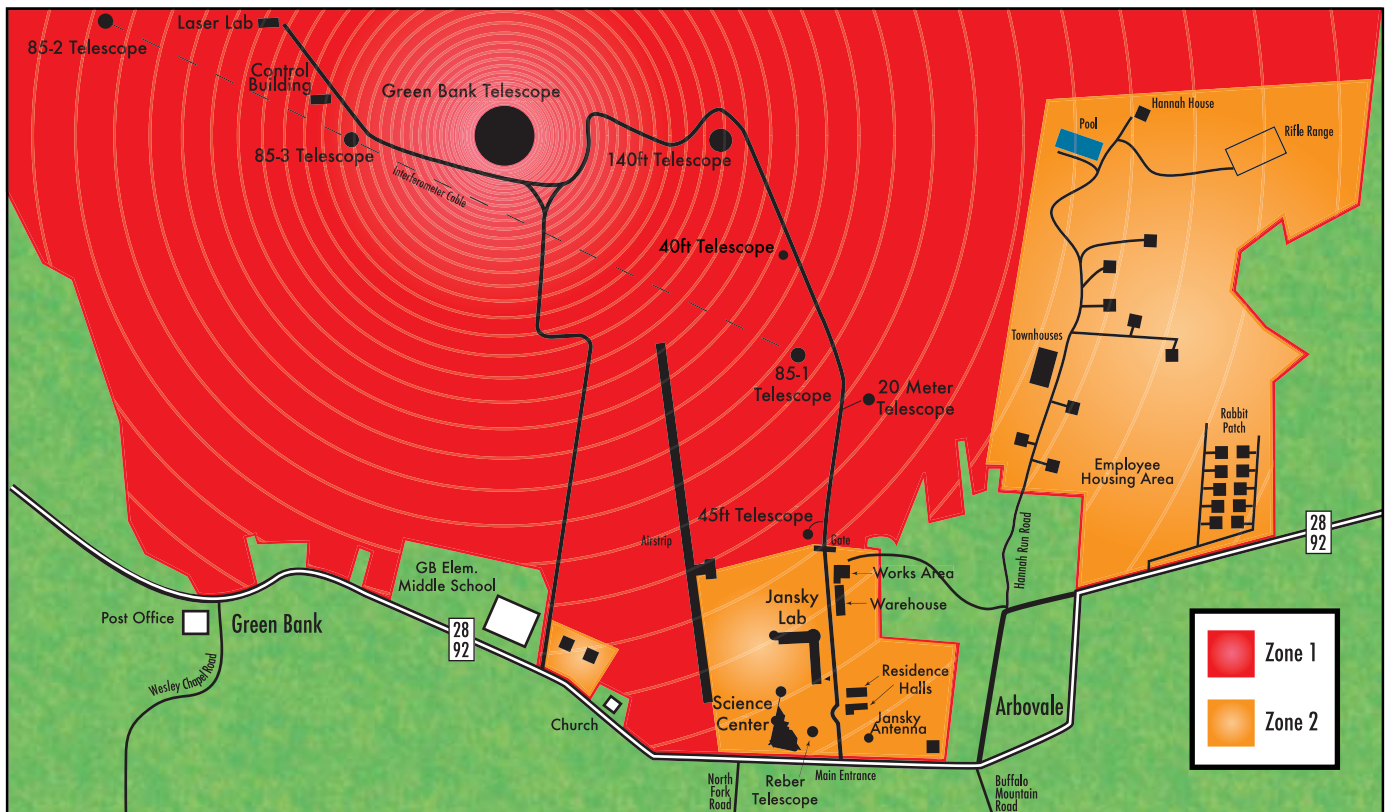


Interference Protection Group • National Radio Astronomy Observatory

“We have met the Enemy, and He is Us.”

NRAO Green Bank Site Regulations for New Employees PLEASE READ!

The NRAO Green Bank Site is a unique resource for Radio Astronomy. We are located in the **National Radio Quiet Zone (NRQZ)** which provides protection from permanent, fixed, licensed transmitter services. Our location, surrounded by National Forest and the mountainous terrain of West Virginia, also serves to protect observations. Additionally, the West Virginia Radio Astronomy Zoning Act allows us to prohibit the use of any electrical equipment within a ten mile radius that causes interference to Radio Astronomical Observations. On the Green Bank Site itself, our protection policy differentiates two zones, one for the laboratory, housing, and visitor facilities (**Zone 2**), and one for the Radio Astronomical Instruments themselves (**Zone 1 aka the Radio Astronomy Instrument Zone**) as illustrated on the following map:



As an employee, you need to understand and abide by the RFI policies for both **Zone 1** and **Zone 2**. **If you are renting housing** from NRAO, note that the **Zone 2** regulations are written into your lease; please make sure that your family understands the restrictions on conveniences such as microwave ovens and wireless technology (cordless phones, wireless gaming systems, wireless networking, etc.) that apply. **If you are an amateur radio operator**, please see our NRQZ administrator for coordination information.

Zone 2 includes the laboratory, housing, and visitor facilities. In Zone 2:

- **Don't use unlicensed transmitters.**
Example: we have several channels at low frequencies dedicated for site radio communications. Cordless phones, however, are prohibited. Wireless networking is prohibited.
- **High-risk unintentional radiators must be mitigated.**
Risk is determined through testing in the anechoic chamber. The only unintentional radiators currently prohibited from the housing are microwave ovens. You will note there is a microwave oven in the cafeteria, but it is housed in a shielded box that minimizes the RF emissions.
- **Turn it off when you're not using it.**
To minimize the risk to observations after working hours, please power down all electronic equipment in your office, including your PC.

Zone 1 is the "ground zero" of our instruments, the area closest to the highly sensitive receivers. In Zone 1:

- **No personal electronic equipment.**
Yes, even digital cameras. We ask our tourists not to use them too.
- **If your work involves installing electronic equipment in Zone 1**
bear in mind that it must be tested in the anechoic chamber and mitigated to the required levels *before* you install it. The RFI group does not have the resources to police these requirements; only cooperative effort can protect us from self-generated interference.
- **For portable, work-related equipment**
bring only what is absolutely necessary for your work into **Zone 1**, and don't leave it there – that counts as "installed".
- **Only diesel vehicles** are allowed in **Zone 1**.

Remember that **the GBT isn't the only instrument on site**; we have many projects sharing our facility. Hence, coordinating with the GBT observation schedule does not protect other research; please be considerate.

Following these guidelines goes a long way towards preserving the relatively RFI-quiet environment at Green Bank. **Your cooperation is vital** to protecting the research that goes on here. More details can be found in a power point presentation at <http://www.gb.nrao.edu/IPG/Green Bank Employee Presentation.ppt>

If you have any questions or concerns regarding our on-site RFI policies, please contact Carla Beaudet at extension x2126.

