The Roads to New Hampshire's Future

2013

New Hampshire DOT
Department of Transportation

Economic Impact of Maintenance

- **40% expenditures Highway Maintenance are expended <u>solely for Snow & Ice control yearly</u>**

  $32-$42 million/year FY 2012 = $32 million

- **Studies have shown that if a state was to "shut down" due to a Snow and & Ice event, economic impacts could be between $64 million (UT) and $700 million (NY) DAILY. Massachusetts had an estimated <u>daily loss of $265 million</u>**

  (2011 American Highway Users Alliance study)

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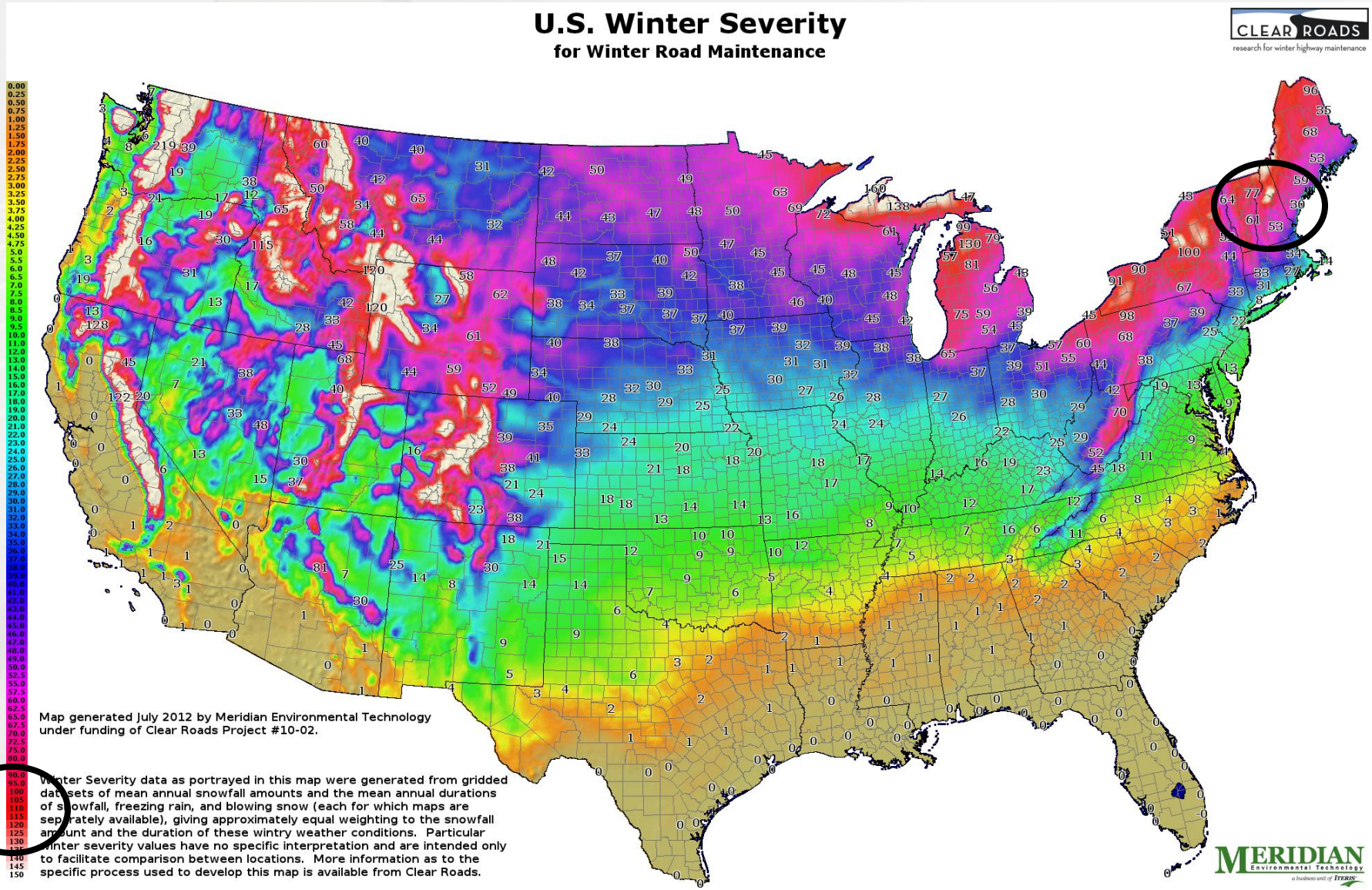
Not All States Are The Same



Natural Disaster – Tropical Storm Irene
August 29, 2011 (Before)

DOT Response
September 9, 2011 (After 10 days later)

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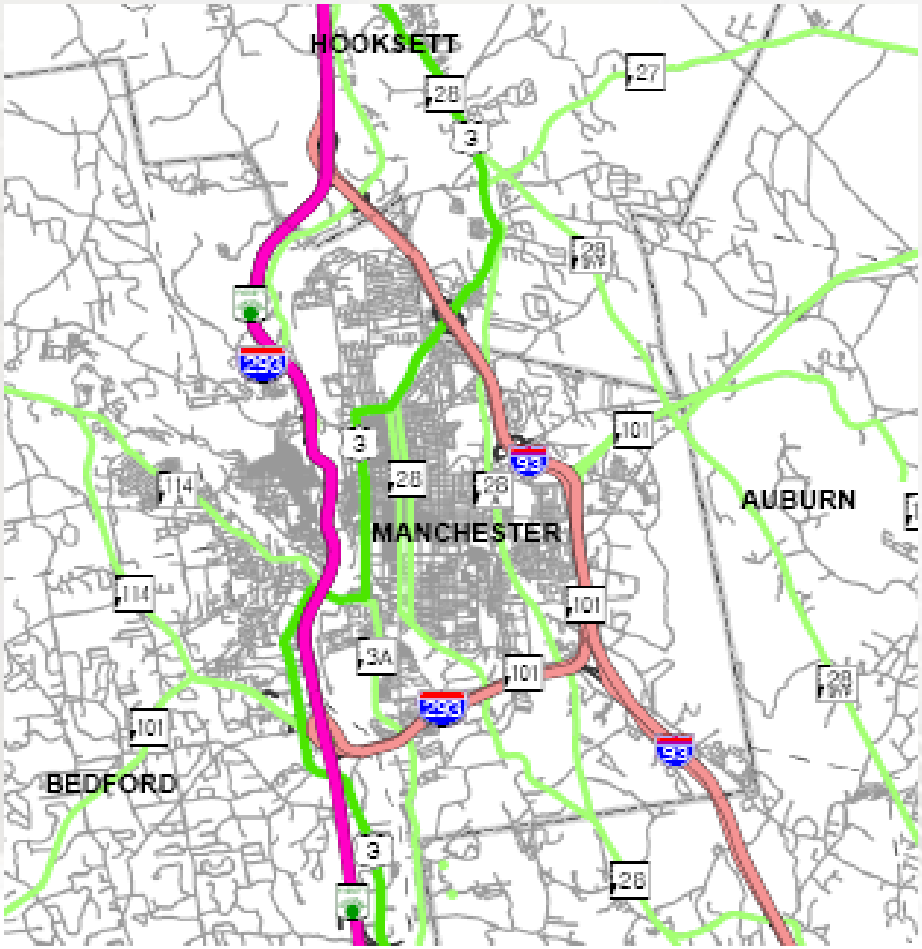
Prioritizing Resources

