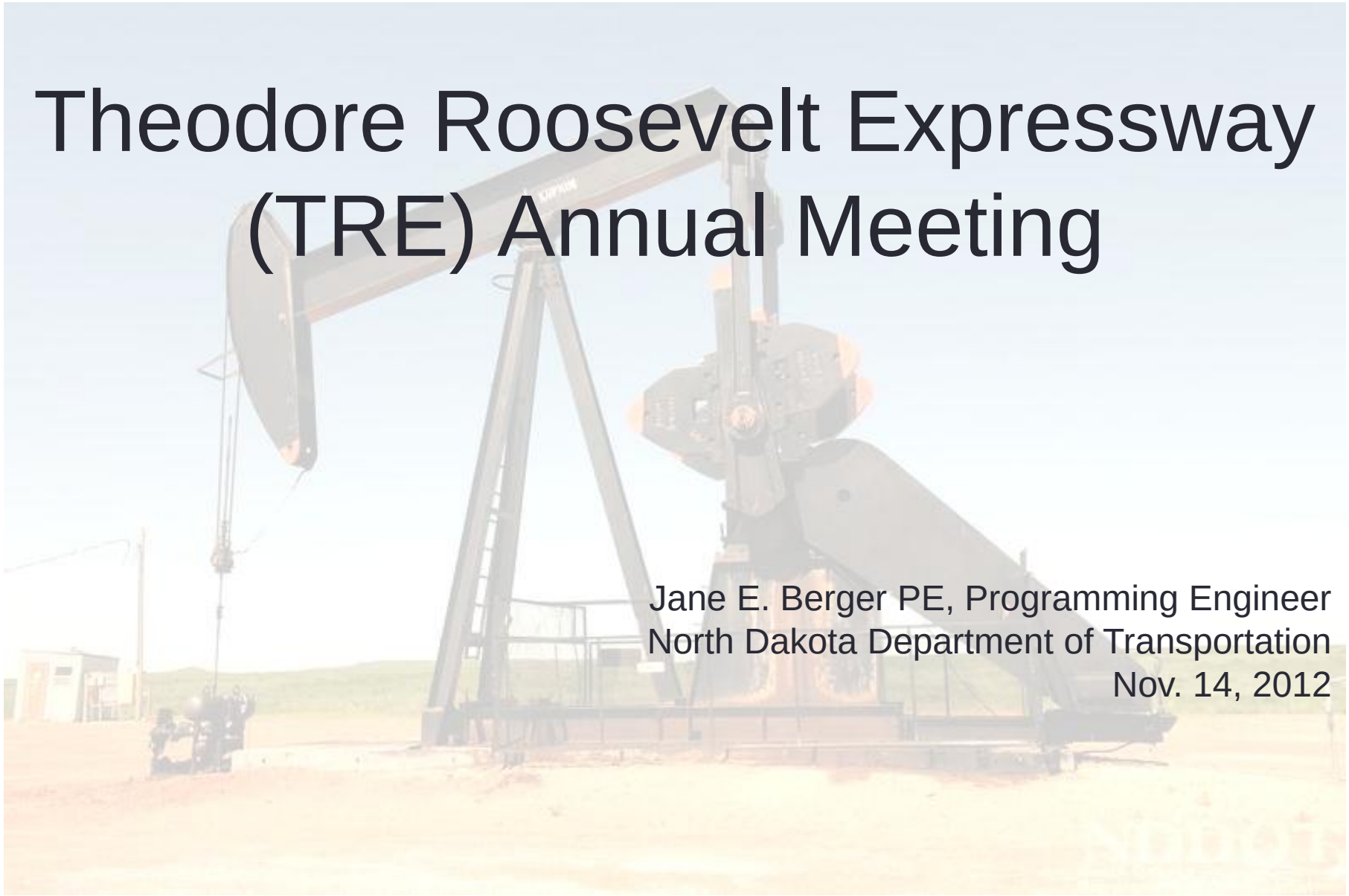
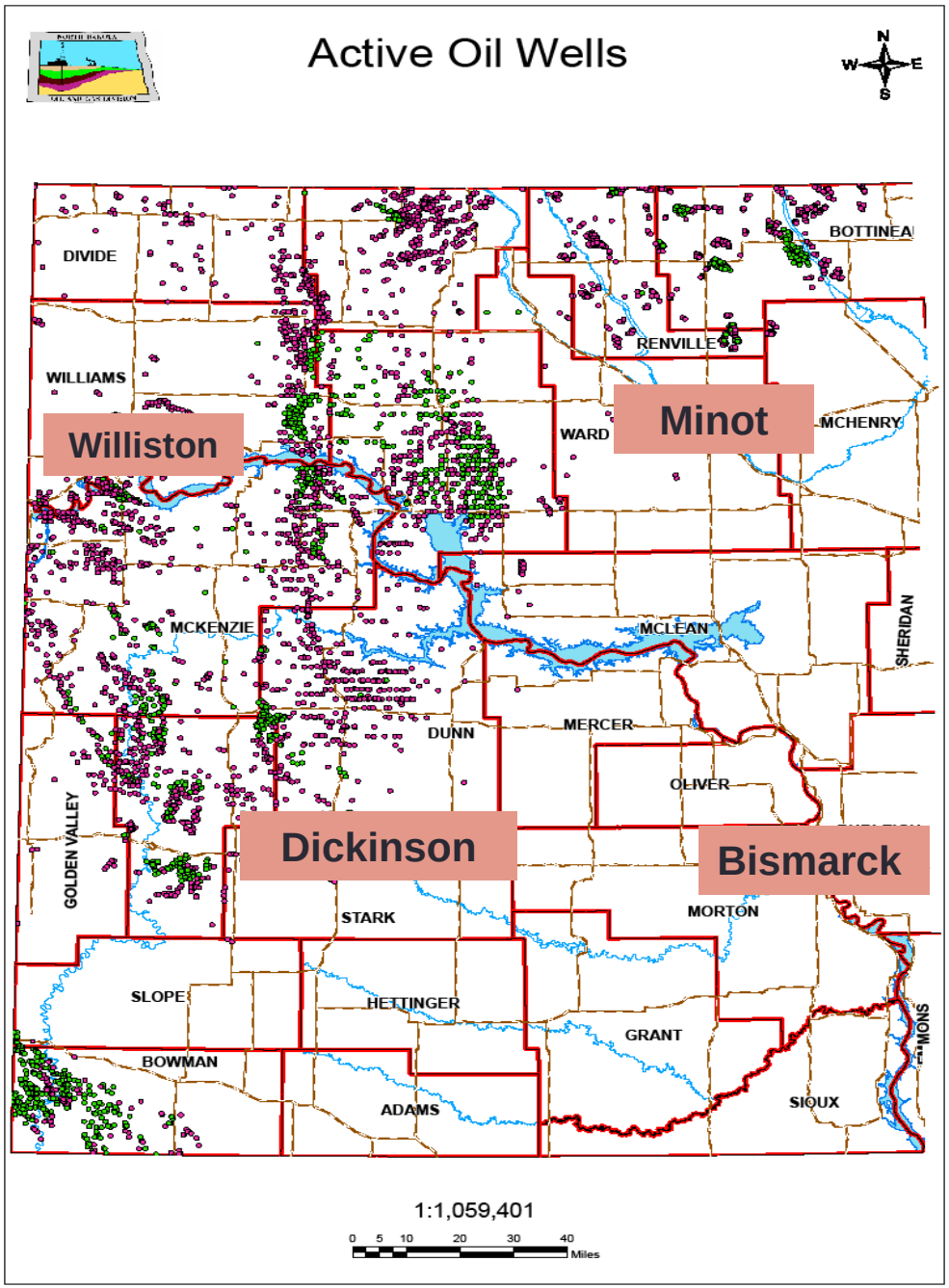
Theodore Roosevelt Expressway (TRE) Annual Meeting



