

Transportation Revenue Changes and Agricultural Transportation

Rural Transportation Summit

Alan Dybing
Associate Research Fellow

Overview

- Agricultural Truck Movements
 - Truck Characteristics
- Funding Sources
 - Federal
 - State
- Potential Revenue
- Impacts to Agricultural Trucking
 - Producer vs. Commercial Hauler

Agricultural Truck Movements

- Producer trucks
 - Farm to elevator
 - Farm to processor
- Commercial trucks
 - Elevator to elevator
 - Elevator to processor
 - Elevator to terminal market

Producer Trucks

- Configuration
 - 5-axle semi: 40.6%
 - Tandem or tridem: 33%
- Utilization (miles/year)
 - Tandem – 2,172
 - Tridem – 3,768
 - 5-axle semi – 6,954

Commercial Trucks

- Configuration
 - 5-axle semi
 - 6-axle semi
 - Multiple trailers
- Utilization
 - 68,000 miles or more

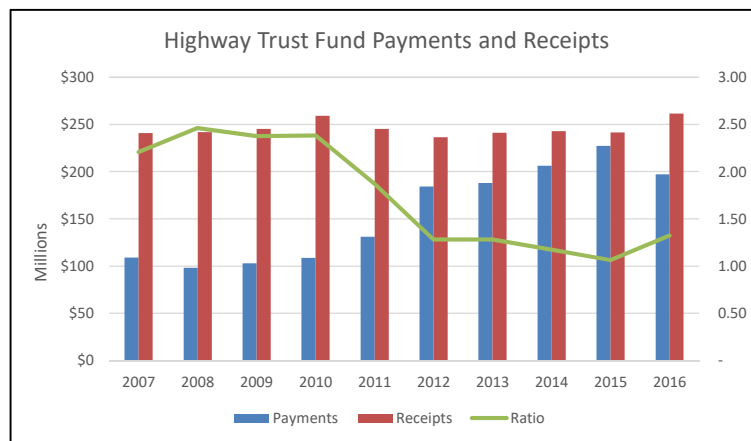
Agricultural Truck Volumes

- Legislative needs study
 - Statewide travel demand model
- 292 million VMT annually
 - @ 5 mpg, generates \$13.4 million in state fuel tax revenue and \$14.2 million in federal fuel tax revenue

Funding Sources

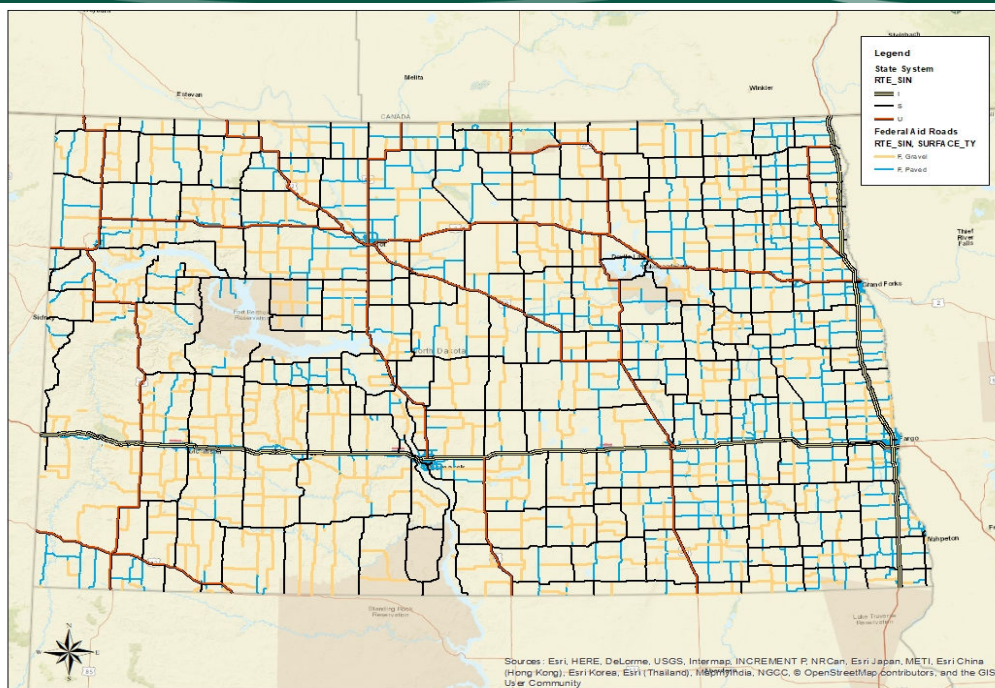
- Federal Funding
- Highway Trust Fund (HTF)
 - Gasoline: 18.4 cents/gallon
 - Diesel: 24.4 cents/gallon
 - Excise Taxes
 - Tractors and Heavy Trucks
 - Tires
 - Usage Taxes
 - Heavy Trucks

