



# **MANITOBA'S WINTER ROADS**

**Up North on Climate Conference  
Thunder Bay  
April 2018**

# Items for Discussion

- History of Winter Roads in Manitoba
- Winter Roads in Manitoba Today
- Mandate
- Construction & Inspection
- Policies & Procedures
- Changing Climate

# History

- Built in the 1940's and 1950's.
- Supplies were hauled via “cat trains” to remote communities, fish camps and mining camps.
- Fish and other items were back hauled to be sold.



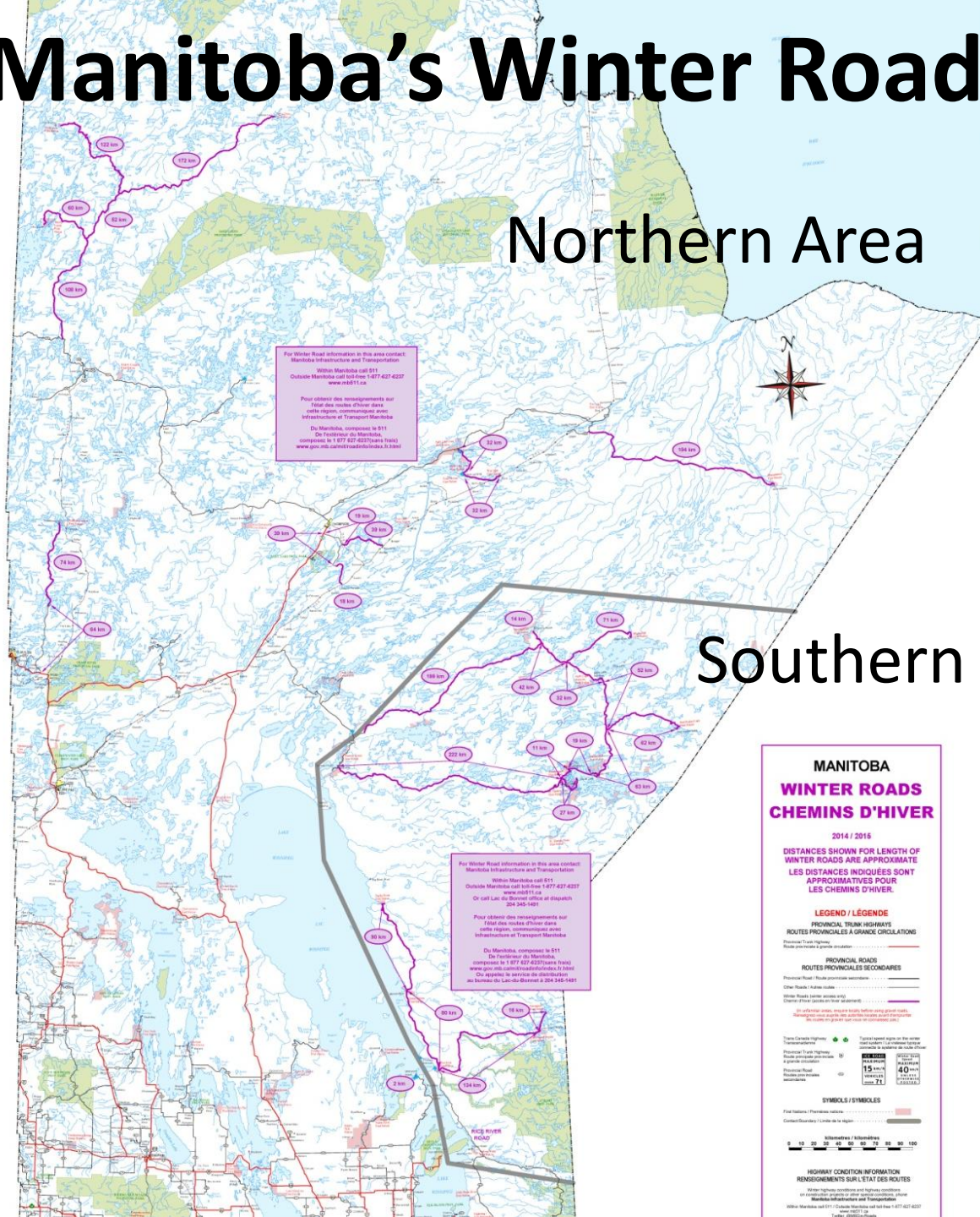
# Cat Trains



# History

- Manitoba took over in 1971 with the entire Winter Road Program now being administered through the Department of Infrastructure

# Manitoba's Winter Roads



Northern Area

Southern Area

For Winter Road information in this area contact  
 Manitoba Infrastructure and Transportation  
 Within Manitoba call 311  
 Outside Manitoba call toll-free 1-877-627-6227  
 www.mti.ca

