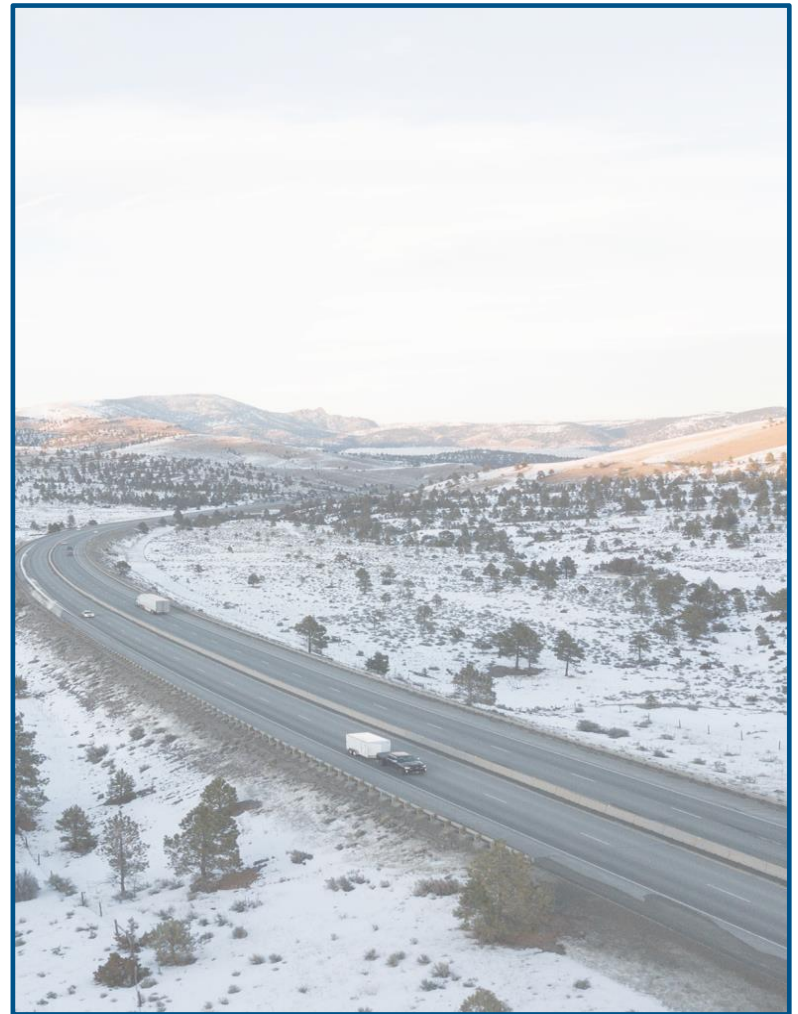


Safer Vehicles & Safer Roads

*Snowplow Awareness, Travel
Information Road Reporting, & Entry
Level Driver's Training CDL program*

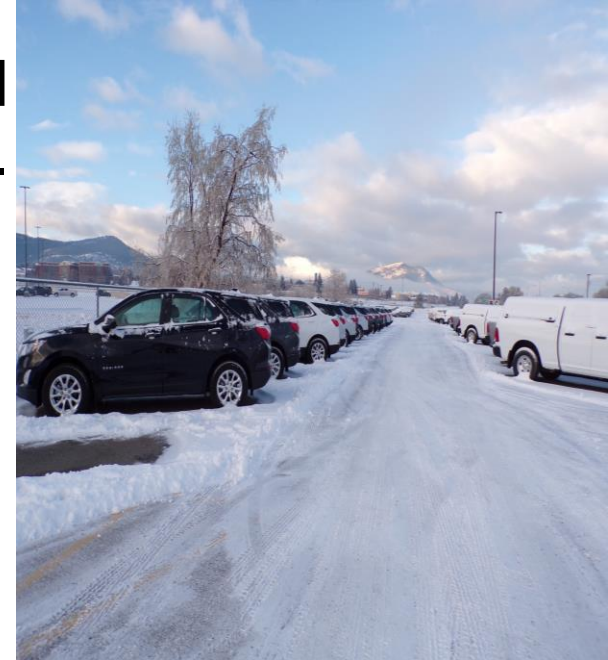
Walt Kerttula, Doug McBroom &
Mike Warren
MDT Maintenance Division

2024 Annual Transportation Safety Meeting
Delta Colonial Hotel
Helena, MT
October 17, 2024



MDT Equipment Bureau

- Two programs: State Motor Pool and the MDT Equipment Program
- State Motor Pool rents cars, SUV's, pickups and vans to state employees to conduct state business.
- Equipment Program supplies vehicles and equipment exclusively to MDT employees.
- The Equipment Bureau purchases, maintains and disposes of the vehicles equipment in both programs



