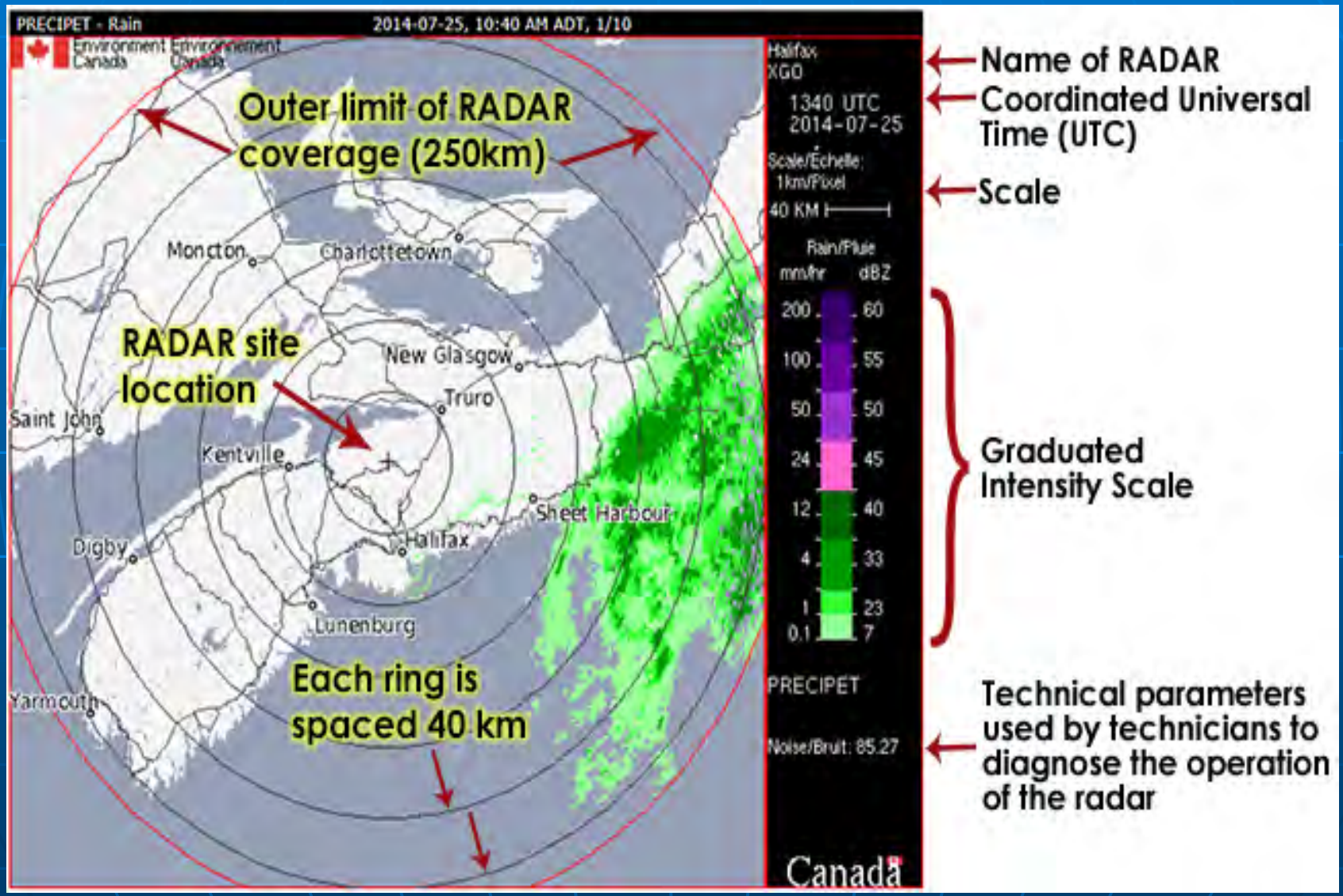
Radar Interpretation

Radar Sites in Canada

Regional Radar Example



Interpreting Radar Images

Figure 3
Influence of Terrain on Radar Reception

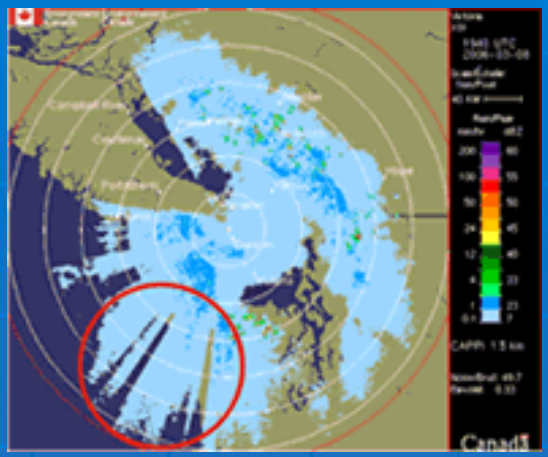
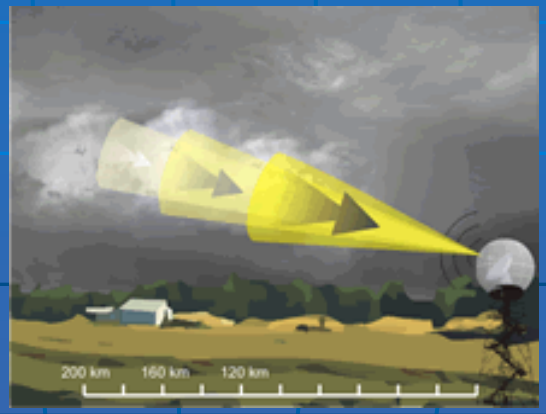


