

# **Making a New CCmaps Project**

**By**

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## **1. Introduction**

Making a new CCmaps project is easiest when there is a CCmaps project available with the region boundary files that you want to use. Section 2 discusses the needed data file structure. Section 3 discusses creating a new project using the new data file. Section 4 comments of the use of pathnames in the project file. A separate document discusses boundary files used in CCmaps.

## **2. CCmaps Data File Structure**

This should be comma delimited (.csv) or white space delimited (.txt) data file. (In white space delimited files character strings with embedded blanks need to be surrounded by quotation marks.)

The first row should be variable names. After this, there should be one row for each region with data. Regions with some missing data can be included. In comma delimited files the absence of values relative to commas indicates missing data. CCmaps treats NA as the missing data code in white space delimited files.

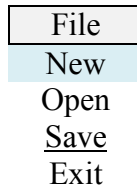
The first column needs to use the same region identifier that is used in the region boundary file. For example, state identifiers are likely the standard state names, two letter state abbreviations, two digit state FIPS codes. CCmaps read first column entries as character strings. Except for the first row of variables names, CCmaps reads all columns but the first column as numeric columns.

## **3. Creating a new project using existing boundary files**

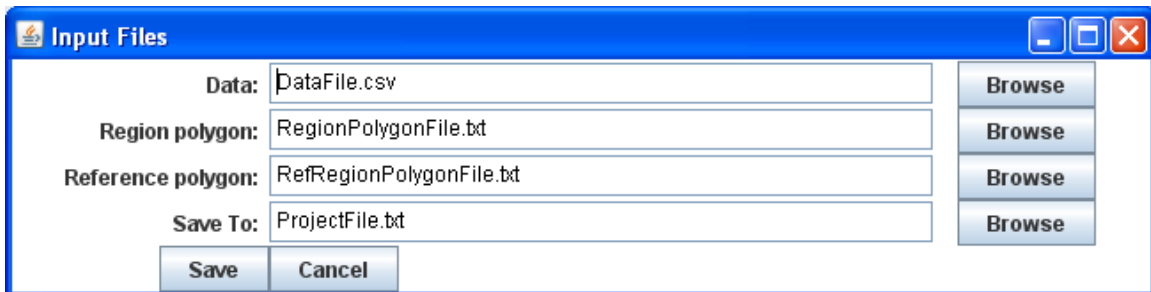
With a new data file available, there are two approaches to preparing a new application. The first uses the CCmaps New option under the File menu as described in Section 3.1. The second approach, described in Section 3.2, is to rename and edit an existing application control text file: replacing the data file name, modifying the variable selection line, and deleting the descriptor lines related to the old file.

### 3.1 Using the CCmap New option under the File Menu

Select New

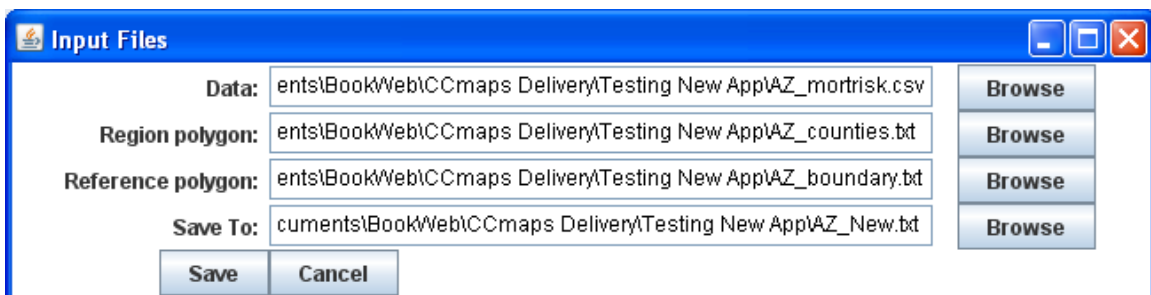


The following window appears



Before responding to this window I suggest putting a copy of the previous application files in a new folder with the new data set. This includes the project control file.

The above asks for three input files: the data, region polygon and reference region polygon files. **The region polygon file can be entered a second time as the reference region polygon file if there is no reference region polygon file.** The reference region polygon boundary lines plot on top of the map of color filled regions. This allows, for example, state outlines to be plotted in a different color on US county map. Use the browser to specify the new data file and the polygon file(s) in the new folder. This will include the path to the files.



