

Potential for Expanding the Near Real Time ForWarn Regional Forest Monitoring System to Include Alaska

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The on-line near real time (NRT) ForWarn system is currently deployed to monitor regional forest disturbances within the conterminous United States (CONUS), using daily MODIS Aqua and Terra NDVI data to derive monitoring products. The Healthy Forest Restoration Act of 2003 mandated such a system. Work on ForWarn began in 2006 with development and validation of retrospective MODIS NDVI-based forest monitoring products. Subsequently, NRT forest disturbance monitoring products were demonstrated, leading to the actual system deployment in 2010. ForWarn provides new CONUS forest disturbance monitoring products every 8 days, using USGS eMODIS data for current NDVI. ForWarn currently does not cover Alaska, which includes extensive forest lands at risk to multiple biotic and abiotic threats.

This poster discusses a case study using Alaska eMODIS Terra data to derive ForWarn like forest change products during the 2010 growing season. The eMODIS system provides current MODIS Terra NDVI products for Alaska. Resulting forest change products were assessed with ground, aerial, and Landsat reference data. When cloud and snow free, these preliminary products appeared to capture regional forest disturbances from insect defoliation and fires; however, more work is needed to mitigate cloud and snow contamination, including integration of eMODIS Aqua data.