

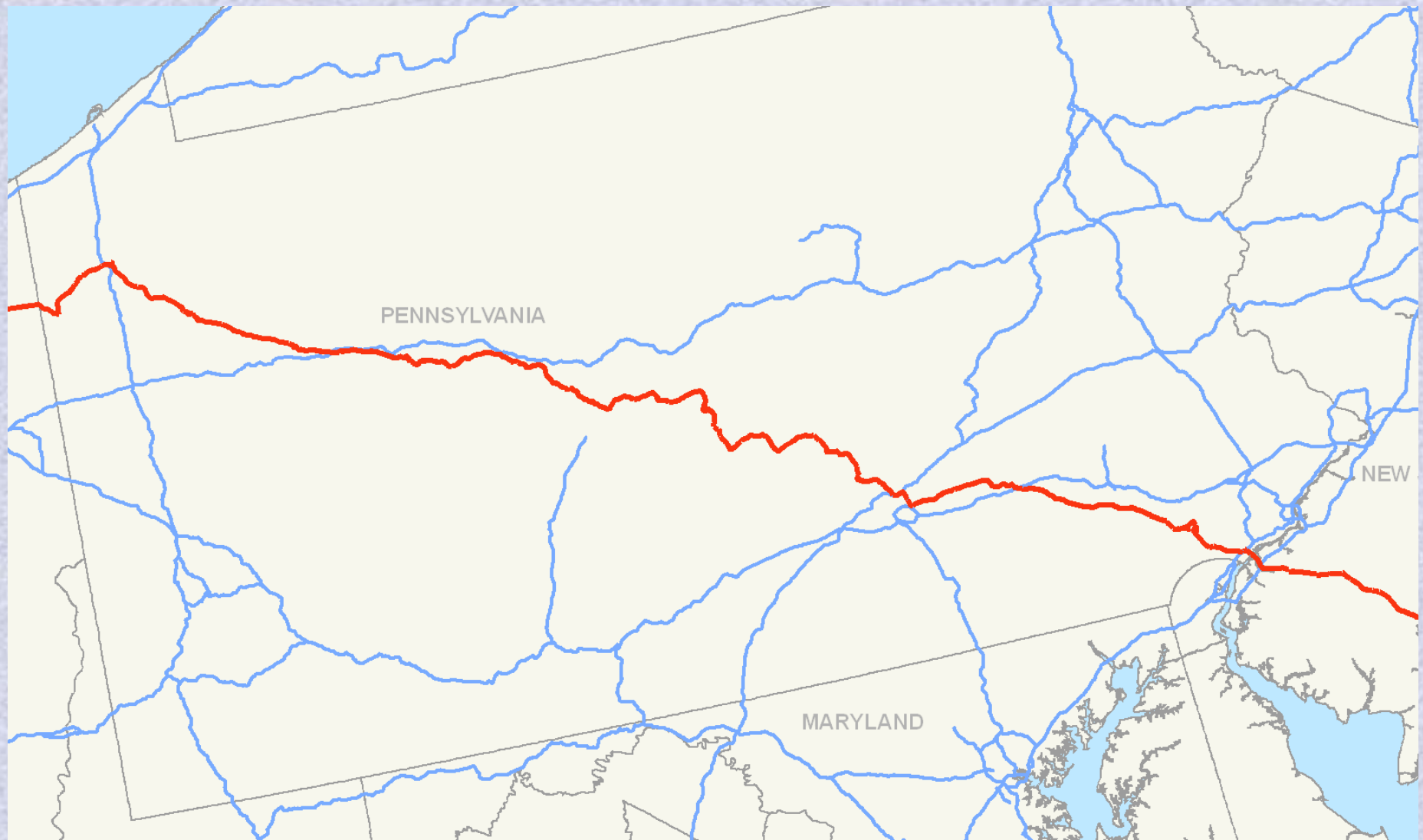
Forensics Case- PennDOT

Route 322 Tie-Up

By: Daniel Pollak



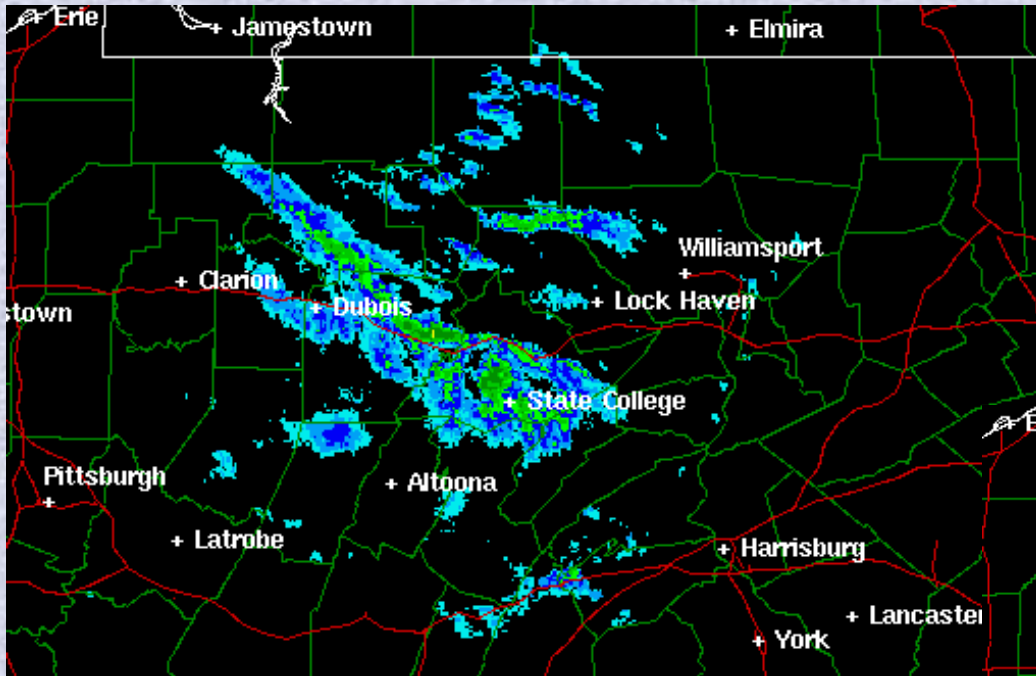
- The Pennsylvania DOT is reviewing their total storm management program
- They found an event on December 20th, 2003 which they saw was not responded to very well.
- Document time, duration and approximate area coverage of snow showers that occurred during the evening on Dec 20, 2003.



- Route 322 is a 494 mile U.S. Highway (370 miles in PA)
- Claim does not specify where on 322 Snowfall may have occurred