Jane E. Berger PE, Programming Engineer
North Dakota Department of Transportation
Nov. 14, 2012

NDDOT
North Dakota
Department of Transportation



NDDOT
North Dakota
Department of Transportation

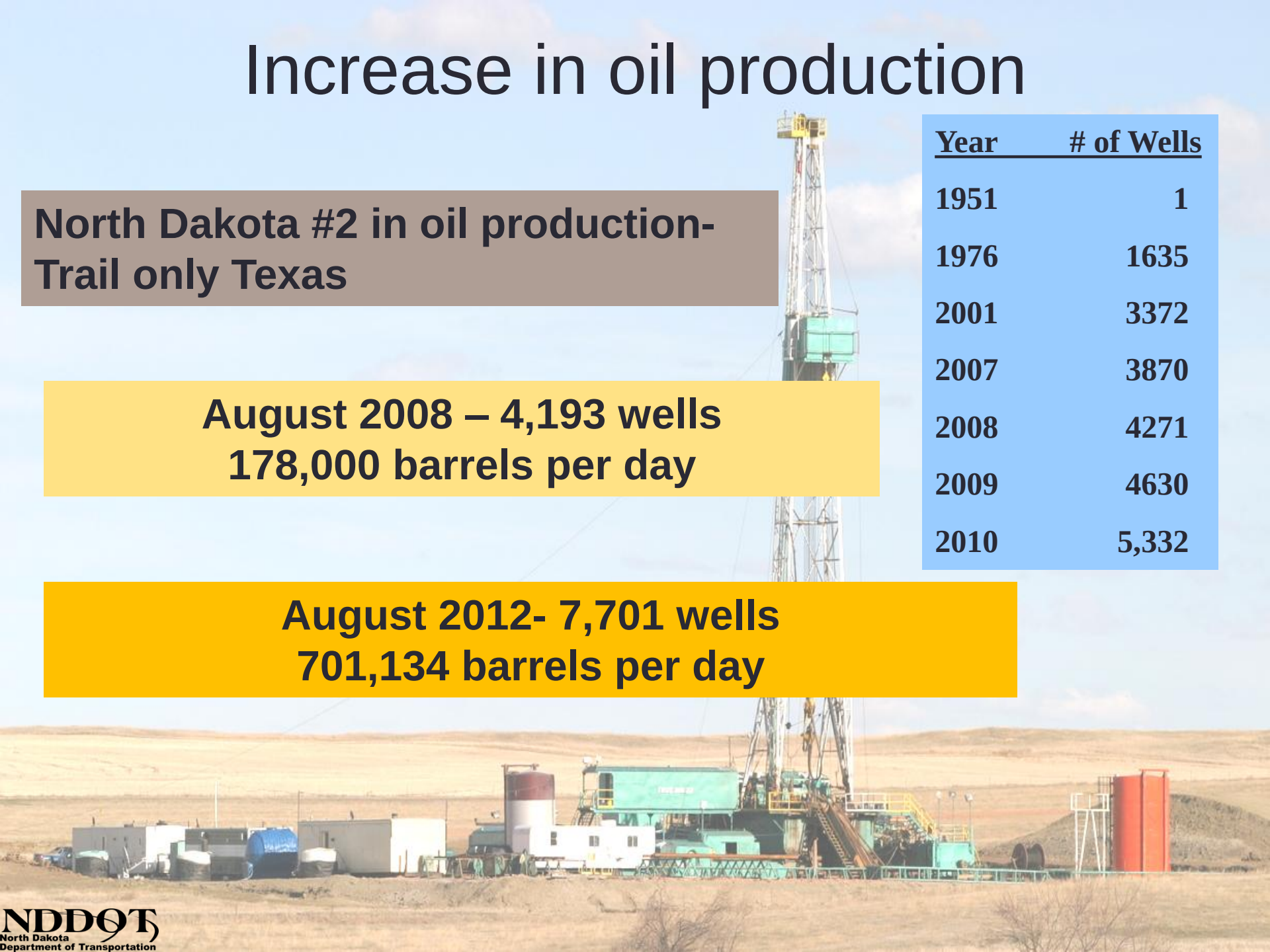
Increase in oil production

North Dakota #2 in oil production- Trail only Texas

August 2008 – 4,193 wells
178,000 barrels per day