Figure 4
Beam Attenuation



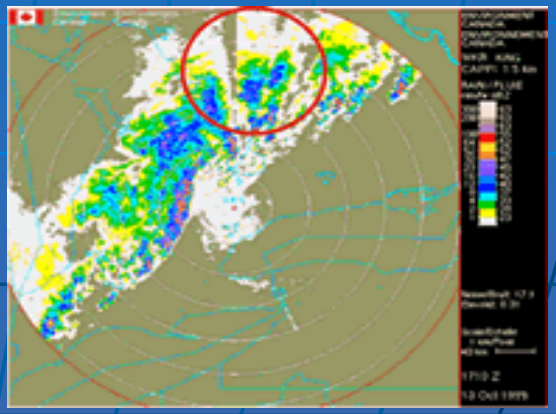
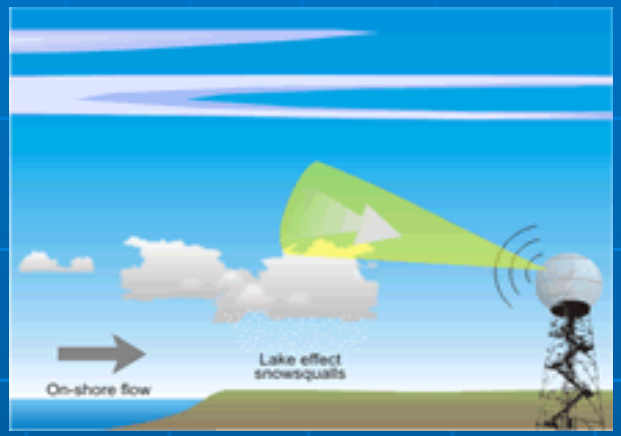


Figure 5
Overshooting Beam



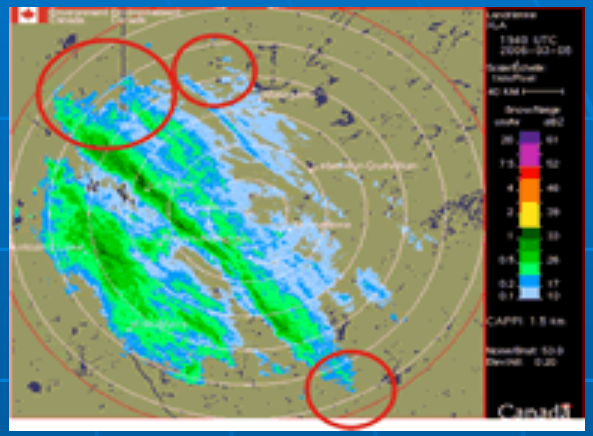
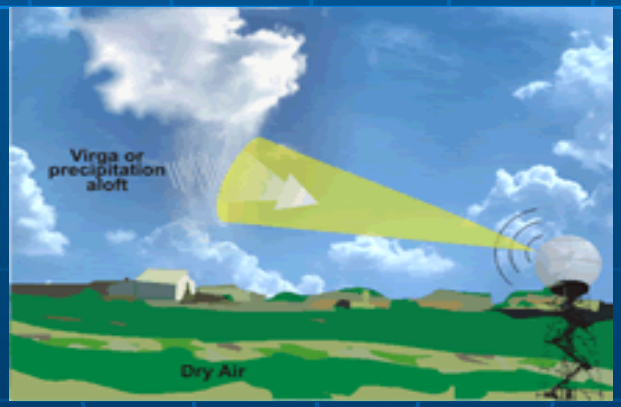


Figure 6
Virga



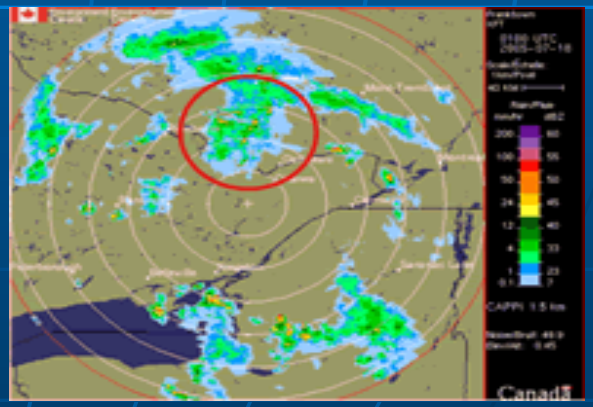
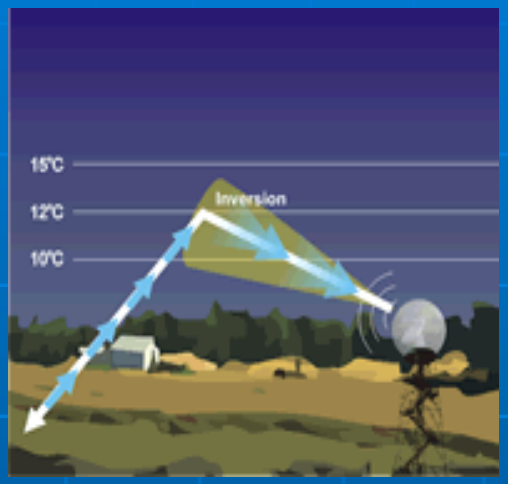
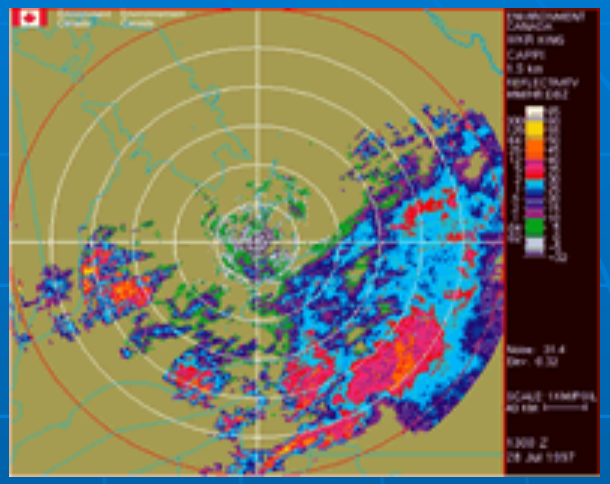


Figure 7
Anomalous Propagation





Ground Clutter

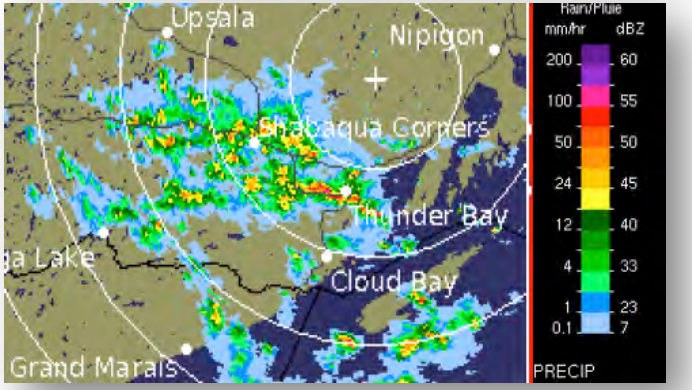
Figure 8
Electromagnetic Interference

WRM Assignment #3 Name(s)

