

Wisconsin State Highway System: Needs and Resources, 2011-20

**A Study Prepared for the
Wisconsin Policy Research Institute**

www.wpri.org

David T. Hartgen, Ph.D., P.E.

The Hartgen Group

Charlotte, NC 28262

david@hartgengroup.net

May 13, 2011



Overview

- State Highway System
 - Prudent Needs, 2011-20
 - Likely Resources, 2011-20
 - Gap between Needs and Resources
- NOT reviewed
 - Local roads and bridges
 - Transit service
 - Other modes

Data Sources

- Wisconsin State Roadway Inventory, 2010
- National Bridge Inventory, 2009
- State Transportation Improvement Program, 2011-14
- Urbanized Area Plans
- Transportation Commission Projects

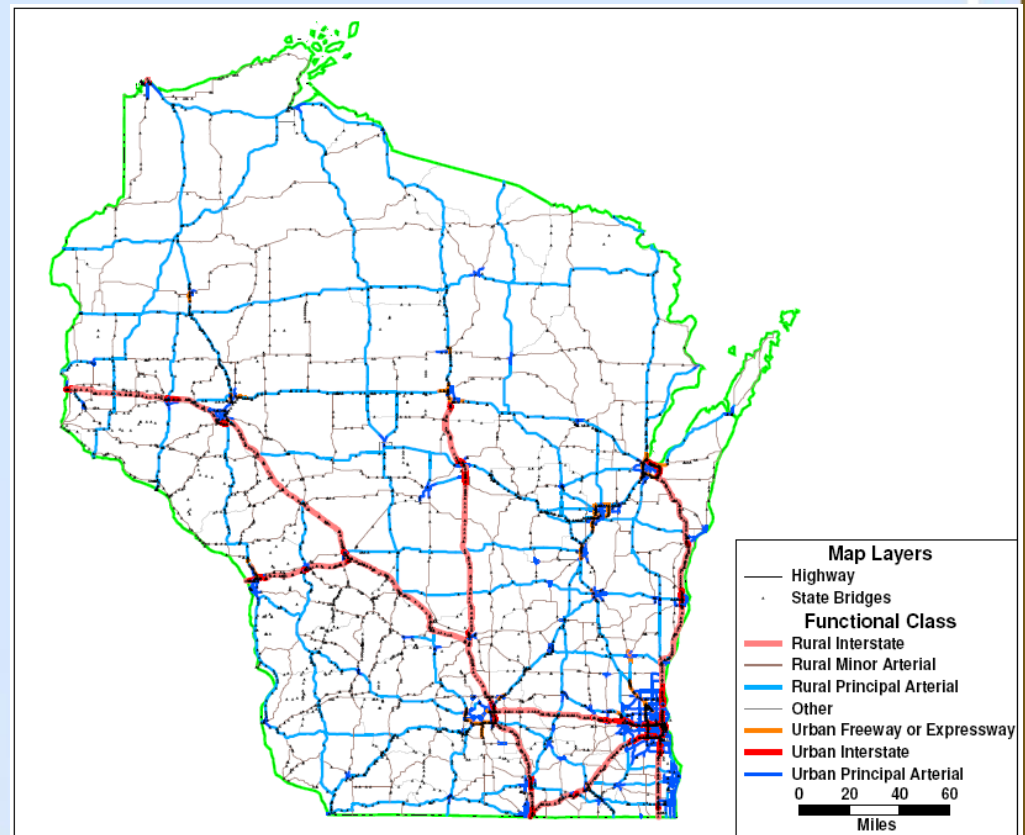
Study Focus

State Highway System

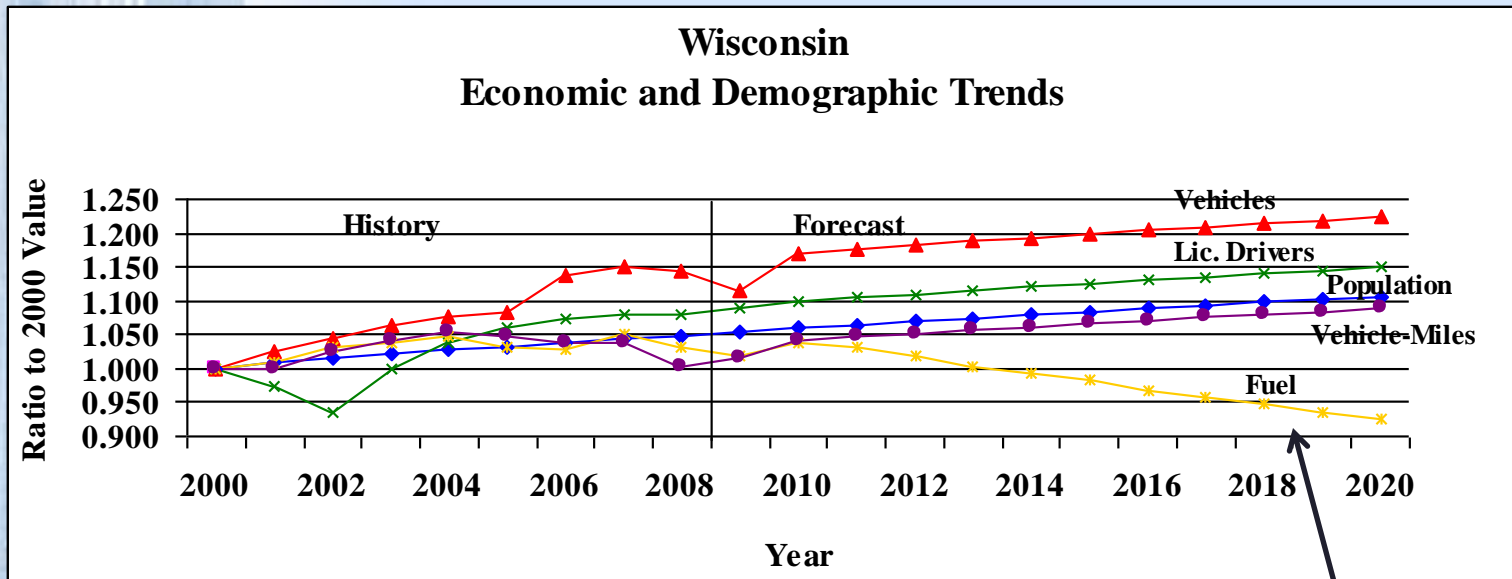
- 11,770 miles
- 14,412 'roadway' miles
- 4,885 bridges

Local System NOT Studied:

