

CMV Traffic Safety Dashboard for the NDHP

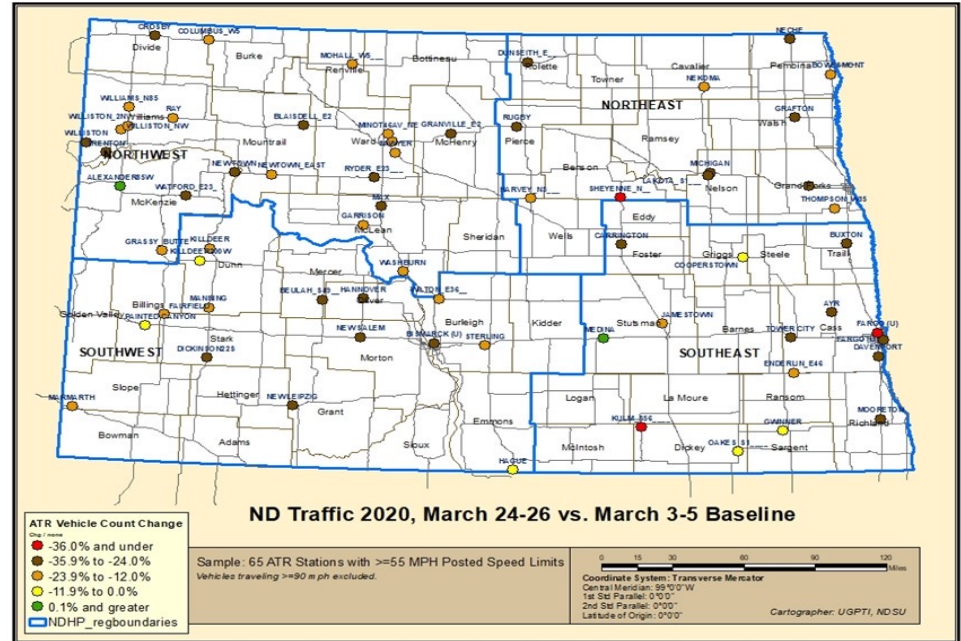
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Southern Commercial Vehicle Safety
Research Summit

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Beginning

- Initial idea from discussions with the NDHP
 - Difficulty obtaining up to date CMV crash data
- Recently completed a project to build a traffic volume dashboard using Automatic Traffic Recorder (ATR) data



Data Sources

- Working with the NDHP, we developed and submitted a FMCSA grant proposal, which was awarded
- Proposed to add CMV crash and inspection data to the ATR data
 - Separate out CMV traffic by vehicle classification
- Also integrating Weigh-in-Motion (WIM) data and weather data
- Each type of data has a different owner and different method to obtain the data

Data Owners - Methods

- ND uses TraCS software for crash reports
 - Data is maintained by the NDDOT
 - Initially, data will be sent as zipped files via FTP
 - The datasets are XML files which can be imported to Excel
- ND uses Aspen software for inspections
 - Data is maintained by the NDHP in SAFETYNET
 - Data can be extracted as comma-delimited files
- WIM data files will be sent from the NDDOT to a NDSU server using third party software from the WIM vendor
 - Software is needed in order to parse the files

Data Example

```

00000000239 NEWTOWN_____01 0000 052210 2400 052210 0060 05 2 100 294 500
0000 0000 0000 0000 0000 0000 0000 0000 11XXXXXX 'FHWA-USA
02 15      0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012 0013 0014 0015
03 12      0040 0045 0050 0055 0060 0065 0070 0075 0080 0085 0090 0147
00 00
01 01 1 0100 0000 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 1 0100 0000 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 03 1 0100 0000 0001 0002 0000 0000 0000 0000 0000 0000 0001 0000 0000 0000 0000 0000
01 04 1 0100 0000 0011 0006 0000 0000 0000 0000 0000 0000 0004 0000 0000 0000 0001 0000 0000
01 05 1 0100 0000 0010 0008 0000 0001 0000 0000 0000 0002 0001 0000 0000 0001 0000 0000
01 06 1 0100 0000 0002 0005 0000 0000 0000 0000 0000 0002 0000 0000 0000 0001 0000 0000
01 07 1 0100 0000 0001 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000 0001 0000 0000
01 08 1 0100 0000 0002 0001 0000 0000 0000 0000 0001 0000 0000 0000 0000 0000 0000 0000
01 09 1 0100 0000 0002 0002 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 10 1 0100 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 11 1 0100 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 12 1 0100 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000

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Diagram illustrating the structure of the data example. Numbered arrows (1-18) point to specific fields in the data rows:

- 1: Station number (239)
- 2: Station location (12 characters) (NEWTOWN_____)
- 3: Filler for 12-character location string (_____)
- 4: Not applicable (01)
- 5: Not applicable (0000)
- 6: Start time in military time (052210)
- 7: End time in military time (2400)
- 8: End date (052210)
- 9: Not applicable (0060)
- 10: Not applicable (05)
- 11: Number of lanes at this station (2)
- 12: Not applicable (100)
- 13: Not applicable (294)
- 14: Not applicable (500)
- 15: Column headers for the 15 FHWA vehicle classes (02 15, 03 12, 00 00)
- 16: Not applicable (0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012 0013 0014 0015)
- 17: Hour of the day (0100)
- 18: These horizontal rows (1-12) contain the data for the 12 speed categories below:

Explanation of numbered arrows above:

- Station number
- Station location (12 characters)
- Filler for 12-character location string
- Not applicable
- Start time in military time(0000=midnight)
- Start date (052210=May 22, 2010)
- End time in military time (2400=midnight)
- End date
- Not applicable
- Not applicable
- Number of lanes at this station
- Not applicable
- Not applicable
- Not applicable
- Column headers for the 15 FHWA vehicle classes
- Not applicable
- Hour of the day (0100=data collected between the hour of midnight and 1:00 AM)
- These horizontal rows (1-12) contain the data for the 12 speed categories below:
 - 1 – 40mph and under
 - 2 – 40.1 to 45.0
 - 3 – 45.1 to 50.0
 - 4 - 50.1 to 55.0
 - 5 – 55.1 to 60.0
 - 6 – 60.1 to 65.0
 - 7 – 65.1 to 70.0
 - 8 – 70.1 to 75.0
 - 9 – 75.1 to 80.0
 - 10 – 80.1 to 84.99
 - 11 – 85.0 to 89.99
 - 12 – Greater than 89.99

Questions / Discussion

Contact Information

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