Review of May 28, 2012 situation

See slides 8 to 14

Thunder Bay – Extreme Precipitation (May 28, 2012)



The total estimated cost of the Flood Event is $100 million CAD

- A rainstorm on May 28, 2012 **caused flash flooding** in and around the city of Thunder Bay.
- Rain showers associated with a thunderstorm began around **midnight on May 28, 2012**.
- Thunder and heavy/moderate rain showers occurred **for two hours**, with **70 mm recorded at the Airport** and **77 mm at the LRCA station** next to the Neebing River.
- The heavy rains and flooding of May 28 **closely followed another heavy rain event** on May 24 of 51.5 mm.
  - The **landscape in and around the City was saturated** and subsequent days with more rain continued very wet ground conditions with **a high water table**.
- Available records suggest that the May 28 situation **reached 100-year status more quickly than any other historical storm.**

G. Saunders (201

Weather conditions late evening on May 27

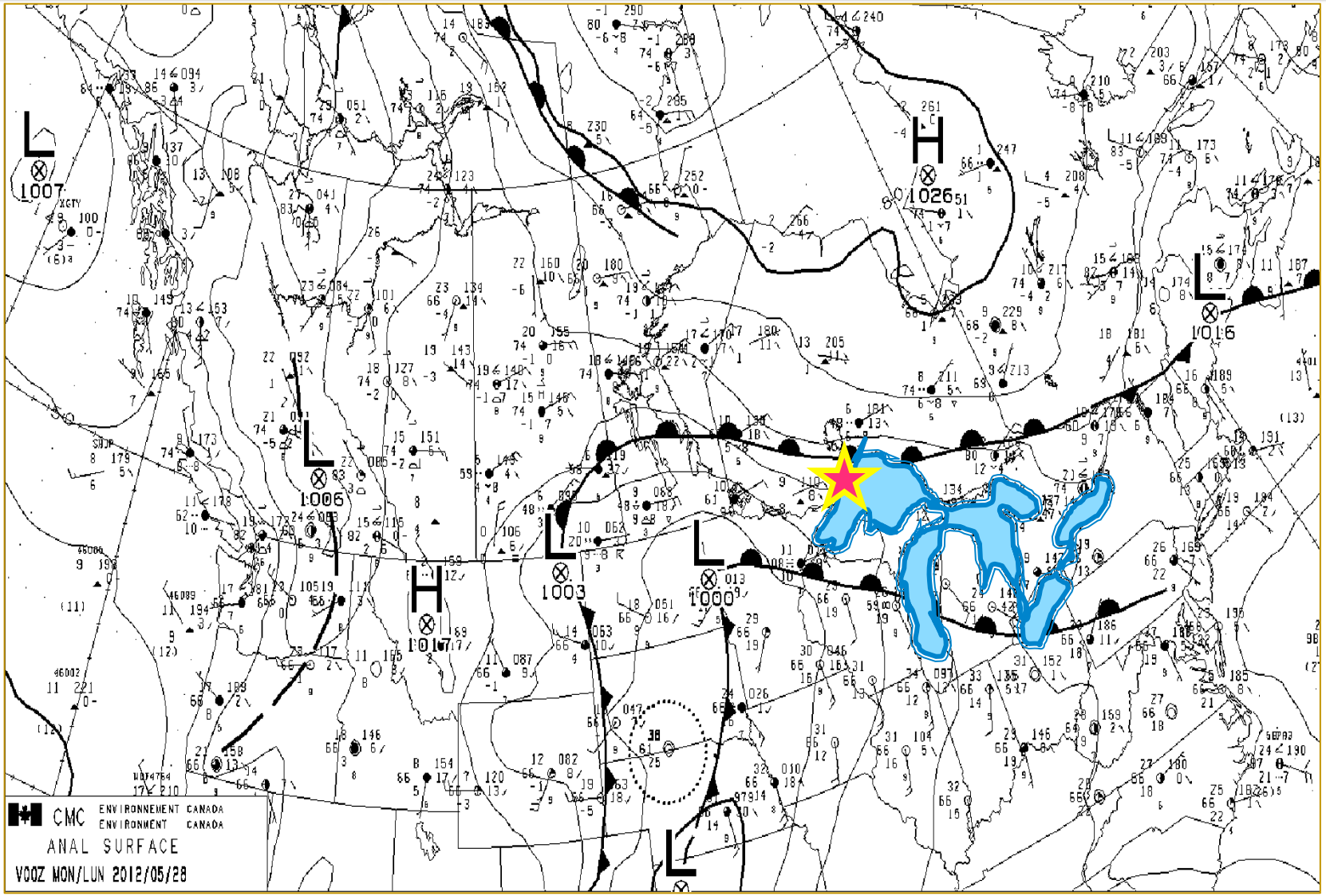
A low-pressure system and associated warm front moved from western Minnesota to southwest of Thunder Bay.