NH Road System (4,559 mi)

1. **National Highway System** (NHS)(790 mi-18%)
   - Turnpikes
   - Interstates
   - Select US Routes
   - Select State Numbered Routes
2. **US Routes and State Numbered** Routes (2,799 mi – 61%)
3. **Unnumbered State Roads** (970 mi-21%)



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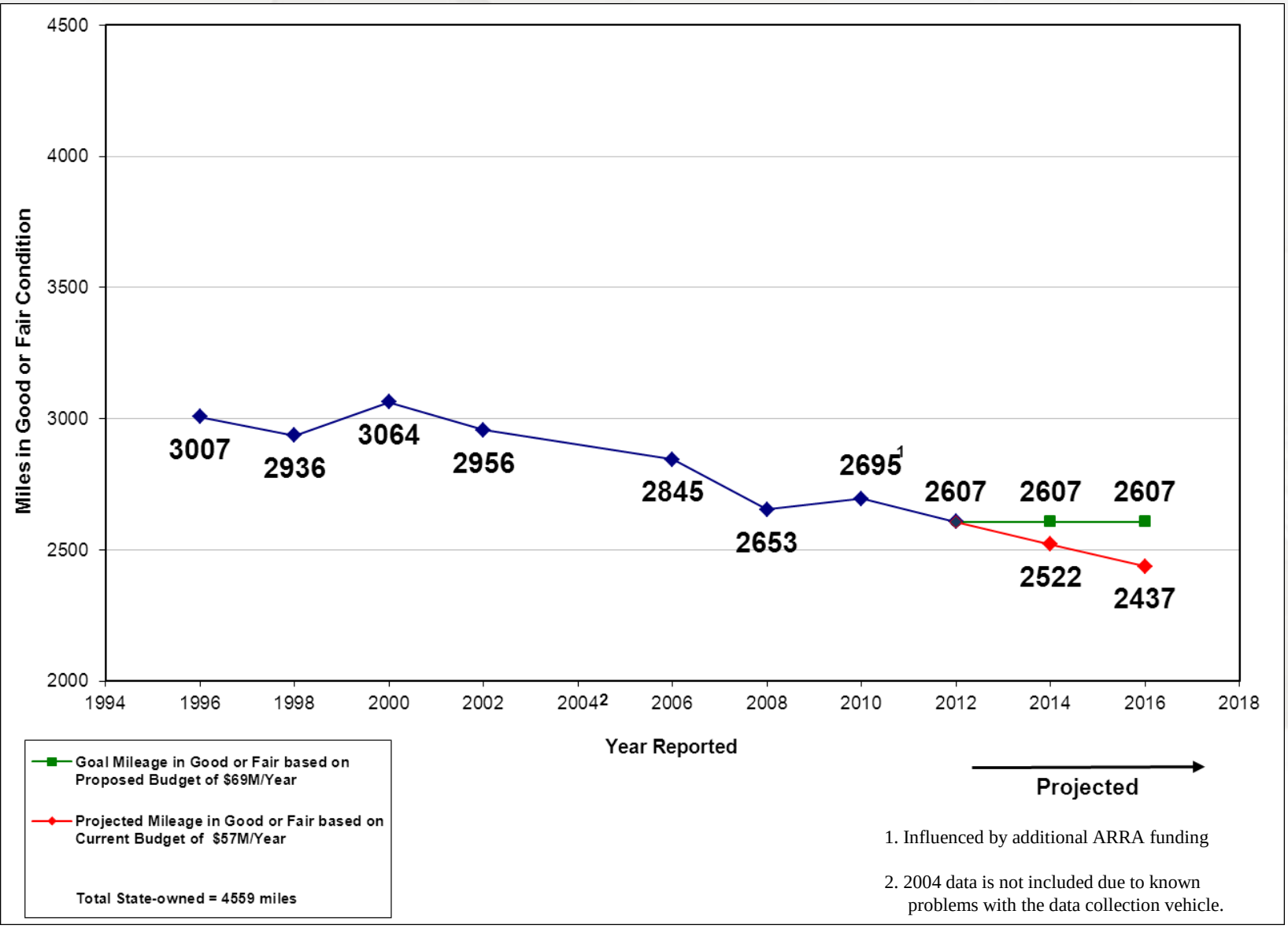
New Hampshire Pavement Conditions: 1996-2016

ADDITIONAL $12M PER YEAR NEEDED



1. Influenced by additional ARRA funding

2. 2004 data is not included due to known problems with the data collection vehicle.

