Although each RCM models the same spatial domain, differences in the map projection used and the depth of the model’s “sponge zone” (where the forcings are applied) create differences in the effective coverage area. The NARCCAP team has developed tools for interpolating data between model grids.

**NARCCAP GOALS**

- Exploration of multiple uncertainties in regional model and global climate model regional projections.
- Development of multiple high resolution regional climate scenarios for use in impacts assessments.
- Further evaluation of regional model performance over North America.
- Exploration of some remaining uncertainties in regional climate modeling (e.g., importance of compatibility of physics in nesting and nested models).
- Creation of greater collaboration between US and Canadian climate modeling groups, as well as with the European modeling community.
- Quantification of uncertainty across all models.

**NARCCAP AT A GLANCE**

- 4 different AOGCMs driving 6 different RCMs
- ~50 km spatial resolution
- 3 hourly temporal resolution
- 52 output variables
- 2 high-resolution GCM timeslice experiments
- Future scenario: A2 SRES emissions

**Phase I**

- RCMs are driven by historical (1979-2003) observed (NCEP2 reanalysis) data

**Phase II**

- Each RCM is driven by 2 GCMs for current (1968-2000) and future (2038-2070) scenarios

**IMPACTS-ORIENTED**

NARCCAP data is organized with an eye toward usability by impacts practitioners. Variables important to impacts research have been prioritized for archiving and distribution. CF-compliant NetCDF data can be imported directly into ArcGIS and exported to plain-text files readable by spreadsheet programs. The NARCCAP website has a variety of support materials and continues to grow.

**SEASONAL CLIMATOLOGY**

These plots show summer and winter seasonal averages of temperature and precipitation for 5 of the NCEP-driven runs, as well as observed data from the University of Delaware dataset for the same 25-year time period.

**SEVERE WEATHER EVENT**

This map shows precipitation for a 3-hour period on the morning of May 22nd, 1993. On this day, heavy storms caused severe flooding in Sioux Falls, South Dakota. NARCCAP data can be imported directly into GIS.

**MAP PROJECTIONS AND SPATIAL DOMAIN**

Although each RCM models the same spatial domain, differences in the map projection used and the depth of the model’s “sponge zone” (where the forcings are applied) create differences in the effective coverage area. The NARCCAP team has developed tools for interpolating data between model grids.

**RCM PROJECTIONS**

- CRCM: Polar Stereographic
- ECPC: Polar Stereographic
- HRM3: Rotated Pole
- MM5I: Lambert Conformal
- RCM3: Transverse Mercator
- WRFP: Lambert Conformal

**NARCCAP Domains**

- CRCM
- ECPC
- HRM3
- MM5I
- RCM3
- WRFP