



**United States of America**  
**FEDERAL COMMUNICATIONS COMMISSION**  
**AM BROADCAST STATION LICENSE**

Authorizing Official:

Official Mailing Address:

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MIDWEST COMMUNICATIONS, INC.  
 904 GRAND AVENUE  
 WAUSAU WI 54403

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Son Nguyen  
 Supervisory Engineer  
 Audio Division  
 Media Bureau

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Grant Date: August 31, 2005

Facility Id: 42086

Call Sign: WTAQ

This license expires 3:00 a.m.  
 local time, December 01, 2012.

License File Number: BL-20050509AEH

This license covers permit no.: BP-20021114ABI

Subject to the provisions of the Communications Act of 1934, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this license, the licensee is hereby authorized to use and operate the radio transmitting apparatus herein described.

This license is issued on the licensee's representation that the statements contained in licensee's application are true and that the undertakings therein contained so far as they are consistent herewith, will be carried out in good faith. The licensee shall, during the term of this license, render such broadcasting service as will serve the public interest, convenience, or necessity to the full extent of the privileges herein conferred.

This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequency designated in the license beyond the term hereof, nor in any other manner than authorized herein. Neither the license nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This license is subject to the right of use or control by the Government of the United States conferred by Section 606 of the Communications Act of 1934.

Hours of Operation: Unlimited

Average hours of sunrise and sunset:  
 Local Standard Time (Non-Advanced)

|      |         |         |      |         |         |
|------|---------|---------|------|---------|---------|
| Jan. | 7:30 AM | 4:45 PM | Jul. | 4:15 AM | 7:30 PM |
| Feb. | 7:00 AM | 5:15 PM | Aug. | 5:00 AM | 7:00 PM |
| Mar. | 6:00 AM | 6:00 PM | Sep. | 5:30 AM | 6:00 PM |
| Apr. | 5:15 AM | 6:30 PM | Oct. | 6:00 AM | 5:15 PM |
| May  | 4:30 AM | 7:15 PM | Nov. | 6:45 AM | 4:30 PM |
| Jun. | 4:00 AM | 7:45 PM | Dec. | 7:15 AM | 4:15 PM |

Callsign: WTAQ

License No.: BL-20050509AEH

Name of Licensee: MIDWEST COMMUNICATIONS, INC.

Station Location: GREEN BAY, WI

Frequency (kHz): 1360

Station Class: B

Antenna Coordinates:

Day

Latitude: N 44 Deg 25 Min 51 Sec

Longitude: W 88 Deg 04 Min 51 Sec

Night

Latitude: N 44 Deg 25 Min 51 Sec

Longitude: W 88 Deg 04 Min 51 Sec

Transmitter(s): Type Accepted. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.

Nominal Power (kW): Day: 10.0 Night: 5.0

Antenna Input Power (kW): Day: 10.53 Night: 5.4

Antenna Mode: Day: DA Night: DA

(DA=Directional Antenna, ND=Non-directional Antenna; CH=Critical Hours)

Current (amperes): Day: 14.5 Night: 10.4

Resistance (ohms): Day: 50 Night: 50

Antenna Registration Number(s):

Day:

| Tower No. | ASRN |      |
|-----------|------|------|
| 1         | None | 59.7 |
| 2         | None | 59.7 |

Night:

| Tower No. | ASRN |      |
|-----------|------|------|
| 1         | None | 59.7 |
| 2         | None | 59.7 |
| 3         | None | 59.7 |
| 4         | None | 59.7 |

DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

Theoretical RMS (mV/m/km): Day: 968.21 Night: 683.97

Standard RMS (mV/m/km): Day: 1017.16

Augmented RMS (mV/m/km): Night: 718.56

Q Factor: Day: Night:

Theoretical Parameters:

Day Directional Antenna:

| Tower No. | Field Ratio | Phasing (Deg.) | Spacing (Deg.) | Orientation (Deg.) | Tower Ref Switch * | Height (Deg.) |
|-----------|-------------|----------------|----------------|--------------------|--------------------|---------------|
| 1         | 1.0000      | 0.000          | 0.0000         | 0.000              | 0                  | 94.5          |
| 2         | 0.3200      | -62.400        | 138.2000       | 22.000             | 0                  | 94.5          |