Environment Canada Forecast at 4 PM

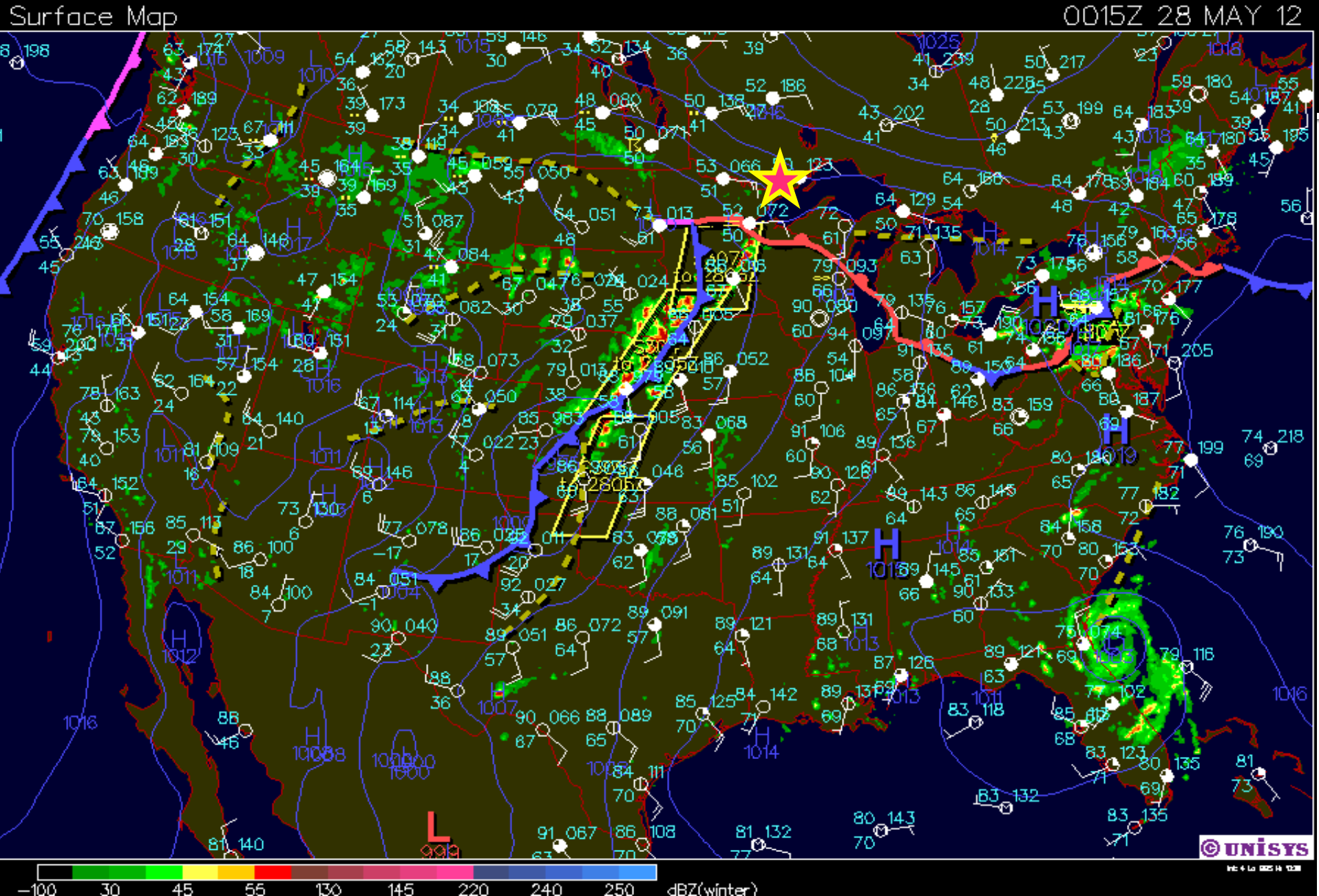
SUNDAY 27 MAY 2012

TONIGHT..SHOWERS WITH RISK OF A THUNDERSTORM. AMOUNT 10 TO 15 MM . . .

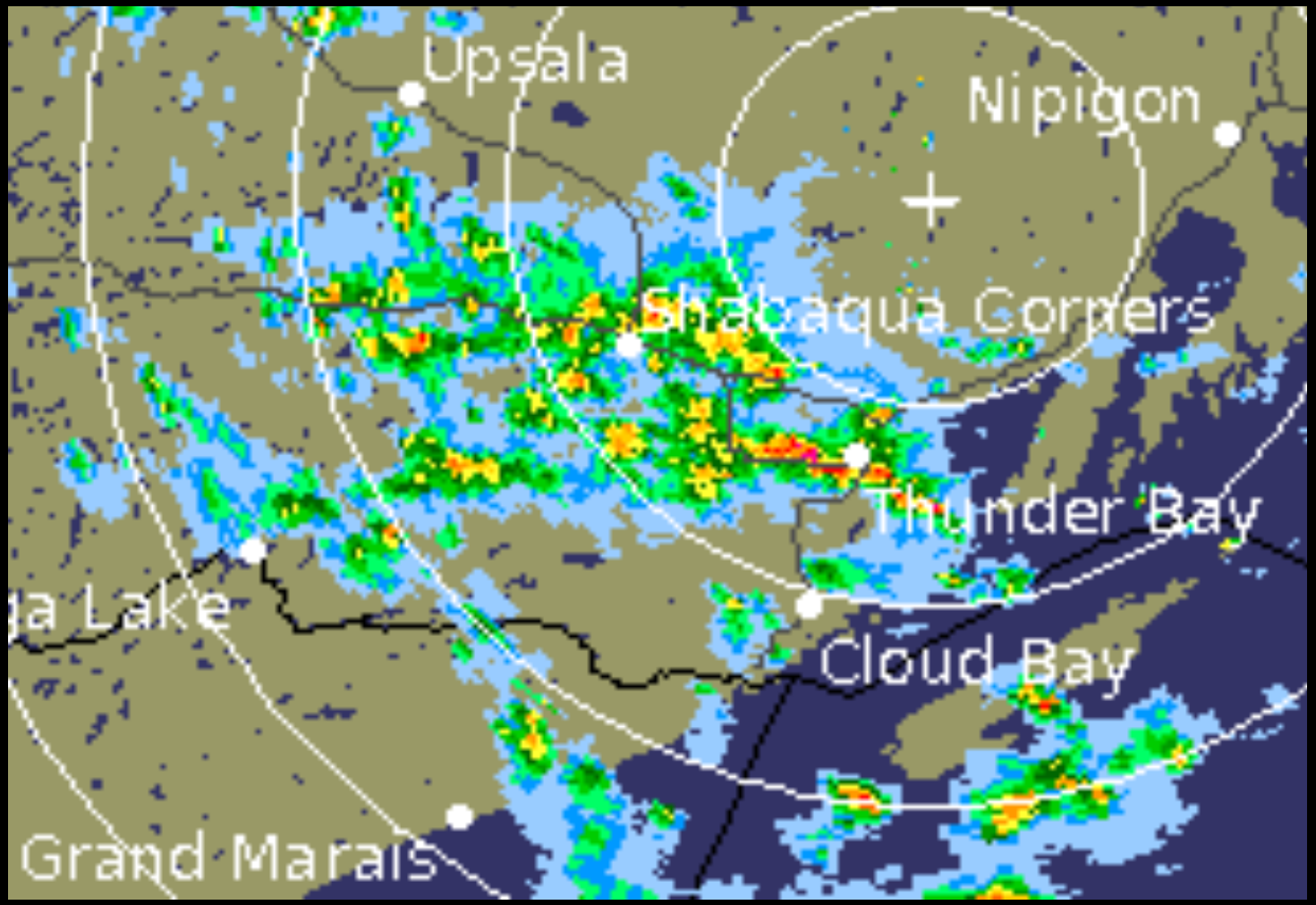
Surface analysis: May 27 at 2000 (8 p.m.)



