Soil Moisture and Soil Temperature Observations and Applications: A Joint U.S. Climate Reference Network (USCRN) – National Integrated Drought Information System (NIDIS) Workshop, Oak Ridge, TN, March 3-5, 2009

Objective: The workshop will assess current activities and develop recommendations for soil moisture and temperature monitoring congruent with the observational principles followed by the USCRN and the development of high-priority products from this information in support of NIDIS and other national programs. Current regional soil moisture / soil temperature networks in the U.S. also contribute to NIDIS , but are not fully adequate to the task of national monitoring due to their uneven distribution and sparse density in many regions. The USCRN will add many additional observations of soil moisture and soil temperature to the existing networks. The USCRN network will complement particularly the existing USDA National Water and Climate Center Soil Climate Analysis Network (SCAN) by providing soil moisture and soil temperature measurements in all of the states not supported by SCAN, while adding additional soil moisture measuring capacity in 70 locations in the central and western U.S., areas of the country particularly vulnerable to drought. Most importantly, the soil moisture / soil temperature measuring approach of the USCRN will adhere to the principles of climate observation expressed in the 1999 NRC report: "Adequacy of Climate Observing Systems". Recommendations will be solicited from the assembled experts representing a number of important perspectives and several existing soil monitoring networks.

Goals:

- Improve the understanding of the status of soil moisture and soil temperature monitoring in the U. S. and Canada
- Characterize information requirements for, and gaps in, drought monitoring and other applications
- Compile a list of ancillary and metadata requirements for current and future interpretation and analysis
- Examine options for network design and technical requirements
- Develop recommendations for USCRN soil moisture and soil temperature measurements.

Workshop Organizers
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