Pour obtenir des renseignements sur  
 l'état des routes d'hiver dans  
 cette région, communiquez avec  
 Infrastructure et Transport Manitoba  
 Du Manitoba, composez le 311  
 De l'extérieur du Manitoba,  
 composez le 1-877-627-6227 (sans frais)  
 www.gouv.mb.ca/infrastructure/mbti/index.fr.html

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 Or call Luc du Savoyet office at dispatch  
 204-345-1491

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 Ou appelez le 204-345-1491  
 au bureau de Luc du Savoyet à 204-345-1491

**MANITOBA**  
**WINTER ROADS**  
**CHEMINS D'HIVER**

2014 / 2015

DISTANCES SHOWN FOR LENGTH OF  
 WINTER ROADS ARE APPROXIMATE  
 LES DISTANCES INDICÉES SONT  
 APPROXIMATIVES POUR  
 LES CHEMINS D'HIVER.

**LEGEND / LÉGENDE**

**PROVINCIAL TRUNK HIGHWAYS**  
 ROUTES PROVINCIALES À GRANDE CIRCULATION

**PROVINCIAL ROADS**  
 ROUTES PROVINCIALES SECONDAIRES

**Trans Canada Highway** / **Transportation route en haut niveau**  
**Provincial Trunk Highway** / **Route provinciale à grande circulation**  
**Provincial Road** / **Route provinciale secondaire**  
**Other Road** / **Autre route**  
**Winter Road** / **Route hivernale**  
(in yellow areas, major roads before snow ground cover) / (dans les zones jaunes, routes majeures avant la neige au sol)


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**SYMBOLS / SYMBOLES**

**Highway Condition Information**  
 Niveaux de circulation

**Highway Condition Information**  
 NIVEAUX DE CIRCULATION

After highway conditions are known, contact  
 Infrastructure and Transportation  
 Manitoba Infrastructure and Transportation  
 Within Manitoba call 311 / Outside Manitoba call toll-free 1-877-627-6227



Every year Manitoba constructs and maintains approx. 2,300km of winter roads, which could stretch from Winnipeg:

- West to the Pacific Ocean;
- East to the Atlantic Ocean;
- South to the Gulf of Mexico;
- North to the Beaufort Sea

# Mandate

- Delivery of Required Freight, Fuel and Goods
- Providing Access to 23 Remote Northern Communities
- Safety
- 23 Community based contracts/subcontracts provide Local Involvement







**Over Land Construction**







# Over Ice Construction











Ice measurements using  
Ground Penetrating Radar





Panasonic CF-19  
TOUGHBOOK  
ICEMAP0006

AQUAFINA  
La Purification



**GPS Distance: 971.5 m**

Easting = 374559.76 m  
Northing = 5958728.83 m  
Elevation = 225.42 m

Avg Ice Thickness = 69 cm  
Min Ice Thickness = 69 cm  
Max Ice thickness = 69 cm

Number of Measurements = 1

Feb 24, 2018

Write a description for your map.

Wasagamack

Core: 102 cm

Core: 98 cm

Core: 75 cm

Island Lake

Saint Theresa Point

Google Earth

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Image © 2018 DigitalGlobe

Image © 2018 CNES / Airbus



7 km



# Policies and Procedures

A background image of a winter scene. In the foreground, a snow-covered road or path leads towards the background. The middle ground shows a wide, snow-covered field or frozen body of water. In the background, a dense line of evergreen trees is visible under a pale, overcast sky. The overall tone is cold and wintry.

Manitoba Infrastructure has developed Videos for:

- Ice Safety
- WR Contractor Procedures
- Internal WR Inspectors Training
- Heavy Trucks & Public Use of WR's

We also conduct annual Winter Road Pre-Opening Meetings for Transport Companies, Suppliers, and other Winter Road users.

# Policies and Procedures

- As “Owner”, Manitoba sets standards, conducts inspections for contract specification adherence, road & bridge safety
- Sets weight limits and officially opens/closes winter roads
- Manitoba requires all commercial transfer companies to obtain and comply with the Manitoba Winter Road Permit conditions
- Contractor COR safety certification is required for all winter road contracts