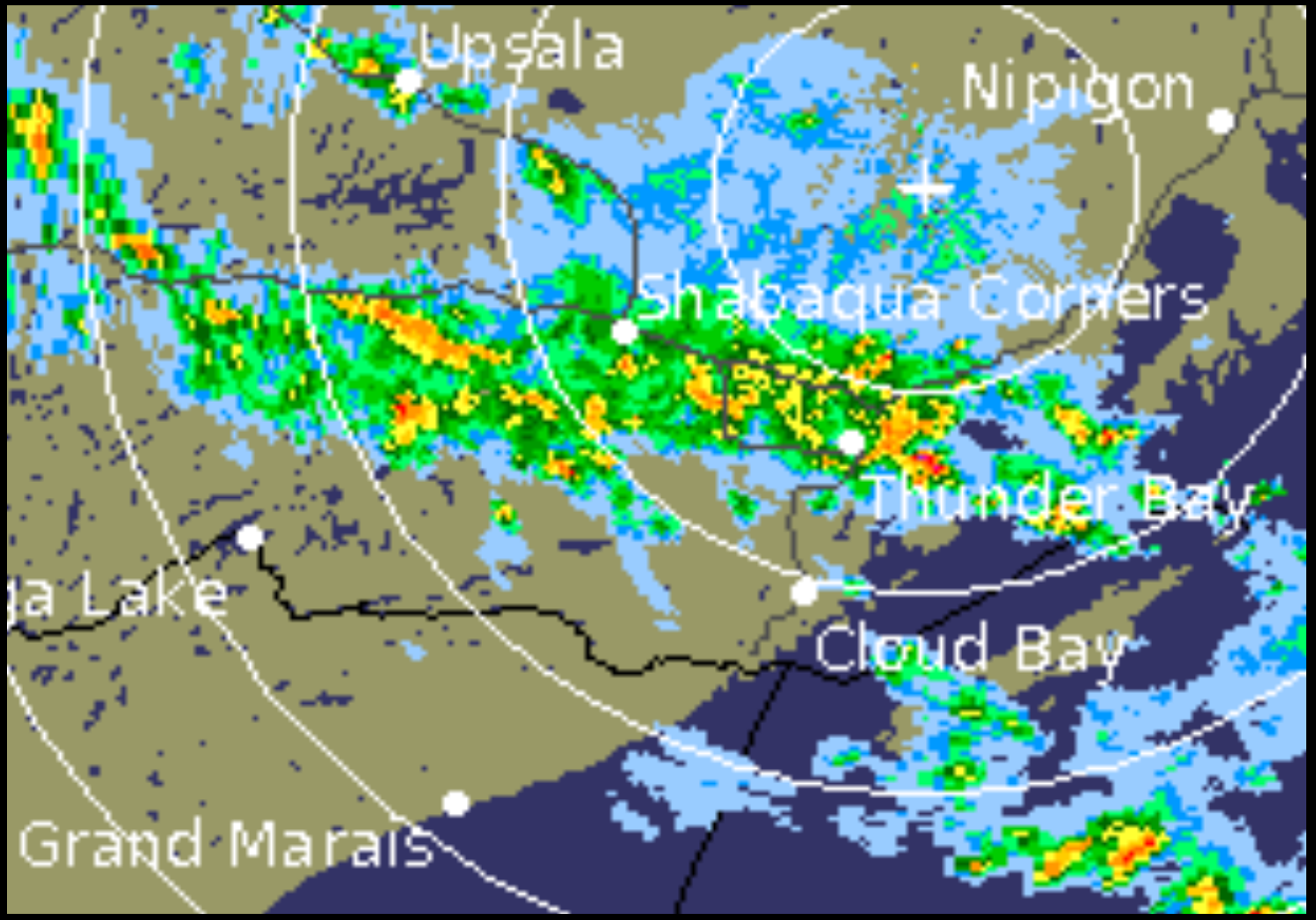
Surface Analysis: May 27 at 2015 (8:15 p.m.)