Federal Funding



Uses for Federal Funding in ND

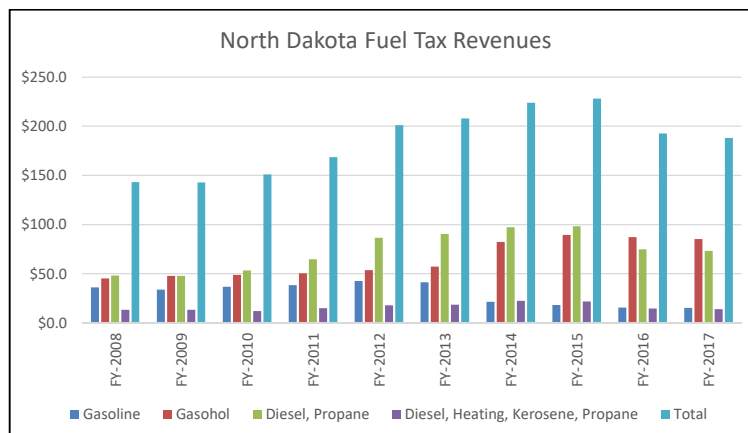
- Distribution
 - Interstate, US and State Highways: 75.5%
 - County Major Collectors: 8.5%
 - Cities: 16%



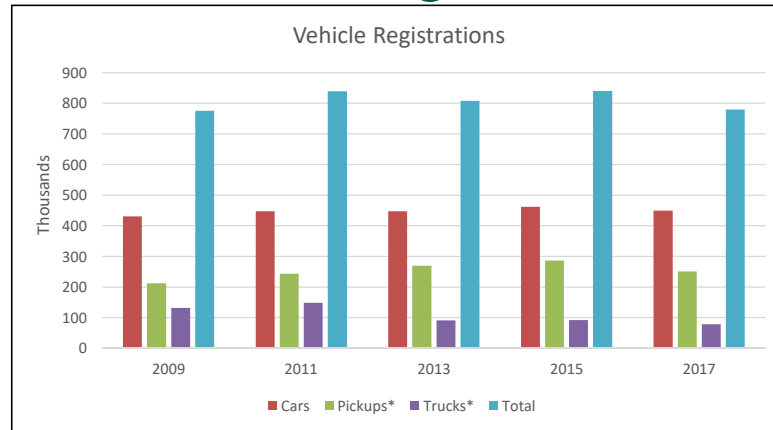
State Funding

- Highway Tax Distribution Fund
 - Fuel Tax: 23 cents/gallon
 - Registration Fees: varies based upon vehicle type, weight, age and usage

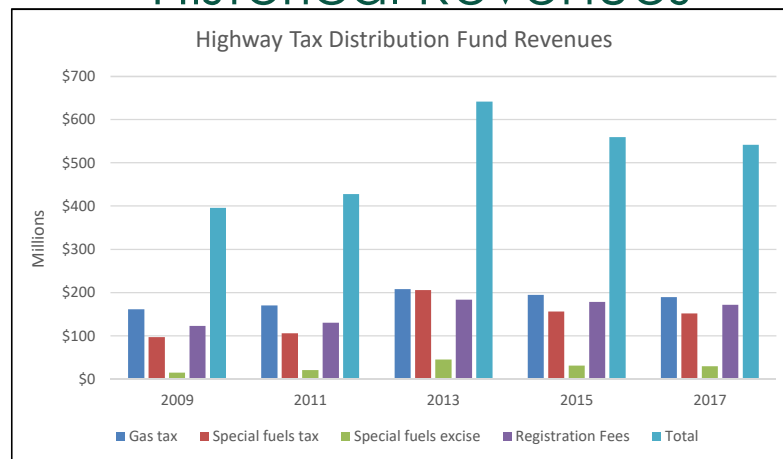
State Fuel Tax



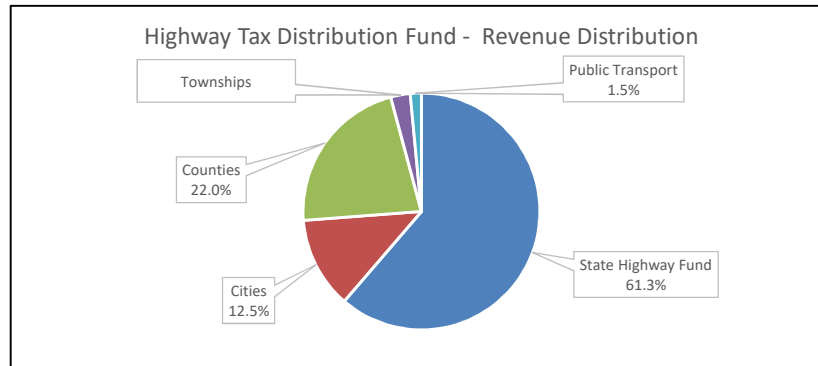
State Registration



Historical Revenues



State Revenue Distribution



Potential Revenue

- Federal Fuel Tax
 - Diesel

Fuel Tax Increase	Revenue Increase (million)	Return to ND (million)
1-cent	\$416	\$2.62
5-cents	\$2,080	\$13.04
10-cents	\$4,160	\$26.21