MDT Equipment Bureau

- 5,700 vehicles and pieces of equipment
 - 600 snowplows
 - 34 tow plows – 8 more will be added in the next 2 years
 - 1,900 light duty vehicles (cars - 1 ton pickups)

Snowplow Safety

- MDT averaged 30-40 snowplow hits each winter since 2016
- Concern for driver and traveling public safety



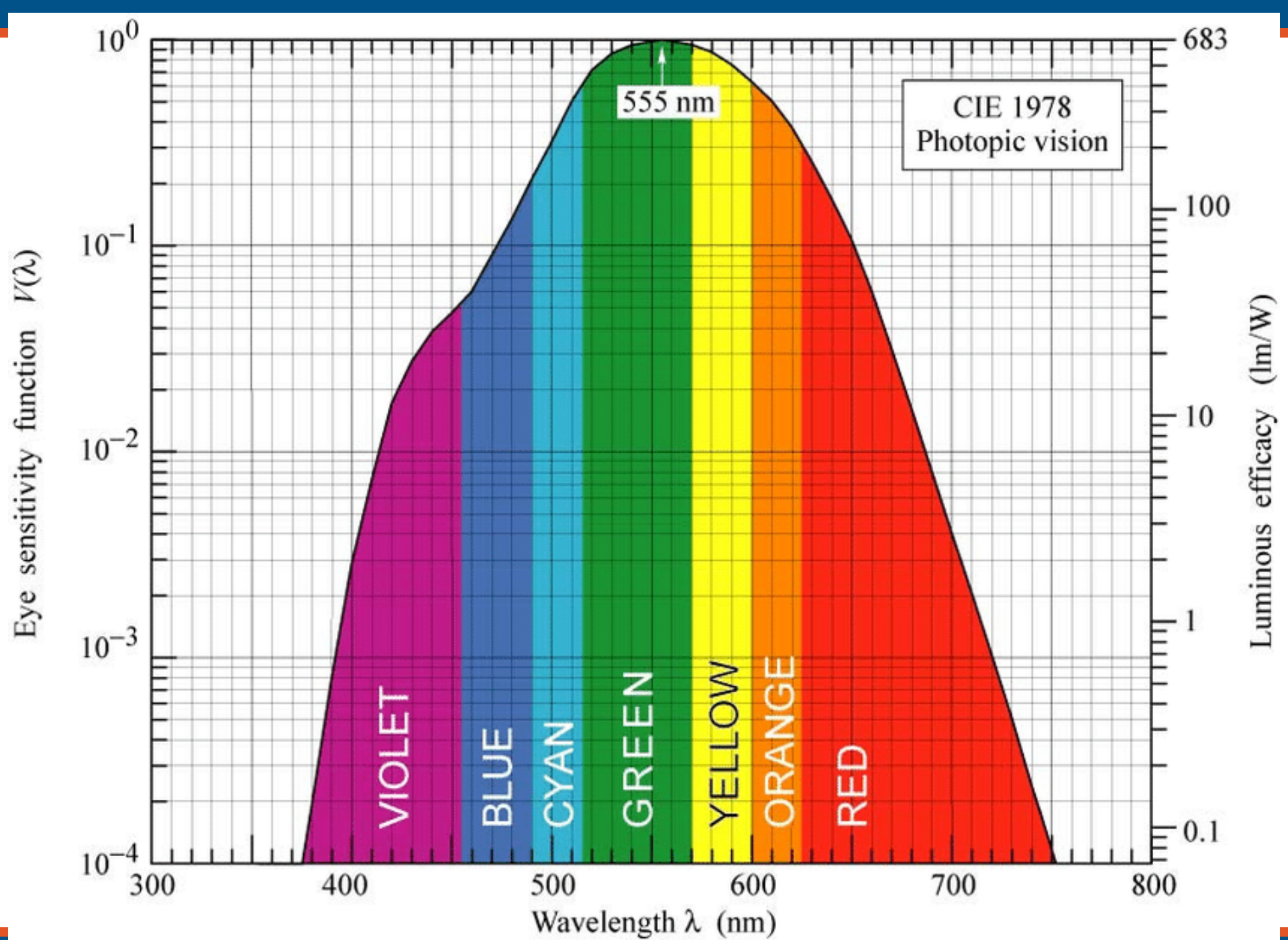
Snowplow Safety

- It costs MDT on average \$2,600 for repairs for each crash
- Equipment downtime
- Visibility in blowing snow