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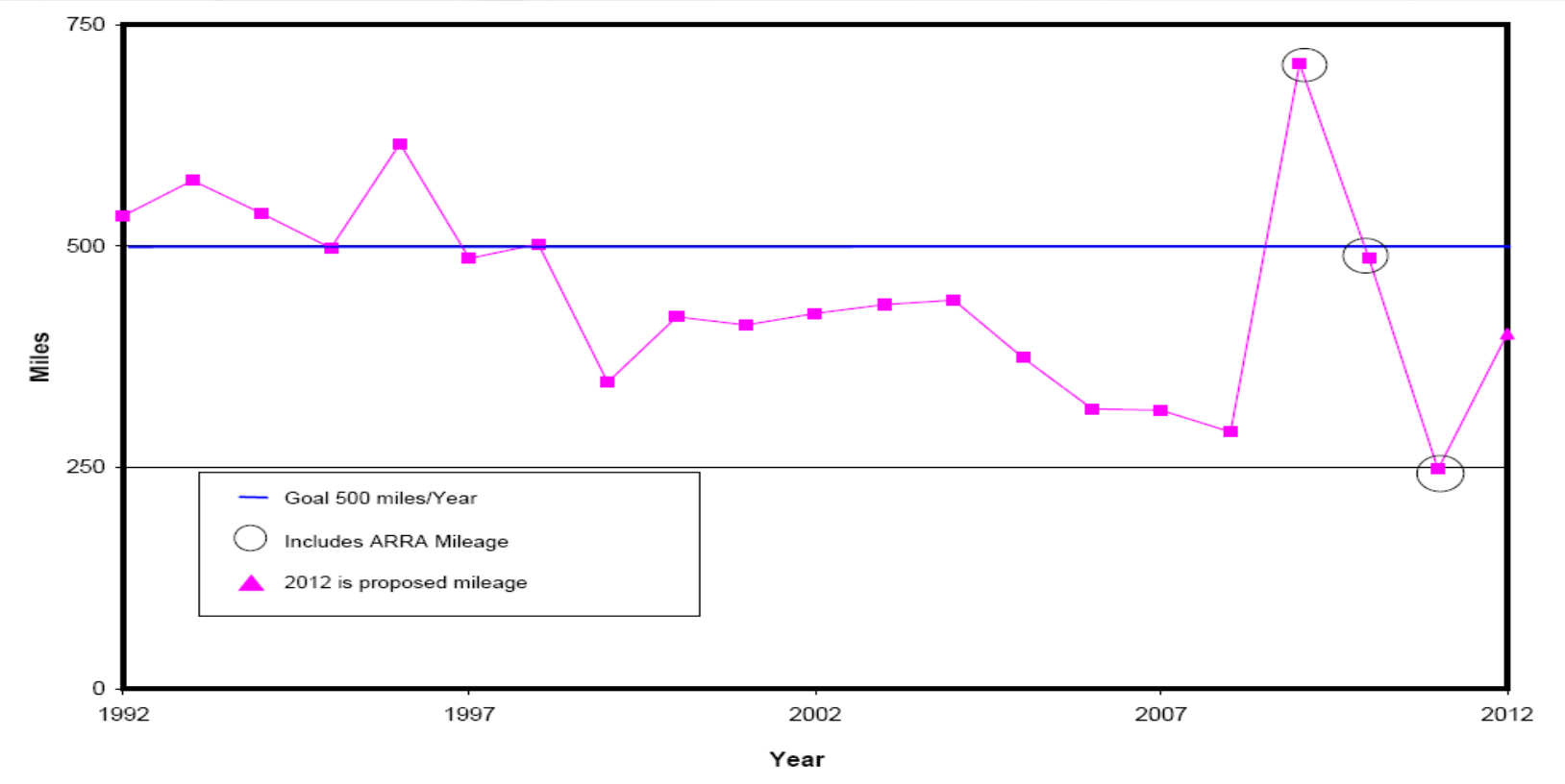
NH Miles of Road Resurfaced 1992 to 2012



- **Goal of resurfacing 500 miles of roadway per year not being achieved**

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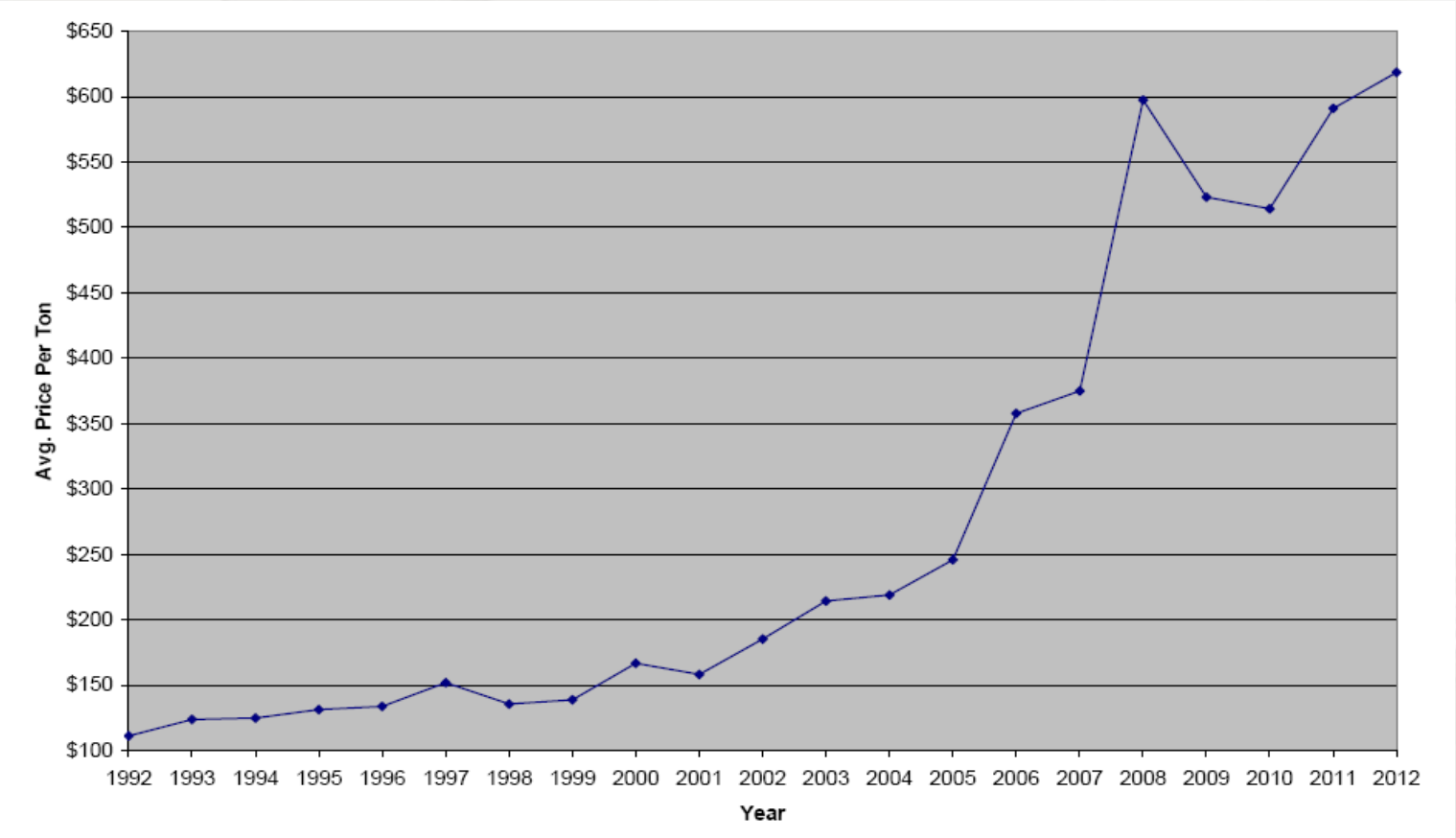
Average Price of Asphalt Cement 1992 to 2012



