

# Student Chapter of The Wildlife Society

Interested in joining the Student Chapter of the Wildlife Society?

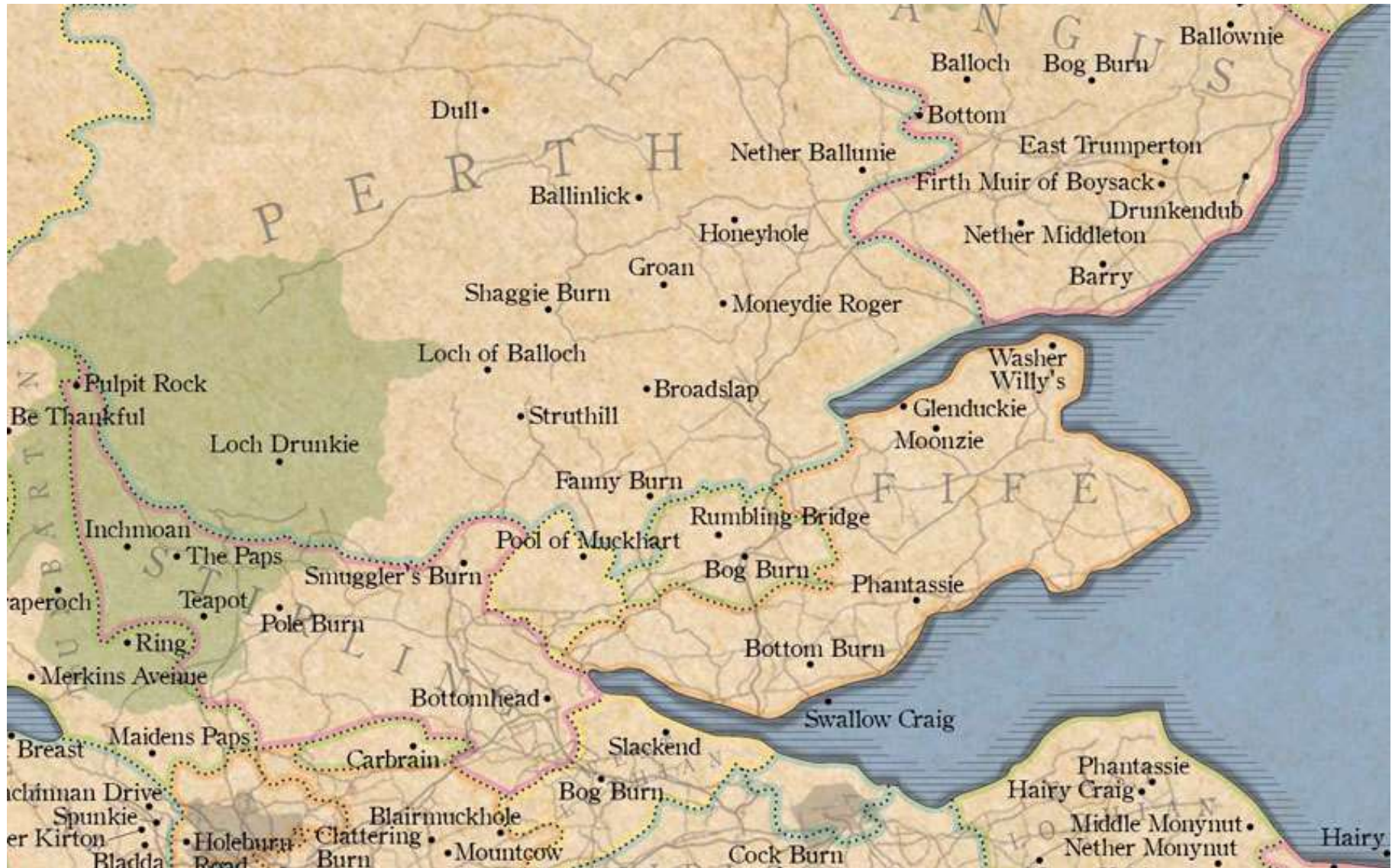
Want to join our executive next year or have questions?

Send us an email to **[tw@unbc.ca](mailto:tw@unbc.ca)** with your name, your student number and your UNBC email address and any questions you have.

Join us **February 4, 2021 at 4pm PST** for a fun game of Pictionary! Email [tw@unbc.ca](mailto:tw@unbc.ca) for the link!

# Toponymy: the study of placenames

## STRUMPSHAW, TINCLETON & GIGGLESWICK'S MARVELLOUS MAPS



# Toponymy: the study of placenames

English place name endings and meaning

by	village, town
Dal /dale	meadow / valley
ford	ford
hurst	wooded hill
knock	hill (gaelic)
minster	large church
pool	harbour
shaw	wood
stead	place
ster	farm

These can tell us about the local geography ...

... we have similar names in Canada, the indigenous names

Lheidli	Confluence
Nagwentled	Landslides
Nanaimo	Big strong tribe
Kakwa	Porcupines
Poboktan	Burrowing Owl
Winnipeg	Murky Water

Wikipedia: Indigenous place names in Canada

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# Place names in Canada

*Listed based on merit: (my list - very unofficial)*

1. Indigenous names based on geography / people
2. Early settlers, features, explorers
3. Home places elsewhere      e.g. Calgary, Edmonton
4. Friends / sponsors / saints / kings-queens ?
5. Minor royal family members, explorers and Lords' cats



# Canada's longest placename:

Pekwachnamaykoskwaskwaypinwanik Lake



"where the wild trout are caught by fishing with hooks."

# Wales: longest placename in Europe

2<sup>nd</sup> longest in the world

Also known as Llanfair PG



Translation: "Mary's house in the hollow of the white hazel rapid whirlpool at the church of the red cave." (19<sup>th</sup> century 'Fake name')

# World's longest placename

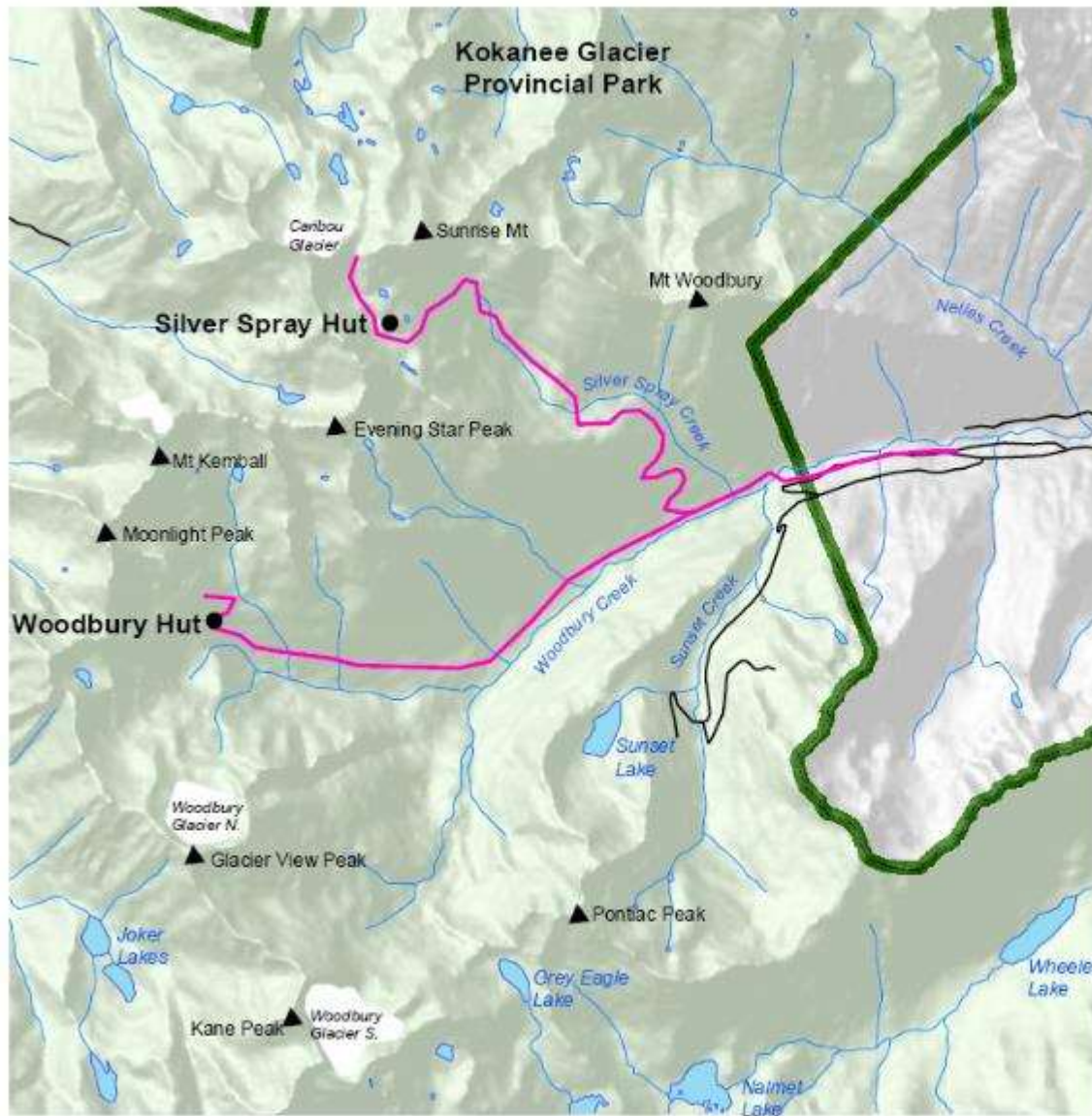


Translates as: "The summit where Tamatea, the man with the big knees, the climber of mountains, the land-swallower who travelled about, played his [nose flute](#) to his loved one