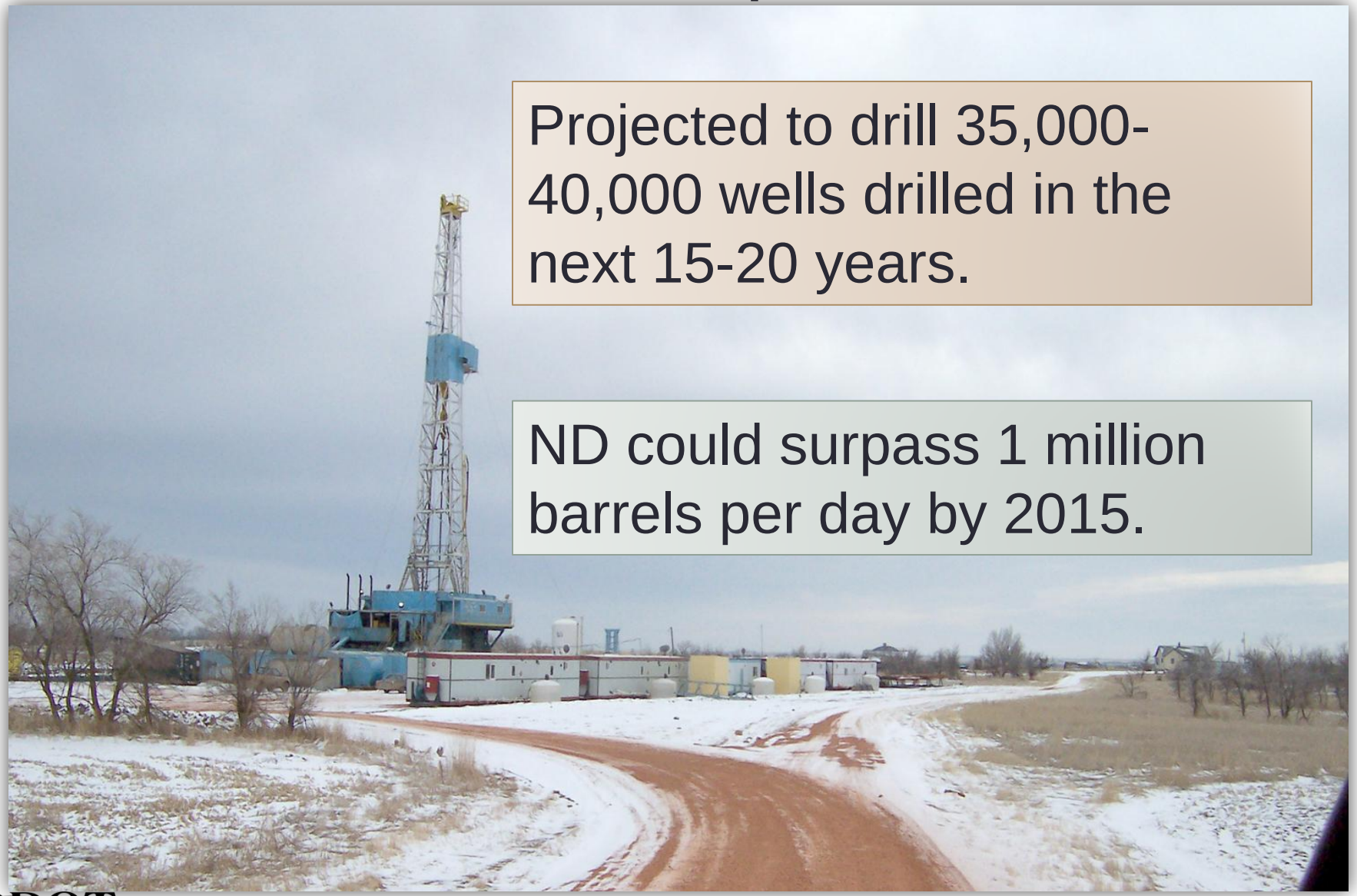
August 2012- 7,701 wells
701,134 barrels per day

Year	# of Wells
1951	1
1976	1635
2001	3372
2007	3870
2008	4271
2009	4630
2010	5,332



NDDOT
North Dakota
Department of Transportation

Increase in oil production



Projected to drill 35,000-40,000 wells drilled in the next 15-20 years.

ND could surpass 1 million barrels per day by 2015.