Use the browser to select the old project file and rename the file if you want but keep the path. You will be asked if you want to overwrite the file. This is fine if it a copy in the new folder. **Then select save.** A variable picker will appear with the variables from you new file. An example picker with variables appears below.

**Variables Selection**

| Col... No. | Variable Name   | MouseOver Display                | Color Control: Top Slider        | Column Control: Bottom Slider    | Row Control: Right Slider        | Region Weight         |
|------------|-----------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------|
| 1          | Region ID       | <input checked="" type="radio"/> |                                  |                                  |                                  |                       |
| 2          | breast.wf9699   | <input type="radio"/>            | <input checked="" type="radio"/> | <input checked="" type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| 3          | pop.wf9699      | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 4          | cervix.wf9699   | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 5          | lung.wf9699     | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 6          | prostate.wm9699 | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 7          | pop.wm9699      | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 8          | lung.wm9699     | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 9          | prostate.bm9699 | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 10         | pop.bm9699      | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 11         | Totalpop        | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 12         | Smokecurmsm     | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 13         | Smokevrmsm      | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |
| 14         | Smokecurmsf     | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> |

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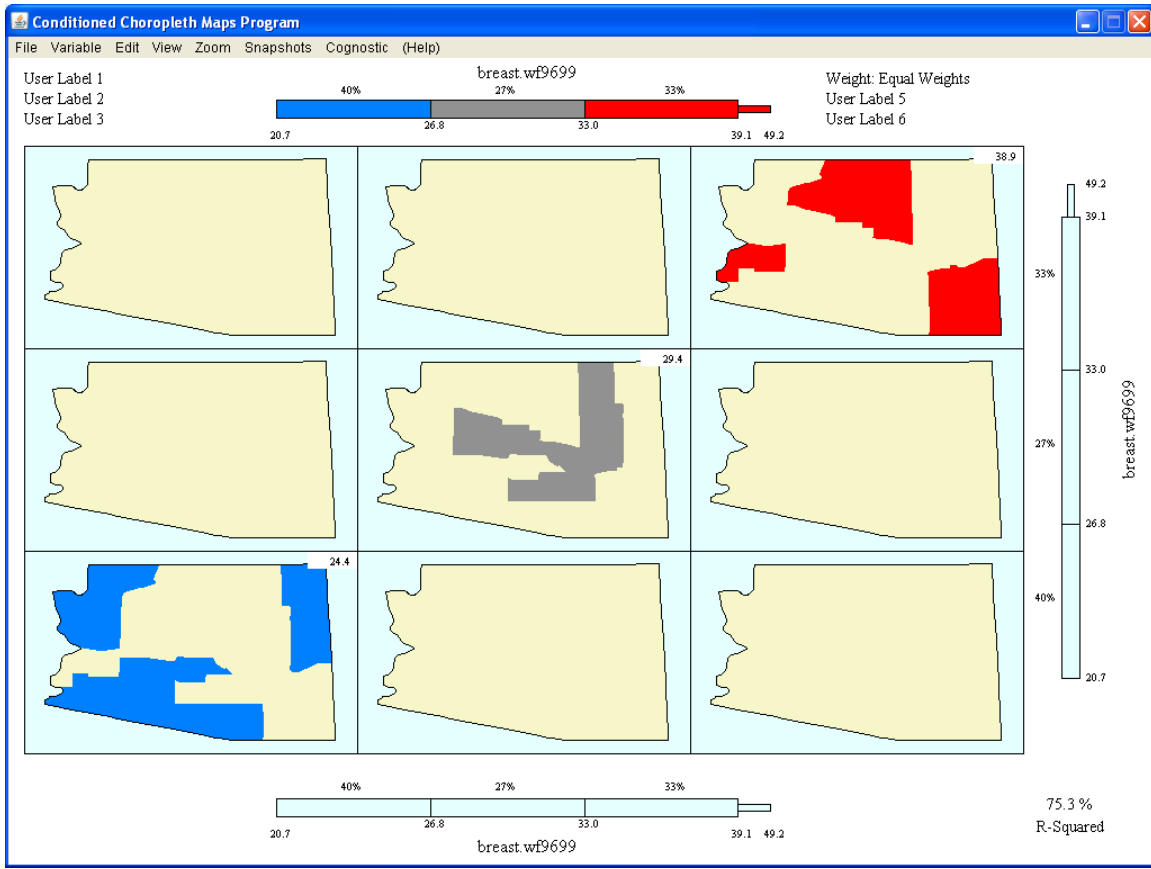
| Col... No. | Variable Name | Mouseover Display                | Color Control: Top Slider        | Column Control: Bottom Slider    | Row Control: Right Slider        | Region Weight                    |
|------------|---------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1          | Region ID     | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            |
| 2          | breast.wf9699 | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            |
| 2          | breast.wf9699 | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |
| 2          | breast.wf9699 | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            |
|            | Equal Weights | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> |

Cancel    OK    Show Summary by Variable ▼

By default the picker attaches the variable in the second column to all three sliders and selects equal weights (from the bottom of the scrollable list). The part of the window at the bottom four files provide a summary of the choices.

