Marcell Experimental Forest (MEF)

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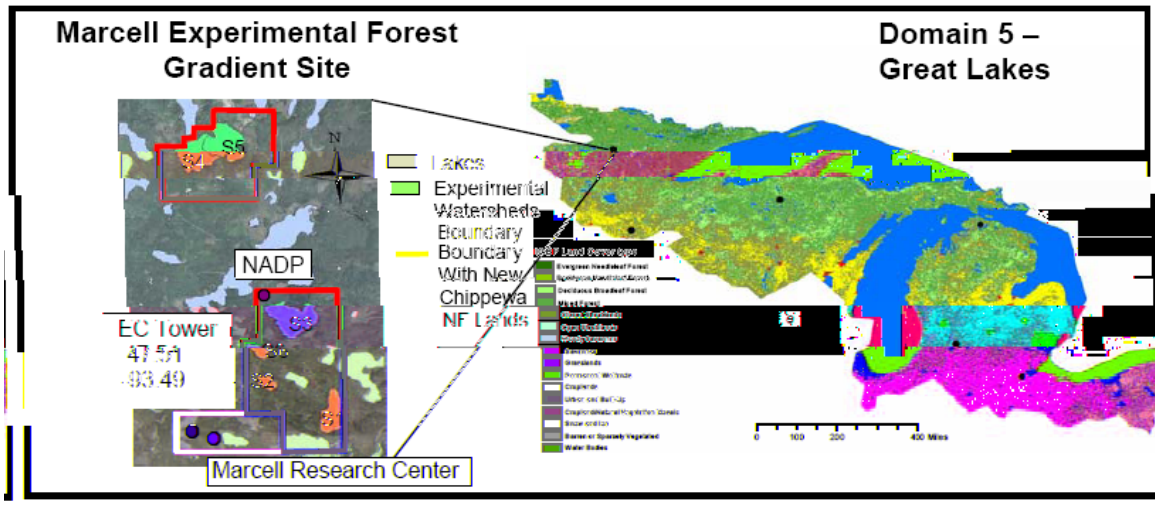
Web Page: http://www.ncrs.fs.fed.us/EF/marcell/marcell.asp

Location within Domain:



History: The MEF was formally established in 1962 to study the hydrology and ecology of peatland watersheds. MEF has been reserved for long-term research with the cooperation of the USFS Northern Research Station, the Chippewa National Forest, the Minnesota DNR, Itasca County, and a private landowner. Although established in 1962, monitoring of streamflow, climate, and groundwater began in 1960. In July 1978 MEF became the first NADP site.

Key Characteristics: Upland vegetation is variable ranging from deciduous (aspen, birch, sugar maple) to conifer species (red, white, jack pine, balsam fir) depending on forest management practices and soils. Peatland vegetation also varies greatly depending on hydrology and ranges from open to forested (black spruce, eastern larch). Mineral soils of the MEF are derived from glacial processes of Wisconsinan age. Peatland soils vary in properties based on decomposition.

Existing Infrastructure: The variety and length of our water, soil, atmosphere, and vegetation databases at the MEF give collaborators a unique opportunity to study watershed and landscape aspects of northern Lake States upland/peatland ecosystems. Six watersheds have been instrumented and studied in detail, including hydrology, nutrient and mercury cycling and behavior, and release of organic carbon and acidity. New instrumentation includes an EC system to assess peatland carbon fluxes. LIDAR data has recently been acquired for MEF. MEF is a member of numerous networks including Hydro-DB, Clim-DB, NACP pilot program, LTSP, NADP, MDN, and the USCCC (US-China Carbon Consortium). We frequently host students and classes ranging from K-12 to graduate level. About 50 graduate students have used MEF for their research. We also host numerous forest management workshops.

Facilities: Our new Marcell Research Center was completed in 2005 to accommodate expanding collaborative research. The new facility has approximately 2,500 sq ft with the main building providing a laboratory, conference facility that seats 30, and living quarters for approximately eight visiting scientists. We're in process to develop satellite capabilities and wireless remote. MEF is within 35 km of additional laboratories at the Forestry Sciences Lab in Grand Rapids. .