NDDOT
North Dakota
Department of Transportation

Positive Impacts

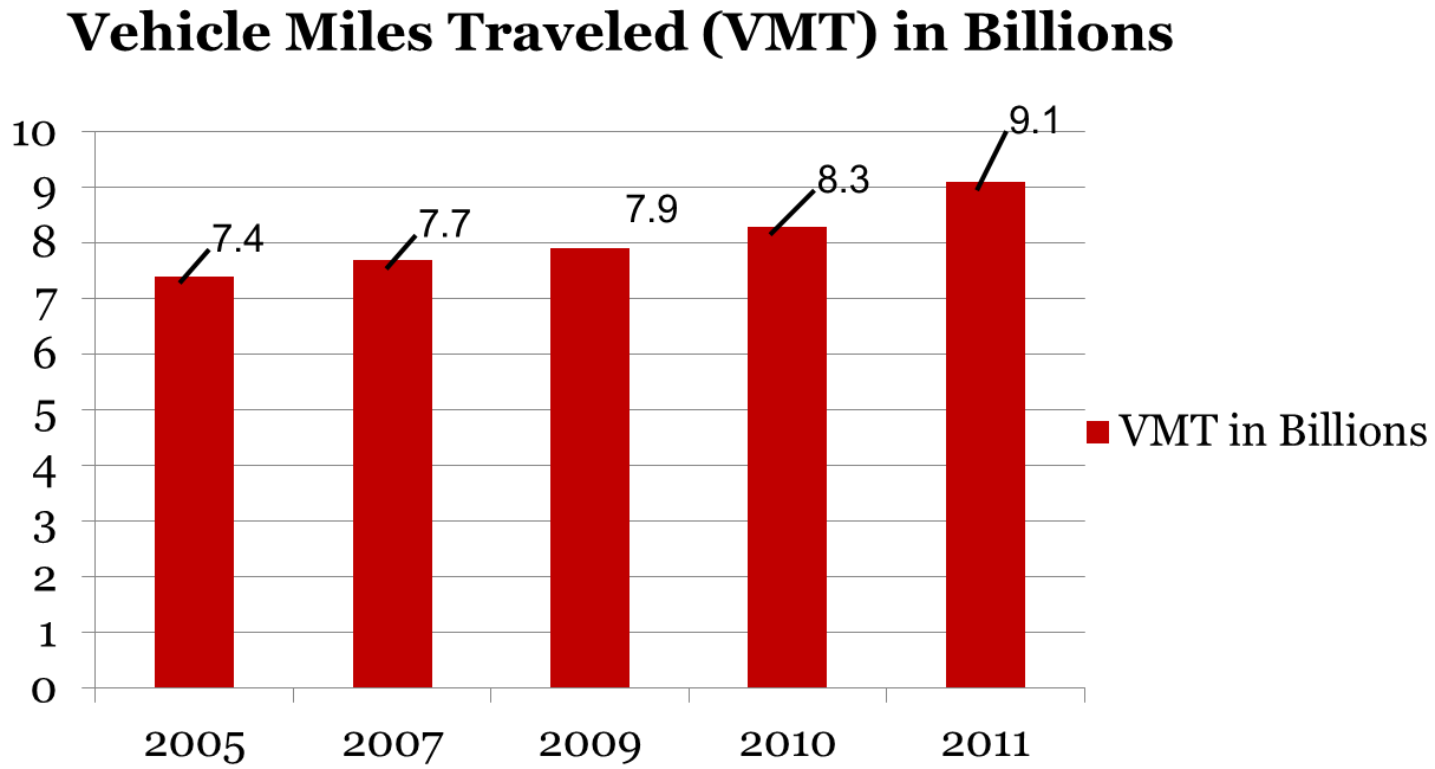
- Positive impact on state and local economy.
- Increase in per capita income- increased 79% since 2000.
- Budget surplus at the state level.
- Lowest unemployment in the nation (~3%).
- State's population is growing.

Energy Impact on Roadways

- Road and street infrastructure not built to handle increases in traffic.
  - Originally built for movement of agriculture products.
- Oil related traffic moves 24 hrs/day.
  - Almost 1/2 of ND oil production shipped by rail.
- For every oil well drilled in North Dakota it takes 2,300 truck loads to bring it into production.

ND Vehicle Miles Traveled

- North Dakota has seen an increase in vehicle miles traveled (VMT's) on the state highway system from 2005 to 2011. Growing from 7.4 billion VMT's in 2005 to 9.1 billion VMT's in 2011. 23% Increase.



NDDOT
North Dakota
Department of Transportation

In 2011, North Dakota saw a 10 percent statewide change in Vehicle Miles Traveled.

Western North Dakota saw a 25 percent change in Vehicle Miles Traveled in 2011.
Trucks saw a 60% increase in Vehicle Miles Traveled.

NDDOT
North Dakota
Department of Transportation

Energy Impact on Roadways

- The increased traffic volumes, (particularly heavy trucks), has accelerated the deterioration of county, township roads, and state highways in the oil impact areas in western North Dakota.