Click the button in the variable row and slider color to attach the variable to the slider. Do this for each slider. If you want region weighted statistics click the button in the variable row and the region weight column on the right. Then click OK at the bottom of the summary.

The 3 x 3 map should appear.



Even though this needs fixing I would use the file menu to **save a new project file with an appropriate name in the new folder to capture the progress.** You can use then use open option under the file to read in the saved control file if need.

You can begin making things better with the menus or start exploring with the sliders. The edit menu lets you make thing better by change colors and region outline colors, Replace the User Labels with something meaningful and you may want to change the the scale limits for the map panels to adjust the aspect ratio of the maps.

**Saving the project file again will capture your improvements and slider settings.**

You can overwrite the old file or provide a new name when you want more than one view. The Snapshot menu can save an annotated sequence of views. the CCmaps Menu document describes and the other menu options.

### 2.3 Hand editing an existing application control file to create a new project.

Save an existing application control file with a new name and then edit this new file. An example file appears in the box below with color links to the changes that.

Change the Region\_data **file name**. You may edit the top **labels** now but do not delete the key words. Replace the **Var\_Select\_Order** line near the bottom with the one in bold. **Remove all of the column lines below that line.**

```
Reference_polygons AZ_boundary.txt
Region_polygons AZ_counties.txt
Region_data AZ_mortrisk.csv

Left_label1 Age-Adjusted Mortality Rates
Left_label2 Time: 1996-1999
Left_label3 Regions: Counties
Right_label1 Weight: Population
Right_label2 November 2002
Right_label3 Contact Dan Carr, dcarr@gmu.edu

Lon_min -298547
Lon_max 725827
Lat_min 23030
Lat_max 683444
region_outline_width 1.0
reference_region_outline_width 1.0
region_outline_colors 0 0 0
reference_region_outline_colors 150 150 150
Panel_color 229 255 255
Back_color 240 249 176
Low_color 0 100 255
Mid_color 164 164 164
High_color 255 0 0
Slider_color 229 255 255
Slider_back_color 240 249 176
Zoom_scale 1.0
Zoom_shift_lat 0.0
Zoom_shift_lon 0.0
#----- id d x y w
#var select order
Var_Select_Order 1 2 16 18 3
Var_Select_Order 1 2 2 2 -1
#column_X scale start stop midlow midhigh label
column_2 1.0 10.0 48.7 21.51 29.6 Breast Cancer Mortality Rate Per 100,000
column_3 1.0 8899.0 8899.0 8899.0 8899.0 Population
column_16 1.0 0.245 0.389 0.313 0.3381 Obesity Fraction
column_18 1.0 0.375 0.8 0.5149 0.55432 Fraction Mammogram In Last Three Years
```

In CCmaps use Open under the file menu to open the new application control file. Select Picker under the Variable menus to select the slider variables. If more information is needed about the Picker menu see the text below the variable picker shown in section in 3.1 above.

You should be able to use the CCmaps features change variables names, tail thresholds, and colors. Save the control file to keep these changes and used different control files Names if there are multiple versions that you want. Note that the Snapshot menu allows saving different map views based on slider settings changes or map enlargements as well as alternative views like scatterplot smoothes. The named live snapshot views are save and restored under the Snapshots menu in a file that associate with the control file. This is often more convenient than saving a new control file for interesting change in slider setting.

#### **4. Opening applications and Path Names**

The second input window in Section 3.1 has long path names in front of the file names. The long pathnames are saved in the project file. The pathnames may be convenient when the same boundary files are used by many projects. There is no need for multiple copies.

If all the needed files are in one folder, the pathnames are not needed in the project file. CCmaps provide access to the project file via the open option under the File Menu. CCmaps will look for files in that folder if they don't have pathnames. Editing out the pathnames (none appear in the 2.3 example above) allows the folder to be moved to a different computer and still work.