\* Tower Reference Switch

0 = Spacing and orientation from reference tower

1 = Spacing and orientation from previous tower

Theoretical Parameters:

Night Directional Antenna:

| Tower No. | Field Ratio | Phasing (Deg.) | Spacing (Deg.) | Orientation (Deg.) | Tower Ref Switch * | Height (Deg.) |
|-----------|-------------|----------------|----------------|--------------------|--------------------|---------------|
| 1         | 0.8300      | 0.000          | 0.0000         | 0.000              | 0                  | 94.5          |
| 2         | 0.6640      | 90.000         | 138.2000       | 202.000            | 0                  | 94.5          |
| 3         | 1.0000      | 0.000          | 183.6000       | 112.000            | 0                  | 94.5          |
| 4         | 0.8000      | 90.000         | 138.2000       | 202.000            | 1                  | 94.5          |

\* Tower Reference Switch

0 = Spacing and orientation from reference tower

1 = Spacing and orientation from previous tower

Augmentation Parameters:

| Aug No. | Central Azimuth (Deg. T) | Span (Deg.) | Radiation at Central Azimuth (mV/m @ 1 km) |
|---------|--------------------------|-------------|--|
| 1       | 122.0                    | 10.0        | 96.56                                      |
| 2       | 141.0                    | 10.0        | 78.86                                      |
| 3       | 152.5                    | 10.0        | 77.25                                      |
| 4       | 256.0                    | 10.0        | 72.42                                      |

Day Directional Operation:

| Twr. No. | Phase (Deg.) | Antenna Monitor Sample Current Ratio |
|----------|--------------|--------------------------------------|
| 1        | 0            | 0.32                                 |
| 2        | 62.4         | 1                                    |

Antenna Monitor: POTOMAC INSTRUMENTS AM-19

Sampling System Approved Under Section 73.68 of the Rules.

Monitoring Points:

Day Operation:

| Radial<br>(Deg. T) | Distance From Transmitter<br>(kM) | Maximum Field Strength<br>(mV/m) |
|--------------------|-----------------------------------|----------------------------------|
| 12                 | 6.42                              | 116.81                           |
| 170.5              | 5.49                              | 106.67                           |
| 233.5              | 4.75                              | 117.17                           |

Night Operation:

| Radial<br>(Deg. T) | Distance From Transmitter<br>(kM) | Maximum Field Strength<br>(mV/m) |
|--------------------|-----------------------------------|----------------------------------|
| 99                 | 5.91                              | 17.5                             |
| 122                | 8.16                              | 7.3                              |
| 141                | 8.35                              | 6.5                              |
| 152.5              | 3.11                              | 25.5                             |
| 192                | 2.57                              | 208.2                            |
| 207.5              | 6.36                              | 73.2                             |
| 256                | 7.87                              | 6.5                              |

Special operating conditions or restrictions:

- 1 Ground system consists of 120 equally spaced, buried, copper radials about the base of each tower, each 82.9 meters in length except where intersecting radials are shortened and bonded to a transverse copper strap midway between adjacent towers or at highway edge.

Special operating conditions or restrictions:

2 MONITOR POINT DESCRIPTIONS

Direction of 12°TN. - The address of the location is 790 Marvelle Lane. The monitor point is in the center of the parking lot of the strip mall, near the sewer catch basin drain in the parking lot. This is point #13 of the proof and is 6.42 km (3.99 mi) from the WTAQ array. The field intensity measured at this point should not exceed 116.81 mV/m daytime.

Direction of 170.5°TN. - The location is 0.1 mile east of Ryan Road on Midway Road. The monitor point is on the south shoulder of Midway Road, across from a power pole with a tag bearing the number "2220-10L15". This is point #14 of the proof and is 5.49 km (3.41 mi) from the WTAQ array. The field intensity measured at this point should not exceed 106.67 mV/m daytime.