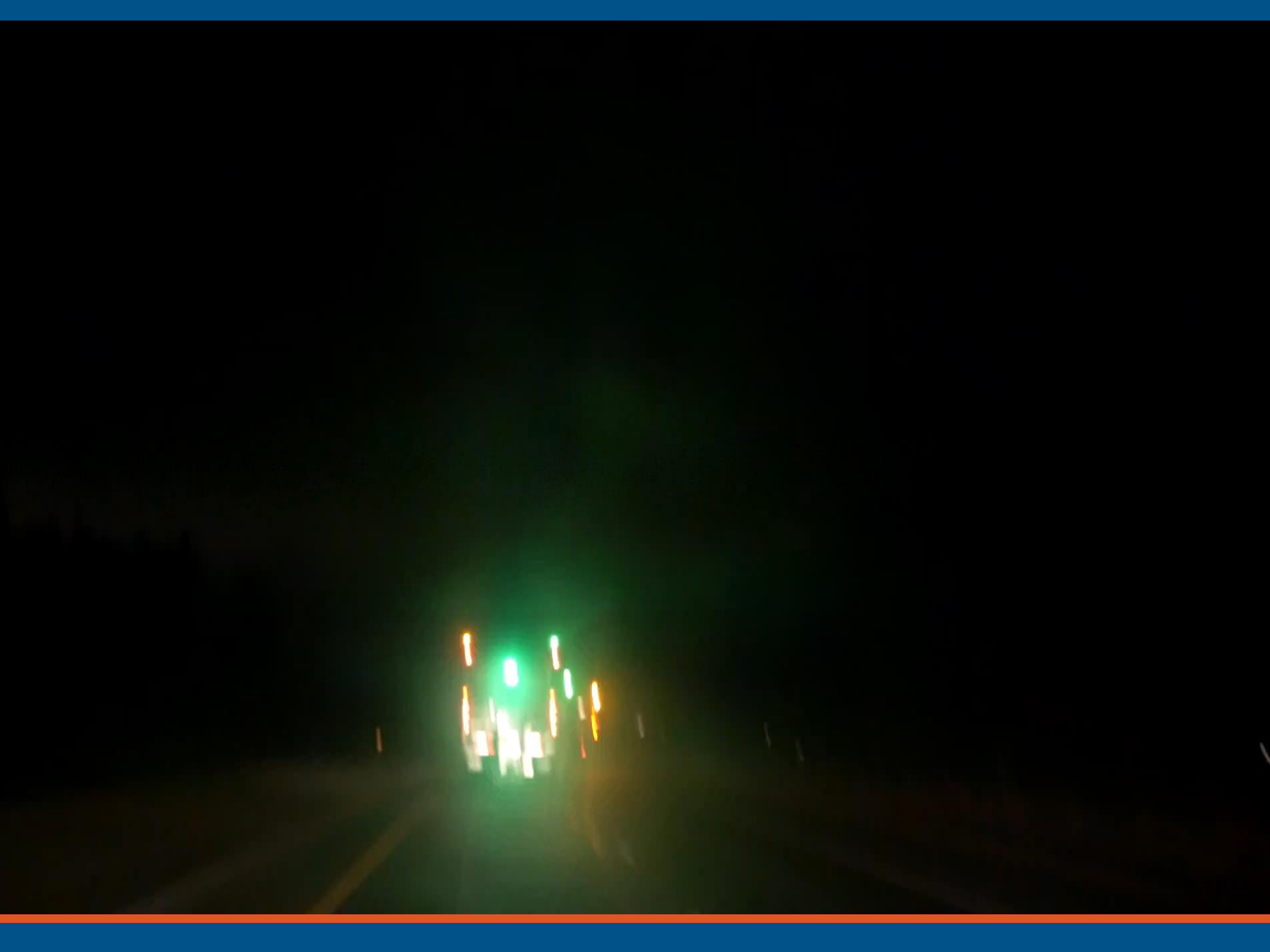
Science

- Light is an electromagnetic radiation with a wavelength of 360 to 780 nanometers (nm). This range includes the spectrum of seven basic colors that the human eye can see. The color spectrum represents division of light energy into individual wavelengths, or frequencies
- It contains the following colors:
 - Purple (360 – 420 nm)
 - Indigo (420 – 480 nm)
 - Blue (480 – 540 nm)
 - Green (540 – 600 nm)
 - Yellow (600 – 660 nm)
 - Orange (660 – 720 nm)
 - Red (720 – 780 nm)
- The human eye is most sensitive to light at a wavelength of 555 nanometers—a bright green.









Do the green lights reduce crashes?

