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PROGRESS REPORT #8

NMC No. 0205 NAS 5-21724

September 1973

TITLE: Detection and Monitoring Vegetation Damage Associated with Highway Facilities.

PROBLEMS:

- 1. Color composites made by the General Electric Photo Lab to replace poorly registered products have not been received to date.

ACCOMPLISHMENTS:

- 1. RC-10 and Vinten coverage obtained during a U-2 aircraft support mission on 3 June 1973 has been analyzed in several select study areas. The 1:125,000 CIR photography taken at this stage of foliage development is very adequate for detecting salt or water damaged coniferous stands having an area of one-half acre in extent. In 014 Vinten at a scale of 1:500,000, damaged coniferous stands in a browning stage can be identified if the minimum dimension of the stressed conifers or deciduous sites can generally be identified in RC-10 photography in areas two acres in extent or more. In 1:500,000 CIR 70 mm transparencies these areas are difficult to differentiate from treeless swampy meadows, especially if healthy, tolerant low brush and non-woody vegetation occur beneath the standing snags.
- 2. Band 4, 5, 7 composites of ERTS imagery obtained on 23 April and 22 July 1973 and 1:1,000,000 B/W transparencies have been back-ordered. An analysis of 70 mm B/W transparencies of MSS imagery taken on the above two dates indicates that very small vegetation stress sites can not be identified with any degree of accuracy with these products. Upon receipt of the simulated color infrared products for the April and July imagery an attempt will be made to detect stress areas over three acres in extent

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(E74-10076) DETECTION AND MONITORING OF VEGETATION DAMAGE ASSOCIATED WITH HIGHWAY FACILITIES Progress Report, period ending 1 Sep. 1973 (Maine State Highway Dept., Bangor.) 2 p HC \$3.00 CACL 08F

that have been identified and located in the RC-10 and 014 Vinten photography taken on 3 June.

3. A 1:1,000,000 mosaic of the State of Maine made from February 1973 Band 7 prints has been prepared and distributed to a number of State Agencies.

PLANNED FOR NEXT PERIOD

1. To present a paper at a Federal Highway Administration Regional Meeting at San Francisco on 16 September 1973, entitled "Potential application of ERTS-1 imagery for hydrological and environmental studies in Maine." This is an oral presentation only - not for publication.
2. To analyze color composites referred to in Item 2 above.