

# Manitoba from the Air: A Geographical Interpretation

Electronic Book by Dr. John Welsted  
Technical Editor: Dr. Dion Wiseman

Foreword by: Dr. John Everitt & Dr. Christoph Stadel

Over a period of 40 years, the late Dr. John Welsted (Department of Geography, Brandon University) assembled a collection of remotely sensed images that depict the geography of Manitoba. About 550 of these images have been selected for presentation in an electronic book (e-book) titled *Manitoba from the Air: A Geographical Interpretation*. The “remoteness” of the sensing varies from a few tens of metres (from building tops) to hundreds of kilometres (from satellites) with multiple image types.

The collection is intended as a companion to the book *The Geography of Manitoba: Its Land and Its People* (Edited by John Welsted, John Everitt, & Christoph Stadel, 1997) and the topics are presented in the same order as in that book. Welsted’s collection is the basis of the e-book, however, it was supplemented by other images obtained specifically for the purpose. Whereas some aspects of the province’s geography such as landforms, settlement patterns, and transport routes (past and present), are well displayed on remotely sensed images, others, such as climate and prehistoric settlements, are not. The e-book includes two chapters that were not in the original book: transport is given separate treatment whereas it was subsumed under other headings in the book and there is a short section about legal issues.

A major advantage of an e-book is that it can be continually edited and updated and is freely available to all. The aim was to use remotely sensed images to display and describe the geography of Manitoba: this would be made readily and freely available to all interested people. The electronic format of the e-book also provides a dynamic and interactive environment for the reader.

The Rural Development Institute ([www.brandonu.ca/rdi](http://www.brandonu.ca/rdi)) is a centre for excellence in rural development helping strengthen rural and northern communities through research and information on issues unique to these areas. The Institute serves as the publisher for Dr. Welsted’s e-book. The e-book continues RDI’s role in publishing topics in the fields of rural and community development.

This e-book was launched in September 2008 and is available online at <http://mbair.brandonu.ca/>.

**1.1: Sequential Air Photos of the Junction of the Assiniboine and Little Saskatchewan Rivers**

Sequential air photos (taken of the same area at different times) reveal changes that have occurred over time. Many geomorphological processes are so slow that no change can be detected even by comparing very old photos with recent ones (the time span is after all little more than 100 years). However, prairie streams flowing across easily eroded sediments assume a meandering form, the position of the meanders changing relatively quickly.

**Figure 1.1a: 1947 Photo**

The Little Saskatchewan River **1** flows southward onto the floor of the Assiniboine spillway, bounded roughly by provincial road (PR) 459 **2**. From that point south, it assumes an indirect meandering course **3** to the Assiniboine River **4**. Several previous routes can be seen both west **5** and east **6** of the present course. Note also the dam **7** across the Little Saskatchewan River with a reservoir **8** to the north. This was the location of the first hydroelectric power station in Manitoba. Between 1900 and 1930 it supplied electricity to Brandon during the summer months. The dam was washed away and the reservoir emptied in 1949.

**Figure 1.1.a: 1947 Photo**



Figure 1.1a  
Vertical air photo: A11041-201  
Flight height: 9,320 feet a.s.l.;  
lens focal length: 152.4 mm  
Scale: 1:16,700 (approx.)  
Date: May 19, 1947  
Location: Township 10, Range 20 W1  
Map sheets: 1:250,000 62F Virden  
1:50,000 62F/16 Alexander

Table of Contents

**Foreword**

**Preface**

1: Introduction

2: Location, Borders, and Lakes

3: Geologic Structure and Landforms

4: Climate

5: Vegetation

6: Pre-historic and Early Historic Settlements

7: Survey Systems

8: Southern Hamlets, Villages, and Towns

9: Mennonite and Hutterite Settlements

10: First Nations Settlements

11: Northern Settlements

12: The Southern Cities

13: Mining and Oil Extraction

14: Agriculture

15: Industry / Manufacturing

16: Water Resources

17: Parks, Recreation, Sports

18: Transport and Communications; Past and Present

19: Legal Issues and Law Enforcement

**Glossary**

Example of E-Book Chapter

**Figure 1.1.a**

**1947 Photo**

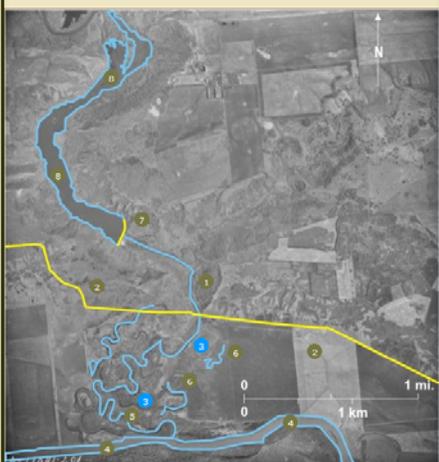


Image Options

**Hide Trace**

Hide dots on image

Image metadata

Points of Interest

1. The Little Saskatchewan
2. PR 459
3. Indirect meandering course of the Little Saskatchewan River.
4. Assiniboine River
5. Previous route of Little
6. Previous route of Little
7. Dam across the Little
8. Reservoir to the north of

Example of Aerial Image with Reference Points