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QUARTERLY PROGRESS REPORT

New England Reservoir Management
EREI Investigation #089
Report for the Period
23 July 1973 - 23 October 1973

NASA ORDER T-4646-B

~~Contract # NAS 9-089~~

Principal Investigations Management Office
Lyndon B. Johnson Space Center
Technical Monitor: Martin L. Miller

Principal Investigator: Mr. Saul Cooper
New England Division, Corps of Engineers
Waltham, Massachusetts 02154

Co-Investigator: Dr. Duwayne Anderson
U.S. Army Cold Regions Research
and Engineering Laboratory
Hanover, New Hampshire 03755

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Earth Resources Experiment Package (EREP)
Progress Report #2 - 23 October 1973
Investigation #089
New England Reservoir Management

Principal Investigator:

Mr. Saul Cooper, New England Division,
Corps of Engineers, Waltham, Mass. 02154

Co-Investigator:

Dr. Duwayne Anderson, U.S. Army Cold
Regions Research & Engineering Laboratory
Hanover, New Hampshire 03755

The overall status of our investigation has not changed significantly since the last reporting date because imagery over New England was not obtained during the SL-2 mission. However, with the launch of SL-3 on 28 July and the subsequent acquisition of imagery on 10, 15, 16 and 21 September (see table 1) significant progress within the next reporting period is anticipated.

A NASA RB57 Mission was flown on 26 September in support of all the EREP passes. Color and color IR imagery was taken from 60,000 feet with the Wild Heerbrugg RC-8 camera. The Zeiss camera malfunctioned during the flight and so black and white photography was not obtained.

A CRREL aircraft mission was accomplished on 10 September to augment the EREP photography taken by the Skylab astronauts on that day. A Zeiss RMK 15/23 camera was employed and aerochrome infrared type 2443 photography was taken at a scale of 1" = 800'. These data will be used to determine the extent of vegetative kill caused by the late June to early July flood in the lower Pemigewasset watershed.

Ground truth hydrometeorological data was collected by NED's ERTS-1 Data Collection System and Automatic Hydrologic Radio Reporting Network (AHRRN) throughout the above missions.

It is anticipated that Skylab-3 imagery will be received by 25 November. The most adequate sensors and resolution for monitoring the extent of floods and mapping vegetation and land use in the Merrimack River Valley will then be determined. A preliminary flood plain map of selected watersheds will also be compiled to assess the influence of vegetation and land use on basin runoff characteristics.

We have previewed SL-2 190A/B photographs of Cleveland, Ohio and St. Louis, Missouri. The resolution of the S190B product is superior to the resolution of the ERTS-1 imagery products and should be adequate for accomplishment of our objectives.

TABLE 1

SATELLITE, AIRCRAFT AND GROUND
TRUTH DATA OBTAINED TO DATE

<u>Data Source</u>	<u>Date (1973)</u>	<u>Products Available</u>
Skylab-3	10 Sept	S190A
	15 Sept	S190A/B
	16 Sept	S190A/B, S192
	21 Sept	S190A/B, S192
ERTS-1	5, 6, 7 and	70 mm negatives and 9-1/2 x 9-1/2 inch positive trans- parencies and prints of MSS bands 4, 5, 6, 7
	23, 24, 25 July	
	10, 11, 12 and	
	28, 29, 30 Aug	
	15, 16, 17 Sept	
NASA RB57 flight, Wild Heerbrugg RC-8 camera altitude: 60,000 feet	3, 4, 5 and	
	21, 22, 23 Oct	
NASA RB57 flight, Wild Heerbrugg RC-8 camera altitude: 60,000 feet	26 Sept	Color and color IR imagery
CRREL underflight, Zeiss RMK 15/23 altitude: 4,000 feet	10 Sept	Aerochrome infrared type 2443 (color IR)
CRREL flight, hand- held Hasselblad altitude: 2,000 feet	6 July	Kodak CPS 70 mm color negative film
NED - AHRRN and ERTS-1 DCS information	Obtained daily	Computer printout, punched cards, paper tapes