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TYPE I PROGRESS REPORT

September 1 - October 31, 1973

20.4 10.0.00
CR-135894

- a. Land Use Management in Minnesota #283.
- b. Joseph E. Sizer (ST-360).
- c. There have been no changes in the rate of receipt of standing order materials and retrospective requests.
- d. This project is focused on developing and evaluating the use of ERTS-1 imagery for updating and refining the detail of land use information for the Minnesota Land Management Information System (MLMIS). Work in this reporting period has been directed toward completion of several demonstration projects, primarily aimed at Minnesota Department of Natural Resources, State Planning Agency and Twin Cities Metropolitan Council user applications. These initial demonstration phase operations are expected to be completed in the next 60 day period.

Discussions have occurred among project personnel, consultants and user agency personnel in an effort to plan a series of formal meetings to deal with ERTS-1 applications to specific user agency informational needs and to broaden the base of demonstration projects. The first meeting will take place in January or February 1974 and will focus at first on one Division of the Department of Natural Resources (Division of Waters, Soils and Minerals) which has expressed interest in developing a fairly broad range of ERTS-1 applications. Shortly after this meeting the work effort will be expanded to include other Divisions of DNR, the State Highway Department, and several local governmental agency users.

During this period Joseph E. Sizer, Principal Investigator, and Dwight Brown, Project Coordinator, attended an October 26, 1973 meeting with the Land Use Discipline Panel. A summary of our discussion is appended.

In the next reporting period, Dwight Brown will present a brief summary of Remote Sensing capabilities developed under this ERTS-1 project to the Minnesota Legislature House Appropriations Committee. This will be followed by a trip to Sioux Falls EROS Data Center by the House Appropriations Committee, Dr. Brown and Gene Karel from the State Planning Agency to discuss their user services for a broad based remote sensing program for the state.

- f. No technical reports or papers have been completed during this reporting interval.
- g. Request for extension of Phase III was granted through 23 September, 1974.
- h. Pursuant to discussions with G. R. Stonesifer, Technical Monitor, at the time of the principal investigator meetings at NASA/Goddard, we submitted a letter modifying the standing order to extend the period of coverage to correspond with the contract time extension through 23 September, 1974. The purpose of this extension was to insure State Agency data users a timely, continuous supply of data once they have developed specific

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(E74-10053) LAND USE MANAGEMENT IN
MINNESOTA Progress Report, 1 Sep. - 31
Oct. 1973 (Minnesota State Planning
Agency, St. Paul.) 5 p HC \$3.00

applications. It was agreed that we would reduce the number of standing order copies to one and omit any with cloud cover greater than 70%.

- i. ERTS image discription form attached.
- j. Three data requests were filed on 9/7/73, 9/27/73, and 10/30/73.
- k. No budgeting changes are foreseen.
- l. No personnel changes have occurred.

SUMMARY OF PRESENTATION TO LAND USE
DISCIPLINE PANEL, OCT. 26, 1973

ERTS-1 Application to Minnesota Land Information

Joseph E. Sizer, Principle Investigator
Director of Environmental Planning
Minnesota State Planning Agency

John R. Borchert, Co-Principle Investigator
Director of Center for Urban & Regional Affairs
University of Minnesota

Dwight Brown, Project Coordinator
Associate Professor
Department of Geography
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Eugene F. Karel, Consultant
Local and Regional Planner
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Merle P. Meyer, Consultant
Director of Institute of Agriculture
Remote Sensing Laboratory
University of Minnesota

Richard Rust, Consultant
Professor of Soil Science
University of Minnesota

Richard H. Skaggs, Consultant
Associate Professor of Geography
University of Minnesota

Joseph Ulliman, Consultant
Associate Professor
Department of Forest Resources Development
University of Minnesota

Donald P. Yaeger, Consultant
Natural Resources Planner
Minnesota State Planning Agency

This investigative effort has three objectives:

1. To identify and develop techniques for extracting land information from ERTS-1 imagery.
2. To implement ERTS-1 imagery in ongoing research and operations of land management agencies.
3. To transfer the capability to use remote sensing data to state and regional agencies charged with planning, policy development, and management of land-based resources in Minnesota.

To achieve these objectives we:

1. Have identified useful working classes of information (see 6 month report).
2. Have operated a systems test for portions of Itasca County, Minnesota (see 60 day report; data user evaluation of forest information is underway at the present time).
3. Have mapped the 7 county Twin Cities Metropolitan Area as a full scale systems test. Determination of accuracy levels and cost analysis are underway. The Metropolitan Council map information is now 7 1/2 years old. They want the area wide map done and will cooperate in its production (see manuscript color pencil copy).
4. Have mapped cultivated land by date of cultivation for Minnesota Department of Natural Resources (DNR) game biologists for planning wildlife habitat programs in western and southwestern Minnesota. Their request for this information is based on our previous work with seasonal cultivated land of Nicollet County (see 6 month report and manuscript maps).
5. Will initiate a specialized land use map for Wright County by November 1973. Both DNR and the Metropolitan Council want such a map done for Wright County and if possible, DNR wishes to have two adjacent counties mapped for planning purposes in their new farmland wildlife program.
6. Have initiated planning for the first in a series of training programs for DNR aimed at transferring the capability of using ERTS-1 imagery for data needs within the agency.
7. Are cooperating with DNR, Bureau of Environmental Planning and Protection in the establishment of a coordinated in house-remote sensing program (see Minnesota Department of Natural Resources work program).

ERTS IMAGE DESCRIPTOR FORM
(See Instructions on Back)

DATE November 15, 1973

PRINCIPAL INVESTIGATOR Sizer, Minn. - S.P.A.

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