Radar of Central Pennsylvania

Evening of December 20th, 2008

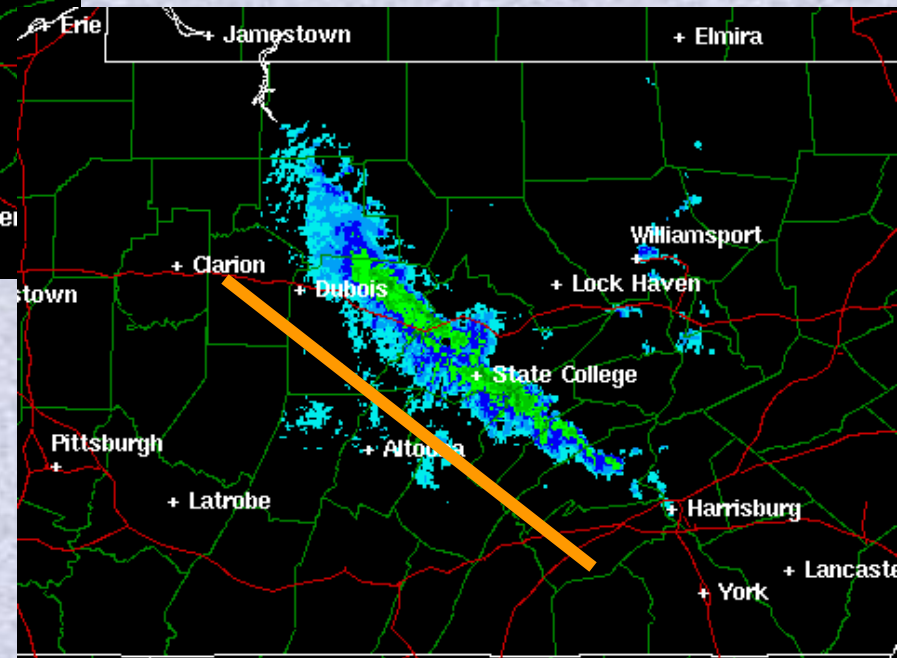


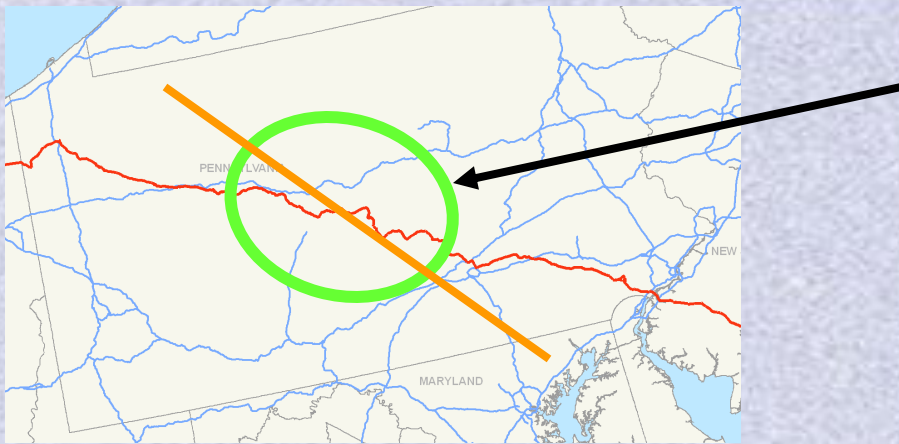
2158 Z (5:58 pm EST)

- Radar reveals that there was a Lake effect snow band that trained over the same areas in central Pennsylvania

<http://climate.met.psu.edu/data/visual/imagearchive/arch1.php>

2358 Z (7:58 pm EST)





- Snow band centered over Route 322 in Central Pennsylvania

- Snow band moves consistently right over State College and the Route 322 Expressway

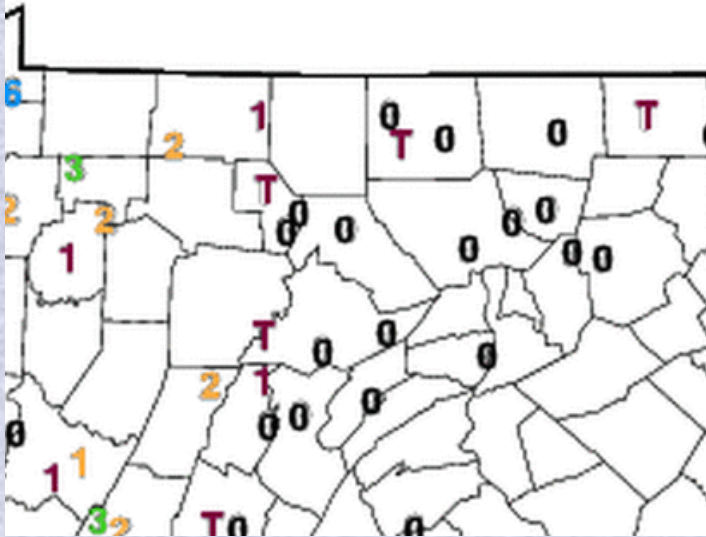


**Counties Affected Most:
Centre, Clearfield,
Cameron, Elk, Mifflin**

- About 70 miles of 322



One-Day Snowfall for Pennsylvania, December 20, 2003
Inches of Snow, Cut Off Time 1500Z

