

## **ASSIGNMENT 1: QUALITATIVE BASELINE INFORMATION AND POPULATION EXTRAPOLATION**

This assignment will help you establish some baseline qualitative and quantitative information about your region. Since this will be an on-going course length assignment, culminating in the term paper, I recommend that you buy a standard (1.5") three-ring binder to hold your notes and drafts of your regional analysis. Also buy a package of the page dividers. The contents of the binder will be an important diagnostic tool and I will check it periodically during the quarter. Always bring it to class and section.

### A. Baseline information

You should have started in on this part already. If not, get going soon. As noted in class, the quantitative analysis is essential to regional analysis and forecasting, but the results are virtually meaningless if they are not set in context. That context is provided by understanding the history of a region, the major planning issues facing the region, and the causes underlying the planning issues. The baseline information should also characterize the human landscape in relation to the natural landscape.

Prepare a 5-7 page baseline report that focuses on the following elements:

- the settlement structure and internal/external connectivity (this will be provided in a GIS)
- the human and natural history of your region (jointly the EA and bioregion)
- current planning issues and the history of those issues (focus on a subset)

The handout prepared by Erin provides an excellent discussion of information sources for this part of the assignment. Also note, however, that this is not a one off assignment. You should continue to dig for background information throughout the quarter. Especially to the extent that it provides some context for the quantitative results.

### B. Population trends I. Extrapolation models

You will be given a set of population accounts for this part of the assignment. The data will contain time series from 1970 to 2000 for total population, population by race/ethnic group, population under 18 years old, and population over 65 year old. Apply the extrapolation models to the data and find a 'best fit' functional form for each series. The write up should include: (1) MATLAB code, (2) graphs of the basic series, (3) estimated parameters, standard errors, and  $R^2$  for each functional form and series, (4) input evaluation measures, and (5) plots overlaying the 'best fit' line (projected out to 2030) over the observed series for each disaggregate series. A brief written report should accompany the model fits defending your final forecasts. Lab session 3 will provide more details on this section of the assignment.