

**Television Channel 6 Protection per FCC Title 47, part 73.525
for proposed Class A, NCE station channel 211, Selinsgrove, PA.**

This exhibit shows the output from the FCC's Interference Analysis Tool for Predicting interference to Reception of TV Channel 6 from noncommercial Educational FM Stations. The coordinates from the proposed NCE FM station were used in the FCC's TV Query, Stations Within a Radius web tool. The distance used for the search came from the part 73.525 rules for FM channel 211, which is 196 kilometers. The actual distance entered was 197 kilometers. In this exhibit, there was no interference within the TV channel 6, Grade B contours. The two TV stations considered were WPVI and WJAC. All other Channel 6 TV stations were beyond 196km or were too small in ERP and too far away for the proposed NCE FM to cause interference to the 47dBu service area contour of the TV station.



Audio Division

Reception

(202)-418-2700

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Section 73.525 Analysis -- NCE Potential Interference to Channel 6

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WPVI-TV, Philadelphia

TV Latitude: 40 2 39. North
TV Longitude: 75 14 26. West

TV ERP = 74.100 kilowatts
TV HAAT = 332.00 meters

Input Data

Proposed NCE FM, 211, Selinsgrove

FM NCE Latitude: 40 44 36. North
FM NCE Longitude: 76 50 1. West

FM Channel = 211

Horizontally Polarized FM ERP = 0.200 kilowatts
Vertically Polarized FM ERP = 0.200 kilowatts
FM HAAT = 268.00 meters

Adjustments:

Selection made that all interference will fall **outside** any community with a population of 50,000 or more.

The equivalent FM ERP used to predict the distance to noncommercial educational FM F (50,10) interfering contour is determined by the equation

$$\text{ERP} = \text{ERPH} + (\text{ERPv}/40) = 0.200 + (0.200/40) = 0.205 \text{ kW} \quad [\text{factor of } 40]$$

where ERP is the adjusted FM station ERP, ERPH is the horizontally polarized FM ERP, and ERPV is the vertically polarized FM ERP.

Distance from TV to FM = 155.953 kilometers

TV to FM azimuth = 300.468 degrees (referenced to True North)

FM to TV azimuth = 119.435 degrees (referenced to True North)

This analysis does not consider the effects of terrain on the FM or TV stations' signals. Directional FM or TV patterns are also not considered.

Data

[Distance, Azimuth from FM to Interference Point](#)

Maps

on Tiger Maps from the Census Bureau

[Decimal Latitude, Longitude Points Used
in the Tiger Census Map Plots](#)

Map at FM Site

[TMS Map File](#)