- 103,073 miles
- 9,015 bridges

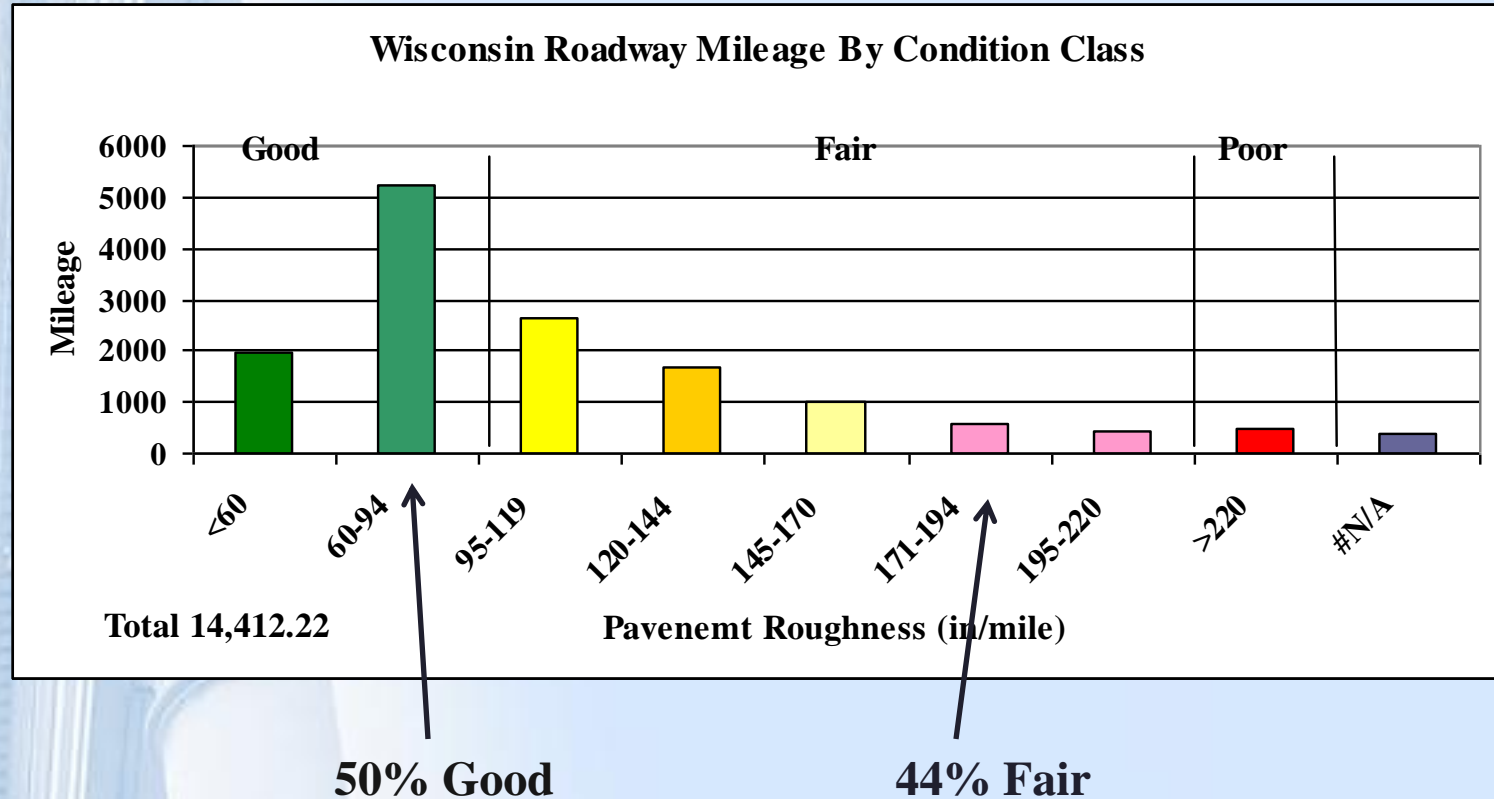


Demographic Trends



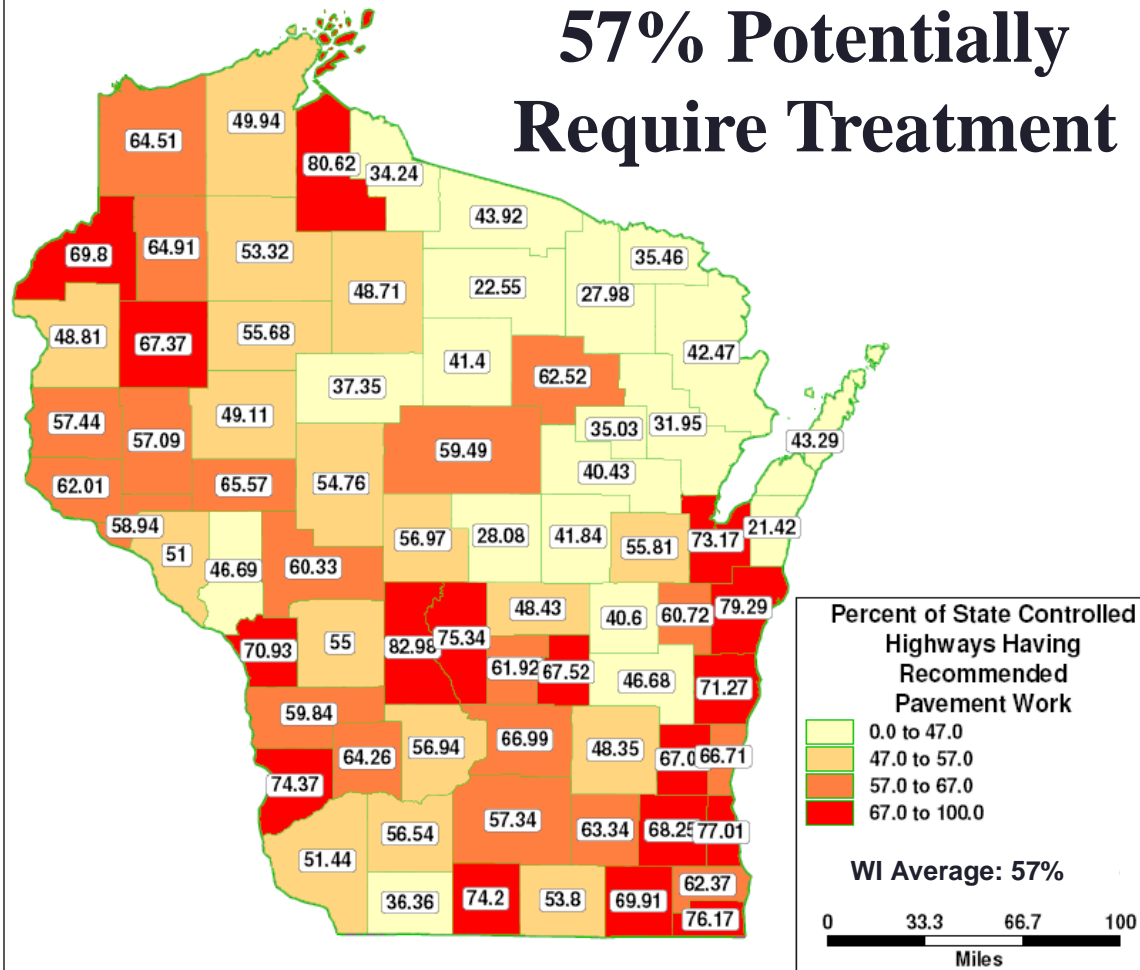
Fuel use
likely to
decline

