

WORKSHEET #2: ENVIRONMENTAL

All applicants can use the General Environmental Worksheet. Some, but not all, applicants for AM and FM facilities will also be able to use the RF worksheets. Generally, an AM or FM applicant can use the RF worksheets if: (1) it is the only user on its tower; (2) its station is one of several FM/FM translator stations located on a single tower; or (3) its station uses a multiple-tower AM array but no other user is co-located within the array. Additionally, the RF worksheets can be used in regard to an AM station only if access to the AM station is restricted by use of a fence or other barrier that will preclude casual or inadvertent access to the site and warning signs are posted at appropriate intervals describing the potential for RF exposure.

If an applicant cannot use the RF worksheets, it may show its compliance with RF guidelines in other ways, as detailed in OET Bulletin 65.

If the worksheets indicate that an applicant exceeds acceptable RF levels, it does not necessarily mean that the proposed station does not or cannot meet the Commission's RF requirements. The worksheets are based on generalized "worst case" presumptions. It may be that a more individualized evaluation of the proposed station (possibly with the help of a consulting engineer) will demonstrate that RF levels are acceptable. Among the individual factors that may be relevant are antenna radiation patterns, actual RF measurements, barriers/precautions that prevent access to high RF areas, etc. These factors are also explained in OET Bulletin 65.

Applicants satisfying the RF requirements on the basis of such non-worksheet factors should submit a detailed explanation demonstrating their compliance. Otherwise, applicants should submit an Environmental Assessment, as explained in 47 C.F.R. Section 1.1311, explaining the environmental consequences of the proposed station's operation.

A. GENERAL ENVIRONMENTAL WORKSHEET

Commission grant of an application may have a significant environmental impact, thereby requiring an Environmental Assessment (EA), if you answer "Yes" to any of the following 8 items:

- | | |
|---|---|
| 1. involves high intensity white lighting located in residential neighborhoods. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2. is located in an officially designated wilderness area or wildlife preserve. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3. threatens the existence or habitat of endangered species. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 4. affects districts, sites, buildings, structures or objects significant in American history, architecture, archaeology, engineering or culture that are listed in the National Register of Historic Places or are eligible for listing. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 5. affects Indian religious sites. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 6. is located in a floodplain. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 7. requires construction that involved significant changes in surface features (<u>e.g.</u> , wetland fill, deforestation or water diversion). | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 8. does not comply with the FCC established guidelines regarding exposure to RF electromagnetic fields as described in OET Bulletin 65. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

CONCLUSION

Applicants who answered "No" to all questions on this General Worksheet but who are relying on information **other than that in our RF Worksheets** to support their RF compliance statement should submit a detailed explanation demonstrating their compliance.

Applicants answering "Yes" to any question on this General Worksheet should submit an Environmental Assessment, which is described in the instructions for Section III.

RF WORKSHEET #1 - FM (including translators & boosters)

PLEASE COPY BEFORE USING. THE DETERMINATION OF COMPLIANCE MAY INVOLVE REPEATED CALCULATIONS. IF LOCATED ON A MULTIPLE FM USER TOWER, PLEASE COMPLETE RF WORKSHEET 1A BEFORE PROCEEDING.

EFFECTIVE RADIATION CENTER HEIGHT

Enter proposed "Height of radiation center above ground" OR as listed in line 1 of Worksheet 1A m (1)

Is antenna supporting structure located on the roof of a building ? (check one) ☐ Yes ☒ No (2)

If line 2 is "yes," enter the building height measured at the base of the antenna supporting structure in line 3

If line 2 is "no," enter "0" in line 3 m (3)

Subtract line (3) from line (1) m (4)

Subtract the value 2.0 from line (4) m (5)

TOTAL EFFECTIVE RADIATED POWER

(If "beam tilt" is utilized, list maximum values)

List Effective Radiated Power in the Horizontal Plane. kW (6)

List Effective Radiated Power in the Vertical Plane kW (7)