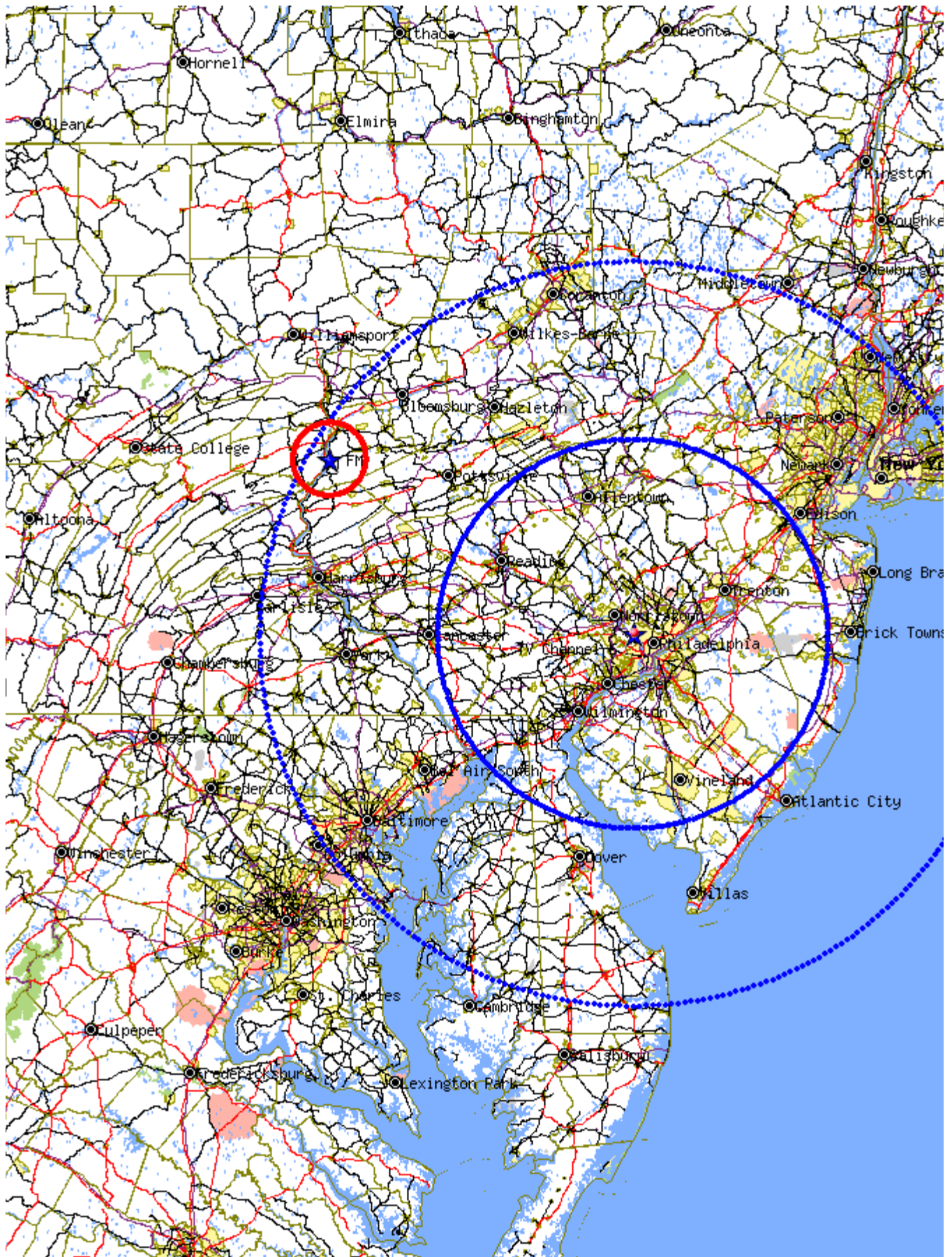
Map at TV Site

**No interference within the TV Channel 6 Grade B
contour !**

Distance to the TV Grade B contour = 102.51 km

FM F(50,10) interfering contour = 72.30 dBu

Distance to the FM interfering contour = 10.05 km





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Input Data

Proposed NCE FM, 211, Selinsgrove

WJAC-TV, Johnstown

TV Latitude: 40 22 17. North
TV Longitude: 78 58 58. West

TV ERP = 70.800 kilowatts
TV HAAT = 341.00 meters

FM NCE Latitude: 40 44 36. North
FM NCE Longitude: 76 50 1. West

FM Channel = 211

Horizontally Polarized FM ERP = 0.200 kilowatts
Vertically Polarized FM ERP = 0.200 kilowatts
FM HAAT = 268.00 meters

Adjustments:

Selection made that all interference will fall **outside** any community with a population of 50,000 or more.

The equivalent FM ERP used to predict the distance to noncommercial educational FM F (50,10) interfering contour is determined by the equation

$$\text{ERP} = \text{ERPH} + (\text{ERPV}/40) = 0.200 + (0.200/40) = 0.205 \text{ kW} \quad [\text{factor of } 40]$$

where ERP is the adjusted FM station ERP, ERPH is the horizontally polarized FM ERP, and ERPV is the vertically polarized FM ERP.

Distance from TV to FM = 186.657 kilometers

TV to FM azimuth = 76.471 degrees (referenced to True North)

FM to TV azimuth = 257.868 degrees (referenced to True North)

This analysis does not consider the effects of terrain on the FM or TV stations' signals. Directional FM or TV patterns are also not considered.

Data

[Distance, Azimuth from FM to Interference Point](#)

Maps

on Tiger Maps from the
Census Bureau

[Decimal Latitude, Longitude Points Used
in the Tiger Census Map Plots](#)

Map at FM Site

[TMS Map File](#)

Map at TV Site

**No interference within the TV Channel 6 Grade B
contour !**

Distance to the TV Grade B contour = 102.59 km

FM F(50,10) interfering contour = 72.30 dBu

Distance to the FM interfering contour = 10.05 km