Wisconsin Pavement Condition, 2010

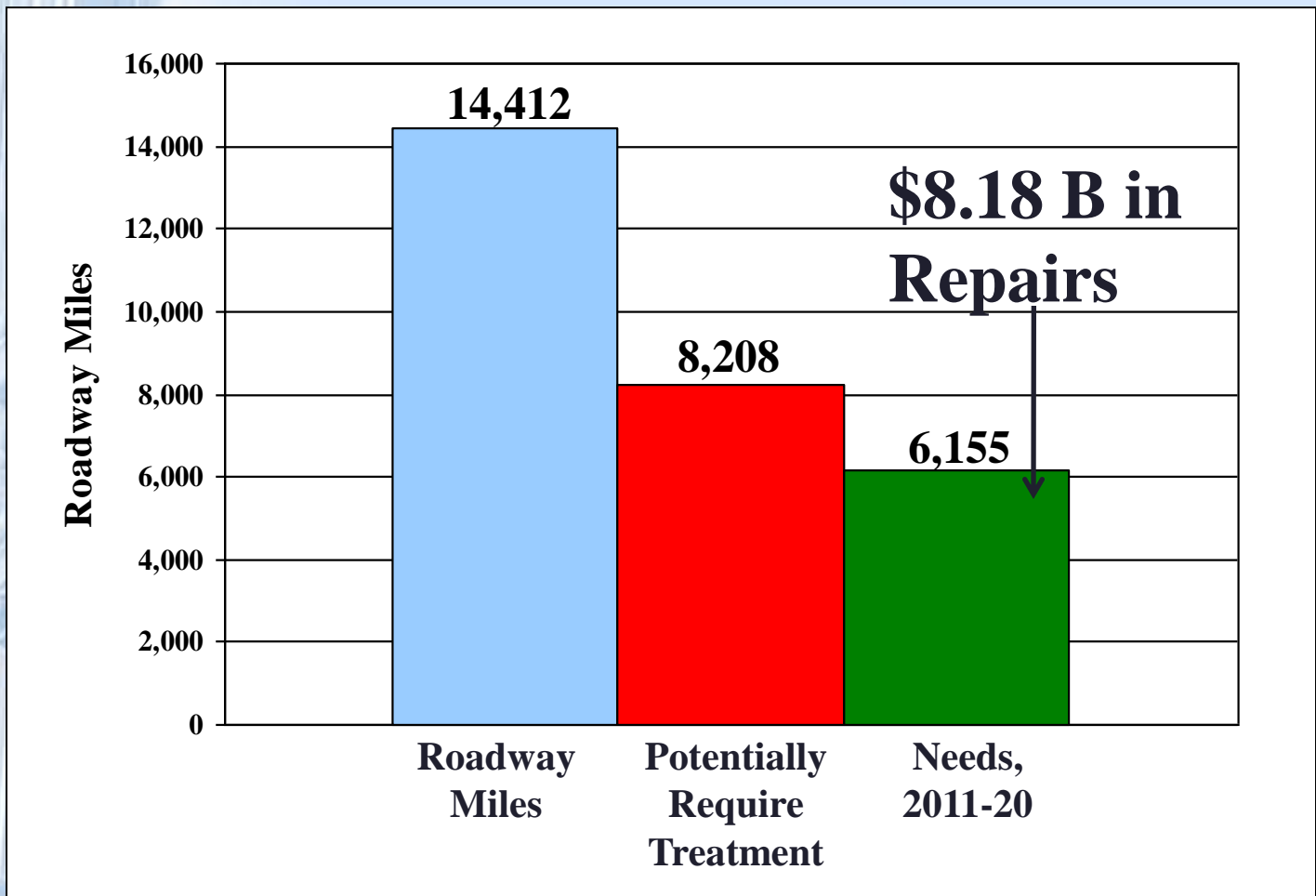


Roadway Miles with Potentially Required Pavement Treatment

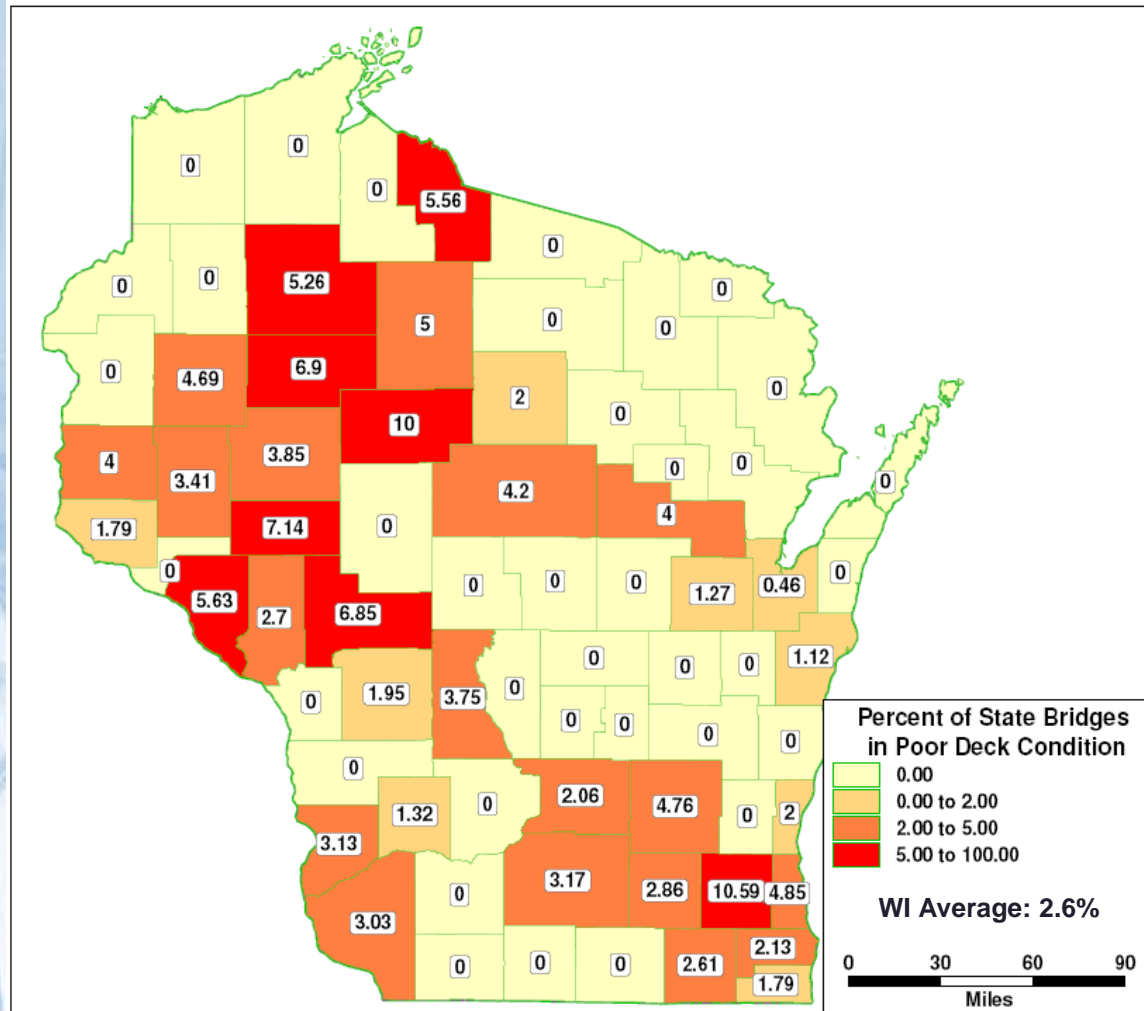
57% Potentially Require Treatment



