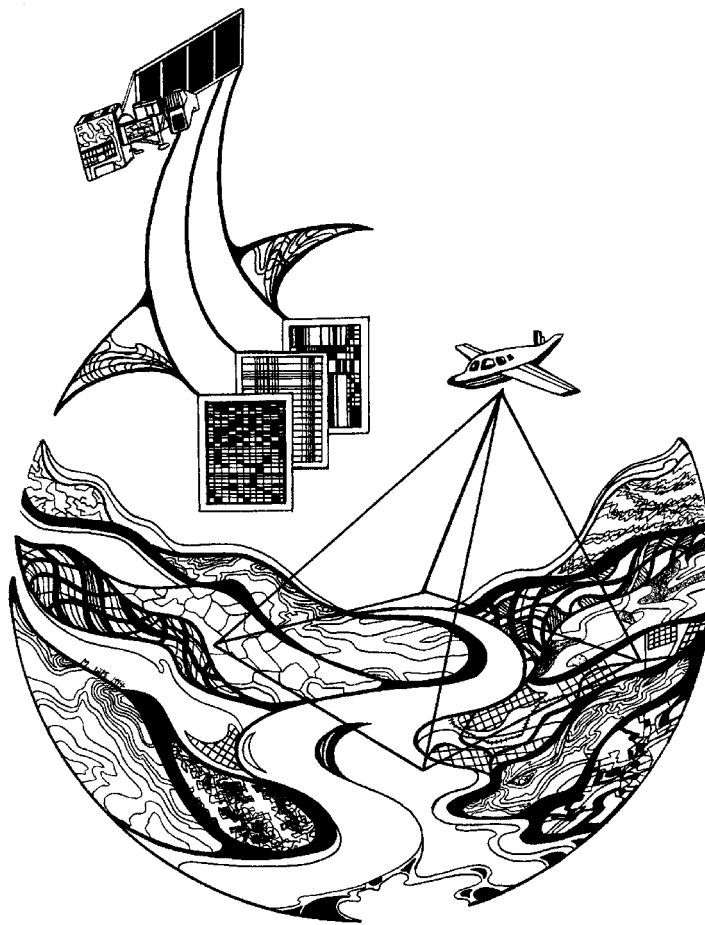


Long Term Resource Monitoring Program

Program Report

95-P008

Standard Operating Procedures for Spatial Data Processing



July 1995

Standard Operating Procedures for Spatial Data Processing

by
National Biological Service
Environmental Management Technical Center
575 Lester Avenue
Onalaska, Wisconsin 54650

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The Environmental Management Technical Center issues LTRMP Program Reports to provide Long Term Resource Monitoring Program partners with programmatic documentation, procedures manuals, training manuals, and geospatial applications.

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Preface

The Long Term Resource Monitoring Program (LTRMP) was authorized under the Water Resources Development Act of 1986 (Public Law 99-662) as an element of the U.S. Army Corps of Engineers' Environmental Management Program. The LTRMP is being implemented by the Environmental Management Technical Center, an office of the National Biological Service, in cooperation with the five Upper Mississippi River System (UMRS) States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, with guidance and Program responsibility provided by the U.S. Army Corps of Engineers. The UMRS encompasses the commercially navigable reaches of the Upper Mississippi River, as well as the Illinois River and navigable portions of the Kaskaskia, Black, St. Croix, and Minnesota Rivers.

The mission of the LTRMP is to provide decision makers with information to maintain the UMRS as a sustainable large river ecosystem given its multiple-use character. The long-term goals of the Program are to understand the system, determine resource trends and impacts, develop management alternatives, manage information, and develop useful products.

This report supports Strategy 4.1.1, *Develop and Update Information Management Guidance Documents* under Objective 4.1, *Provide Direction for Automation Activities*. This report was developed with funding provided by the Long Term Resource Monitoring Program.

Additional copies of this report may be obtained from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (1-800-553-6847 or 703-487-6847).

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Introduction

The development of spatial databases should follow standard guidelines to ensure reliability of the end product. This document contains procedures for data entry (digitizing), photo interpretation, operation of the zoom transfer scope, and development of bathymetric databases. These standard operating procedures (SOPs) provide instructions for processing data collected in the field, whether by airborne camera or hydrographic survey equipment, and the use of the equipment associated with these activities. The SOPs have been developed by Long Term Resource Monitoring Program (LTRMP) staff who are responsible for these activities. In some cases, such as the Digitizing SOP, the instructions are specific to software applications developed by LTRMP staff. In most instances, the SOPs included in this document are the result of years of experience and can serve as general guidelines for anyone involved in these activities.

This document will be updated and added to as SOPs change and new SOPs are developed for additional activities, such as the Global Positioning System.

The Long Term Resource Monitoring Program (LTRMP) for the Upper Mississippi River System was authorized under the Water Resources Development Act of 1986 as an element of the Environmental Management Program. The mission of the LTRMP is to provide river managers with information to maintain the Upper Mississippi River System as a sustainable large river ecosystem given its multiple-use character. The LTRMP is a cooperative effort by the National Biological Service, the U.S. Army Corps of Engineers, and the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin.

