

Recommendations from the [MAGIP](#) Community on Open Source Geographic Information Software

These responses were compiled as a result from a question posed to the MAGIP listserv (10/25/12) in regards to "recommendations for Open Source GIS." Names of people, either recommending or referenced, have been removed.

Here's a free open source GIS package (Quantum GIS) that **someone** recommended to me. Some FWP employees use it and I think **NHP** uses it: <http://www.qgis.org/>

There are a few around here that use SAGA GIS. I don't know much about it, but they tend to really like it and it is free. Tends to have a hydrology focus.

There's a good discussion thread here: <http://gis.stackexchange.com/questions/23637/comparison-of-open-source-desktop-gis-packages?lq=1>

And check out the 'Linked' items in the right-hand sidebar for more threads.

In my early days of GIS, I used the GRASS software developed by the Army Corps of Engineers. I recently had to access some of these old files so I could import them into ArcMap. The ESRI tools wouldn't do it, so I downloaded a recent version of GRASS 6.4.2. I was able to remember a lot of the old commands and pick it right up. Exported the old files into a format ArcMap could use without any problems. It's pretty amazing how far this software has come. They claim to be the leading open source GIS. Check it out at <http://grass.osgeo.org>

I'd look at GRASS – bigger user community and I believe download/install is easy and obviously free. I think IDRISI is no longer free.

I would second the research of **GRASS GIS**. I used it for my Master's Dissertation as that was the GIS program we were taught in one of the classes.

It works amazingly well for a wide range of data types and queries. I have a lot of my handouts and explanations on how to use it at home if you want me to bring any of it in.

I use **Quantum GIS** (<http://www.qgis.org/>) a bit, and on Linux, run it with the GRASS backend. In fact, my GIS professor recommends QGIS for the Mac users in the class; She suggests the learning curve isn't

too bad coming from ESRI products, and I tend to agree. I find it to be very capable, but don't feel as comfortable with it as I do with ESRI products, in which I had my formal training. However, the more I use it, the more I find I like it.

Desktop

I recommend **QGIS** as well. A couple of years ago I downloaded and tried out quite a few, but QGIS was the most intuitive to me so I stuck with it. The interface is a lot like ArcView 3.x, but the usability and available functions are quite close to ArcGIS. There are LOTS of additional plugins like SEXTANTE, mmqgis that extend the functionality close to that of ArcGIS. And if you are familiar with Python already, you could even write your own tools. There is an excellent tutorial here that will help you get started, as well as a "how do I do that in QGIS" section here. And of course <http://gis.stackexchange.com/> has LOTS of Q&A about QGIS. FYI- The print output quality still leaves a bit to be desired, but it's reasonable.

Database

If you are looking for something to store your data like ArcSDE, take a look at **PostGIS**, which in version 2.0 now supports both vector and raster storage/analysis. The great thing about PostGIS is that you can perform most GIS analysis right from the database, just by writing SQL commands without the overhead of loading an application to do the analysis on the data. You can then display the results of PostGIS in QGIS by just connecting to the database table/view, or even easier, use one of the QGIS/PostGIS plugins to perform the SQL query right from within QGIS.

The easy way to evaluate them all

Lastly, if you want to evaluate lots of open-source GIS products (from desktop to server products) without installing them on your local machine, just download the OSGEO-LiveDVD, which is an Xubuntu Linux virtual machine that has the most popular open-source GIS products pre-installed. If you download and install a free copy of VirtualBox then you can just connect it to the OSGEO-LiveDVD image and run it like its own machine. This makes it a fairly painless way to dip your toes into the world of open source GIS without much "commitment".