

Engineering Exhibit 13 with Second Adjacent Channel Waiver Request Move K281BM to Channel 277 Shelton, WA

The applicant requests handling of the instant proposal as a Mattoon Waiver.

Olympic Broadcasting, Inc. (Olympic), licensee of AM station KMAS 1030 Shelton, Washington, asks that their licensed fill-in translator, K281BM be allowed to move to vacant non-adjacent channel 277 in a single move.

There would be no change of location or community of license. The proposed facility would service nearly all of the existing translator coverage area near Shelton. It would bring the KMAS FM signal to the Olympia area. Olympia is within the existing 2.0 mV/m AM contour, but is in a null for K281BM to protect co-channel K281AD, Olympia.

The original plan for the current translator was to bring service to both Shelton and Olympia. However, because of unforeseen interference issues, service to Olympia had to be scrapped.

For background, this move could be made via a change to Channel 280 at the existing site, followed by an application for a subsequent move to Channel 277. Using lower power and a directional antenna, KHTP 279C Tacoma and K280GE Aberdeen could be protected from operation on Channel 280 at the current site.

However, such a move would require K281BM to eliminate service to many current listeners during the interim. Olympic feels that the public good could be better achieved by waiving the major channel change rule in this instance.

Foremost, the instant application would allow an AM station's only FM translator to more fully cover their licensed coverage area with an FM signal.

Although this translator did, in fact, 'hop' to its current location, it was done before the release of the Mattoon Waiver decision that would have made the process a single step. We note that K281BM has not hopped an inch since early 2011, well before the Mattoon Waiver decision was released. And no physical move is requested here.

The proposed protected contour already has a large overlap with the licensed translator protected contour.

And if it still matters, the transmitter site is outside all major radio markets, so it should have no impact on the establishment of LPFM in spectrum limited markets.

Olympic hereby requests that the instant application be granted without being treated as a major modification.

Second Adjacent Channel Waiver Request

The proposed facility is within the protected contour of KYNW 275C Centralia, Facility 33829.

The KYNW predicted contour is 95 dBu. Therefore, the +40 dBu interfering contour of the instant facility would be 135 dBu. The interference zone would be 20 meters. Since the radiation center is 26 meters above ground level, the interference zone would be more than 6 meters above the ground.

The site is an uninhabited mountain top, and there are no nearby habitable structures within 20 meters.

The applicant believes that the proposed facility would create no prohibited interference to current licensees or permit holders.

Directional Antenna Information

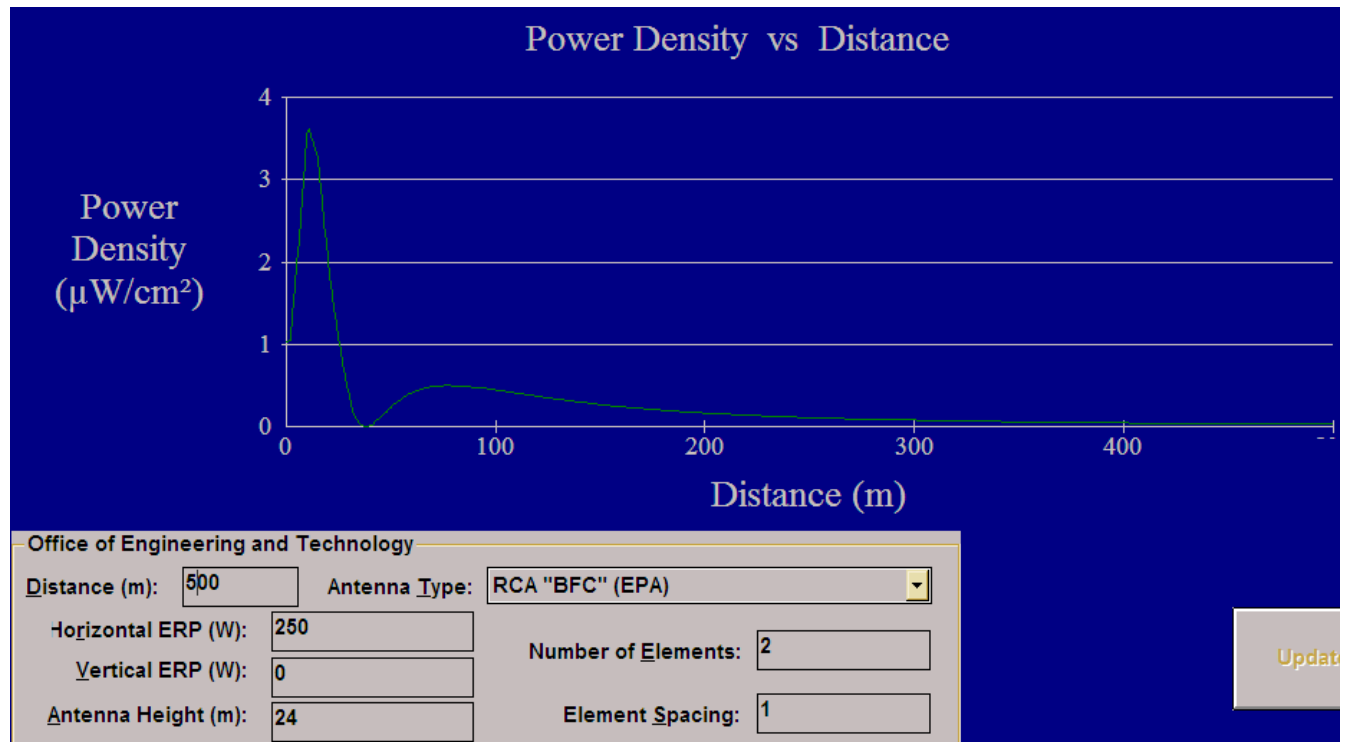
The proposed antenna array uses two antennas that are not normally considered directional. But their mild directional properties suit the small amount of protection needed for K277AE, Seattle.