# Ancillary data

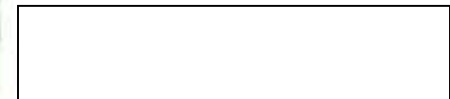
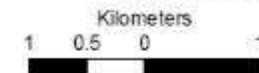
'subordinate' = Information required to explain the display contents



## Silver Spray & Woodbury Alpine Huts

### Legend

-  Hiking Trail
-  Forest Service Road



# 1. Title: often/usually at the top

Geographic area

map purpose / content:  
(if not general)  
and date (if variable)

No need for the word  
'map'



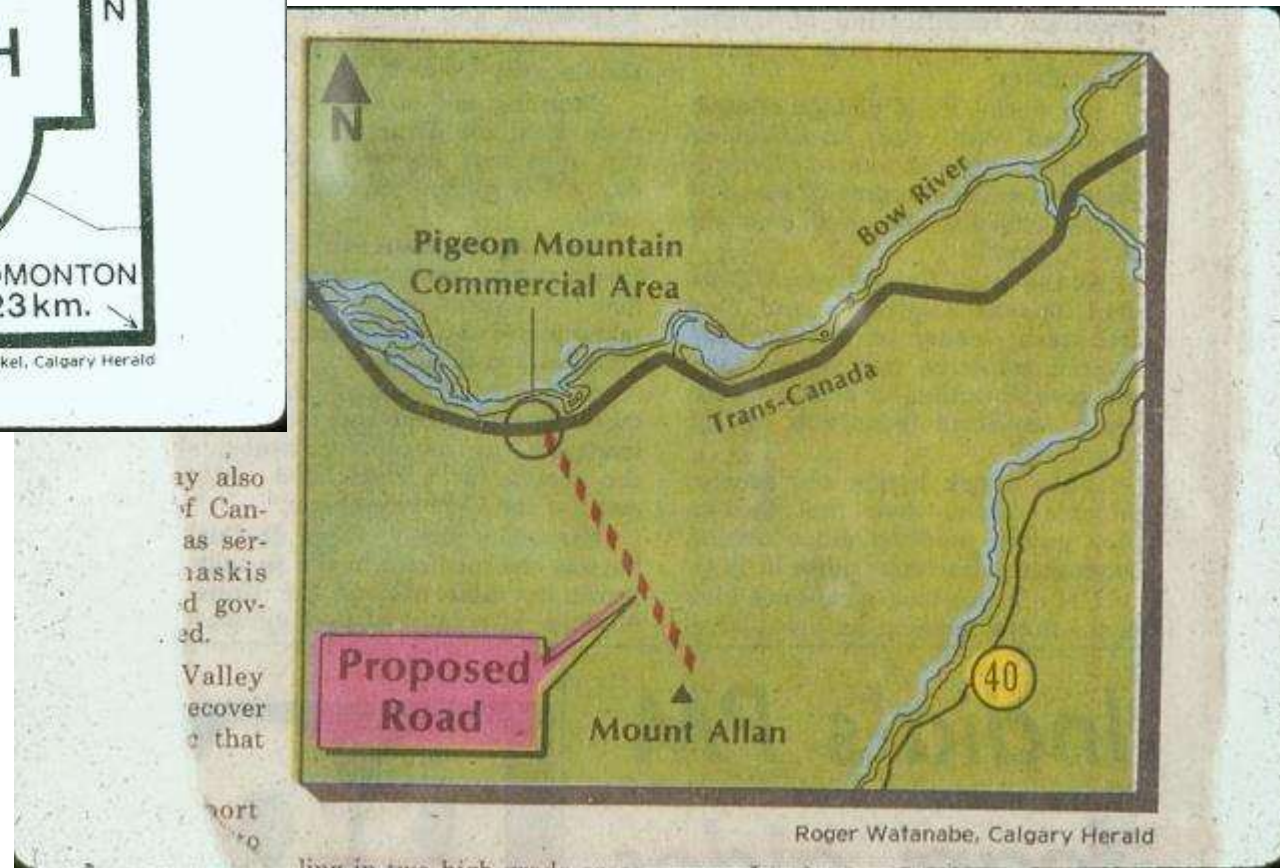
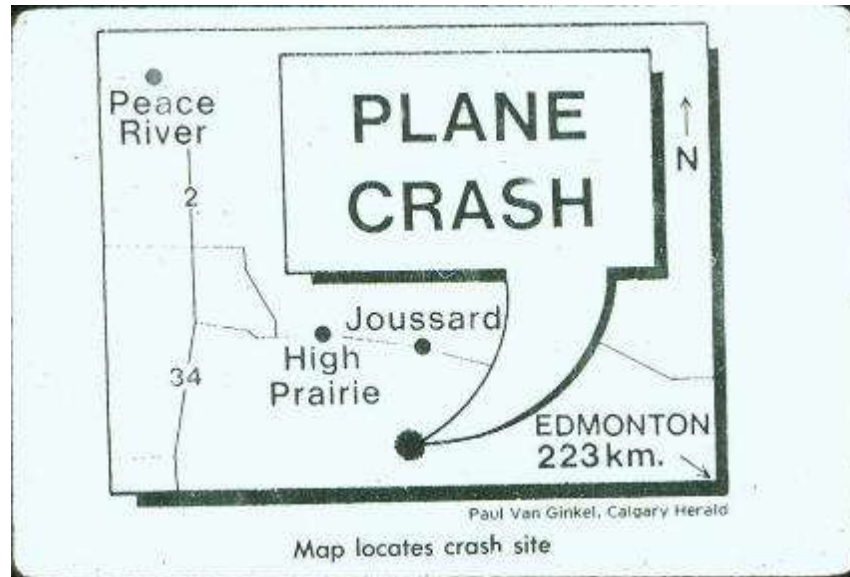
Usually required - it can be a caption in journal/magazine/newspaper articles

[http://www.wvu.edu/huxley/spatial/tut/what\\_all\\_maps\\_must\\_have.htm](http://www.wvu.edu/huxley/spatial/tut/what_all_maps_must_have.htm)



2. **Scale** is **required** – it explains the amount of reduction

No scale = it's a diagram, not a map



## 2. Scale

- Scale must be given on the map / display
- it is usually placed near the bottom of the map
- *Verbal statement*, ratio or graphic bar (best for output)



- Use round numbers
- Subdivide as appropriate
- Use appropriate units e.g. 1km not 1000m

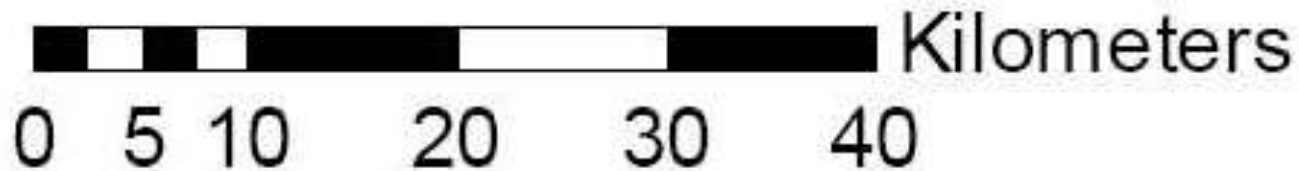


# Examples of scale bar abuse (#1 ArcMap error)

The least worst

Kilometres ...