MDT only has two winters with the green/amber lights installed

Not enough data to say for sure...

Only three direct rear end collision in the last two winters.

One collision was before green lights had been installed on that truck.

One collision the driver said he saw our truck but didn't want to stop.

Light Duty Warning Lights

- MDT instituted a consistent lighting package for all new light duty vehicles.
- Trying to make vehicles more visible.
- Crashes and near misses on the rise.
- MDT can use only amber warning lights on light duty vehicles.





Tow Plows

- MDT started purchasing tow plows in 2014
- Currently we have 37 in the fleet with 8 more planned in the next 2 years.
- Snowplow operators can plow up to 20 feet of roadway when the trailer is fully deployed.
- Provides additional sand and liquid deicer capabilities.
- Provides the ability to clear roads quicker making them safer for the traveling public.





Vehicle Mounted Message Boards



- LiteSys LED changeable message sign with speed feedback
- 35 will be in use by this fall
- Successful in slowing people down and getting people moved over.

Fall 2020, Montana implemented a centralized Transportation Management Center (TMC)

- Provide 24/7/365 support for Maintenance Operations
- Improve on the frequency and consistency of travel related messaging to the public
- Primary point of contact for EMS / Law Enforcement
- Create the organizational infrastructure to support future ITS implementations

Challenges

- MDT field offices staffed 24/7 only during the winter season (November-March)
 - April - October only radio coverage during normal business hours
- Radios are analog, with relays – regional coverage
- Off season incidents continued to increase
- EMS/MHP needed to be able to contact MDT easily and reliably

Solutions

- Centralization to reduce staffing need
- Good radio coverage at the district level but not statewide
- Radio over IP (RoIP)
 - Gateway installed in each area office to convert analog radio signals to digital
 - Transferred over the state network

TMC vs Areas' Responsibilities

TMC

- Manage all 511 Traveler information
- Provide 24/7 coverage for all MDT employees
- Facilitate communication with external partners
- Manage Variable Message Signs

Area Offices

- Staffed during normal business hours
- Deal with public/local requests for sand, animals, and even requests for assistance
- Communicate with TMC when an incident affects the roadway
- Communicate and direct work of field staff

Off-Season Staffing

- Six full time permanent employees, two part-time permanent employees, and one supervisor
 - 24x7 coverage during off season
 - Two during the weekday / one overnight and on weekends
- Construction zones, work zones, incidents, calls for service

Winter Staffing

- November - March add twelve to fifteen temporary staff
 - Four to five during the day / three overnight
- Heavier workload
 - Many areas run three or more shifts – check in/check out
 - Road condition reporting

Stats

- 100K inbound phone calls
 - 40K resulted in further action
- 2.5 segment condition updates per day
- 511 20M contacts

Future Direction

TMC will be the home for managing future ITS initiatives

- Advanced Transportation Management System (ATMS)
- Variable message signs
- Variable speed limits
- Chains required signs
- Road closure gates

Entry Level Driver Training

Importance of Well-Trained Drivers

- Commercial truck drivers play a vital role in the country's economy. They transport goods from one place to another and cover a lot of miles every day, making sure that products arrive at their final destination in a timely and safe manner. With the increasing number of drivers on the road, we should ensure their safety and that of other road users. One way to guarantee this is by providing adequate safety training for commercial truck drivers.

Entry-Level Driver Training (CDL) for Maintenance Equipment Operators

Under federal rule, all new commercial driver's license (CDL) holders must complete the ELDT Program, and all providers (individual locations) of entry-level CDL training must be listed on Federal Motor Carrier Safety Administration's (FMCSA) Training Provider Registry (TPR). To be listed on the TPR, the provider must certify that the program meets these requirements:

1. Follows a training curriculum that meets specific criteria for theory and behind-the-wheel training.
2. Utilizes facilities, vehicles, and instructors meeting federal requirements.
3. Meets federal record-keeping requirements.
4. Complies with any applicable state laws and regulations.
5. Had to be implemented on February 7th, 2022

ELDT Program History

- If a bill was not passed that required MVD to check the ELDT registry;
 - Montana would lose Federal Highway Funds (up to 30 million/year)
 - All Montana CDL's would be decertified by the Federal Government and not recognized in the US
- In 2023 Legislative session MDT helped draft a Bill with DOJ to require MVD to check the ELDT registry
 - SB 47 was developed and passed. This bill required MDT to implement for the public it's ELDT program