# Signage

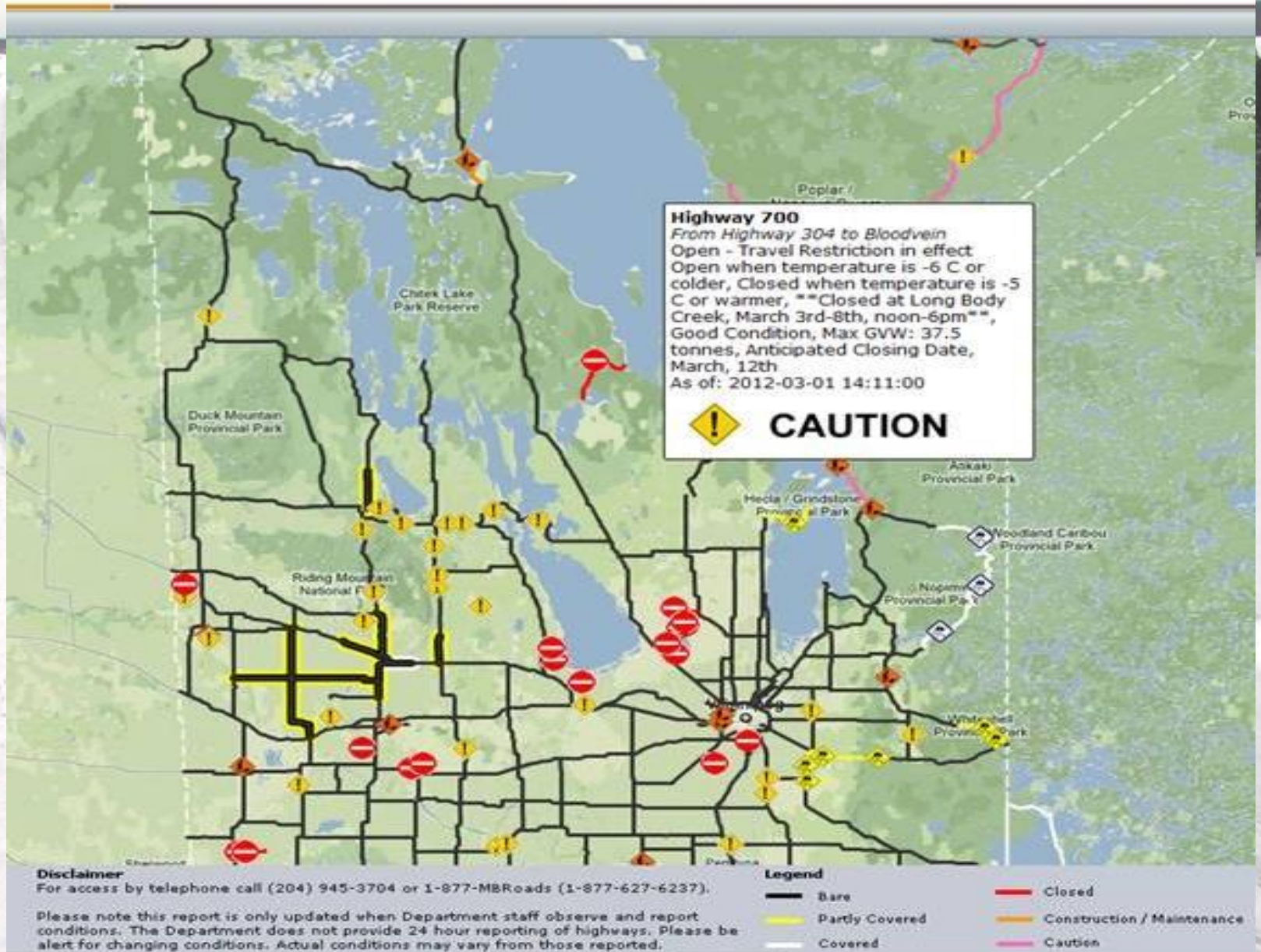
**WINTER ROAD**

Narrow winding roadway.  
Slippery surface.  
Sharp curves and hills.  
Drive with extreme care !

Winter Road	STATUS	MAX. G.V.W.
Oxford House	OPEN	39.5 t
Gods Lake Narrows	OPEN	39.5t
Gods River	OPEN	30 t
Red Sucker Lake	CLOSED	
Garden Hill	CLOSED	



# Manitoba 511 Road Information Website



# Service Delivery



Shortened Winter Road seasons cause strain on trucking capacities as many of the remote communities in Manitoba and Northern Ontario rely on the same Transport Companies for freight delivery.