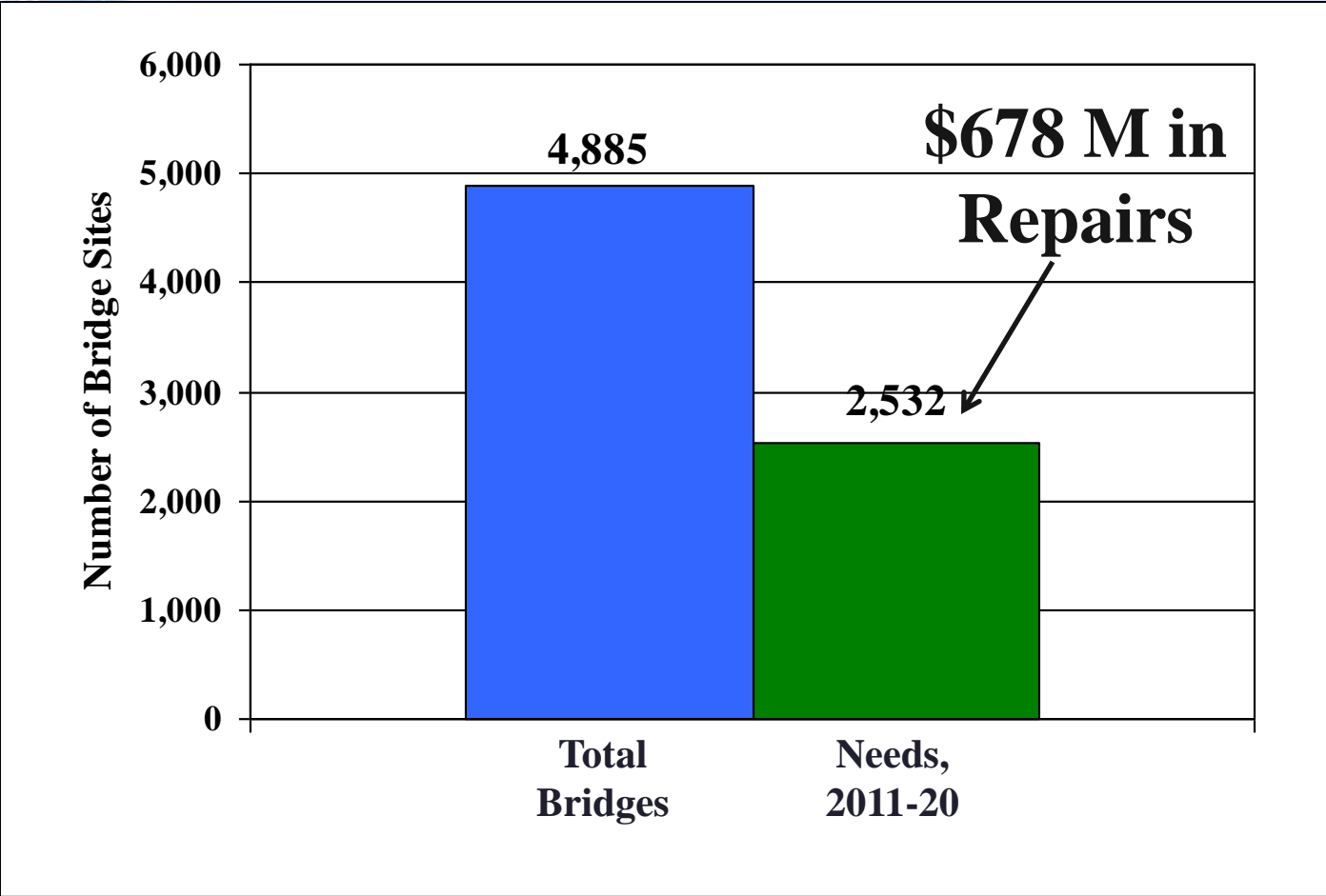
Pavement Repair Needs



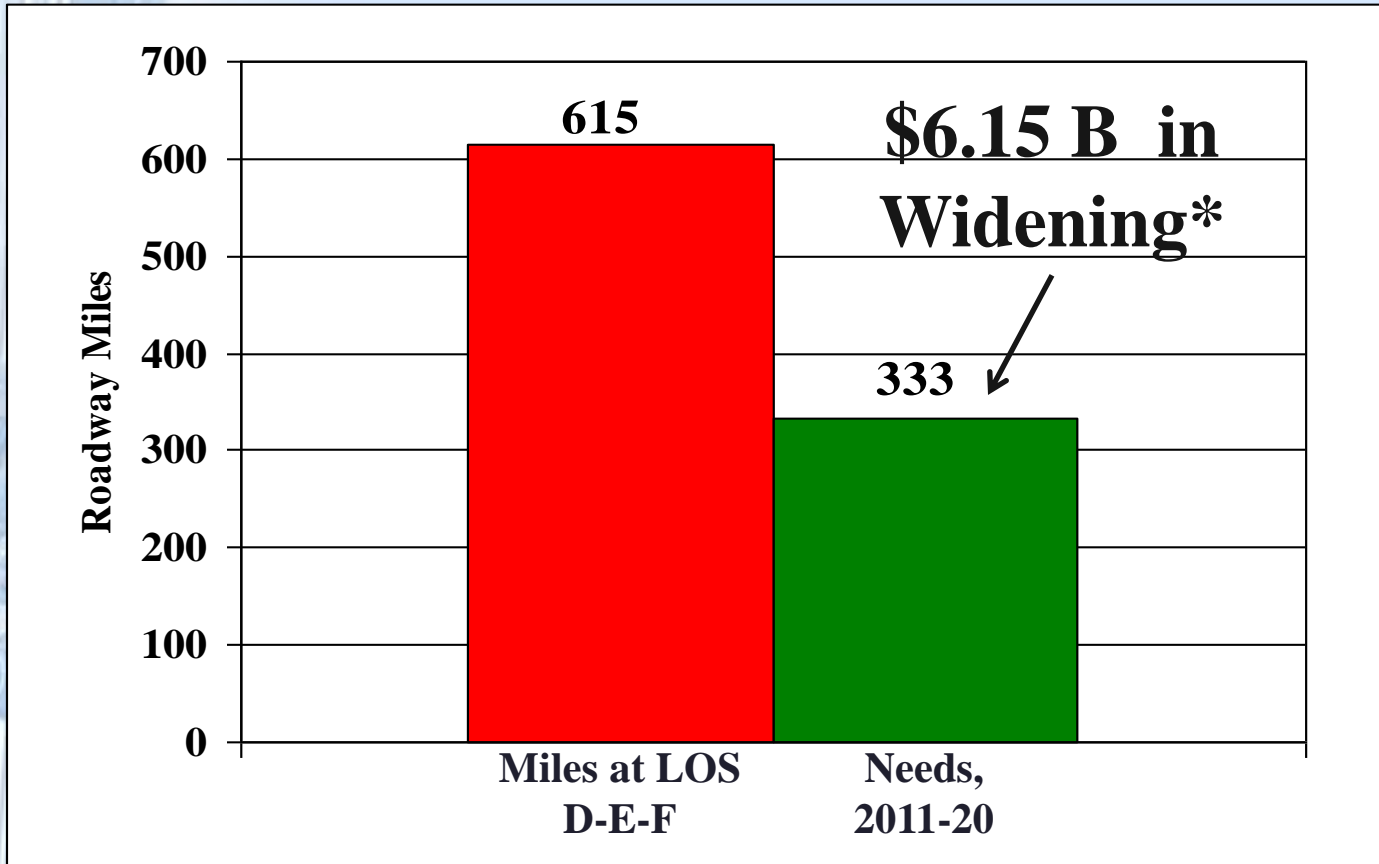
Percent of State-Owned Bridges with Poor Deck Condition