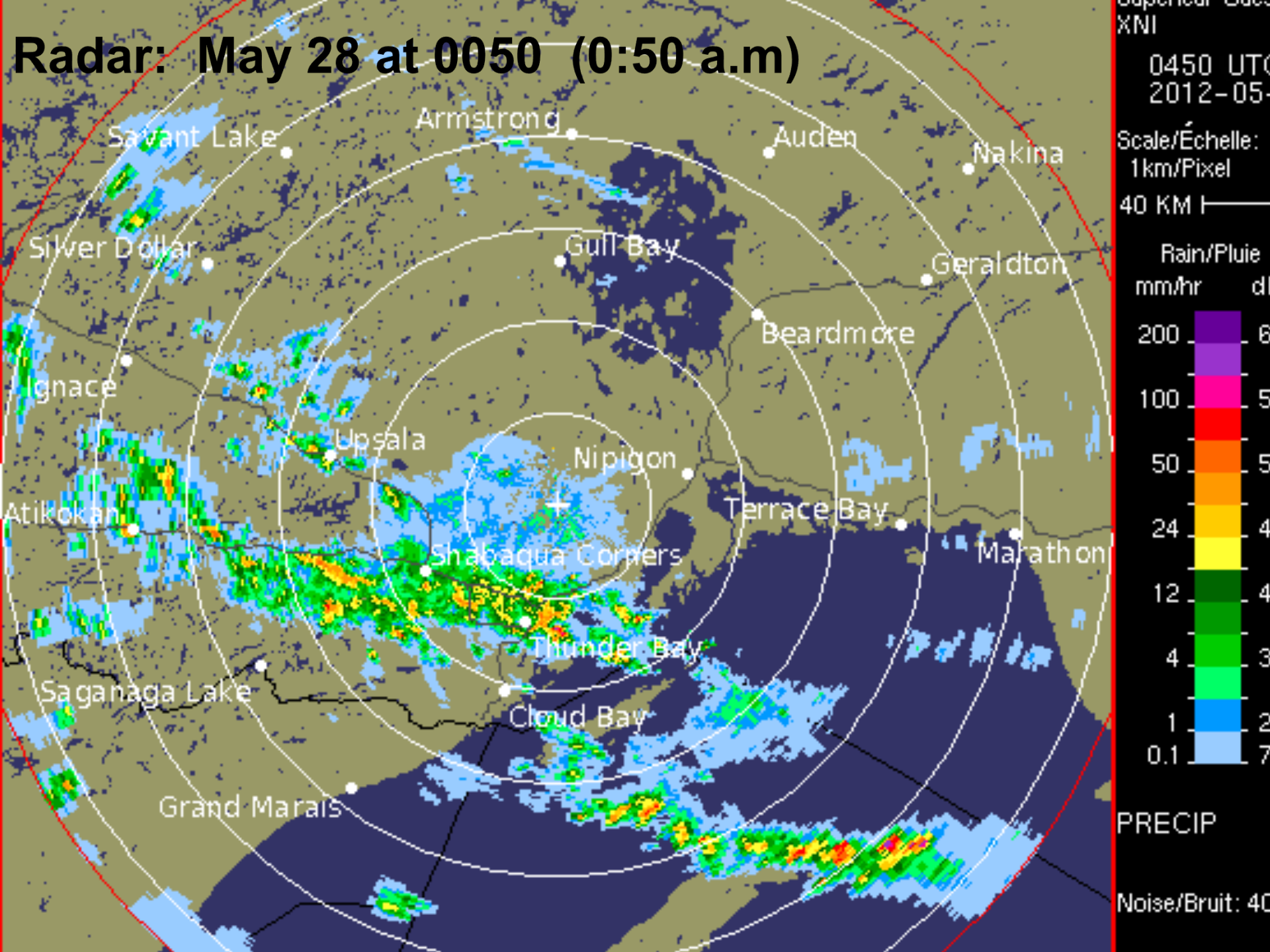


Radar: May 28 at 0010 (00:10 a.m.)



Radar: May 28 at 0030 (00:30 a.m.)



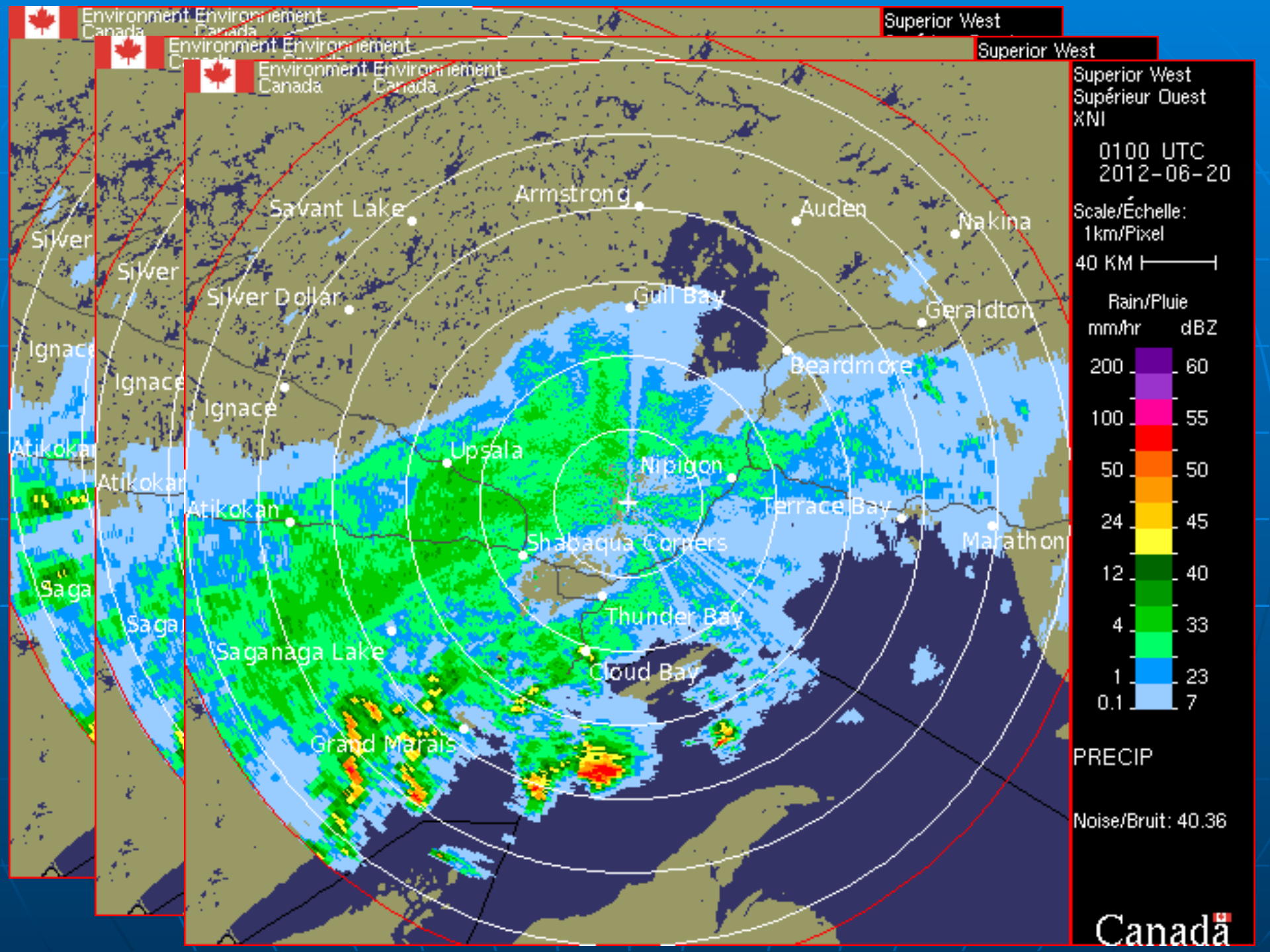

Radar: May 28 at 0050 (0:50 a.m)
Savant Lake
Armstrong
Auden
Nakina
Silver Dollar
Gull Bay
Geraldton
Beardmore
Ignace
Upsala
Nipigon
Atikokan
Terrace Bay
Marathon
Shabaqua Corners
Thunder Bay
Saganaga Lake
Cloud Bay
Grand Marais
XNI
0450 UTC
2012-05-
Scale/Échelle:
1km/Pixel
40 KM
Rain/Pluie
mm/hr
200
100
50
24
12
4
1
0.1
PRECIP
Noise/Bruit: 40

WRM Assignment #3 Name(s)

Scenario A

Slides 16 (cascade)

Slides 17, 18, 19


Environment Canada
Environnement Canada
Superior West
Supérieur Ouest
XNI
0100 UTC
2012-06-20
Scale/Échelle:
1km/Pixel
40 KM
Rain/Pluie
mm/hr
dBZ
200
100
50
24
12
4
1
0.1
60
55
50
45
40
33
23
7
PRECIP
Noise/Bruit: 40.36
Savant Lake
Armstrong
Auden
Nakina
Silver Dollar
Gull Bay
Geraldton
Beardmore
Ignace
Upsala
Nipigon
Atikokan
Terrace Bay
Shabaqua Corners
Marathon
Thunder Bay
Saganaga Lake
Cloud Bay
Grand Marais
Canada


151-UXP

WRM Assignment #3 Name(s)

Scenario A (Slides 16 to 19)

What is your main concern(s)?