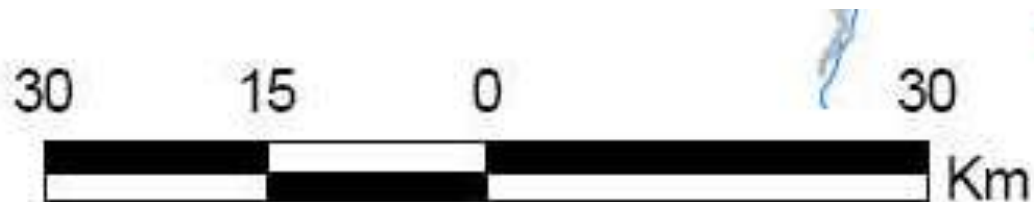
A-



B



B-



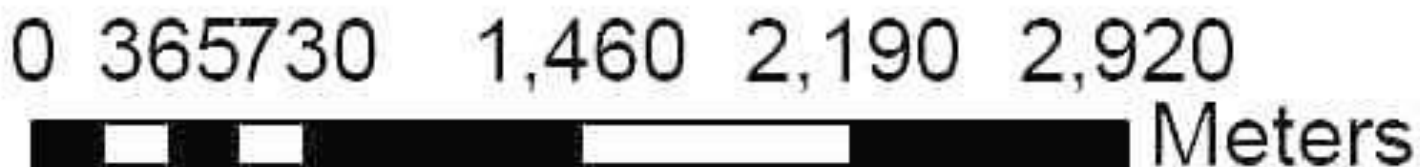
C

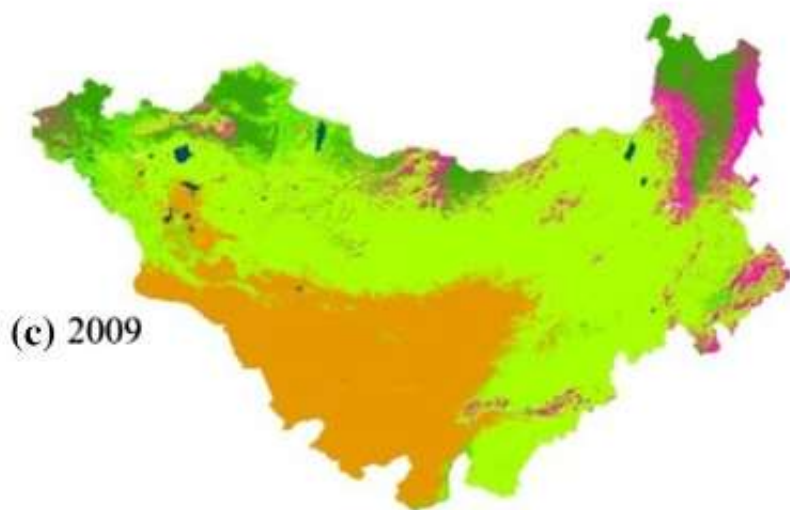
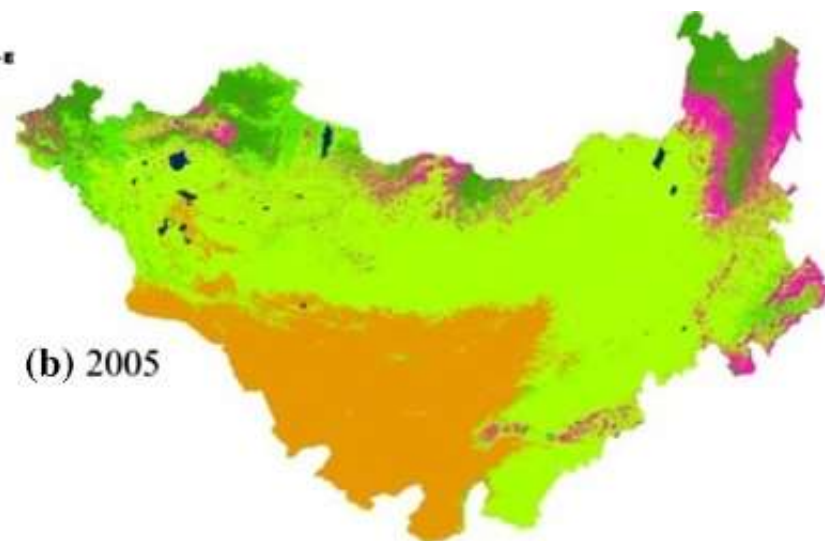
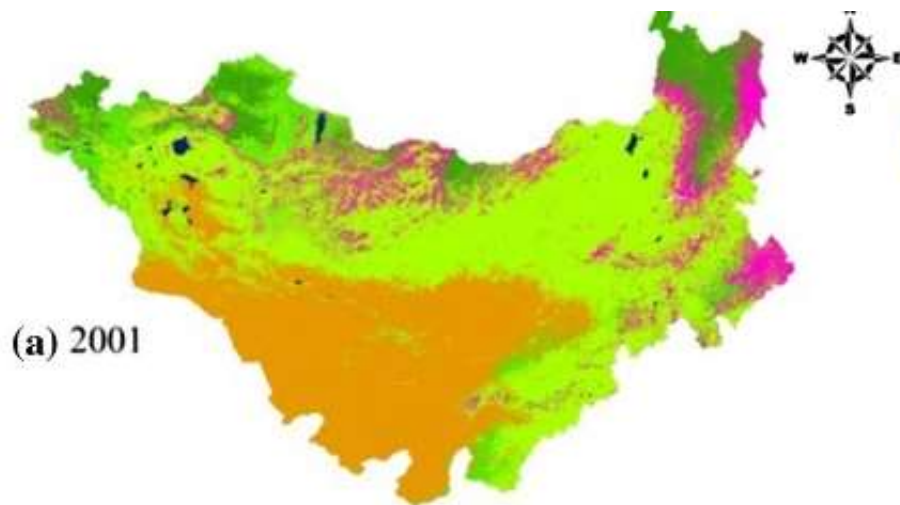


D



F-





**Legend**

- |            |                   |
|------------|-------------------|
| Forest     | Bare land         |
| Shrub land | Construction land |
| Grassland  | Wet land          |
| Cropland   | Others            |

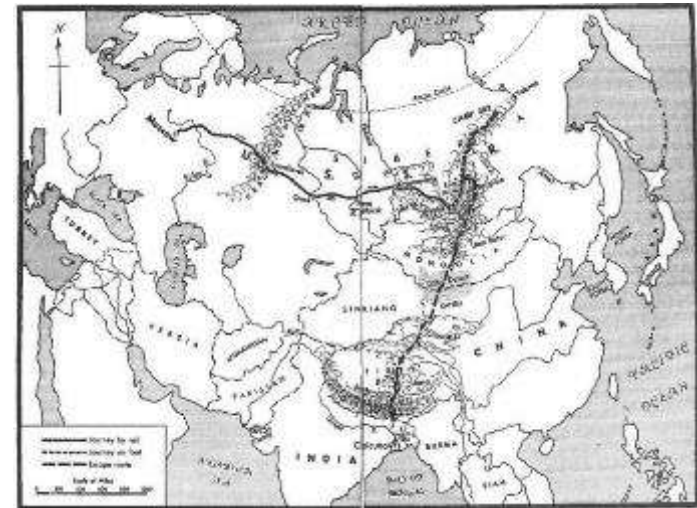
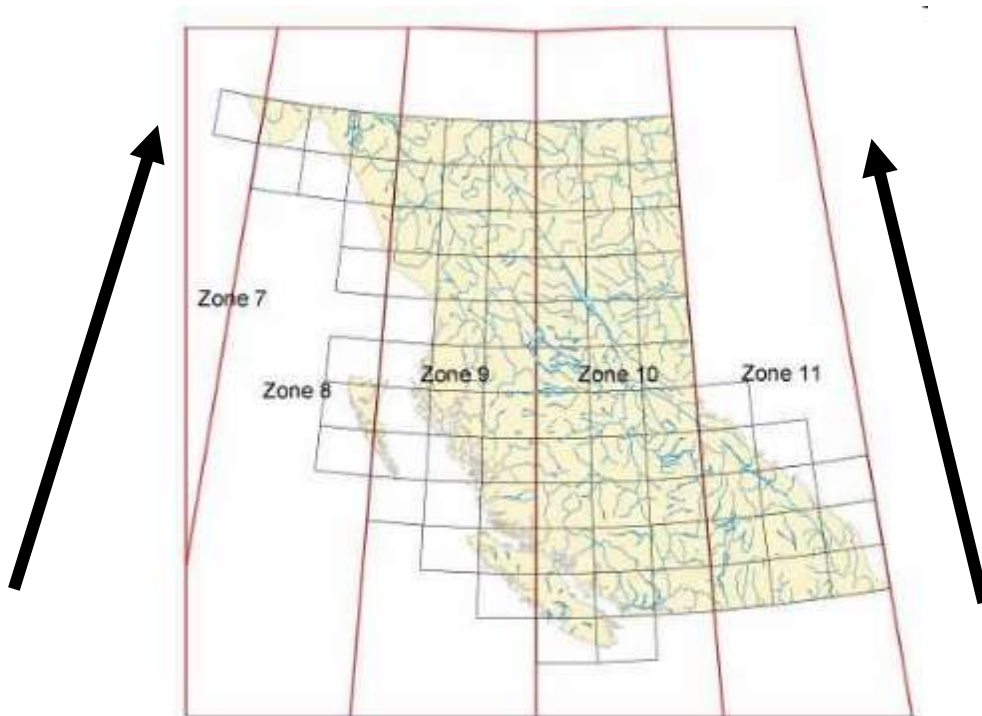
0 437,500 875,000 1,750,000  
Meters

## 4. Direction

A North arrow is optional if it is clear that (true) North is to the top

If North is not to the top, a North arrow is a **MUST**

A North arrow is wrong for some maps





# True north and Grid north

Canada

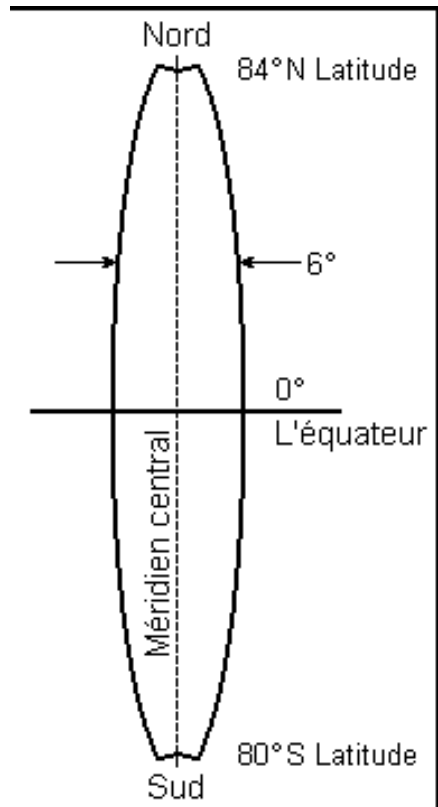
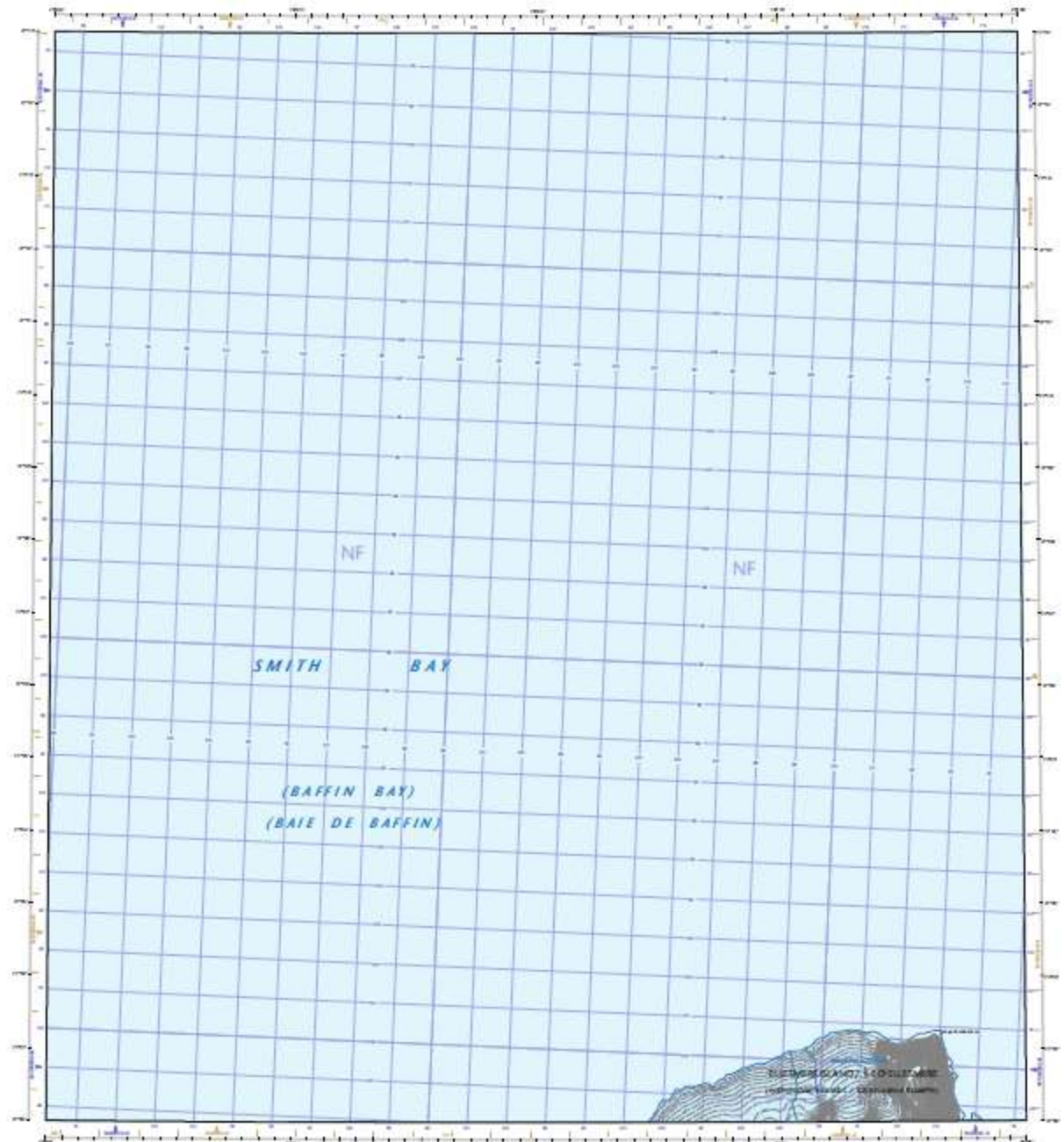