- **The cost of asphalt cement increased 460% over this period**
- **Diesel, gasoline, road salt increases…..**

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Limited Resources
Must Manage & Prioritize

- 1st priority – NH National Highway System (includes all high volume and primary routes); needed for healthy economy and mobility
- 2nd priority – Remaining US Routes and State Numbered Routes; maintained at a less than desirable level
- 3rd priority - State Unnumbered Routes; not being properly maintained due to lack of funding

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Statewide Pavement Condition

(4,559 total centerline miles 299 unrated)

- 19 % good condition - 828 miles
- 44 % fair condition - 1,867 miles
- 37 % poor condition - 1,565 miles
- $615 million would be needed to bring all poor condition pavements to good condition (not including drainage, guard rail & bridges)
- $3.7 billion is the estimated total value of the state-owned pavements
- Pavements are the State's most valuable asset other than land and bridges

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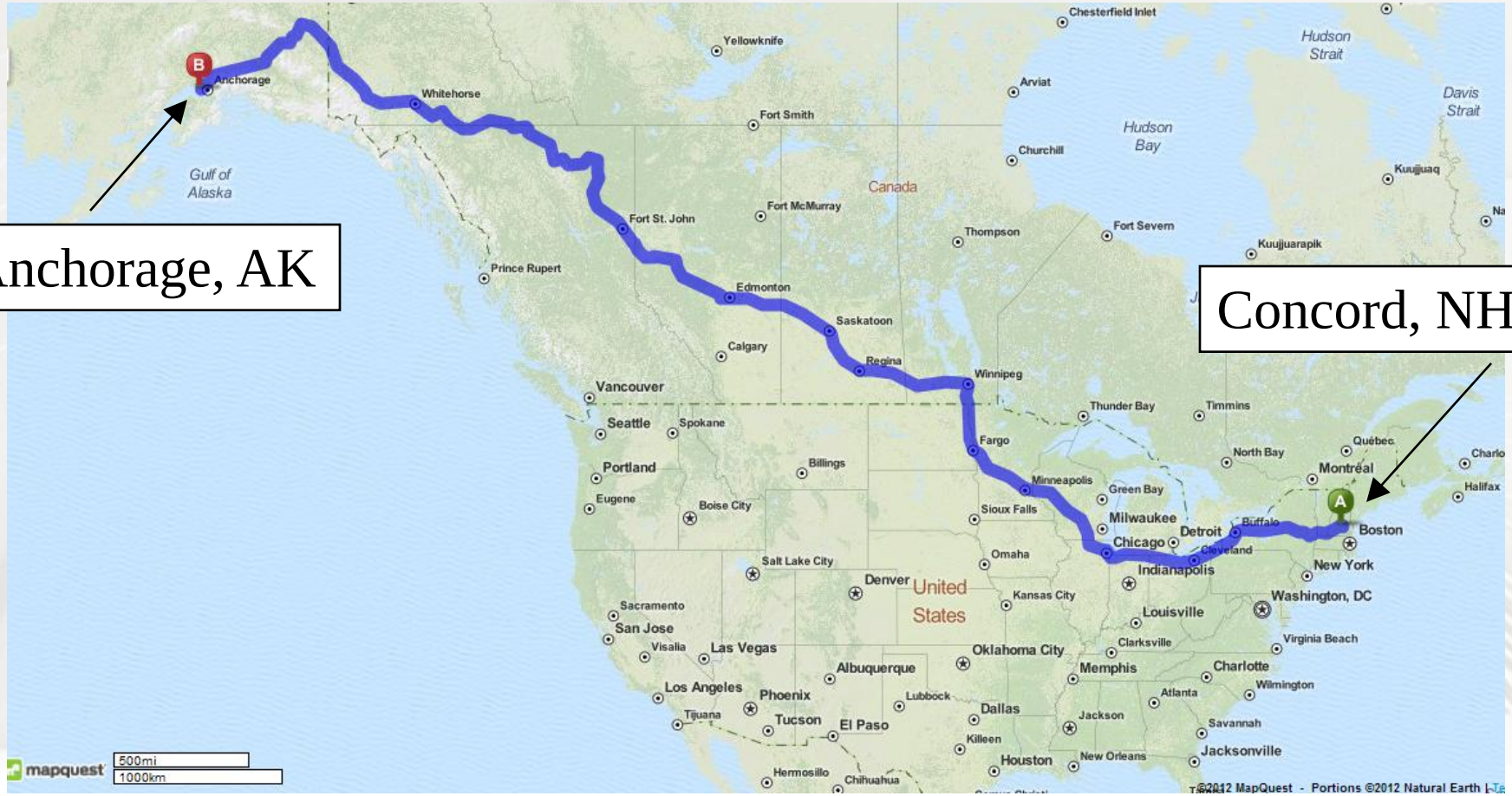
4,559 Miles

- The DOT Maintained road network would stretch from Concord, NH to Anchorage, AK



A VERY LONG DRIVE!

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Poor Condition – 1,565 miles

Fair Condition – 1,867 miles

Good Condition – 828 miles

WOULD YOUR CAR SURVIVE?

