

Name of Collection

Fredericton Historical Aerial Photo Orthomosaic 1981

Description of Collection

Historical aerial photo Orthomosaic of Fredericton over several days in 1981. Created from a series of 78 aerial photo survey images collected between May 25th and September 26th, 1981. The images that comprise the mosaic were provided partially as i) analog prints (59 analog prints) and ii) digital images (19 TIFFs). The i) analog prints were given to the Geodesy and Geomatics Engineering Department (Remote Sensing Group/Dr. Yun Zhang) at the University of New Brunswick for the *Three Cities New Brunswick Project* (3CT-NB, Dr. Sasha Mullally, Dr. Yun Zhang) by Felix McCarthy, GIS Analyst at the City of Fredericton in 2021. The ii) digital imagery (19 TIFFs) was acquired from the New Brunswick Department of Natural Resources (NB DNR) in 2021. The analog prints from the City of Fredericton were then digitized by the Provincial Archives of New Brunswick (PANB – P960) in 2021 and are currently held there for permanent preservation.

Capture

Photographic Capture

Roll	81501	81503	81505	81513	81519	81522
Capture Date	June 1 st , 1981	May 25 th , 1981	June 2 nd , 1981	June 8 th , 1981	June 30 th , 1981	September 26 th , 1981
Pilot	C. Brossard	C. Brossard	C. Brossard	S. Martin	T. Cooper	J. Campbell
Navigator	C. Girouard	C. Girouard	C. Girouard	G. Savard	T. Cooper	J. Campbell
Camera Operator	C. Girouard	C. Girouard	C. Girouard	G. Savard	T. Cosgrove	S. Shortt
Line	18W	17E	19E	20W (051-	22W	15W

				063), 21E (162-174)		
Air Photos in Orthomosaic (via NB DNR)	136-141	029-031	132, 133, 136	057, 059	062, 063	-
Air Photos in Orthomosaic (via City of Fredericton)	042-050, 134, 135, 142	027, 028, 032, 033	128-131, 134, 135, 137-140	051-056, 058, 060- 063, 162- 174	057-061, 064, 065	051-055
Time of Day	1246- 1313	1347- 1355	1359- 1414	1334- 1352 (20W), 1414- 1432 (21E)	1816- 1829	1412-1431

Flight structure

Several flights over several days.

Relationship between images

Aerial photo survey captured as individual images along survey flight lines.

Geographic scope of the flight

Fredericton and surrounding area.

Purpose of the flight

Unknown

Employing organization or company

Photosur Inc. (81501, 81503, 81505, 81513, 81519)

Capital Air Surveys Ltd. (81522)

Commissioning body

Maritime Resource Management Service

Original Custody & Early Handling

Initial owner/custodian

Aerial photo prints initially held by the City of Fredericton and NB DNR. The Interdepartmental Committee on Air Survey Air Photography Reports were provided by Service Nova Scotia, from the Nova Scotia Aerial Photography Library.

Length of time held by original custodian

Within the year of capture (1981) to 2021.

Original format

Aerocolor (Neg 2445) Film

Individual imagery contains numbering and sequencing based on the available film report per the standards of the Interdepartmental Committee on Air Surveys, Government of Canada (Fig 1).

Figure 1

Photo print annotations and connection to Air Photography Report

INTERDEPARTMENTAL COMMITTEE ON AIR SURVEY
AIR PHOTOGRAPHY REPORT

CONTRACTOR'S JOB NO.
4740-08-00

L.C.A.S. JOB NO.
MMS PROJECT

CAMERA TYPE VERTICAL	FILM TYPE AEROFILM FIIM 2445	BAR X	FEDERAL ROLL NO. FNR 81505
LEN. NO. UAG 1029	EXPOSURE NO. 2245-238-7	EXPIRY DATE 4/82	CONTRACTOR'S ROLL NO. 9358
CALIBRATED F.L. 151.73 mm.	MAGAZINE NO. 1327	FILTER TYPE & NO. FAN 2x 420 NM. #5261	AVERAGE SCALE 1:12,500

