

**U.S. GEOLOGICAL SURVEY/EROS CENTER
TECHNICAL REQUIREMENTS DOCUMENT
for
TECHNICAL SUPPORT SERVICES CONTRACT SOLICITATION**

TRD NUMBER

0020

PERFORMANCE PERIOD

Contract Base Year: April 1, 2010 thru March 31, 2011

PROJECT NAME

Radar Project

1.0 Scope

This Technical Requirements Document (TRD) defines requirements for science project support for the RADAR Project at the USGS Earth Resources and Observation (EROS) Center to be provided by the Technical Support Services Contract (TSSC) to the USGS EROS staff. Support beyond that identified in this TRD will be addressed by the USGS Project Manager as needed. The Technical Support Services Contractor (TSSC) has corresponding work managers who shall interface with the staff, monitor performance, prepare reports in coordination with the task leads, and report to the USGS Project Manager. This TRD outlines the USGS work requirements that shall be performed during the April 2010 through March 2011 time period by TSSC staff, subject to availability of funding. The TRD is considered a living document that will be updated to reflect major direction and priority changes throughout this performance period.

2.0 Deliverables

- Provide support for determining the biophysical parameters (particularly canopy height and biomass) of vegetation using synthetic aperture radar (SAR), polarimetric SAR (Pol-SAR), and interferometric SAR (InSAR) observations in priority ecosystems.
- Provide support for the use of multi-temporal SAR and optical imagery to improve land cover characterization with a focus on mapping fire scars, lake ice, wetlands, and land cover change due to natural hazards.
- Provide support for the use of SAR, Pol-SAR, and InSAR data for mapping surface hydrology variables including its use in mapping surface water for flood assessment, water level beneath wetlands, soil moisture and related variables.
- Help synthesize, document and publish developed methods, applications, and scientific results in the professional literature. Present findings at professional conferences.
- Provide support for the continued development of the radar website – CRICKet – a USGS Center for SAR Technology that seeks to expand the application and use of satellite radar technology by scientists and managers within the USGS, DOI, and other government agencies.
- Participate in project meetings, provide input to monthly project status reports, provide input to quarterly project reports of accomplishments, and attend other ad-hoc meetings as requested.

3.0 Schedule

All work is to be performed in a timely manner as determined by the USGS Project Manager working in coordination with the TSSC Management.

4.0 Communication

The USGS will meet with TSSC Management quarterly, or at a frequency requested by the USGS, to discuss expenditures and emerging requirements. The contractor shall keep the Government project manager informed of all activities, such as work successes, problems, and potential problems as soon as they are known. Other communications required by the USGS in support of work may include quarterly briefings, special reviews, and presentations at key events.