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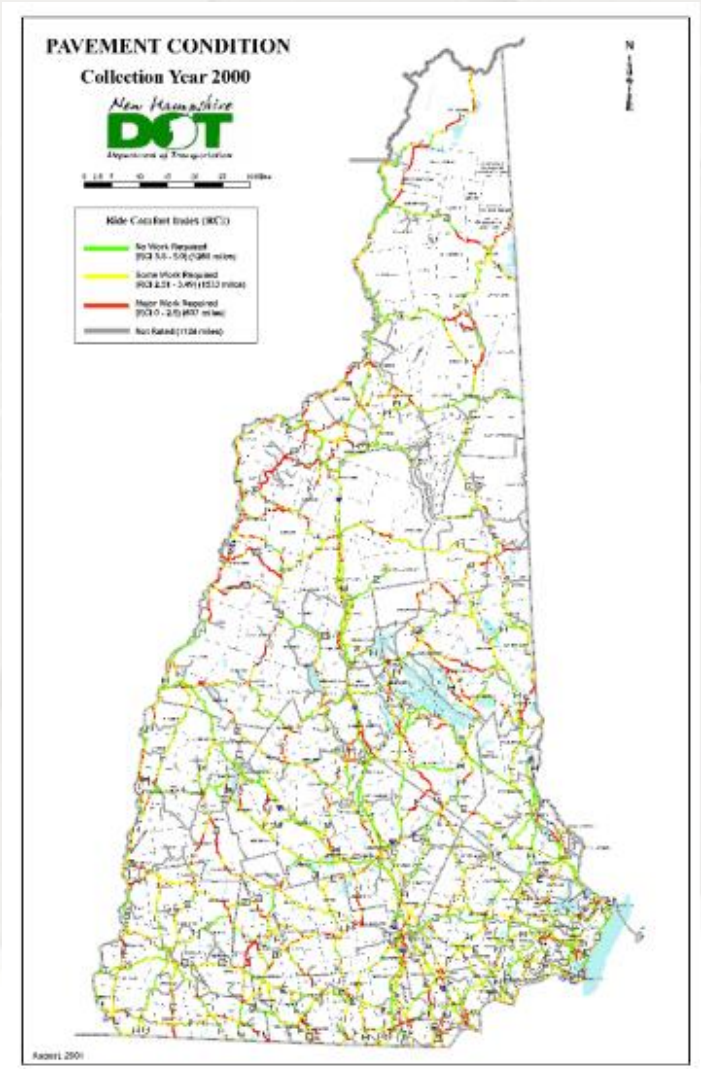
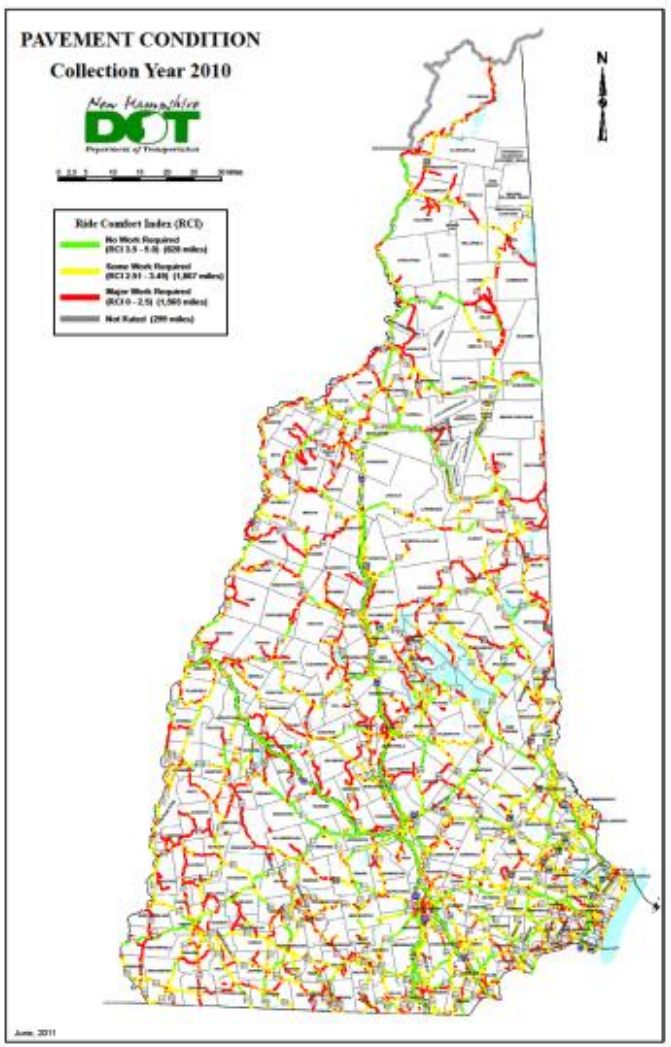
Pavement Conditions

2000



2010



Red = Poor Condition

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Pavement Preservation

- Routine surface treatment and wearing surface renewal (perpetual pavement)
- Most cost effective way to maintain pavements
- Need to apply treatment before distress starts to show
- Will free up resources to invest in lower volume roads
- “Keep Good Roads Good”

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NH Bridge Condition

- Red List – Bridges where one or more major structural element is rated as poor condition or worse, or require weight limit posting.
- Near Red List – Bridges where one or more major structural element is rated as fair condition.
- Good – Bridges where no major structural element is rated as fair or poor.