Date	Associated Neg. Nos.	Line No. & Direction	Exposure No.		GMT		TRUE ALT.	Camera Exposure	REMARKS
			Start	Finish	Start	Finish			
2-6-81	1 - 25	6 - E	4208	4232	13:12	13:18	6800	£5.6/200	MMS PROJECT SOUTHERN NEW BRUN 1:12 500
	25-26	6 - W	4241	4265	13:25	13:30	"	"	
	88-51	7 - W	4267	4304	13:40	13:48	"	"	
	89-144	19 - E	4306	4361	13:59	14:14	"	"	
3-6-81	165-145	5 - W	4364	4384	11:40	11:43	"	"	
	166-198	5 - W	4388	4420	11:49	11:58	"	"	

from the north

DNR81505
135

MARITIME RESOURCE MANAGEMENT SERVICE, COUNCIL OF MARITIME PREMIERS - AMHERST, N.S.

DNR81505

135

Transfer to Archives

Tracking how the material moved through institutions.

Chain of custody summary

The imagery in the mosaic originates from two sources – the City of Fredericton and NB DNR.

City of Fredericton

The first source, the City of Fredericton held 59 colour analog prints from within its year of capture (1981) until the summer of 2021. The analog imagery was then given to the Geodesy and Geomatics Engineering Department (GGE, Remote Sensing Group/Dr. Yun Zhang) at the University of New Brunswick (UNB) for the *Three Cities New Brunswick Project* (3CT-NB, Dr. Sasha Mullally, Dr. Yun Zhang) by Felix McCarthy, GIS Analyst at the City of Fredericton (2021). The images were then organized and given to the Provincial Archives of New Brunswick (PANB – P960) for digitization and preservation of the analog prints (2021).

Nova Scotia Air Photography Library & NB DNR

The analog aerial photo prints held by the City of Fredericton was an incomplete collection; imagery along flight lines were missing which makes mosaic creation impossible. So, imagery was acquired from both the Nova Scotia Air Photography Library and NB DNR. Imagery from the Nova Scotia Air Photography Library was initially acquired as photo reprints, due to a restriction on digital sharing between NB and NS. The photo reprints were not feasible for use because a digital photo print produced by the Nova Scotia Air Photography Library contains a max DPI of 300. A minimum of 600dpi is required for image processing tasks. Digital imagery was then acquired from NB DNR at 600dpi and used in the creation of the Orthomosaic.

All digitized imagery was then given to the geomatics analyst in the 3CT-NB Project in GGE at UNB (2022) and processed for the 3CT-NB project (2022). The film negatives and the air photography reports for the imagery in the mosaic are currently held at the Nova Scotia Aerial Photography Library. All digital imagery for the Orthomosaic is held on the 3CT NB project server (UNB GGE Remote Sensing Group, in *datavault*).

Source of acquisition for AIM Project & Format

City of Fredericton, Felix McCarthy, GIS Analyst, 59 analog prints

Nova Scotia Aerial Photography Library (19 printed photos – not used)

NB DNR (19 digital TIFFs – used in the mosaic)

Known storage environments

Film of full acquisition (vault, Nova Scotia Aerial Photography Library, current)

Analog prints from City of Fredericton (banker box in Fredericton City Hall, 1981 – 2021),
E13 Remote Sensing Lab for sorting and interpretation at UNB in GGE (2021), PANB
(digitizing and preservation, 2022 – present)

Technical Provenance

The imagery was georeferenced in ArcGIS Pro (2022) and then orthomosaicked in ArcGIS Pro (2022).

Additional information and sources

The following documents are also available for this collection:

Air Photography Report for rolls 81501, 81503, 81505, 81513, 81519, 81522 (from Nova Scotia Air Photography Library)