Who do you inform and in what order?

What information do you obtain?

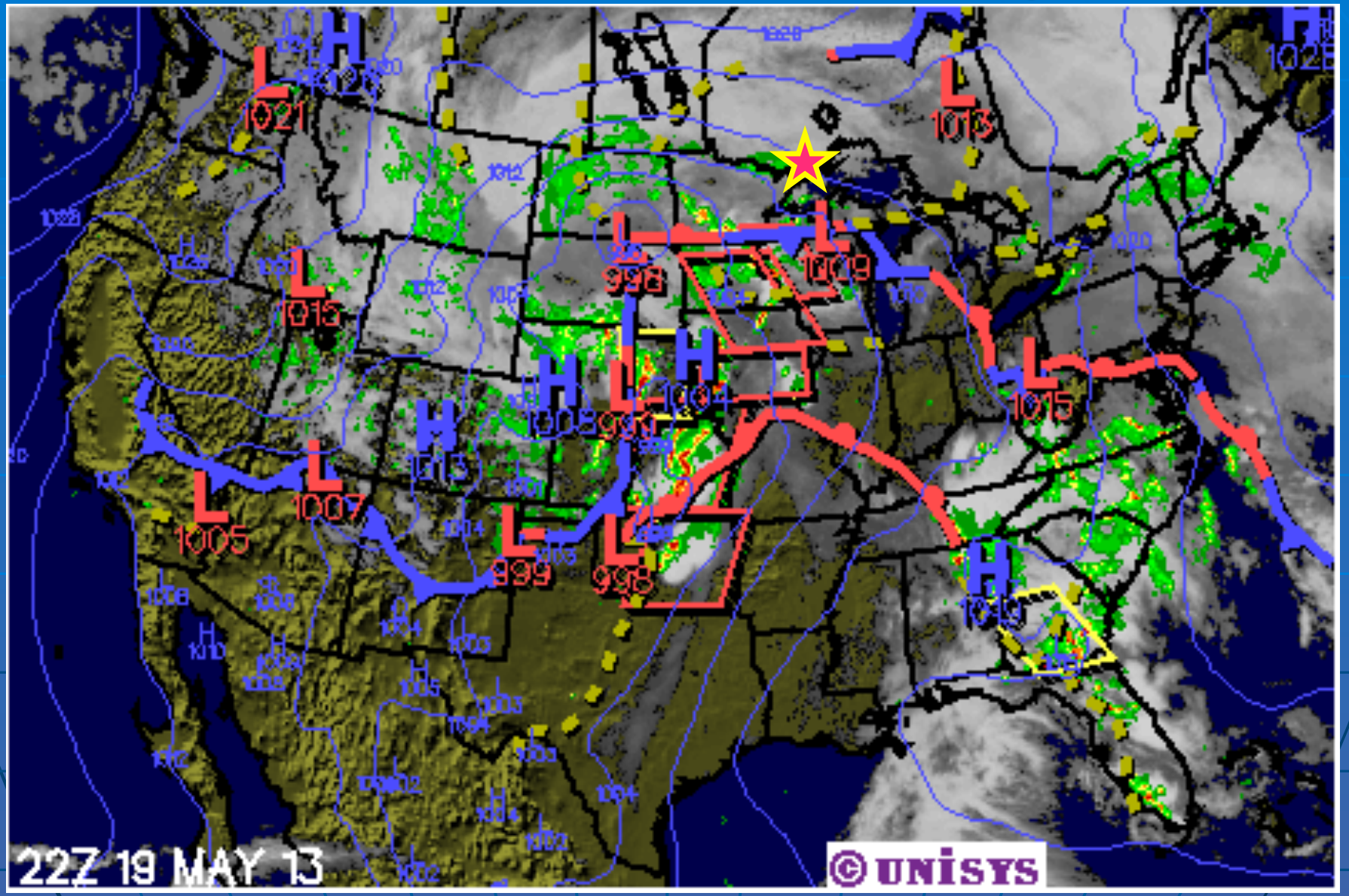
Scenario B (Slides 21 to 23)

Is the "B" scenario similar to the previous situations?