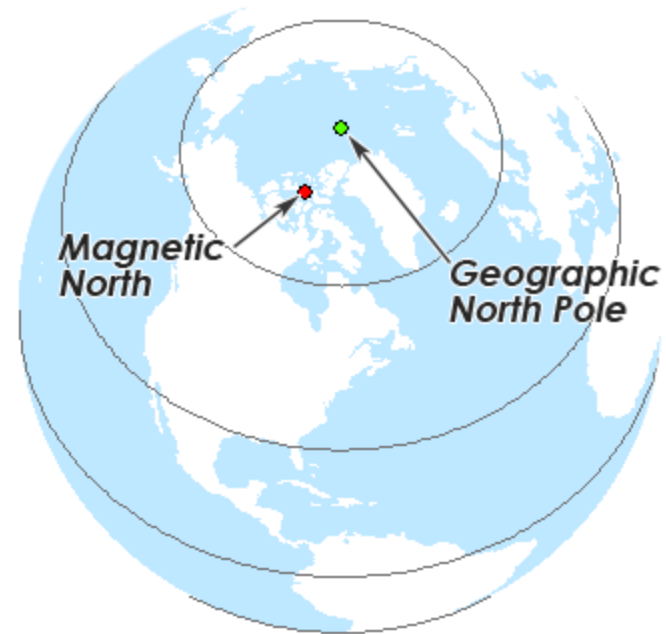
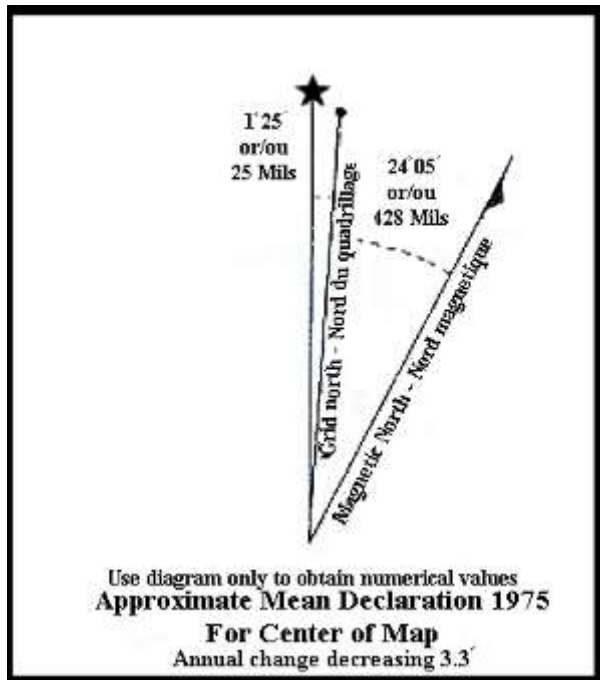
Figure 1 - Zone UTM



## Magnetic North

There are 3 'Norths'

The compass points to the magnetic north pole, not the 'true' north pole or grid north



The difference between magnetic north and true north is the **declination**



# THE NORTH POLE IS MOVING TO RUSSIA



40km/year



#### 4. Border – neatline

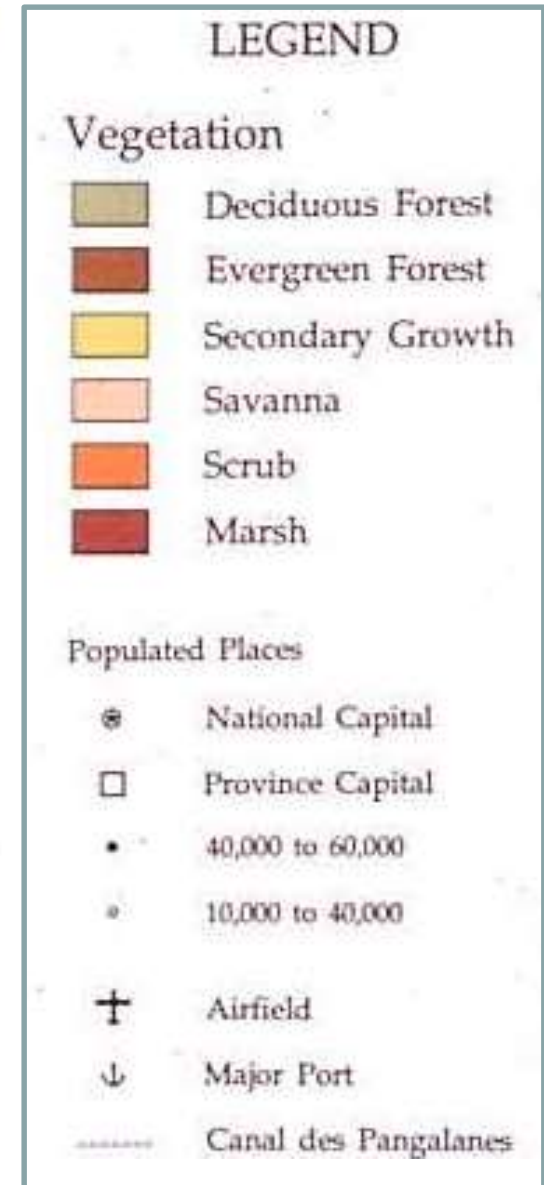
also for legend – see next one





# 5. Legend












- Symbols should be in the legend unless explained by lettering e.g. lakes
- Symbols must appear in legend exactly as on map, same colour, size etc..
- Symbols on the left, labels on the right (so they line up nicely)
- Boxes for area symbols
- Optional box for legend
- Capitalise the first letter



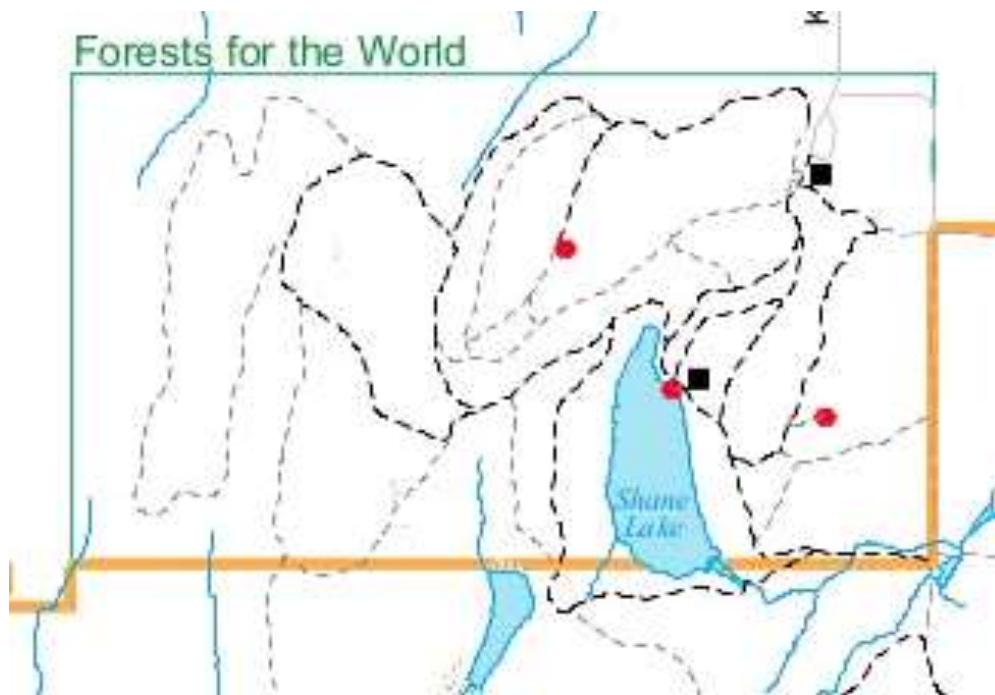
# No 'ziggie-zaggies' ... (early versions of ArcMap)