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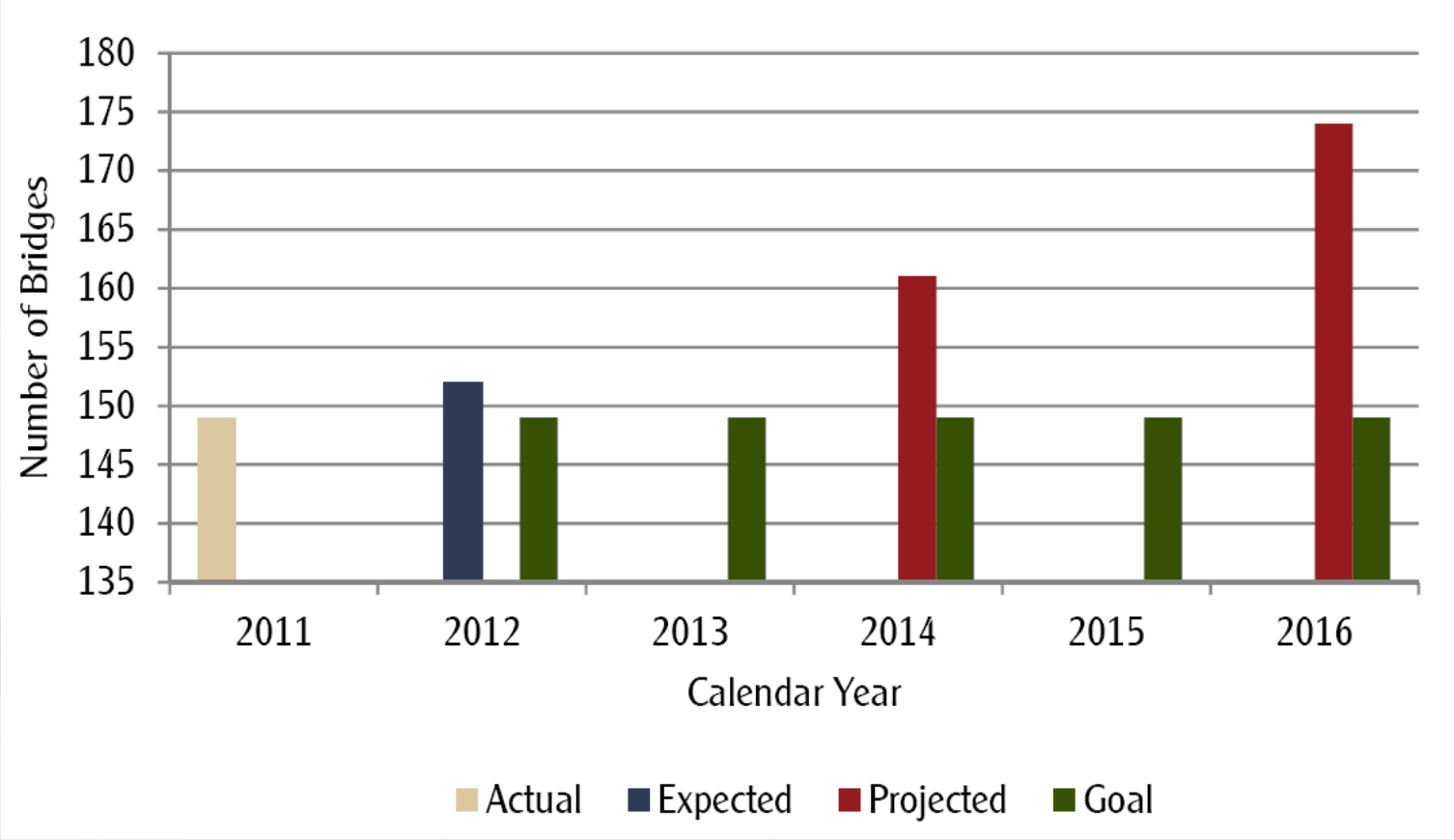
New Hampshire Red List Bridges



- **Total Number of State owned bridges in 2011 = 2,143**

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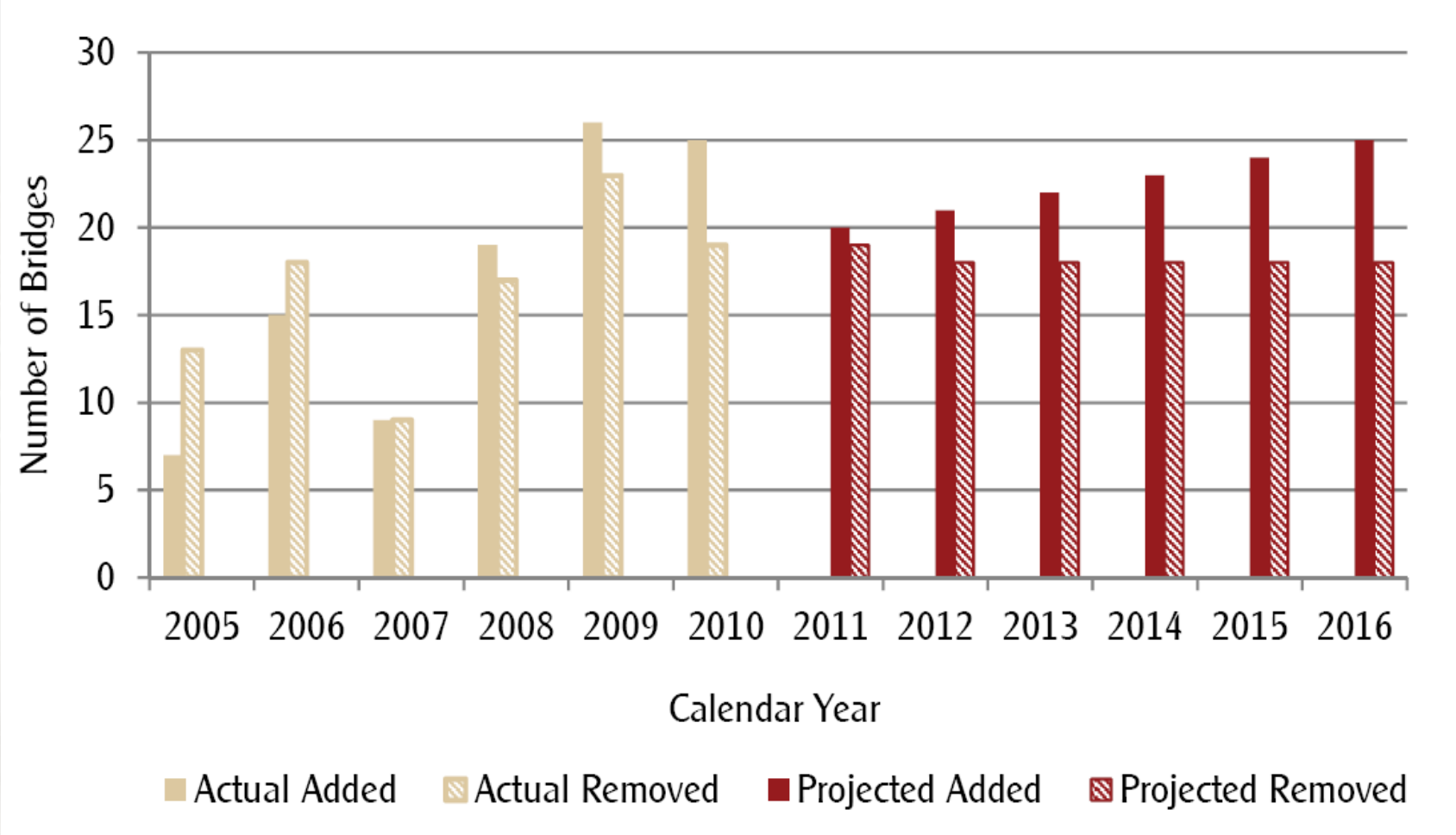
State Owned Bridges Added and Removed from the Red List



