USE OF HELICOPTER IN SOIL MAPPING

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The summary of results of the comprehensive field review of the Lackawanna and Wyoming Counties survey area was nearing the end as we sat in the field office at Tunkhannock, Pennsylvania, in mid September 1974. All items relating to soil series and mapping units had been discussed with the area conservationist, district conservationist, and civil engineer.

Discussion turned toward the completion of the survey in preparation for the final field review in May of 1975. Approximately 36,500 acres remained to be mapped before field work was complete. The majority of these acres were in remote steep areas. Access to these areas was limited in many places to foot traffic. At best, a four-wheel drive vehicle would be required to get within reasonable walking distance of these areas. It was generally agreed that more time would be required to get from the office to the area to be mapped than would be required in actual mapping.

Area conservationist Dick Kirk suggested the possibility of using a helicopter to survey the area. The pros and cons of this suggestion were discussed at some length. The soil correlator included the following statement in his report of the review: “The possibility and feasibility of the use of a helicopter to facilitate mapping in remote areas was discussed. The state soil scientist and his staff believe that this proposal has merit and should be investigated.”

A number of air charter services were contacted and, in late December 1974, an agreement for helicopter service was signed with Cherry Ridge Flying Service of Honesdale, Pennsylvania. This agreement provided for 22 hours of helicopter time to Joseph Eckenrode, soil scientist in Tunkhannock. Snow cover and unfavorable weather conditions prevented any trial flights until February 28, 1975. Snow cover on the mountains had finally diminished to 1 or 2 inches at the deepest spots. In many places there was no snow cover.

The aerial photographs being used were taken during a 1959 flight made in late spring before the foliage was fully developed. Features such as small drainageways, rock outcroppings, stone cover, and evergreen swamps were readily distinguished on the photographs. All areas to be covered in