Add Lines (6) and (7) OR list value from Line 2 in Worksheet 1A kW (8)

PERCENTAGE OF FCC RF LIMIT(S) FOR MAXIMUM PERMISSIBLE EXPOSURE

Multiply Line (8) by 33.41 (9)

Multiply the value listed in line (9) by itself (10)

Divide Line (9) by Line (10) (11)

Multiply Line (11) by (100) % (12)

DETERMINATION OF COMPLIANCE WITH CONTROLLED/OCCUPATIONAL LIMIT

Does Line (12) exceed 100% ☐ Yes ☒ No (13)

IF YOU ANSWERED "YES" IN LINE (13), THE WORKSHEETS MAY NOT BE USED IN THIS CASE. *

IF YOU ANSWERED "NO" IN LINE (13), THEN THE SITE SHOULD COMPLY WITH THE FCC'S CONTROLLED/OCCUPATIONAL RF EXPOSURE LIMITS FOR GROUND LEVEL EXPOSURE. #

CONTINUE

* In this case, you may need to prepare an Environmental Assessment. See Instructions for Section III-A, Item 15 of FCC Form 349.

RF WORKSHEET #1 - FM (continued)

DETERMINATION OF COMPLIANCE WITH THE UNCONTROLLED/GENERAL POPULATION LIMIT

Does Line (12) exceed 20% ☐ Yes ☒ No (14)

IF YOU ANSWERED "NO" IN LINE (14), THEN THE SITE SHOULD COMPLY WITH THE FCC'S UNCONTROLLED/GENERAL POPULATION RF EXPOSURE LIMITS FOR GROUND LEVEL EXPOSURE. NO FURTHER STUDY REQUIRED.

IF YOU ANSWERED "YES" IN LINE (14), CONTINUE.

Rooftop with restricted access.

If you answered "yes" in Line (14) and "yes" in Line (2) (indicating that the tower is located on the roof of a building), and the general public is not allowed access to the rooftop level, repeat lines 5 through 12, entering the value in Line (1) directly in Line (4). (If Multiple FM Use Tower, recalculations should be in accordance with instructions on Worksheet #1A.) **Otherwise, go to the next section.**

Upon recalculation, Does Line (12) exceed 20% ☐ Yes ☐ No (15)

IF YOU ANSWERED "YES" IN LINE (15), THE WORKSHEETS MAY NOT BE USED IN THIS CASE. *

IF YOU ANSWERED "NO" IN LINE (15), THEN THE AREA AT GROUND LEVEL SHOULD COMPLY WITH THE FCC'S UNCONTROLLED/GENERAL POPULATION EXPOSURE LIMIT. NO FURTHER STUDY REQUIRED.

Access to base of tower restricted by fencing.

If the tower is not located on the roof of a building, is the base of the tower surrounded by fencing or other restrictive barrier and are appropriate warning signs posted on the fence that adequately detail the nature of the RF exposure environment contained therein? ☒ Yes ☐ No (16)

IF YOU ANSWERED "NO" IN LINE (16), THE WORKSHEETS MAY NOT BE USED IN THIS CASE. *

If you answered "yes" in line (16), what is the distance from the base of the tower to the fence or barrier at its nearest point. m (17)

Multiply Line (9) (as calculated previously) by 5 (18)

Subtract Line (10) (as calculated previously) from Line (18). (19)

Take the square root of Line (19). m (20)

Is Line (20) less than or equal to Line (17). ☐ Yes ☐ No (21)

IF YOU ANSWERED "YES" IN LINE (21), THEN THE RF FIELD OUTSIDE THE FENCE COMPLIES WITH THE FCC'S UNCONTROLLED/GENERAL POPULATION EXPOSURE LIMIT. NO FURTHER STUDY REQUIRED.

IF YOU ANSWERED "NO" IN LINE (21), THE WORKSHEETS MAY NOT BE USED IN THIS CASE. *

*** In this case, you may need to prepare an Environmental Assessment.** See Instructions for Section III-C, Item 15 of FCC Form 349.