Bridge Repair Needs

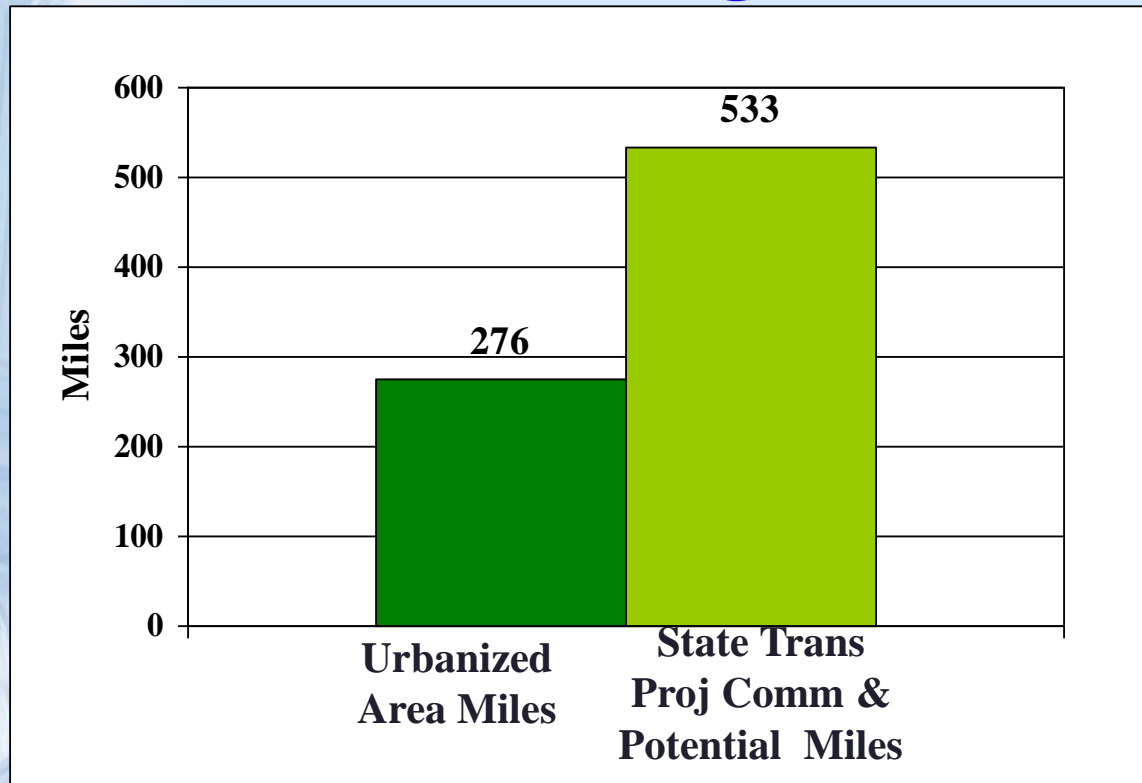


Capacity-Related Widening



* \$5.72B without I-43 & I-94 Milwaukee

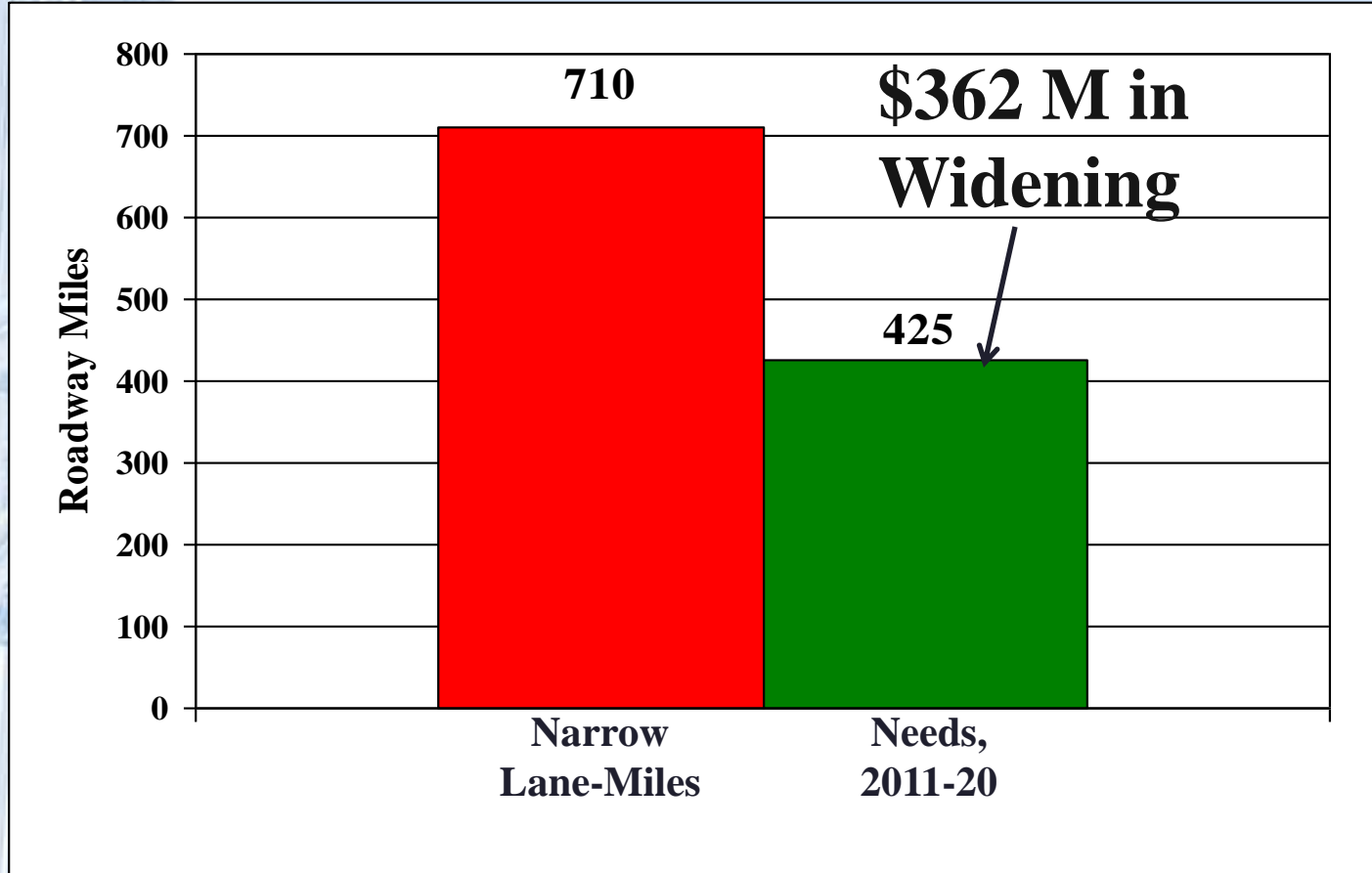