Line symbols should be a straight or gently curved section

## Boundaries

	Federal Electoral District Boundaries		Main Trail		Logging Block
	International		Block Trails		Gravel Pit
	Provincial / Territorial		Hell Trail		
	EEZ (200 mile)				
	Canada / Kalaallit Nunaat dividing line				

Alternate polygon design



## Legend

- Viewing Platform
- Picnic Shelter
- Pathway
- - - Trail
- Campus Road
- Gravel Road
- Paved Road
- └ Parking Lot
- Building
- Marsh

Do not take software defaults which includes all layers  
... no need to include the obvious e.g. lakes

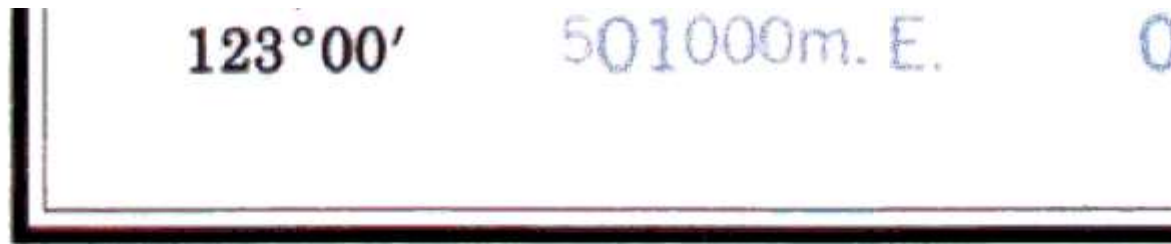
## Legends

<http://resources.arcgis.com/en/help/main/10.1/index.html#//00s900000023000000>

## 6. Data source

A set of statements usually at the bottom in small text explains how the data were derived, and when

Not required for common base data e.g. coastlines



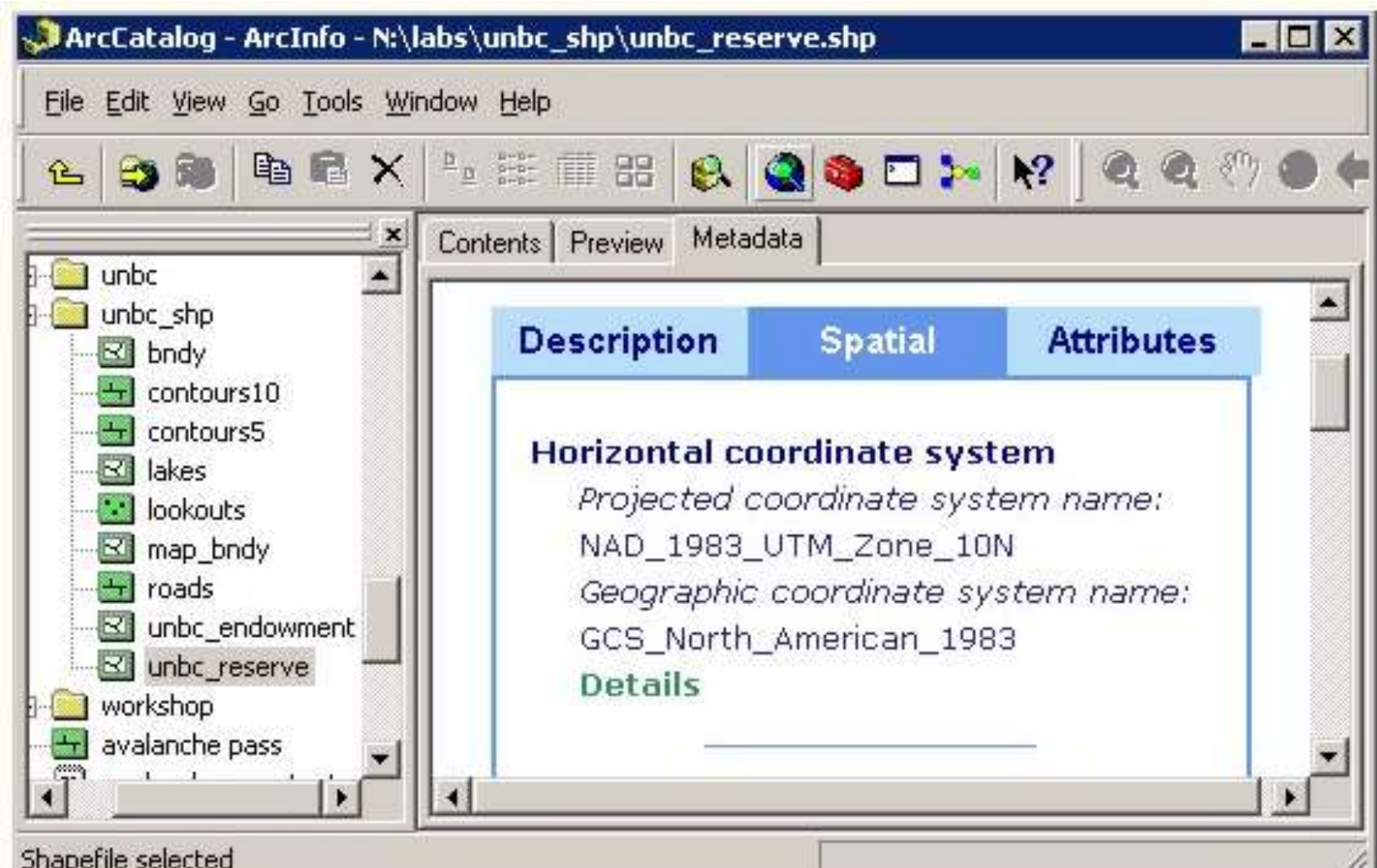
Produced by the SURVEYS AND MAPPING BRANCH,  
DEPARTMENT OF ENERGY, MINES AND RESOURCES,  
from aerial photographs taken in 1980. Culture check 1982. Published  
in 1985.

Canada examples – photos 1980, culture check 2020



# Data source: GIS / digital mapping: 'Metadata'

**Metadata** = 'data about data' - how, when, where etc.. (often stored in a text file)



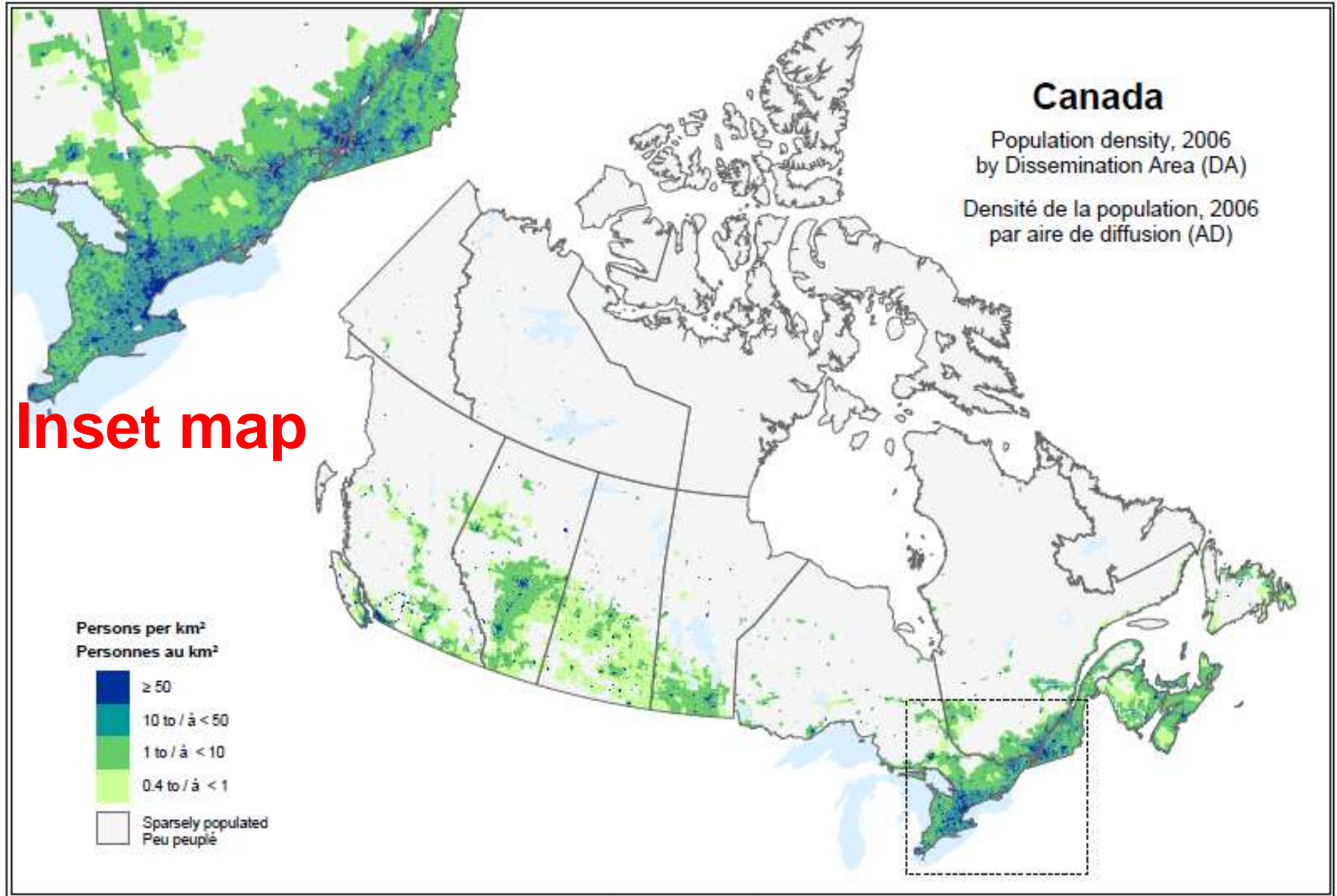
# 7. Location

- a. Direction / distance indicators (e.g. x kms to Edmonton)
- b. Locator maps, including scale of locator /inset
- c. Grids showing latitude and longitude (or UTM)