Average Annual Daily Traffic (AADT) for all types of vehicles					
Hwy	**Location**	**Average AADT 2006**	**Average AADT 2009/2010**	**Average AADT 2011**	**% Growth 2006-2011**
ND 8	ND 23 N to Stanley	611	2,454	2,981	388%
ND 22	Dickinson N to ND 23	1,078	2,573*	3,557	230%
ND 23	Watford City to New Town	1,353	3,356*	4,020	197%
ND 23	New Town to ND 8	3,326	5,608*	6,508	96%
ND 23	ND 8 to US 83	1,351	2,191*	2,680	98%
US 85	West of Watford City to Jct. of US 85 and US 2	2,322	2,828	6,270 (10,750)	170% (363%)
US 2	US 85 to Stanley-EB &WB	2,003	3,654	7,270	263%
US 2	Stanley to US 52-EB & WB	2,442	2,914	6,056	148%

Energy Impact on Roadways- Truck Traffic

Truck Average Annual Daily Traffic (TAADT)

Hwy	Location	Average TAADT 2006	Average TAADT 2009/2010	Average TAADT 2011	% Growth 2006-2011
ND 8	ND 23 N. to Stanley	102	744	1,295	1,169%
ND 22	Dickinson N. to ND 23	108	696	1,061	882%
ND 23	Watford City to New Town	167	1,114	1,686	910%
US 2	US 85 to Stanley-EB &WB	450	1,385	2,671	493%
US 2	Stanley to US 52-EB &WB	640	838	1,606	150%

Transportation Challenges – Oil Impact

ND Highway 1806 on September 2, 2010.

Transportation Challenges – Oil Impact

ND Highway 1806 on April 28, 2011.

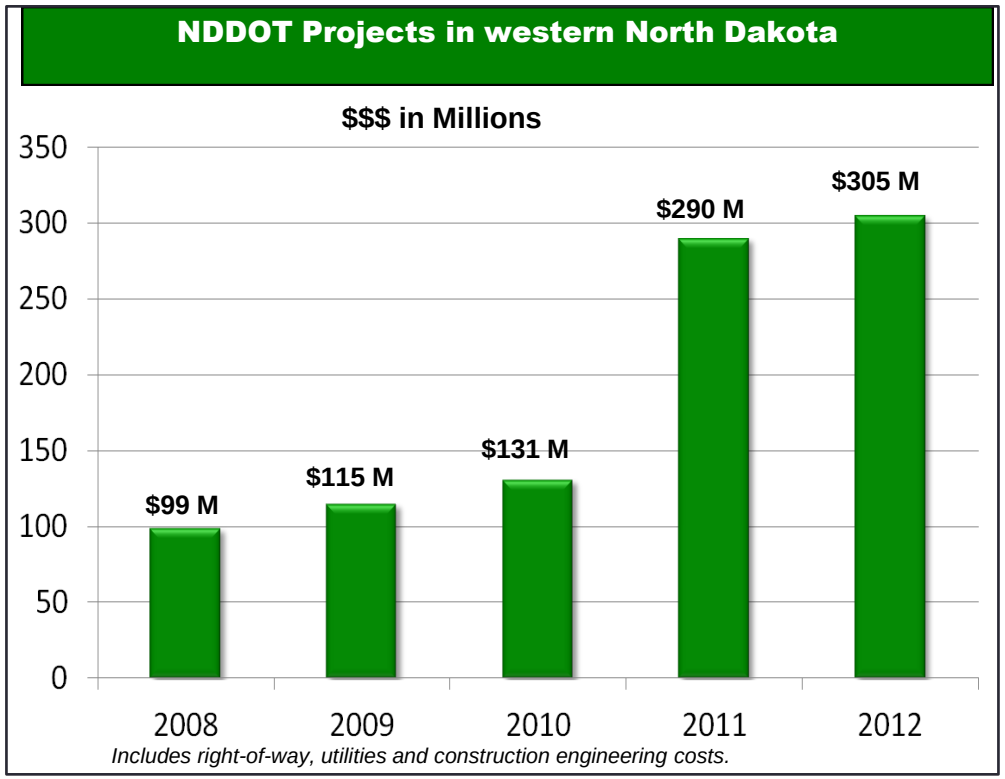
Transportation Challenges- Oil Impact

- US Highway 2 - Emergency repair work must be completed due to greatly increased truck traffic. The highway was built in 2004 and designed for a 20 year life cycle. Due to significantly more traffic, the roadway has sustained damage. The DOT must address this damage. Below are photos of damage on US Hwy 2 near Ray.

NDDOT projects in western ND

NDDOT is aggressively addressing infrastructure improvements to enhance safety and traffic movement in western North Dakota

The North Dakota Department of Transportation (NDDOT) invested approximately $635 million in state projects from 2008-2011 to preserve and improve transportation infrastructure in this area. The state will invest an additional $305 million in 2012, as well as continue to plan and work on future road projects.