New Roads, Expansions, Bridges and Interchanges



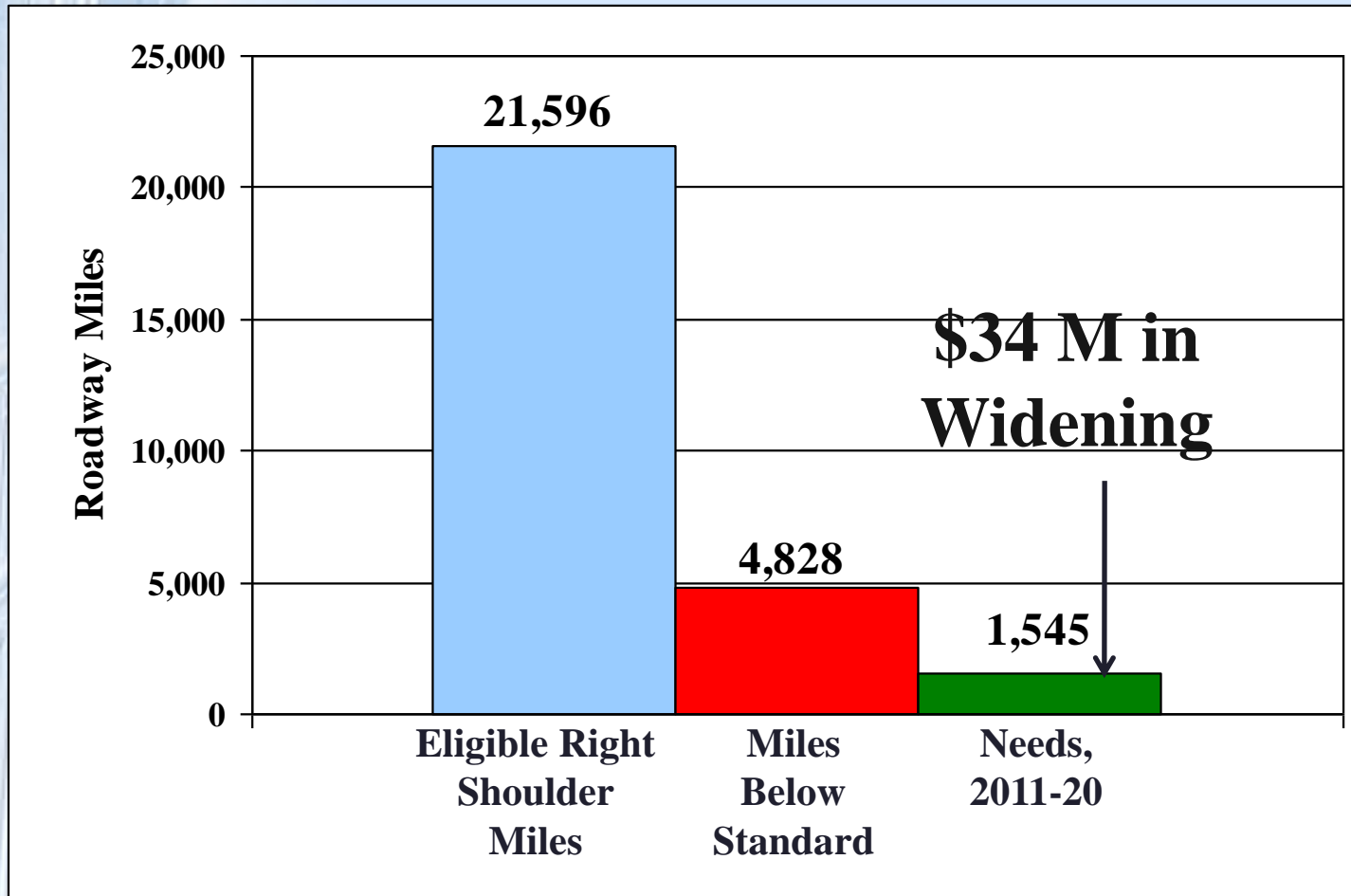
- Urbanized Areas -\$3.83 B
- State Trans Projects Commission & Potential-\$3.94 B