Locator map

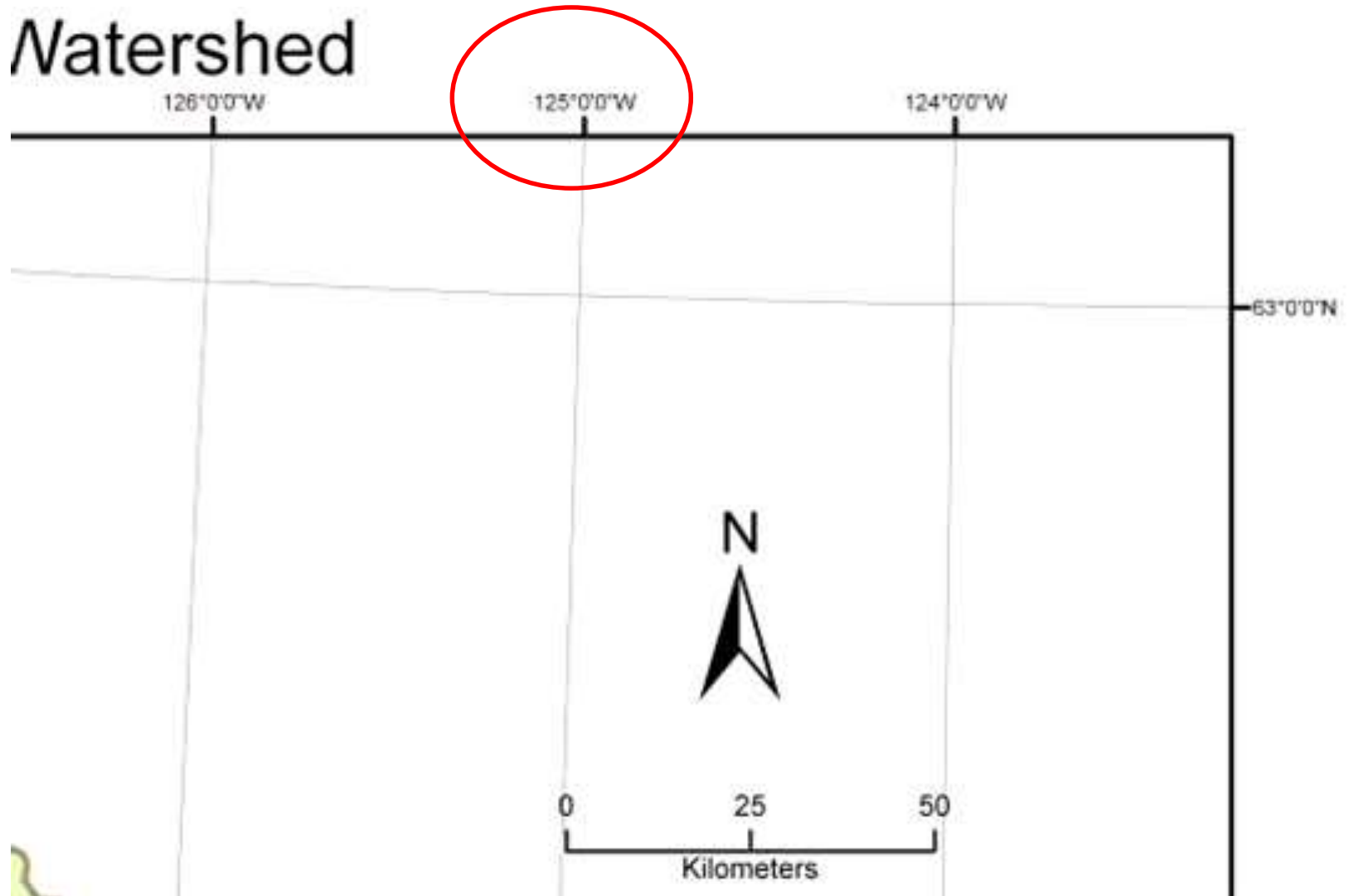
An inset map is the opposite of locator map – zooms in on an area with more detail