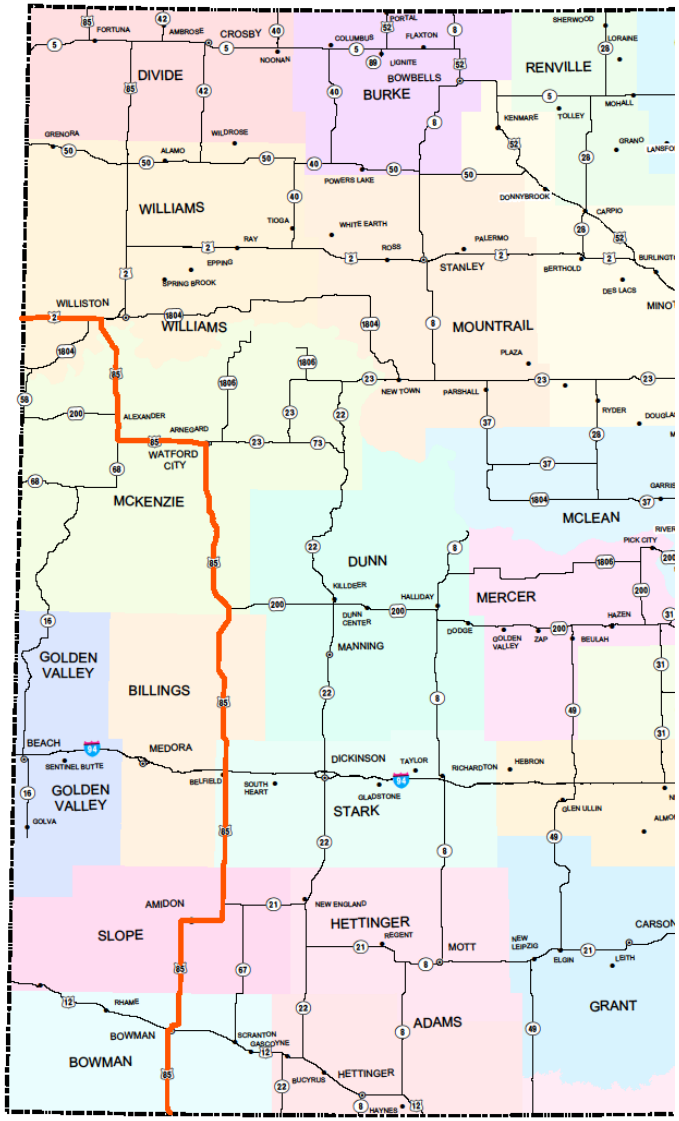


NDDOT
North Dakota
Department of Transportation

NDDOT projects in western ND

- Demand for four lanes
  - US 85
  - ND 22 north of Dickinson
- Request for truck reliever routes:
  - Williston
  - Alexander
  - Watford City
  - Dickinson
  - Killdeer
  - New Town