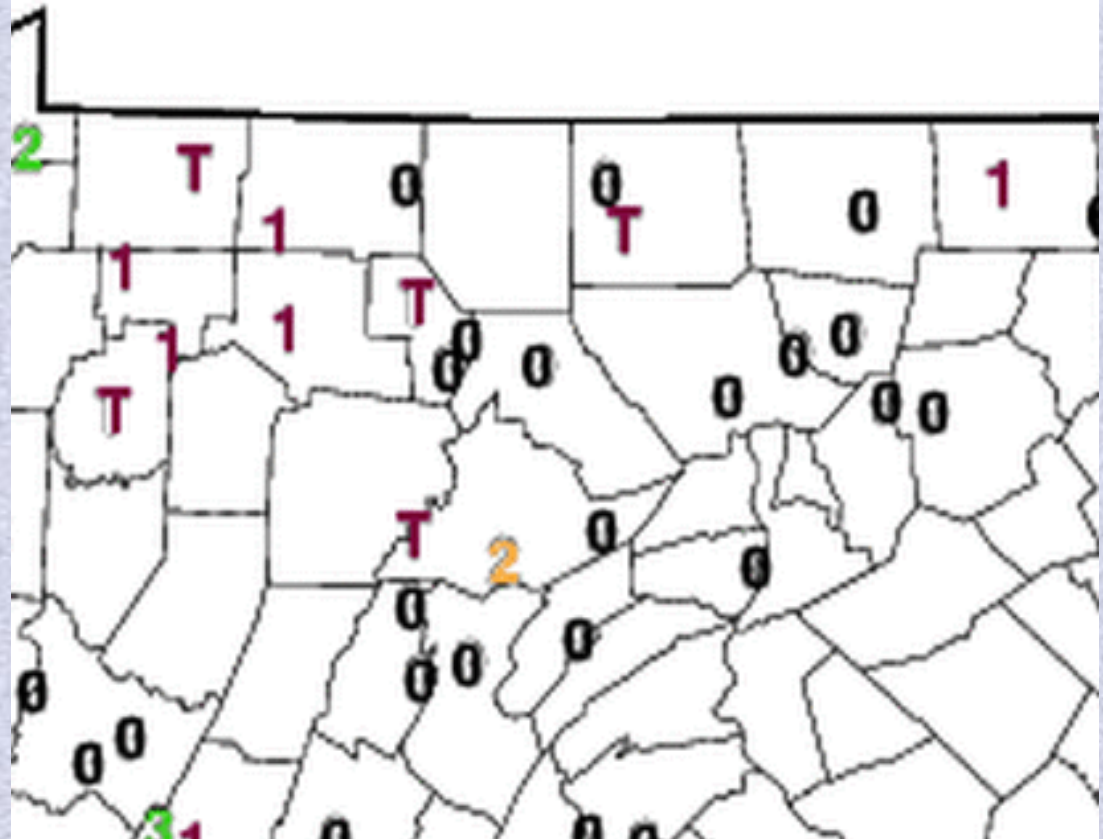


•We assume a similar amount of snow fell in places along the snow band where no observations were taken.

•One-Day Snowfall Report

Cut off time: 1500Z = 11:00 am EST

One-Day Snowfall for Pennsylvania, December 21, 2003
Inches of Snow, Cut Off Time 1500Z



Courtesy of Pennsylvania State Climate Office

KUNV- University Park Airport Observations (AWOS)