SB 47 Text

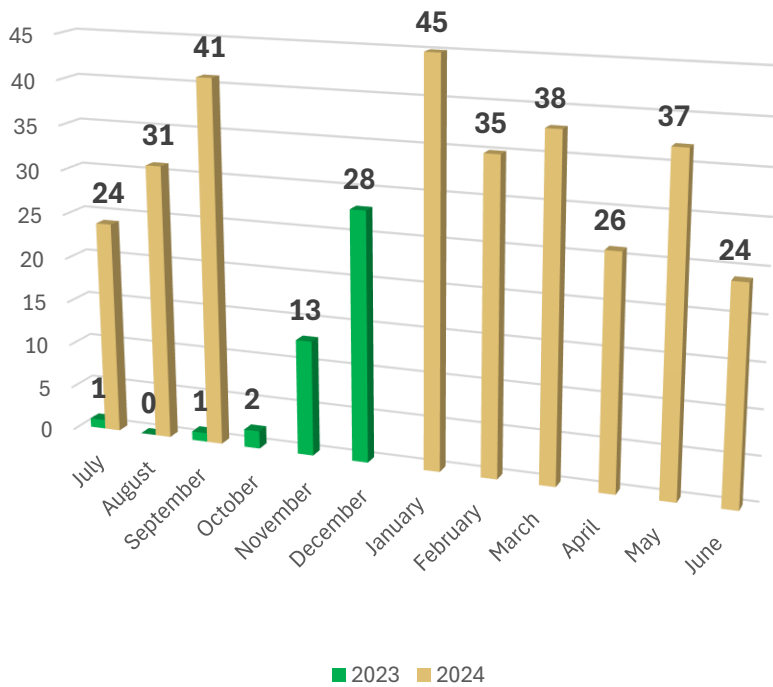
- Section 1. Entry-level driver training -- requirements -- responsibilities of department of transportation. (1) The department of transportation: (a) shall develop and implement an entry-level driver training program, including theory and behind-the-wheel training, that complies with federal requirements for class A and class B commercial driver's licenses, excluding endorsements; (b) shall make available to the public the entry-level driver training program provided for in subsection (1)(a); (c) may utilize various formats of entry-level driver trainings, including in-person training and asynchronous or synchronous virtual training; and (d) driver training. (2) may coordinate with other state agencies or organizations to develop and implement entry-level An entry-level driver training program developed by the department of transportation must include use of facilities, vehicles, and instructors sufficient to issue a commercial driver's license.

ELDT Timelines

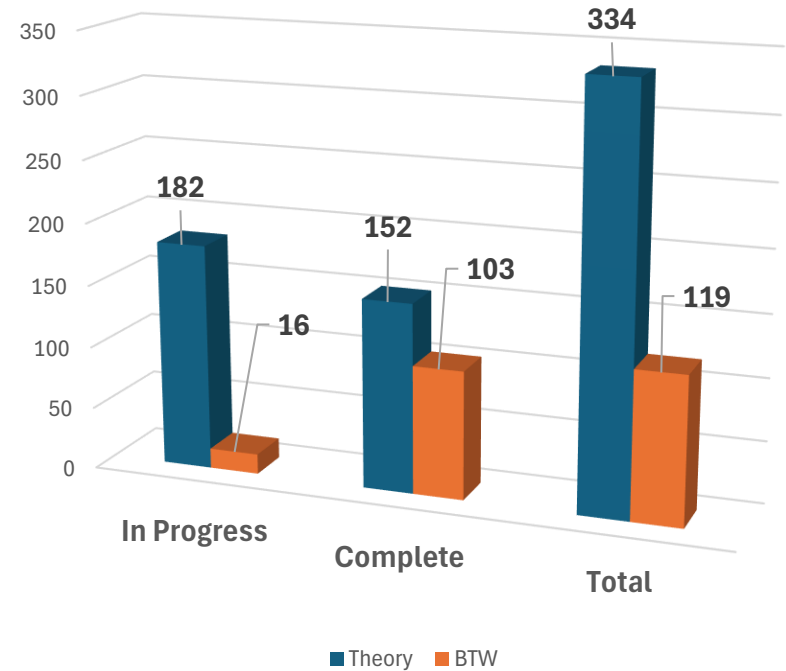
- Bill Passed in May 2023
- Had to have a public portal developed by July 1st 2023
- MDT had to work with State Department of Administration for Insurance
- Had to have trucks ordered by July 2023 (we could use working transports in a pinch)
- Successfully had the program in place July 1st 2023
- Department of Motor Vehicles started checking the ELDT registry November 15th 2023

ELDT Stats

ELDT Public Enrollment by Month



Public ELDT Participants



MDT's cost between \$2200-\$2800/student

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Maintenance Division
Montana Department of Transportation