Theodore Roosevelt Expressway Corridor



STATE OF
NORTH DAKOTA

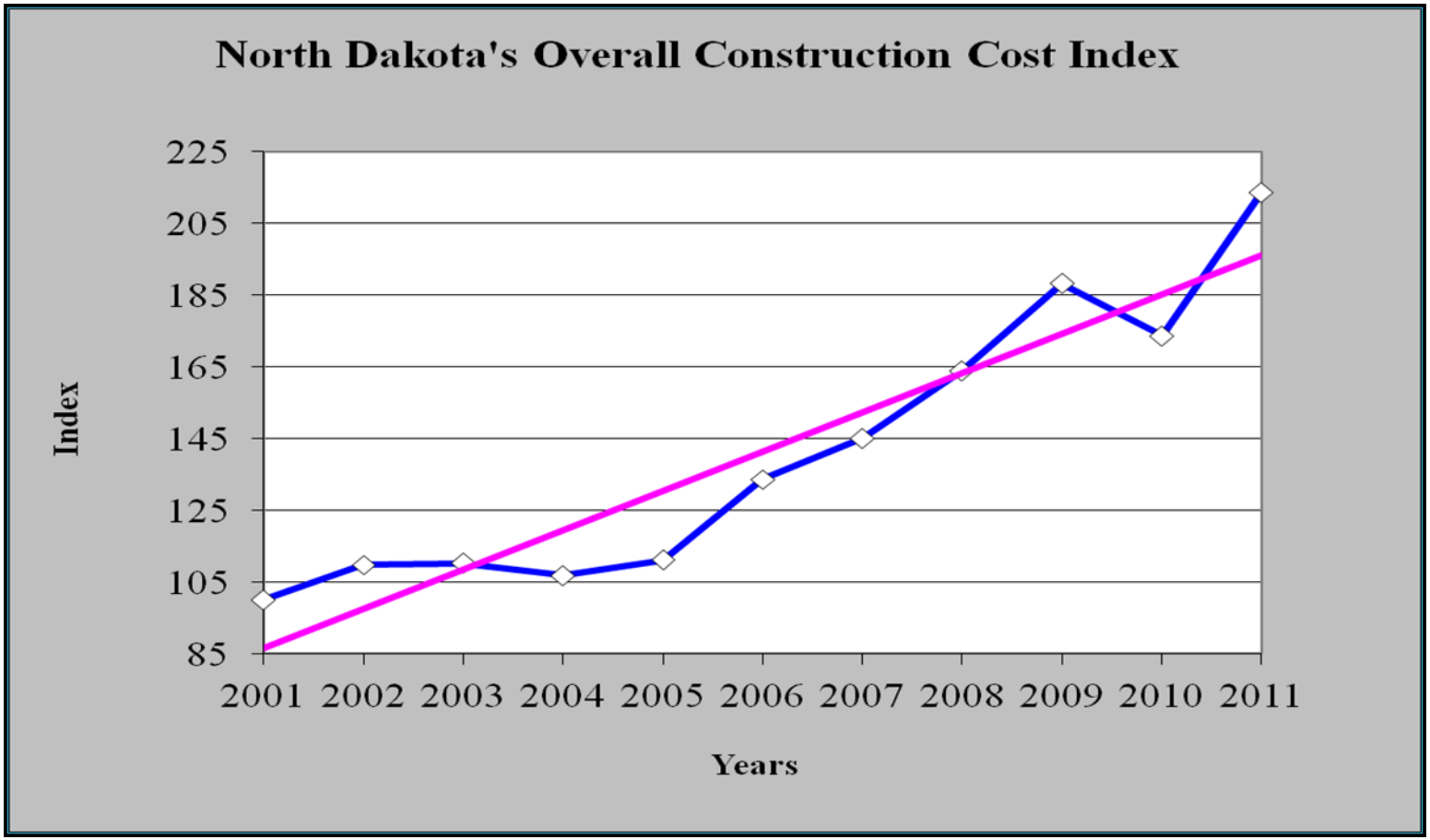
PREPARED BY THE
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
PLANNING & PROGRAMMING DIVISION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

2009

F:\PLANNING\Steve_Nelson\MXD\ThEodoreRooseveltNDCorridor.mxd

NDDOT
North Dakota
Department of Transportation

Construction Costs



Our Transportation Funding Today

The Governor and legislature passed a comprehensive transportation package of $1.67 billion for the 2011-2013 biennium.

- It includes an unprecedented sum in non-matching State General Fund dollars.
- It is the largest two-year budget for road construction and transportation services in NDDOT history.
- $600 million = Regular federal aid statewide construction program.
- $60 million for highway needs in the non-oil producing counties.
- $228.6 million = Extraordinary State Highway Maintenance program.*
- $142 million = County and Township Road Reconstruction program.*
- $200 million = to address emergency roadway needs at Devils Lake and flooding on roadways across the state.*

**New funding legislature gave NDDOT- first time in state history.*

NDDOT
North Dakota
Department of Transportation

Upper Great Plains Transportation studies

Upper Great Plains Transportation Institute is partnering with NDDOT to develop the following studies:

- Western North Dakota Traffic Model Study.
- Needs Study for State Highways.
- Update reports for transportation infrastructure needs for all county and township roads.
- Traffic Safety Study which will analyze crash data and conduct a regional survey in the state's oil producing region.

What does the future hold?

- Continue to provide a transportation system that serves the industries' needs and promotes economic growth.
- Continue to focus on safety.
- Continue to work with local officials and oil industry.
- Keep the Legislature informed of needs and impacts.
- Evaluate the need for truck reliever routes on case by case basis.

Western ND Information Resource

- www.dot.nd.gov/projects/western-nd/western-nd-projects.htm

Thank You

NDDOT
North Dakota
Department of Transportation