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HYDROGEOLOGY OF THE SPRUCE HOLE AQUIFER

Principal Investigators: Dr. Thomas P. Ballesterio, Dr. Frank S. Birch, Dr. Thomas Lee, University of New Hampshire

Descriptors: Aquifer characteristics, groundwater recharge, groundwater movement, groundwater modeling, geophysics, ecosystems, wetlands

Problem and Research Objectives:

The research objectives of this project included: delineation of the lateral and vertical extent of the aquifer through the use of seismic geophysics; completion of monitoring wells and a pumping well; biotic and ecologic assessment of the bog; delineation of the ground water connection to the bog; hydrogeology of the formation; and potential for the formation to serve as a water supply with and without the use of artificial recharge.

Principal Findings and Significance:

Summer and Fall 1992 saw the completion of seismic geophysics. This work resulted in maps depicting bedrock elevation, total overburden thickness, till thickness, water table elevation and saturated sediment thickness. These maps were used to locate monitoring wells. At this writing, five wells had been completed and three more were to be drilled. Six other wells were to be vibrated in. The production well was to be constructed in Fall 1993.

The plots for the floristic study were begun in April and they continued to be studied.