# Grid labels: common ArcGIS error #3

## software default: silly graticule precision

Watershed





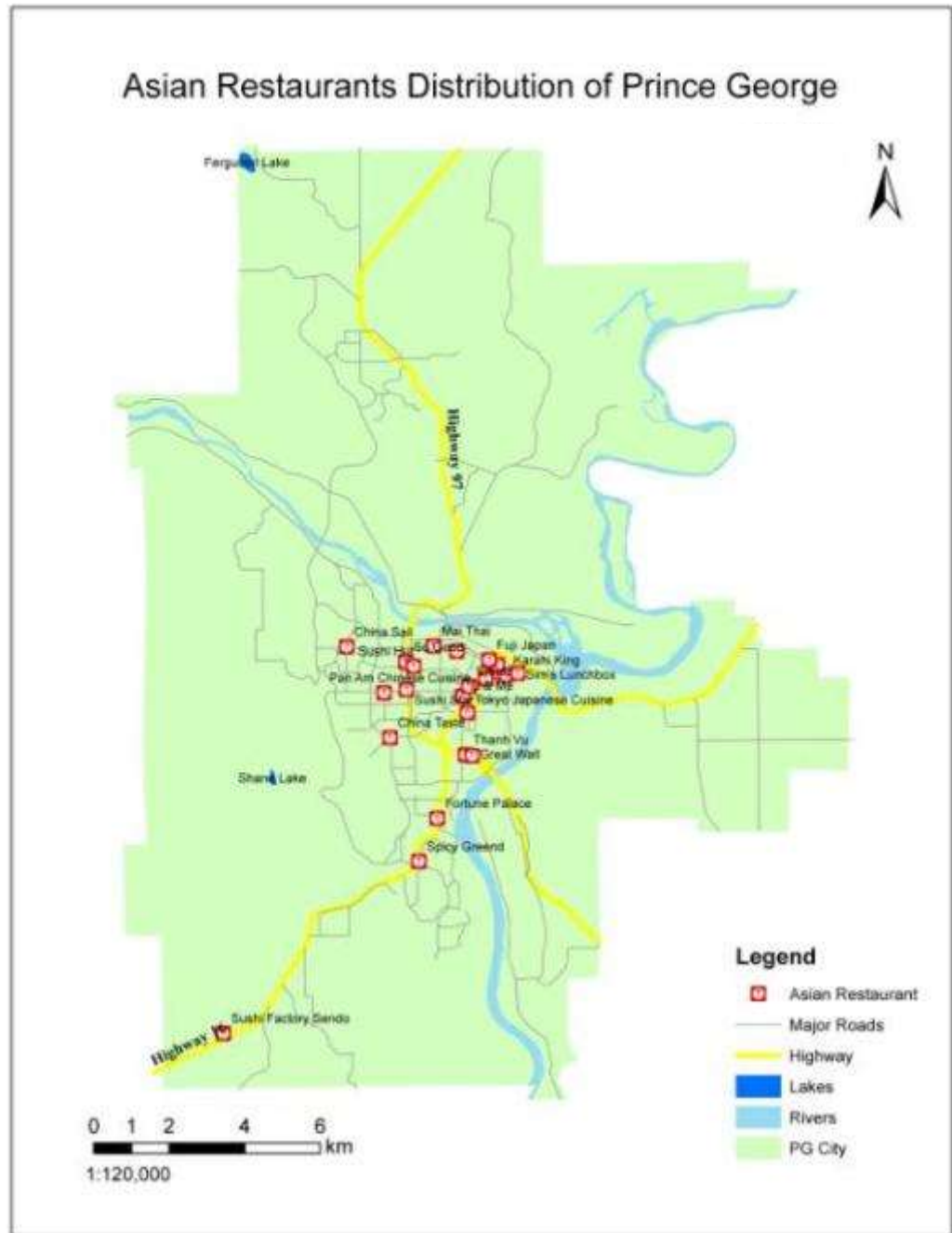
## 8. Overall Layout

Optional) 'neatline' around the map as a whole and/or the legend

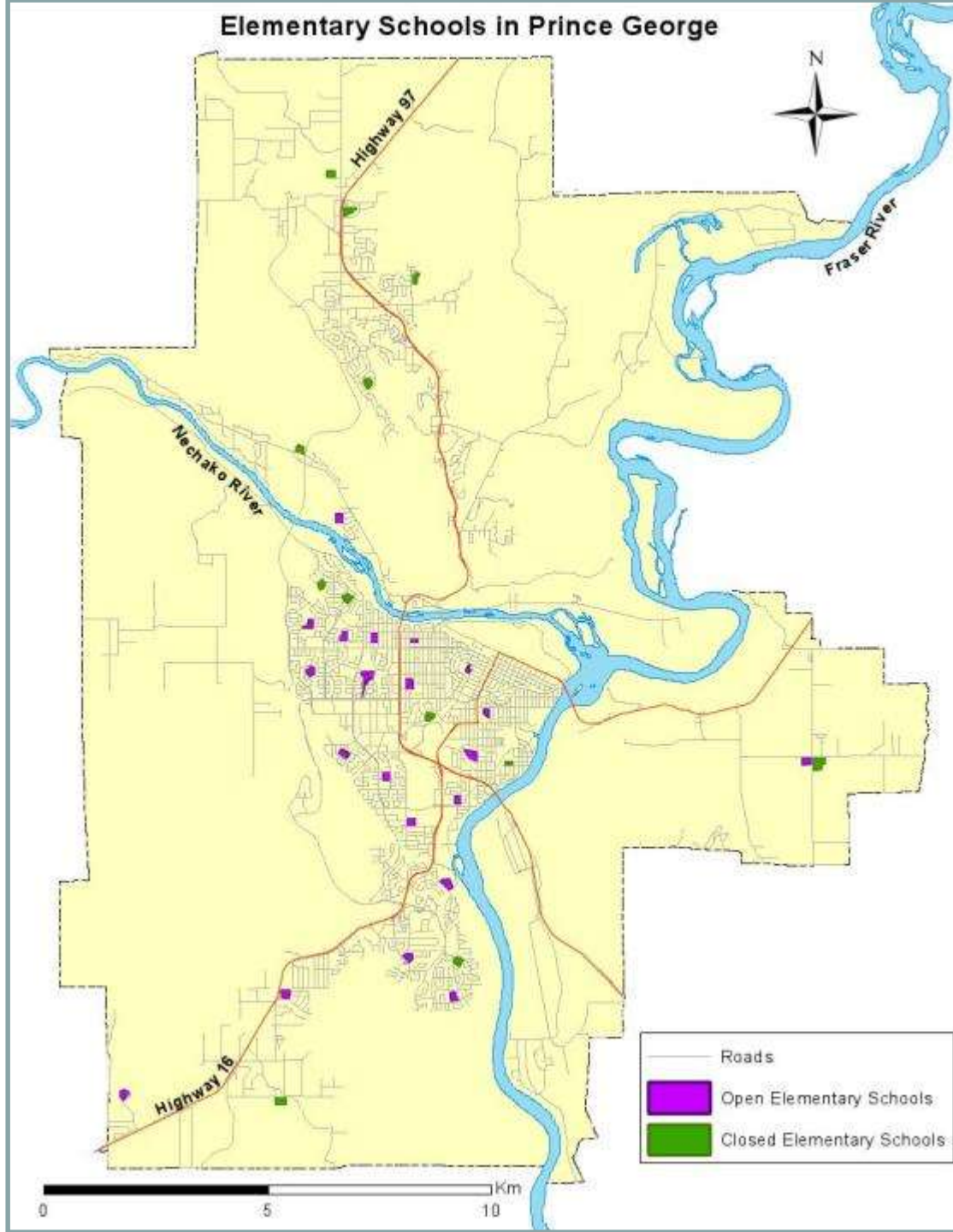
Use space wisely –don't waste white space

Maximise map content space – use white area for ancillary info

This map could be bigger



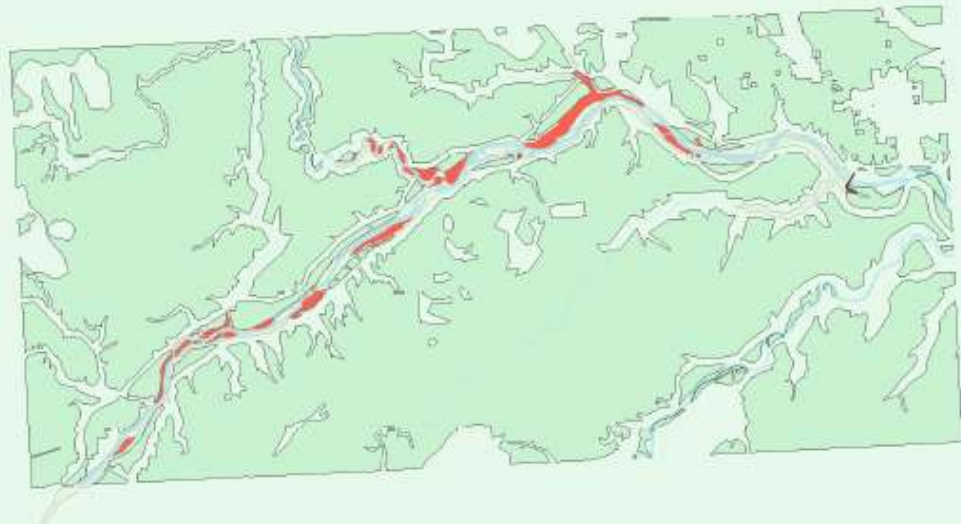
This one works ...  
... better



This could  
hardly be  
worse ...



British Columbia's Site C Dam Land Effect



0 5 10 20 Kilometers

### Important Features

- Site C Dam
- Rivers
- Reservoir Boundary
- Agriculture Land Within Floodzone
- Agriculture Land Reserve

# Map page layout

- **Rectangle ~3 x 2 preferred over a square**
- **Landscape v portrait orientation**
- **Letter v tabloid v poster (if printed)**



# Ancillary map content summary: visual position and prominence

	Item	Best Position
<b>TITLE</b>	what?	Prominent, near top
<b>SCALE</b>	how big?	Near bottom
<b>LEGEND</b>	what (details)?	On side, may be boxed
<b>DIRECTION</b>	which way is up?	Side
<b>LOCATION</b>	where?	Side ticks, or insert
<b>SOURCE</b>	where from?	Very bottom, inconspicuous
<b>LAYOUT</b>	Shape and space	Visual Balance, Neatline etc

Good summary for ancillary map information:

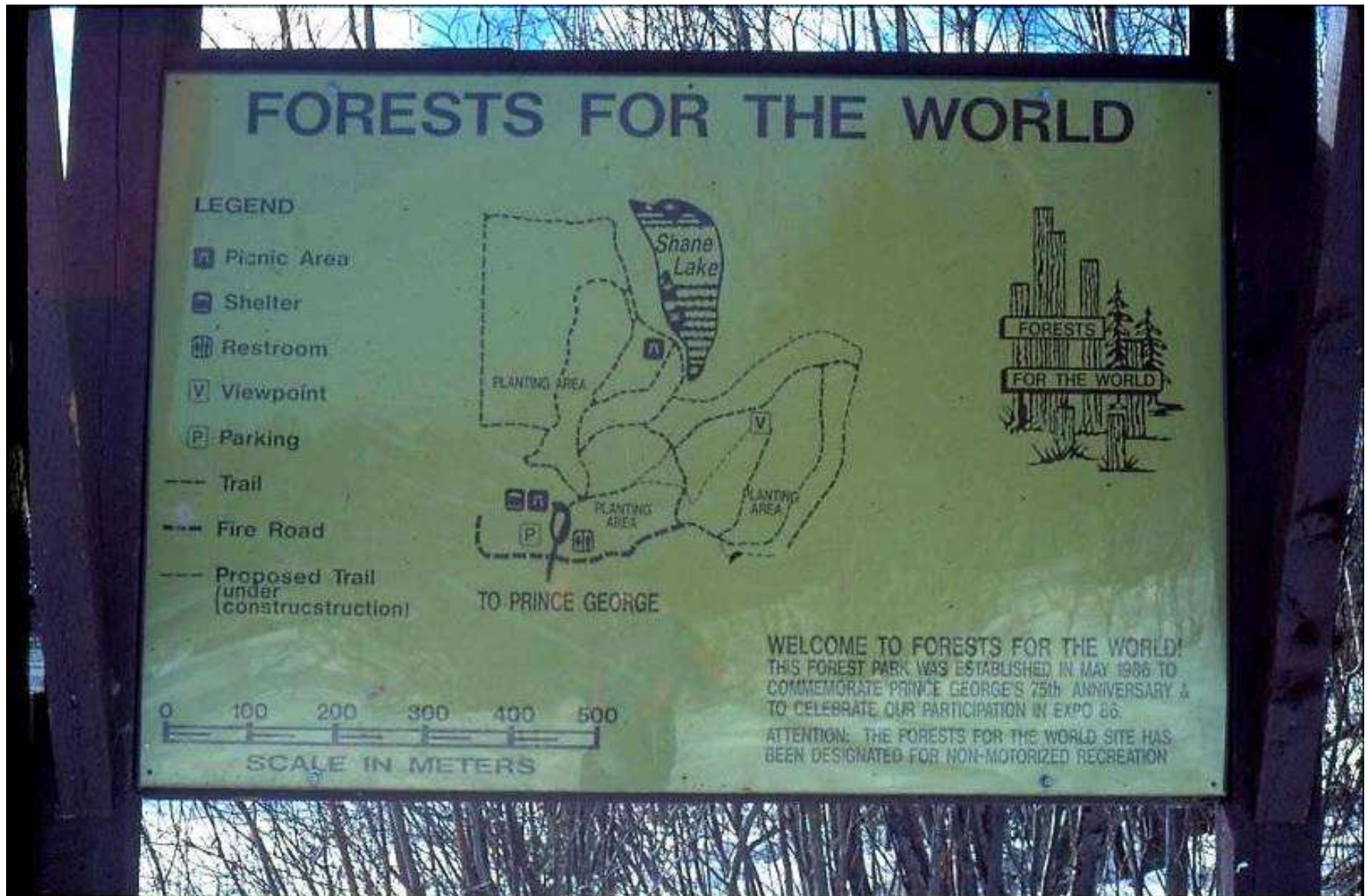
[http://www.wvu.edu/huxley/spatial/tut/what\\_all\\_maps\\_must\\_have.htm](http://www.wvu.edu/huxley/spatial/tut/what_all_maps_must_have.htm)

# Summary of common ancillary info errors

- Too much white space; maximise map content
- Fit ancillary in the spaces, extra panel only if needed
- Scale Bar – avoid silly subdivisions and numbers
- Coordinate ticks – remove false precision
- Legend – remove unneeded layers from legend
- Ancillary information too prominent, should be smaller

