**Obtaining FIA data**

**1. Overview**

This quick tutorial describes how to obtain and use a PSQL version of the FIA database. The accompanying scripts “Import Raw FIA Data to PSQL” and “FIA Example Queries” provide examples. There are also notes on how to obtain the raw FIA data.

All files referenced here currently available at <https://duke.box.com/macrosystems-FIA>.

**2. Installing PostgreSQL**

You’ll need a PSQL server running locally or access to a remote one in order to install and query a PSQL database. Binaries are available at <http://www.postgresql.org/download/>. That site has good documentation, and installation is fairly straightforward.

**3. Obtaining FIA data as a PSQL database**

*3.1 A complete copy of the database, already in PSQL format*

We’ve prepared a PSQL version of the FIA database, ‘fia5\_complete\_2015.02.05.gz’. The file is available fomr the link above. Once downloaded, import the file to your database as follows, replacing bold text as appropriate:

gzcat **downloaded\_file\_ending\_in.psql.gz** | psql -d **new\_database\_name**

*3.2 Convert FIA data to PSQL from scratch*

If for some reason you need to create your own PSQL version of some FIA data, a separate tutorial (‘Converting FIA to PSQL’) offers tips.

**4. Querying FIA data from a PSQL database**

Once the data are in a PSQL database they can be queried with standard commands. The script ‘FIA Example Queries’ contains some examples using an R interface to PSQL, including extraction of plot- and tree-level information subsetted by census year, lat/lon, and species. To create your own queries, you may need to consult the FIADB User Guide (available from USFS, and also in macrosystems-FIA folder linked above), which exhaustively defines every field of every table in the database.

**5. Obtaining FIA data in other formats**

If you don’t need or want the data in PSQL format, the USFS provides FIA data for download at their DataMart website: <http://apps.fs.fed.us/fiadb-downloads/datamart.html>. The data are available as Microsoft Access database files, so if you have MS Access and want to use it, that’s an option. They are also available as .csv files, one for each table in the FIA database. These are provided in several packaging options:

* Individual data tables for individual states, either zipped up or plain text. This format is useful if you want to quickly download a small subset of variables, but otherwise skip it.
* State-level .zip files containing all tables for the state. Useful if you need data from only a few states and want to avoid downloading the whole thing.
* The whole thing. I.e. a big .zip file containing all data for all states (i.e. <http://apps.fs.fed.us/fiadb-downloads/ENTIRE.zip>, linked at the bottom of the DataMart page).

The DataMart site is slow and buggy, but otherwise downloading these files is straightforward. Note that we are also hosting a copy of the complete .csv datasetin the macrosystems-FIA folder linked above (file ‘ENTIRE.zip’). This may be a quicker download option than DataMart if you want the entire dataset.

*A note on unzipping*

The .zip files of FIA data are large enough that some software may have problems unzipping them. The utility ‘p7zip’ (linux/unix/OS X) worked for me, e.g.:

7z e -oENTIRE ENTIRE.zip