- **Additional Investment of $15m per year would repair as many as 10 bridges depending on size and conditions**

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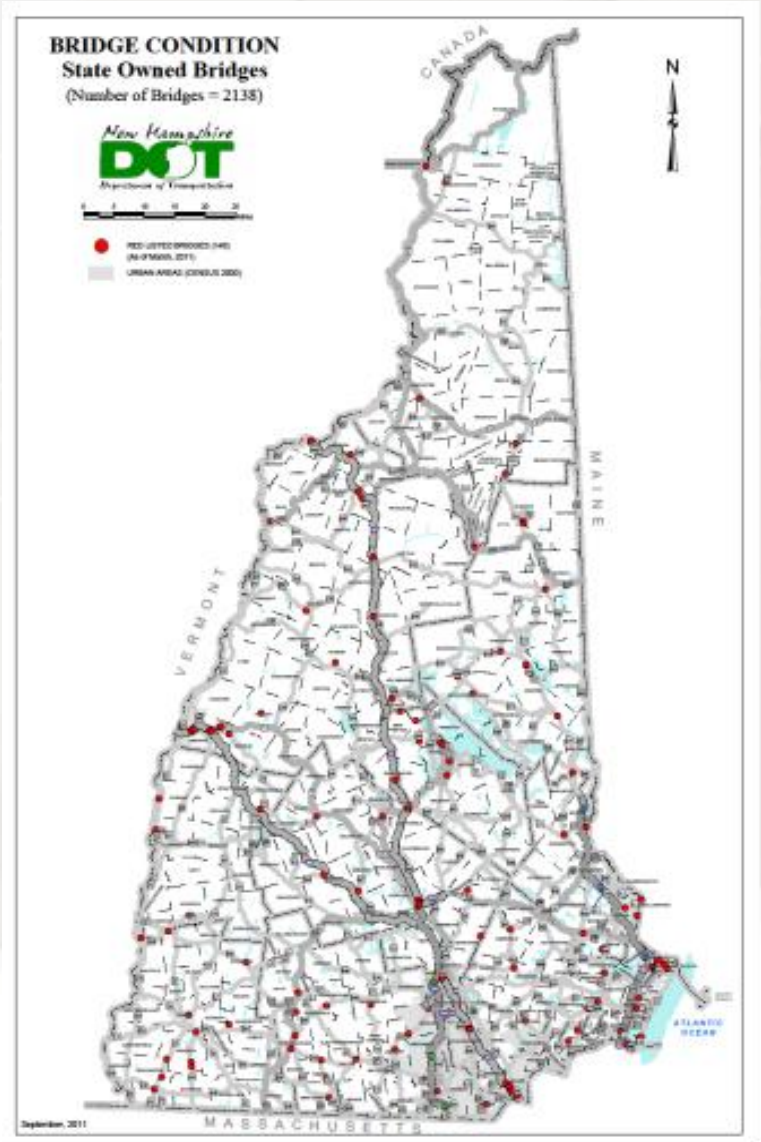
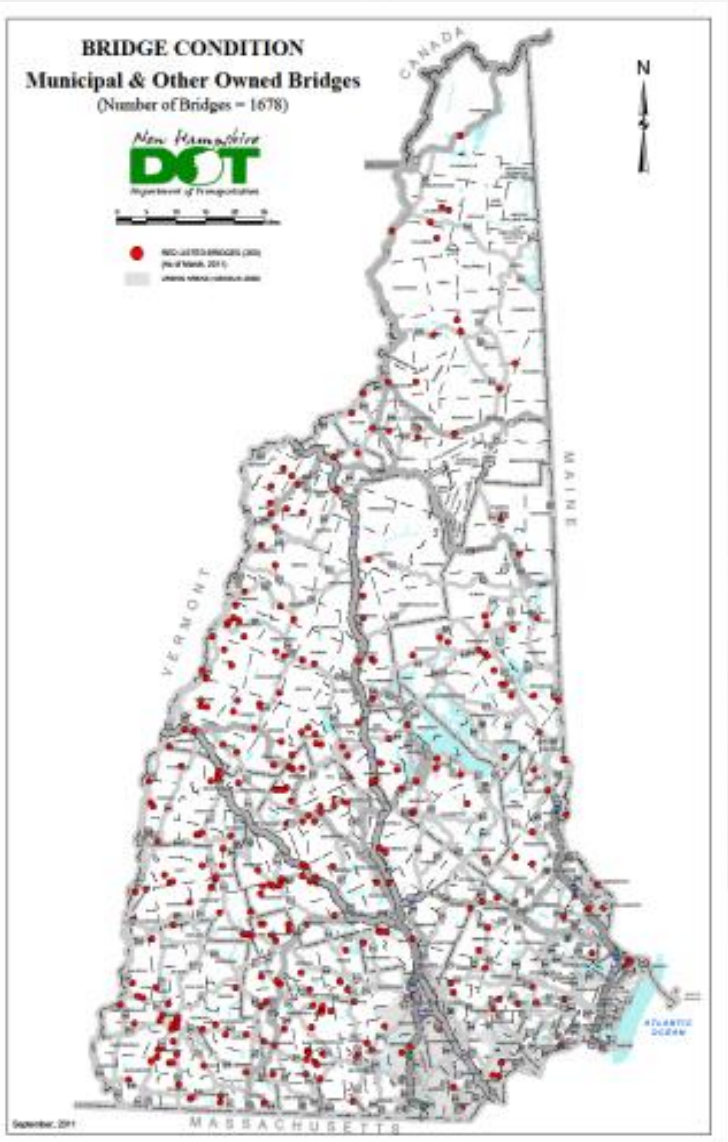
2011 Red List Bridges

140 State Owned Bridges



353 Municipal & Other Owned Bridges



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2012: 11 Municipal Bridges Closed

