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PRELIMINARY EVALUATION OF ERTS-1 FOR DETERMINING NUMBERS AND DISTRIBUTION OF PRAIRIE PONDS AND LAKES

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ABSTRACT

Management of waterfowl is a major responsibility of the Bureau of Sport Fisheries and Wildlife. Numbers and distribution of wetlands (prairie ponds and lakes) in the primary breeding areas during the spring and summer provides an index to waterfowl production. The Bureau conducts annual surveys to determine waterfowl habitat conditions and makes periodic regional wetland inventories to assess the long-term changes in this resource. To improve the accuracy and speed of these inventories the use of satellite borne sensors and associated data processing techniques are being investigated. ERTS-1 and aircraft multispectral data collected over a North Dakota test site during July 1972 are compared to evaluate the capability of the satellite sensors to detect numbers and distribution of wetlands of various sizes. Digital maps of wetlands processed from satellite and aircraft scanner imagery and photographic products are presented.