Total \$7.77 B

Narrow Lanes

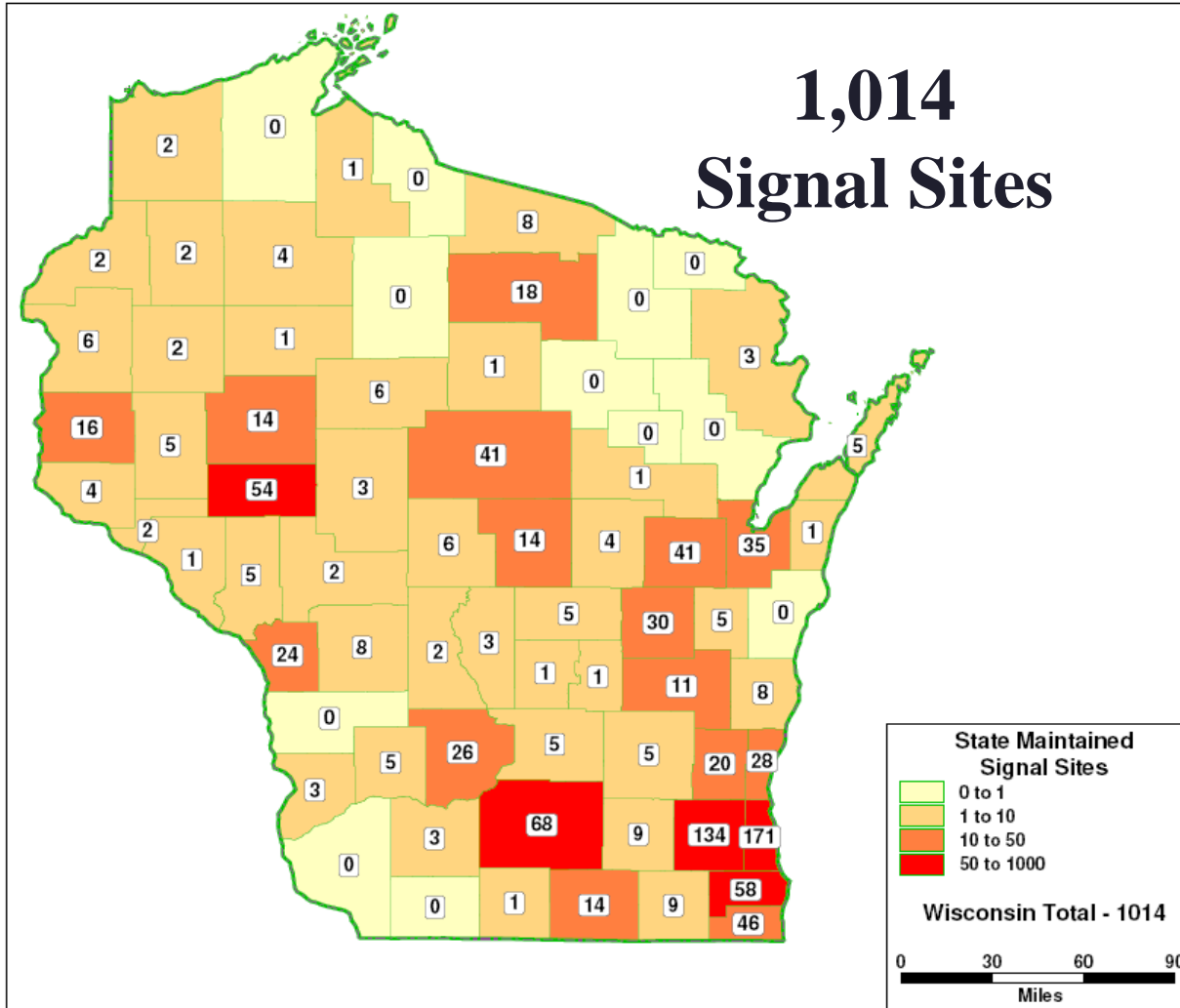


Narrow Shoulders



State Highway System Signal Sites

**1,014
Signal Sites**





Maintenance & Operations

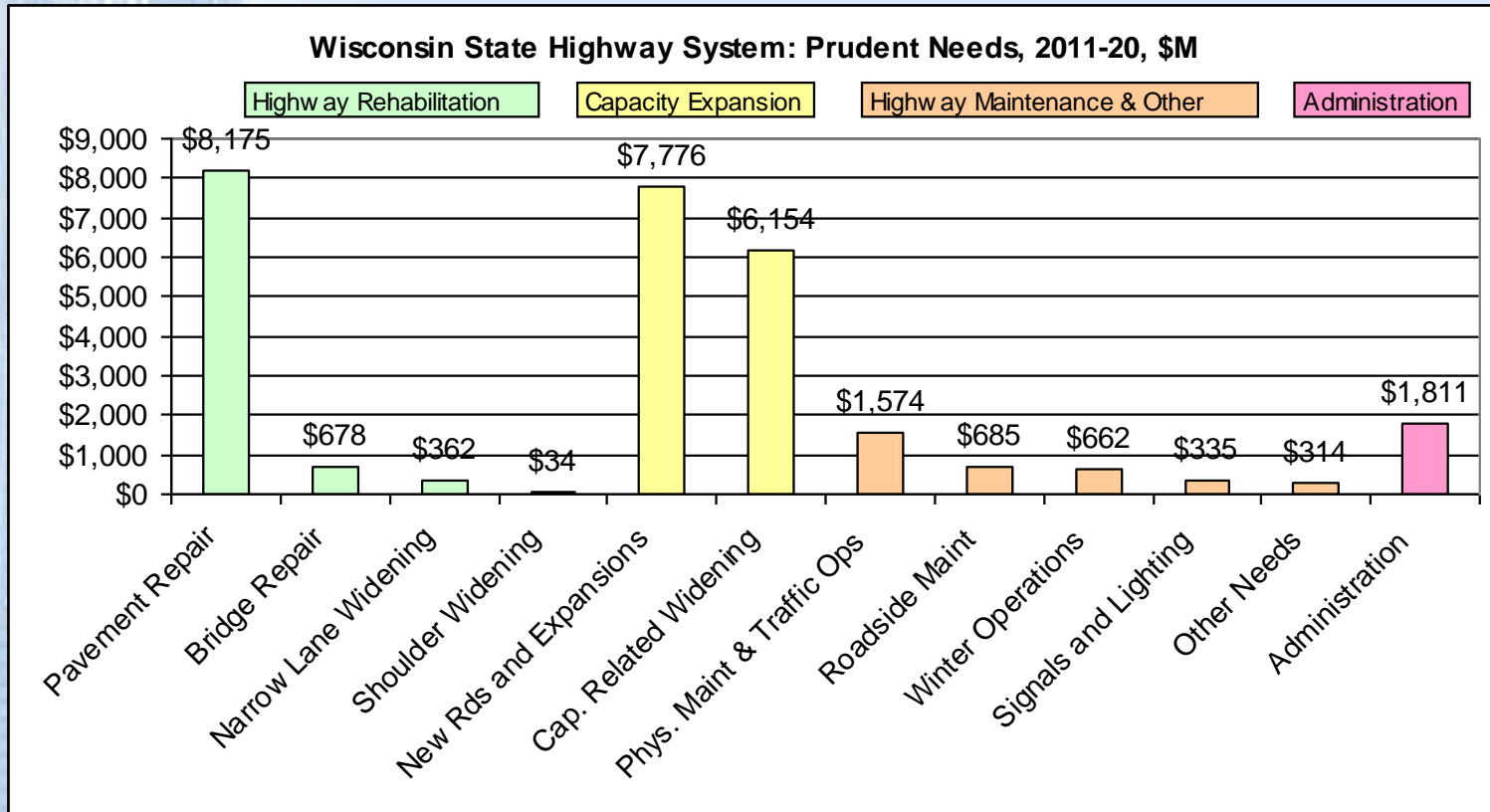
- Physical Maintenance \$1.57 B
- Roadside Maintenance \$ 685 M
- Winter Maintenance \$ 662 M