Municipal Bridges - Recommended Closed in 2012

Date	Type of Deficiency	Bridge ID	Facility Carried	Feature Intersected	Description of Deficiency	Posting Comments
February 13, 2012	Critical Deficiency	Dalton 125/130	Hurlburt Road	Brook	Boiler plate pipes with severe distortion/damage/piping	Recommended closed.
August 15, 2012	Critical Deficiency	Rollinsford 090/052	Old Mill Lane	Rollins Brook	Severe timber decay, beams crushing at ends, abts undermined.	Posted 6, recommend BRC
August 16, 2012	Critical Deficiency	Madbury 056/072	Nute Road	Bellamy River	Severe corrosion of steel culvert, holed through	Posted E2 rec BRC
August 23, 2012	Critical Deficiency	Belmont 103/072	Church Street	Tioga River	Severe corrosion of steel culvert, holed through	Posted E2 rec BRC
September 4, 2012	Critical Deficiency	Hillsborough 152/095	Bog Road	Sand Brook	Rusty MP.	Recommended closed, previously E-2.
September 5, 2012	Critical Deficiency	Ashland 089/052	Collins Street	Squam River	CTB (double tees) with severe spall/crack at exterior.	Recommended closed, OR restricted to ONE LANE and E-2 along south edge.
September 19, 2012	Critical Deficiency	Unity 074/066	Church Road	Chase Brook	Rusty MP.	Posted 6 tons, recommend BRC
October 25, 2012	Critical Deficiency	Alstead 058/136	Hill Road	Darby Brook	Rusty MP.	Recommended closed, previously E-2.
December 4, 2012	Critical Deficiency	Francestown 121/077	Woodward Hill Road	Brennan Brook	Severe corrosion of steel culvert, holed through	Posted E2 rec BRC
December 4, 2012	Critical Deficiency	Francestown 125/077	Second NH Turnpike	South Branch Piscataquog River	Severe corrosion of steel culvert, holed through	Posted E2 rec BRC
December 14, 2012	Critical Deficiency	Amherst 134/100	Manchester Road	Beaver Brook	Severe corrosion of steel culvert, holed through	Posted W.L. 10 Tons, Rec. BRC

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Status and Estimated Costs – State Red List

- Ten Year Plan rehab/replace 98 of the 140 State Red List bridges.
- $680 M (2012 dollars) to rehabilitate or replace the current State Red List bridges.
- 100 State bridges were replaced last 10 yrs.
- Current 10-Year Plan, 98 State bridges to be replaced =10/yr.
- +200 years to replace all 2,143 State bridges.
- $7.82 Billion is the estimated total value of the state-owned bridges

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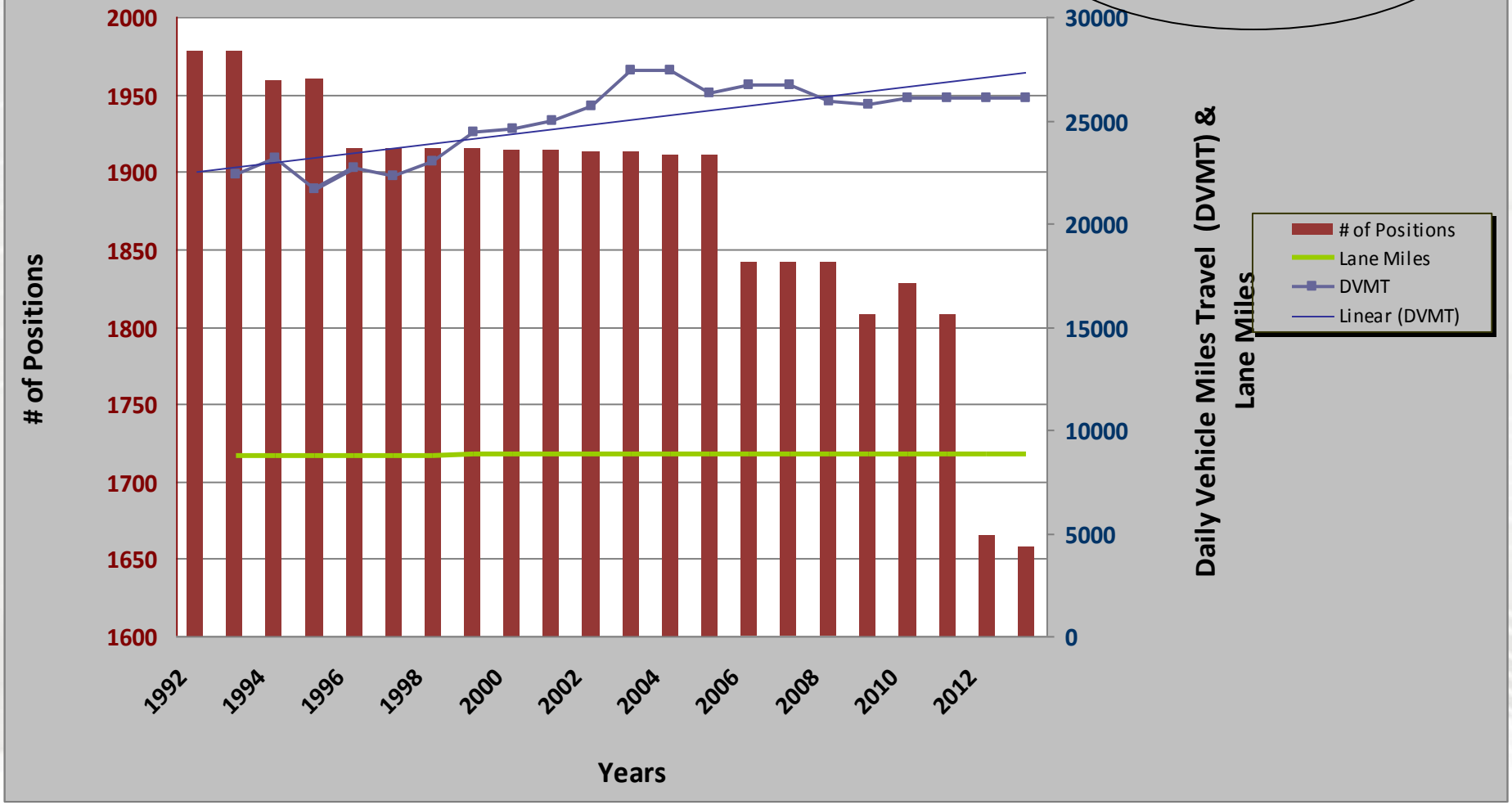
NHDOT Positions VS DVMT & Lane Miles

VMT 29% increase
11% increase lane miles
20% less # positions



57% of Staff eligible for retirement in next 5 years

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One-time Non-Sustainable Funding

- FY 06-07 Surplus from Highway Fund
- FY 08-09 Bonding $60m
- FY 10-11 Registration Surcharge $90m

  I-95 Transfer $50m
- FY 12-13 I-95 Transfer $52m
- FY 14 -15 I-95 Transfer $11.8m ($40.2m less)

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