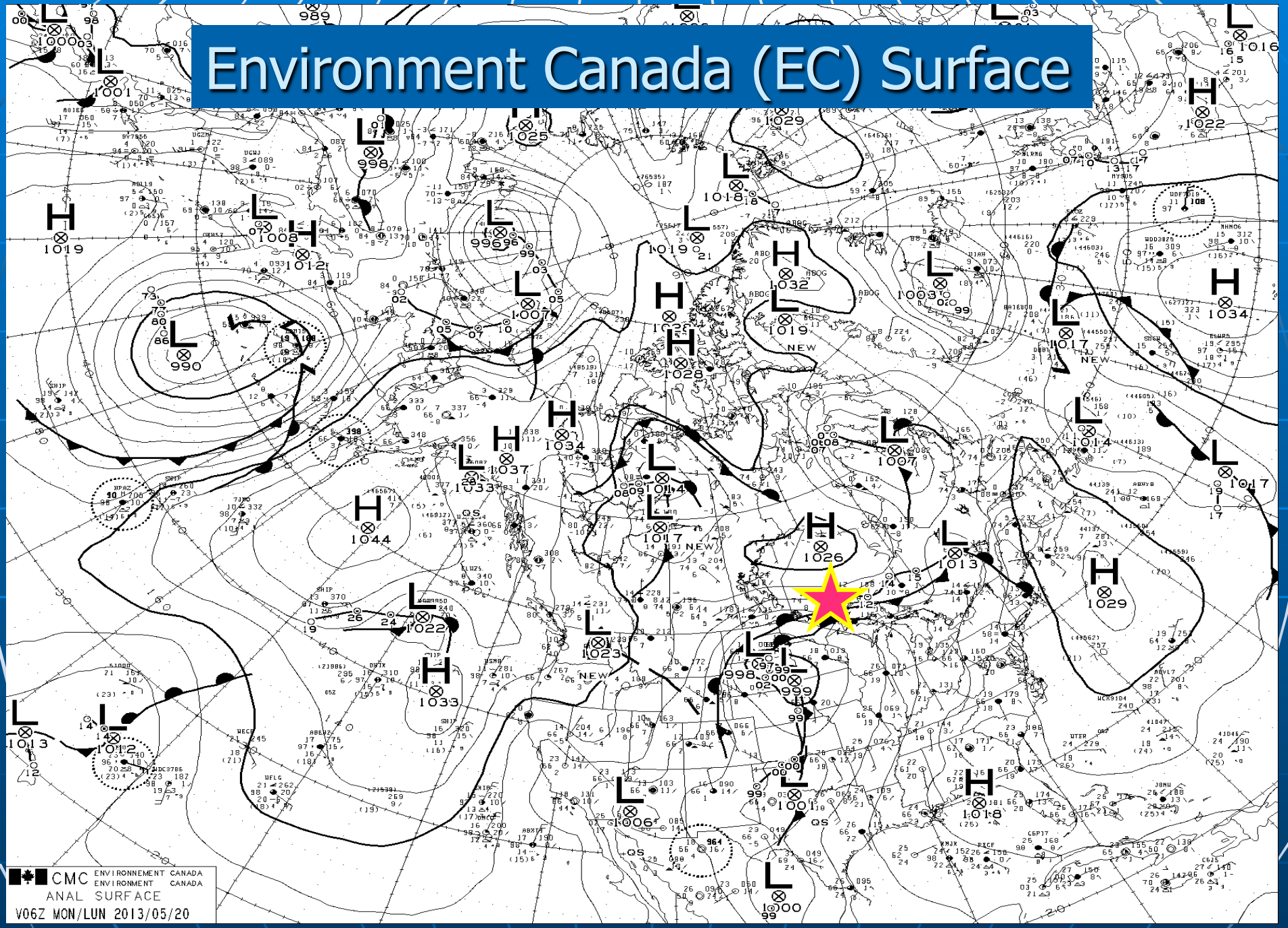
Differences?

Discuss in the context of the above events your brief list of recommendations for planning and improvements in infrastructure

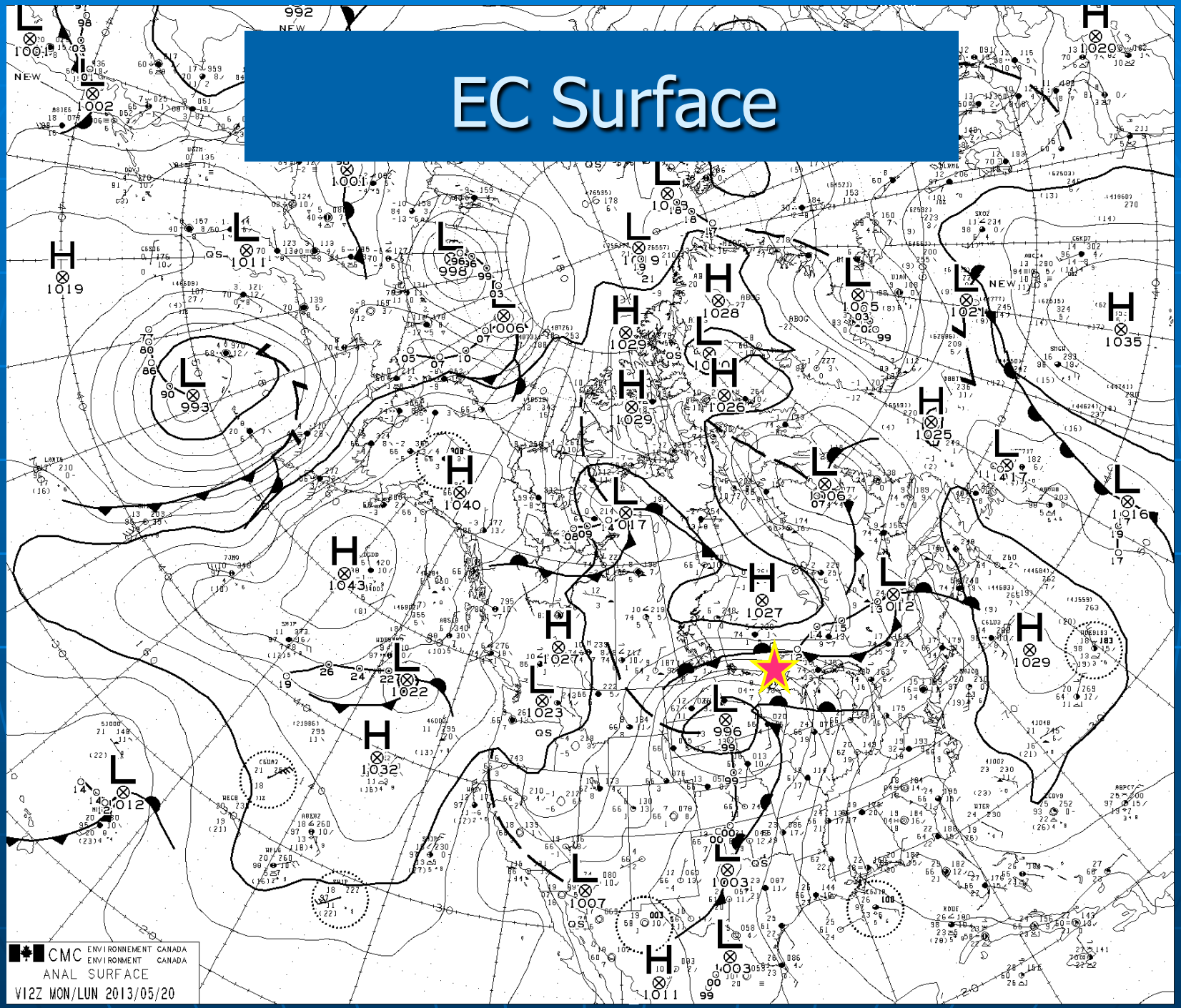
Current American Surface Map



Environment Canada (EC) Surface



EC Surface


CMC ENVIRONNEMENT CANADA
ENVIRONMENT CANADA
ANAL SURFACE
V12Z MON/LUN 2013/05/20

Done

9 Likes
4 Comments


Stormy weather futures?