Manitoba restricts heavy trucks during temperatures above -6 Celsius to avoid conditions below which lead to early closures and future construction delays



# A Changing Climate

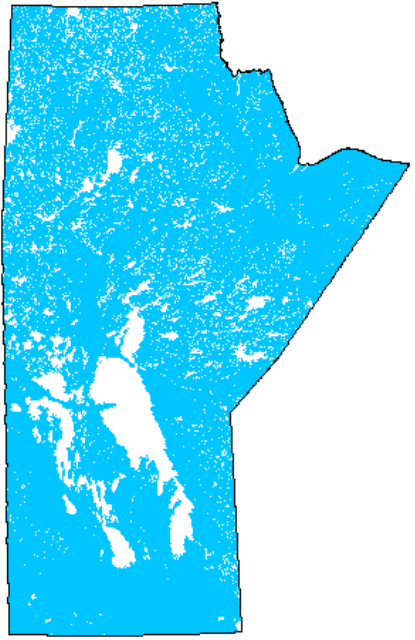


*The Effect on Winter Roads*

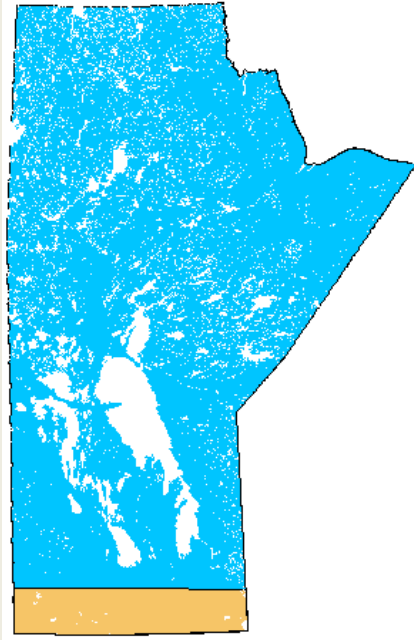


# Airlift 1998

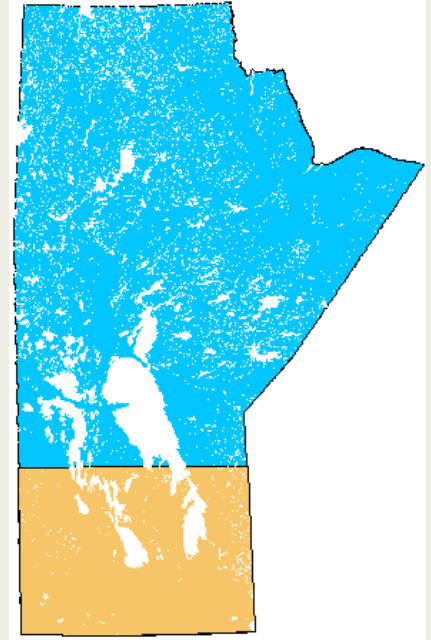




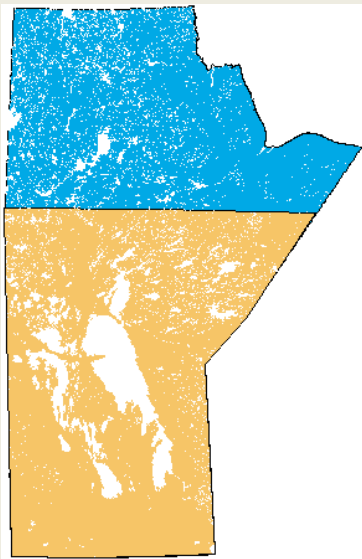
**1800**



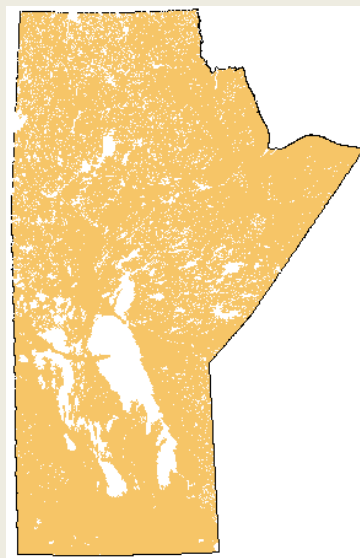
**1900**



**2000**



**2050**



**2100**



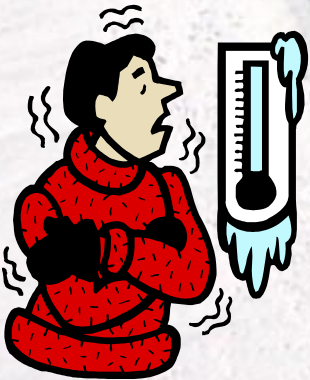
**Cooler Climate**



**Warmer Climate**

# A Changing Climate

The effects of climate change will result in the winter roads becoming progressively harder to construct every year. In the past decade, Manitoba has also increased safety factors for those working on ice.



An aerial photograph showing a long, straight road built across a vast, frozen body of water. The road is marked with tire tracks and has a yellow tanker truck driving on it. The surrounding landscape is flat and covered in snow, with a dense forest of evergreen trees visible in the distance under a cloudy sky.

## **Initiatives Undertaken To Adapt to Climate Change**



# Re-routes off of Ice





# Meccano Bridges





# Acrow Panel Bridges

EMERGENCY  
PUSH HERE



# All Season Road Construction



# Thank you



