



Figure 2. Population trend estimate for the Midwest region using the baseline assumptions from the NPA Data Services estimates. Under this scenario, the population of the Midwest is expected to increase by about 30% by 2050.

2020

Year

2030

2040

2050

2010

1990

2000

Figure 1. Map of Midwest region.



Figure 3. Percentage of economy by sector for (a) 1997, and (b) 2050, estimated from the NPA Data Services using baseline assumptions (NPA 1999b). Under these estimates, by 2050 the manufacturing percentage of the economy decreases by 7%, and the service sector increases by 5%.



Great Lakes Water Level Change

Figure 5. Change in water level for each of the Great Lakes under a number of climate change scenarios, from Chao (1999).

Midwest Daily Precipitation/HadCM2



Midwest Daily Precipitation/CGCM1



Figure 4. Annual trends in daily precipitation by percentile for the (a) CGCM1 (Canadian model) and (b) HadCM2 (Hadley model) scenarios. Notice the largest trend is in the heaviest daily precipitation amount for both model simulations indicating that most of the increase in annual precipitation is due to an increase in precipitation on days already receiving large amounts (analysis based on method in Karl and Knight, 1998).

Midwest Soybean Yield and Precipitation



Figure 8. The relationship between Midwest soybean yield and precipitation is shown here. Soybean yields in thousands of bushels are shown as the differences from the average yield in recent decades. Precipitation is the difference from the 1961-90 average precipitation. Note that lower yields result from both extreme wet and extreme dry conditions. Soybean yields from National Agricultural Statistics Service, USDA



Figure 7. Illustration of how the summer climate of Illinois would shift under the (a) CGCM1 (Canadian model) scenario, and (b) HadCM2 (Hadley model) scenarios. For example, under the CGCM1 Canadian scenario, the summer climate of Illinois would become more like the current climate of southern Missouri in 2030 and more like Oklahoma's current climate in 2090.



Shipping Cost Change

Figure 6. Change in shipping costs under a number of climate change scenarios, from Chao (1999).