- Gasoline

Fuel Tax Increase	Revenue Increase (million)	Return to ND (million)
1-cent	\$1,358	\$8.56
5-cents	\$6,790	\$42.78
10-cents	\$13,580	\$85.56

Potential Revenue

- Federal Fuel Tax Distribution

- Diesel

<i>Fuel Tax Increase</i>	<i>State</i>	<i>County</i>	<i>City</i>
1-cent	\$1.98	\$0.22	\$0.42
5-cents	\$9.85	\$1.11	\$2.10
10-cents	\$19.79	\$2.23	\$4.19

- Gasoline

<i>Fuel Tax Increase</i>	<i>State</i>	<i>County</i>	<i>City</i>
1-cent	\$6.46	\$0.73	\$1.37
5-cents	\$32.30	\$3.64	\$6.84
10-cents	\$64.60	\$7.27	\$13.69

Potential Revenue

- State Fuel Tax

<i>Fuel Tax Increase</i>	<i>Revenue Increase (million)</i>
1-cent	\$8.24
5-cents	\$41.16
10-cents	\$82.30

<i>Fuel Tax Increase</i>	<i>State</i>	<i>County</i>	<i>City</i>	<i>Township</i>	<i>Transit</i>
1-cent	\$5.04	\$1.82	\$1.02	\$0.22	\$0.12
5-cents	\$25.22	\$9.06	\$5.14	\$1.12	\$0.62
10-cents	\$50.46	\$18.10	\$10.28	\$2.22	\$1.24

Potential Revenue

- Registration

Registration Fee Increase	Revenue Increase (million)				
\$5 Increase	\$3.90				
\$10 Increase	\$7.79				
\$20 Increase	\$15.58				

Registration	State	County	City	Township	Transit
\$5 Increase	\$2.39	\$0.86	\$0.49	\$0.11	\$0.06
\$10 Increase	\$4.78	\$1.71	\$0.97	\$0.21	\$0.12
\$20 Increase	\$9.55	\$3.43	\$1.95	\$0.42	\$0.23

Impacts of Revenue Increases

- Fuel Tax

	Truck Type	Owner	Annual Miles	1-cent	5-cents	10-cents
Per truck	Tandem	Producer	2,172	\$4.83	\$24.13	\$48.27
	Tridem	Producer	3,768	\$8.37	\$41.87	\$83.73
	5-axle Semi	Producer	6,954	\$15.45	\$77.27	\$154.53
	5-axle Semi	Commercial	80,000	\$177.78	\$888.89	\$1,777.78

	Truck Type	Owner	Annual Miles	1-cent	5-cents	10-cents
Per mile	Tandem	Producer	2,172	\$0.0022	\$0.0111	\$0.0222
	Tridem	Producer	3,768	\$0.0022	\$0.0111	\$0.0222
	5-axle Semi	Producer	6,954	\$0.0022	\$0.0111	\$0.0222
	5-axle Semi	Commercial	80,000	\$0.0022	\$0.0111	\$0.0222

Impacts of Revenue Increases

- Registration Fees

	Truck Type	Owner	Annual Miles	\$5 Increase	\$10 Increase	\$20 Increase
Per truck	Tandem	Producer	2,172	\$5	\$10	\$20
	Tridem	Producer	3,768	\$5	\$10	\$20
	5-axle Semi	Producer	6,954	\$5	\$10	\$20
	5-axle Semi	Commercial	80,000	\$5	\$10	\$20
	Truck Type	Owner	Annual Miles	\$5 Increase	\$10 Increase	\$20 Increase
Per mile	Tandem	Producer	2,172	\$0.00230	\$0.00460	\$0.00921
	Tridem	Producer	3,768	\$0.00133	\$0.00265	\$0.00531
	5-axle Semi	Producer	6,954	\$0.00072	\$0.00144	\$0.00288
	5-axle Semi	Commercial	80,000	\$0.00006	\$0.00013	\$0.00025

Questions?

Alan Dybing

701.231.5988

alan.dybing@ndsu.edu

www.ugpti.org