Direction of 233.5°TN. - The location is the intersection of North Cross Creek Circle and Lawrence Drive. The monitor point is 15 feet southwest of street light pole #129-AA77 on south curb of North Cross Creek Circle. This is point #10 of the proof and is 4.75 km (2.95 mi) from the WTAQ array. The field intensity measured at this point should not exceed 117.17 mV/m daytime.

Direction of 99°TN.- From DePere proceed east on Hwy G to the intersection of Hwy GV. Continue east for a distance of 0.9 miles beyond this intersection, to gas pipeline warning signs posted on each side of Hwy G. Point #19 is in the field 150 feet north of the road and 50 feet east of the pipeline marker sign and is 3.67 miles from the WTAQ array. The field intensity measured at this point should not exceed 17.5 mV/m nighttime.

Direction of 122°TN. From the 99 monitor point continue east on Hwy G approximately 0.2 miles and turn right (south) on Scray Hill Road. Proceed 1.25 miles around bend to Morrison Road. Turn right (south) on Morrison Road and proceed 0.9 miles to the intersection of Hwy X. Turn left (south) on Hwy X and proceed 0.6 miles to the point. Point #20 is in the back yard of the garage at residence, fire number 5307, on east side of road. Distance is 5.07 miles from the array. The field intensity measured at this point should not exceed 7.3 mV/m nighttime.

Direction of 141°TN. From the 122 monitoring point continue south of Hwy X for 0.4 miles to Morrison Road. Turn right and proceed south on Morrison road 0.2 miles to Ledgeview Road. Turn right (west) on Ledgeview and proceed 1 mile to Tower Road. Turn left (south) on Tower Road and proceed 0.65 mile to a field access driveway on the west side of the road. Point #9 is in the center of the road. Distance is 5.19 miles from the array. The field intensity measured at this point should not exceed 6.5 mV/m nighttime.

Direction of 152.5°TN. From 141 monitor point continue south 0.35 miles to the intersection of Hwy W. Turn right (west) on Hwy W and proceed 2.9 miles to the intersection of Hwy PP. Turn right (north) on Hwy PP and proceed 1.35 miles to a ranch-style house, number 2804, on the left (west) side of the road. Point #15 is 50 feet in the field on the west side of the road, 50 feet straight off the north end of this house. Distance is 1.93 miles from the array. The field intensity measured at this point should not exceed 25.5 mV/m nighttime.

Direction of 192°TN. From 152.5 monitor point continue north on Hwy PP for 0.4 miles to Rockland Road. Turn left (west) on Rockland and proceed 1.2 miles to Hwy 57. Turn left (south) on Hwy 57 and proceed 0.3 miles to a yellow brick ranch-style house on the east side of the road. Point #10 is in front of this house. Distance is 1.6 miles from the array. The field intensity measured at this point should not exceed 20.2 mV/m nighttime.

Special operating conditions or restrictions:  
exceed 200.2 mV/m nighttime.

- 3 Direction of 207.5°TN. From 192 monitor point continue south on Hwy 57 for 1.8 miles to Midway road. Turn right (west) on Midway and proceed 1 mile to its end at the intersection of Old Military Road. Turn left (south) on Old Military and proceed 0.2 miles to the point. Point #14 is on the east shoulder of the road. The distance is 3.95 miles from the array. The field intensity measured at this point should not exceed 73.2 mV/m nighttime.

Direction of 256°TN. From the WTAQ transmitter site proceed south .35 miles to Hwy. F. Turn right (west) on Hwy F and proceed 2.85 miles to a four-way stop, at which point Hwy. F turns off to the left and Hwy. EB turns right. Proceed straight thru this intersection, proceeding on what is now called Nathan Road, for 1.75 miles to the intersection of Overland Road. Turn left (south) on Overland and proceed .9 miles, to just beyond a stand-alone concrete silo on the left (east) side of the road. Point #20 is in the center of the road. The field intensity measured at this point should not exceed 6.5 mV/m, nighttime.

\*\*\* END OF AUTHORIZATION \*\*\*