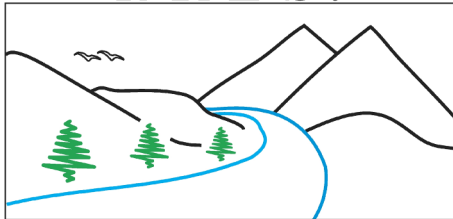


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RESEARCH COLLOQUIUM SERIES

Dr. Thomas G. Pypker

Department of Natural Resource
Sciences, Thompson Rivers
University



Friday
Oct. 3, 2014

3:30 - 4:30

Weldwood Theater
7-238

POTENTIAL IMPACT OF CLIMATE CHANGE ON GREENHOUSE GAS EMISSIONS FROM SUB-BOREAL PEATLANDS

Peatlands are a critical component in the global carbon (C) cycle because they represent a long-term sink of atmospheric carbon. Today, soil carbon stocks in peatlands are estimated to be 1850 Pg (10^{15} g); equal to 12-30% of the global soil carbon pool. Moreover, peatland ecosystems currently sequester an estimated 76 Tg (10^{12} g) $C^{-1}yr^{-1}$. Peatlands are also a significant source of methane (CH_4) because of the anaerobic conditions occurring in the often saturated peat. The fate of the stored carbon in peatlands is now in question because many of the world's peatlands are located in northern climates where temperature and precipitation are expected to experience rapid change. Using examples from my research in Upper Michigan, I will present information on how changes in hydrology and temperature may influence carbon emissions from peatlands.