, 2019

Erik C. Swanson, P.E.


LEMHI
CUSTER
CLARK
KMGI 273C Pocatello
49.5 dBu F(50,10)
FREMONT
JEFFERSON
MADISON
TETON
TETON
BUTTE
New 274C2 Cora (App)
60 dBu F(50,50)
BONNEVILLE
BLAINE
BINGHAM
LINCOLN
CARIBOU
MINIDOKA
JEROME
POWER
BANNOCK
TWIN FALLS
CASSIA
BEAR LAKE
ONEIDA
LINCOLN
FRANKLIN
KDUT 272C Randolph
60 dBu F(50,50)
CACHE
BOX ELDER
RICH
UINTA
ELKO
WEBER
KVUW 272C Wendover (CP)
60 dBu F(50,50)
MORGAN
DAVIS
SUMMIT
KSL-FM 274C Midvale
60 dBu F(50,50)
©2013 CALIPER
KMGI -10 dBc IBOC Study Map
0
33.3
66.7
100
Kilometers
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6/2019