# Design and ancillary information - local example

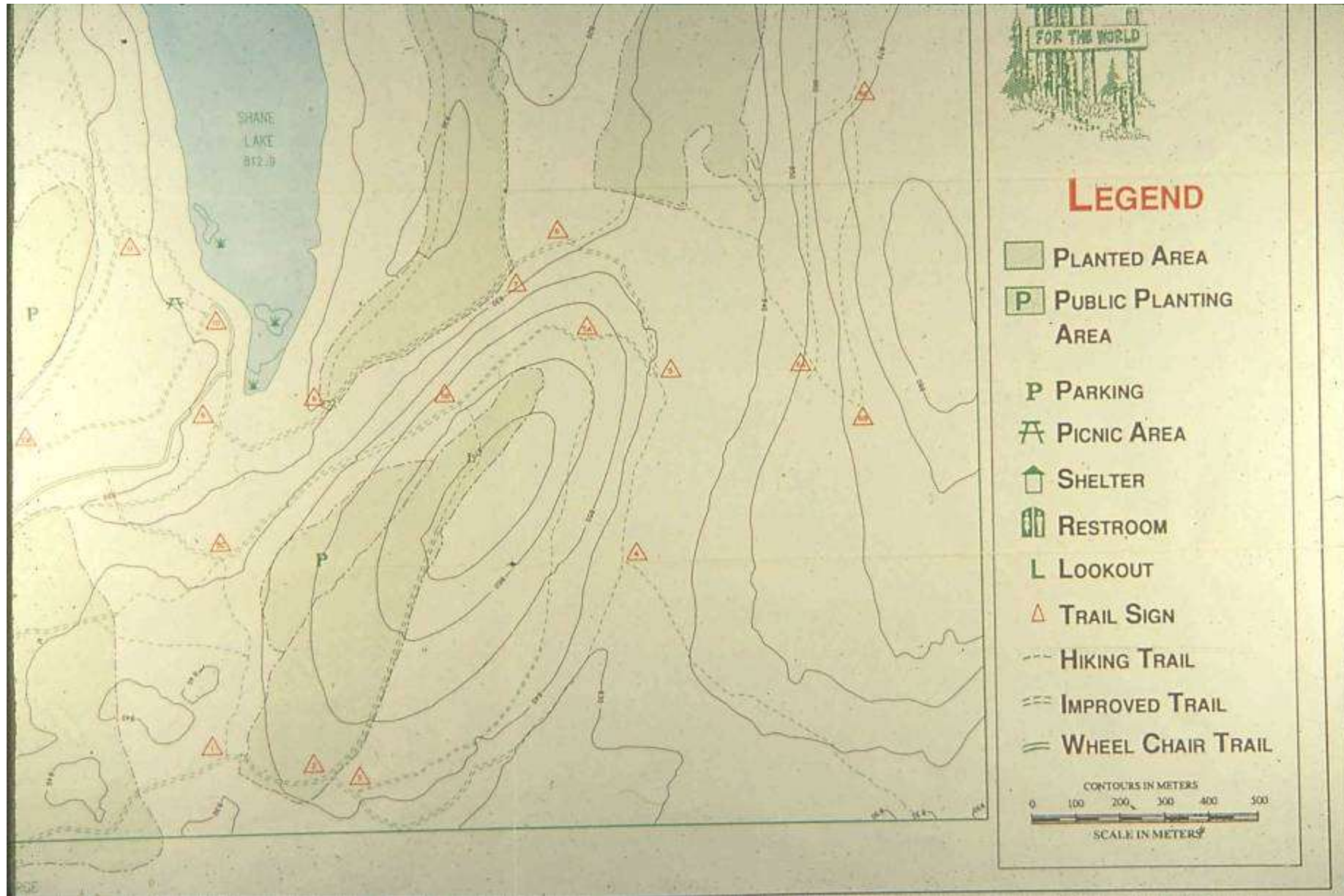
## Forests for the World 1986-95



Scale bar size, north to the bottom



1993-96



Scale bar size incorrect, north to the bottom, P and P

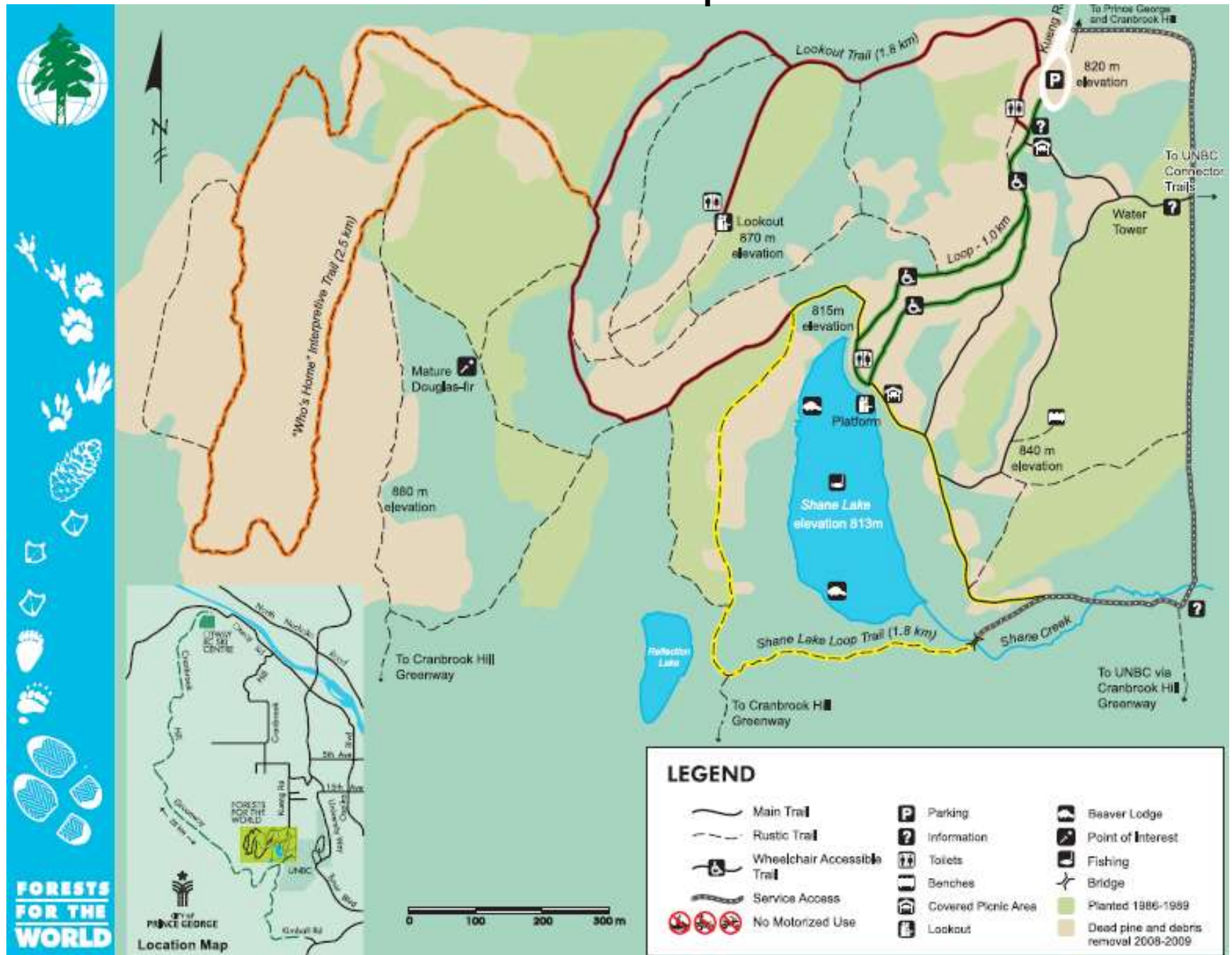


# 1997- 2010



Redesigned by UNBC GEOG205 student, fall 1994 - the only one who had a computer !

# 2010 – includes mountain pine beetle blocks





# Trails of Prince George: *Forests for the World*

===== Major Trail	===== Main Trail	• Map, Marker Post or Natural History Sign
- - - - - Secondary Trail		— Gate/Barrier
- - - - - Single-track Trail		▲ 840 m Spot Height, metres above sea level
- - - - - Route (may be overgrown)		☐ Picnic Shelter
— Wood Chipped Surface/Skid Line		Ren Natural History Panel Key Word
J3 Trail Junction Label: On Map only		

Data Sources:  
Shaded Relief, Contours, Lakes: City of Prince George Open Catalog,  
<http://princegeorge.ca/cityservices/online/oda/Pages/Terms.aspx>  
Map Design, Trail and Infrastructure Survey and Data Analysis by  
the map author, © Nancy Doreen Alexander  
Contact: [ndigart@gmail.com](mailto:ndigart@gmail.com)

Grid Tic Interval: 500 m  
Contour Interval: 5 m  
UTM Zone 10 N  
Datum WGS84

0 100 Metres

Grid North  
West ← → East  
South  
Magnetic Declination:  
18°51', 2011

To UNBC

Water Tower

Platform

Dock and Viewing Deck

Dock

Shane Lake  
813 m

Reflecton Lake

To Greenway Trail & UNBC Trailhead

To Greenway Trail

To Greenway Trail

To Greenway Trail

510000

511000

510500

5972000

5971500

5971000

807 m

Farmer

J3A

640 m

Who's Home

J3

844 m

832 m

J2

865 m

Lookout Viewing Platform

240 metres

841 m

J1

830 m

839 m

820 m

J13

839 m

820 m

850 m

Reno

885 m

Jack

J5

869 m

J4

832 m

J1A

827 m

J10

832 m

J11

820 m

J12

839 m

820 m

832 m

850 m

Pioneers

885 m

Highest spot in Prince George

827 m

J8

834 m

J7

827 m

J6

811 m

J12A

809 m

789 m

832 m

816 m

827 m

811 m

869 m

J6

834 m

J7

827 m

J8

832 m

J10

827 m

J11

820 m

J12

839 m

820 m

839 m

820 m

832 m

811 m

869 m

J6

834 m

J7

827 m

J8

832 m

J10

827 m

J11

820 m

J12

839 m

820 m

839 m

820 m

832 m

811 m