USACE CLIMATE CHANGE IN JANUARY 2011: PROGRESS TO DATE

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

SUMMARY

The magnitude of climate change impacts facing water resources managers in the United States has spurred the US Army Corps of Engineers (USACE) to embark closer interagency cooperation in developing methods supporting climate change adaptation. Close collaboration, both nationally and internationally, is the most effective way to develop practical, nationally consistent, and cost-effective measures to reduce potential vulnerabilities resulting from climate and other global changes. Examples include interactions with a wide variety of intergovernmental stakeholders and partners begun during the *Building Strong Collaborative Relationships for a Sustainable Water Resources Future* initiative and collaborative work with other water resources management agencies in the *Climate Change and Water Working Group (CCAWWG)*, a collaboration of the major water resources management agencies.

FY 2011 PROGRESS TO DATE

Nationwide Datum and Subsidence Standard – Based on findings from the Interagency Performance Evaluation Task Force (IPET) following Hurricane Katrina, the foundation for our collaborative and consistent coastal approach is a standardized vertical datum. This was accomplished with USGS and NOAA experts, and the three agencies are now working with USGS to apply the same standard to USGS tide gauges. Since 2006, we have developed two Engineer Circulars, one Engineer Regulation, an Engineer Manual, plus instituted the nationwide datum, trained and certified district datum coordinators, conducted a comprehensive evaluation of Corps projects with respect to datums, developed a database to track datums and datum compliance, provided workshops and training for the field, and assisted in technical support for districts (see http://www.agc.army.mil/ndsp/index.html for further details).

Sea-Level Change – Also based on IPET recommendations to incorporate new and changing conditions in project planning and engineering, we updated the USACE policy on sea-level change and expanded it to the whole project life cycle. The updated, scenario-based sea-level change guidance was developed with the aid of other agency experts from NOAA and USGS and released in 2009 (see http://140.194.76.129/publications/eng-circulars/ec1165-2-211/). We are currently developing updated coastal guidance addressing climate change impacts, responses, and adaptation along with a wide variety of agencies as well as national and international experts. Draft guidance is expected in 2011 (see http://www.corpsclimate.us/etl.cfm for more details).

Water Resources Management – The first result of CCAWWG collaboration was USGS Circular 1331, "Climate Change and Water Resources Management: A Federal Perspective," begun in 2007 and published jointly in 2009 (see http://pubs.usgs.gov/circ/1331/). USACE and Reclamation represented the operating agencies, and USGS and NOAA represented the science agencies. These four agencies formed the nucleus of CCAWWG, which has expanded to include FEMA and EPA, and representatives of other agencies such as the Federal Highway Administration and Navy. In 2010, CCAWWG addressed the concerns that water resources management agencies face with two major workshops. The first, held in January 2010, addressed the concept of nonstationarity on hydrologic records, which makes it difficult to project future conditions based on the past record (for the Proceedings, see http://www.cwi.colostate.edu/NonstationarityWorkshop/index.shtml). A November 2010 workshop was the first in a series of activities intended to ultimately develop best practice guidelines to assess the large and varied portfolio of possible approaches for producing and using actionable climate science for water resource adaptation questions (see http://www.corpsclimate.us/assessingportfolioworkshop.cfm). In early 2011, USACE and Reclamation published a report, "Addressing Climate Change in Long-Term Water Resources Planning and Management: User Needs for Improving Tools and Information." This report can be accessed at http://www.usbr.gov/climate/userneeds/.

U.S. ARMY CORPS OF ENGINEERS – INSTITUTE FOR WATER RESOURCES
Casey Building, 7710 Telegraph Rd, Alexandria, VA 22315
Dr. Rolf Olsen (703-428-6314) Dr. Kate White (603-646-4187)