Time (EST):	Temp.:	Visibility:	Precip:	Events:	Conditions:
4:00 PM	30.2 °F / -1.0 °C	10.0 miles / 16.1 kilometers	N/A		Overcast
4:20 PM	30.2 °F / -1.0 °C	10.0 miles / 16.1 kilometers	N/A		Overcast
4:40 PM	30.2 °F / -1.0 °C	10.0 miles / 16.1 kilometers	N/A		Overcast
5:00 PM	30.2 °F / -1.0 °C	5.0 miles / 8.0 kilometers	N/A	Snow	Light Snow
5:20 PM	28.4 °F / -2.0 °C	0.8 miles / 1.2 kilometers	N/A	Snow	Snow
5:40 PM	28.4 °F / -2.0 °C	2.5 miles / 4.0 kilometers	N/A	Snow	Light Snow
6:00 PM	26.6 °F / -3.0 °C	0.8 miles / 1.2 kilometers	N/A	Snow	Snow
6:20 PM	26.6 °F / -3.0 °C	5.0 miles / 8.0 kilometers	0.02 in / 0.1 cm	Snow	Light Snow
6:40 PM	26.6 °F / -3.0 °C	1.0 miles / 1.6 kilometers	0.02 in / 0.1 cm	Snow	Snow
7:00 PM	26.6 °F / -3.0 °C	2.5 miles / 4.0 kilometers	N/A	Snow	Light Snow
7:20 PM	26.6 °F / -3.0 °C	3.0 miles / 4.8 kilometers	N/A	Snow	Light Snow
7:40 PM	26.6 °F / -3.0 °C	1.2 miles / 2.0 kilometers	N/A	Snow	Light Snow
8:00 PM	26.6 °F / -3.0 °C	1.5 miles / 2.4 kilometers	N/A	Snow	Light Snow
8:20 PM	26.6 °F / -3.0 °C	3.0 miles / 4.8 kilometers	N/A	Snow	Light Snow
8:40 PM	26.6 °F / -3.0 °C	7.0 miles / 11.3 kilometers	N/A	Snow	Light Snow
9:00 PM	26.6 °F / -3.0 °C	10.0 miles / 16.1 kilometers	N/A	Snow	Light Snow
9:20 PM	26.6 °F / -3.0 °C	10.0 miles / 16.1 kilometers	N/A	Snow	Light Snow
9:40 PM	26.6 °F / -3.0 °C	10.0 miles / 16.1 kilometers	N/A		Overcast
10:00 PM	26.6 °F / -3.0 °C	7.0 miles / 11.3 kilometers	N/A		Overcast

KFIG- Clearfield Airport Observations (AWOS)

Date	Hour	Temperature	Pressure	Visibility	Ceiling	Snow Depth	Hourly Precip.	6 Hr Precip	Weather
YYYY-MM-DD									
12/20/2003	1400	26	1015.7	10	2400	-9999	-9999	-9999	
12/20/2003	1500	26.9	1016.5	10	11000	-9999	-9999	-9999	
12/20/2003	1600	26.9	1016.9	10	2600	-9999	0	-9999	
12/20/2003	1700	28	1016.8	10	3300	-9999	-9999	-9999	
12/20/2003	1800	28	1017.1	8	3200	-9999	0	0	S-
12/20/2003	1900	28	1017.5	10	-9999	-9999	0	-9999	
12/20/2003	2000	28	1018.4	10	4400	-9999	-9999	-9999	
12/20/2003	2100	26.9	1019.5	2.5	2300	-9999	0	-9999	S-
12/20/2003	2200	26	1020.5	3	2700	-9999	0.01	-9999	S-F
12/20/2003	2300	24.9	1021.6	4	2100	-9999	0	-9999	S-F
12/21/2003	0	24.9	1022.4	4	2500	-9999	0	0.01	S-
12/21/2003	100	24	1023.2	6	2300	-9999	0	-9999	S-
12/21/2003	200	23	1023.6	8	2100	-9999	0	-9999	S-
12/21/2003	300	23	1024.4	9	4100	-9999	0	-9999	S-
12/21/2003	400	23	1024.5	10	3700	-9999	0	-9999	
12/21/2003	500	21.9	1024.5	10	3300	-9999	-9999	-9999	

Courtesy of Pennsylvania State Climate Office



Commencement & Move Out

Fall 2003 Academic Calendar

Final Exams	Monday - Friday	December 15 - December 19
Commencement	Saturday	20-Dec

Saturday, December 20, 2008

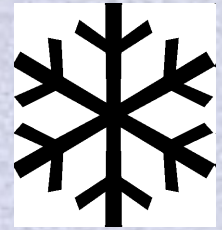
9:00 a.m. - [Bryce Jordan Center](#)

12:30 p.m. - [Bryce Jordan Center](#)

4:00 p.m. The Graduate School - [Eisenhower Auditorium](#)



Conclusions



- A thin band of lake-effect snow did cause snow over about seventy miles of U.S. Route 322 in Central Pennsylvania.
- Snow over 322 began between 3-5 Pm and lasted until around 9 Pm EST dropping around two inches of snow during this period.
- Many students and families were likely leaving town during this time period. (Commencement, finals)
- Factors which would have made it hard for PennDOT:
 - Small area where snow showers occurred.
 - A couple inches of snow falling in a relatively short time period (SC- 1/2" per hour)
 - Visibilities below one mile at times.
 - Large volume of cars on the Rte 322 leaving Penn State.