INFORMATION SHEET ON CPPA FY 2005 PRIORITIES

1. CPPA Description

The Climate Prediction Program for the Americas (CPPA) merges NOAA's CLIVAR Pan American Climate Studies (PACS) and GEWEX Americas Prediction Project (GAPP) into a single integrated competitive research program to improve operational intraseasonal to interannual climate and hydrologic forecasting. CPPA, like PACS before it, will support NOAA's contribution to the US interagency CLIVAR program, particularly its Pan-America regional focus. GAPP remains an interagency program with support from NOAA, through the CPPA program, and NASA, through its Earth Science Enterprise Terrestrial Hydrology Program.

To achieve its goal, CPPA supports research to:

- Improve the understanding and model simulation of ocean, atmosphere and land-surface processes through observations, data analysis, and modeling studies;
- Determine the predictability of climate variations on intra-seasonal to interannual time scale, including predictability of the continental-scale monsoon systems across the Americas;
- Advance NOAA's operational climate forecasts, monitoring, and analysis systems; and
- Interpret and facilitate the transfer of improved climate predictions for water resource applications.

The scientific basis for CPPA lies in the climate system's predictability determined by variations of the ocean and land surface conditions. The program draws together the coupled climate modeling expertise of PACS, with its emphasis on the processes that couple climate variability over the oceans to that over the land, and the regional and hydrological modeling expertise of GAPP, which emphasizes the processes that couple the land surface to the overlying atmosphere. Motivation for a unified program arises from a common goal to improve climate forecasts based on predictable changes in surface boundary forcing.

The following list of research elements for CPPA includes activities currently supported under the individual PACS and GAPP programs. Descriptions of research activities and plans in each of these areas are provided in the FY 2004 CPPA Program Plan (http://www.ogp.noaa.gov/mpe/cppa/FY04.htm).

1) Understanding and simulating ocean-atmosphere processes
    a. Eastern Pacific Investigations of Climate (EPIC)
2) Understanding and simulating land-atmosphere interaction
    a. Land Data Assimilation System (LDAS)
    b. Understanding land surface predictability
    c. Representing land surface processes in uncoupled and coupled models
    d. Regional climate modeling
3) Coupled Ocean-Atmosphere-Land System
    a. North American Monsoon Experiment (NAME) *

b. Monsoon Experiment over South America (MESA)
c. US Western Mountain Climate *

4) Applications in water resource management
a. Improvement of hydroclimatic forecasting *
b. Development of decision support tool

2. CPPA FY05 Priorities

In this first year of CPPA, NOAA will maintain its commitment to projects previously awarded under the PACS and GAPP programs. Significant resource constraints in FY 2005, however, necessarily limit the areas of research for which NOAA will request new projects. Proposals are invited in the three program elements marked by asterisks in the above list.

1) CPPA embraces the concept of Climate Process and Modeling Teams designed to accelerate improvement of climate models by more closely linking climate process research to model development and testing activities. Under this approach, research teams comprised of observationalists, process modelers, operational model developers, and model diagnosticians work collectively to transfer theoretical and process model understanding into improved treatment of processes in climate models used for operational prediction. Particular priority is placed on improving the NOAA NCEP operational climate models. In FY 2005, CPPA invites proposals to implement such teams for NAME, capitalizing on the summer 2004 field campaign and its data sets. Other NAME and warm season research proposals are not encouraged this year.

2) Proposals are encouraged to investigate relationship between orography, precipitation, snow pack and runoff in western US mountain areas and to develop methodologies to improve climate and hydrological predictions on climate time scales (intraseasonal to interannual). Studies that examine how satellite data may resolve mountain processes will also be considered.

3) Proposals on the theme of improved hydrologic prediction on intraseasonal to interannual timescales using coupled climate and hydrologic models are encouraged. These proposals will be jointly funded by CPPA and CDEP programs. Information on CDEP program priorities in FY 2005 may be found at http://www.ogp.noaa.gov/mpe/cdep/index.htm (Program manager: Anjuli Bamzai, Anjuli.Bamzai@noaa.gov, 301-427-2089 x 113).

For further information on program priorities for FY 2005, investigators may contact the NOAA program managers, Michael Patterson (Michael.Patterson@noaa.gov, 301-427-2089 ext. 102, fax: 301-427-2073) and Jin Huang (Jin.Huang@noaa.gov, 301-427-2089 ext. 148, fax: 301-427-2073), and the NASA program manager, Jared Entin (Jared.K.Entin@nasa.gov, 202-358-0275, fax: 202-358-2770).