The Horizontal antenna is a standard Scala-Kathrein FMO-2 at 65 degrees from true north. There is greater than 2 dB reduction toward 45 degrees and K281AE.

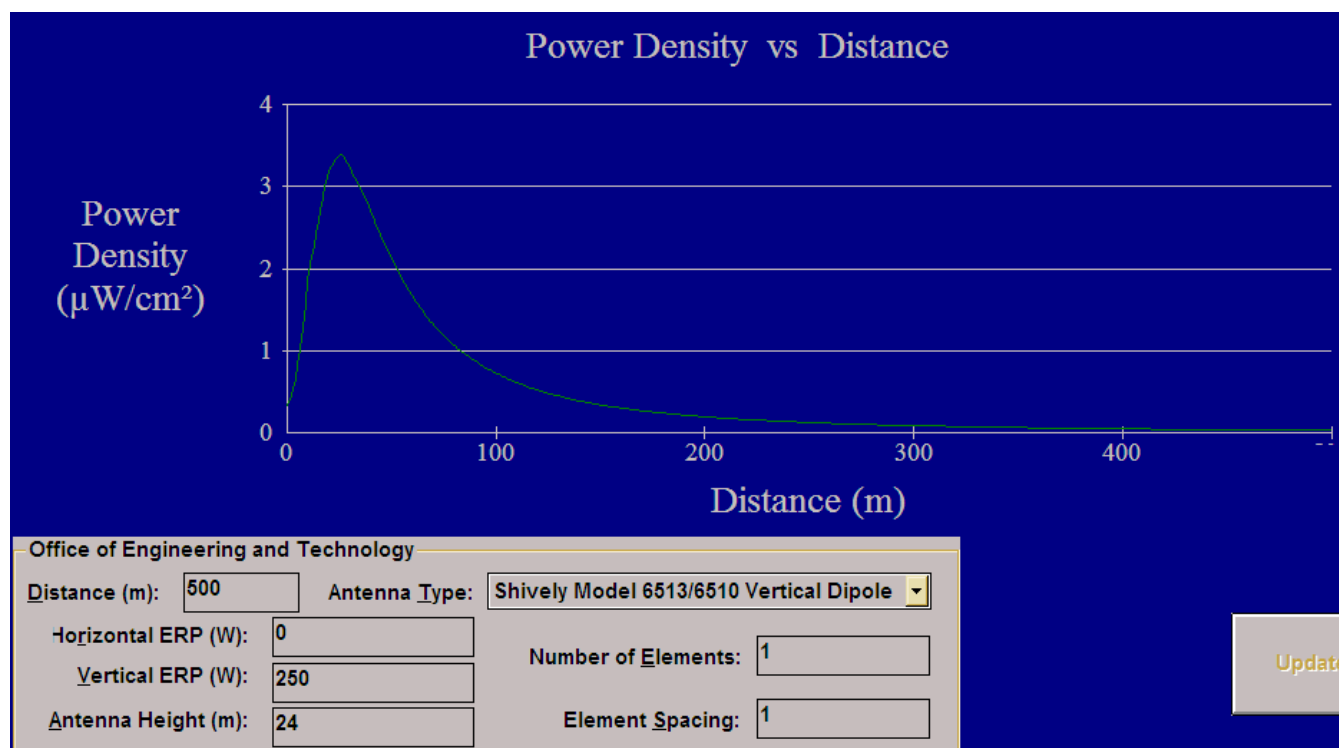
The Vertical antenna is a standard Scala-Kathrein Vertical Dipole mounted at 140 degrees from true north. The back side is down approximately 5.4 dB from the front. There is greater than 2 dB reduction toward K277AE.

Radiation Hazard Study

The proposed Maximum Effective Radiated Power (ERP) is 250 at 36 meters above ground level. As shown in the following figure, there is no RF hazard created by the Horizontal portion of the array, an FMO-2 omnidirectional horizontal crossed dipole antenna. Since there is no setting on the FCC tool for this antenna, we have chosen the worst case RCA "BFC" which shows a maximum exposure of 3.6 microWatts per centimeter squared at 11 meters.



The following figure shows no hazardous radiation created by the Vertical portion of the array, an FMV single bay Vertical dipole. We have used the Shively Vertical Dipole setting of the FCC tool.



The peak downward radiation is less than 3.5 microWatts per centimeter squared. This is well within the maximum permissible level of 200.

Combining the Vertical and Horizontal values yields 7.1 microwatts per cm squared, well under the uncontrolled RF exposure limit.

We conclude that no prohibited RF exposure would be created by the operation of the proposed facility.

The site is not a protected historic area.