- Signals and Lighting \$ 335 M
- Other Needs \$ 314 M

\$3.57B

Administration

\$1.81 B

Summary of Needs, 2011-20

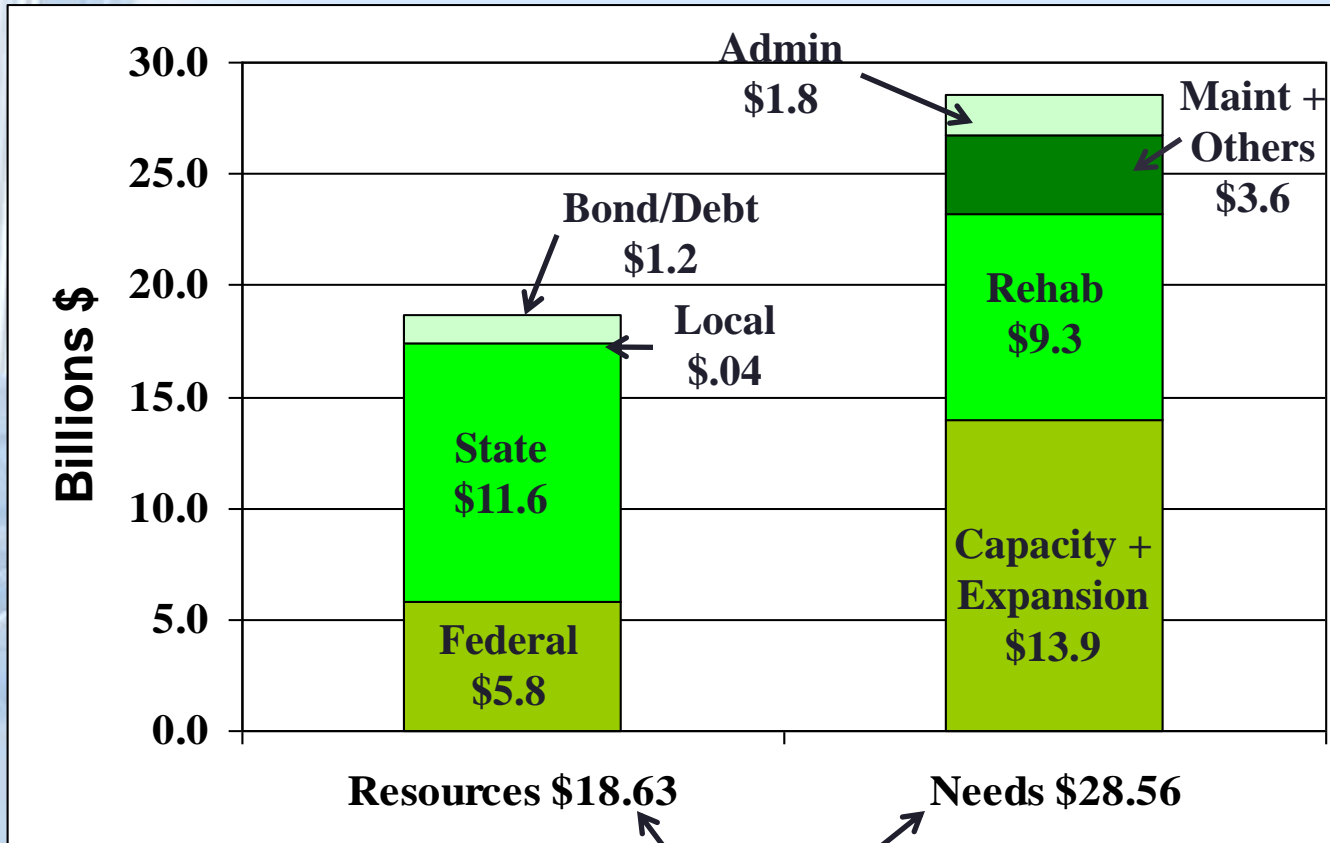


Total Needs = \$28.56 B

10-Year Fiscal Resources

Federal	\$5.82 B
State	\$11.58 B
Bond/Debt	\$1.19 B
Local	<u>\$43 M</u>
Total	\$18.63 B

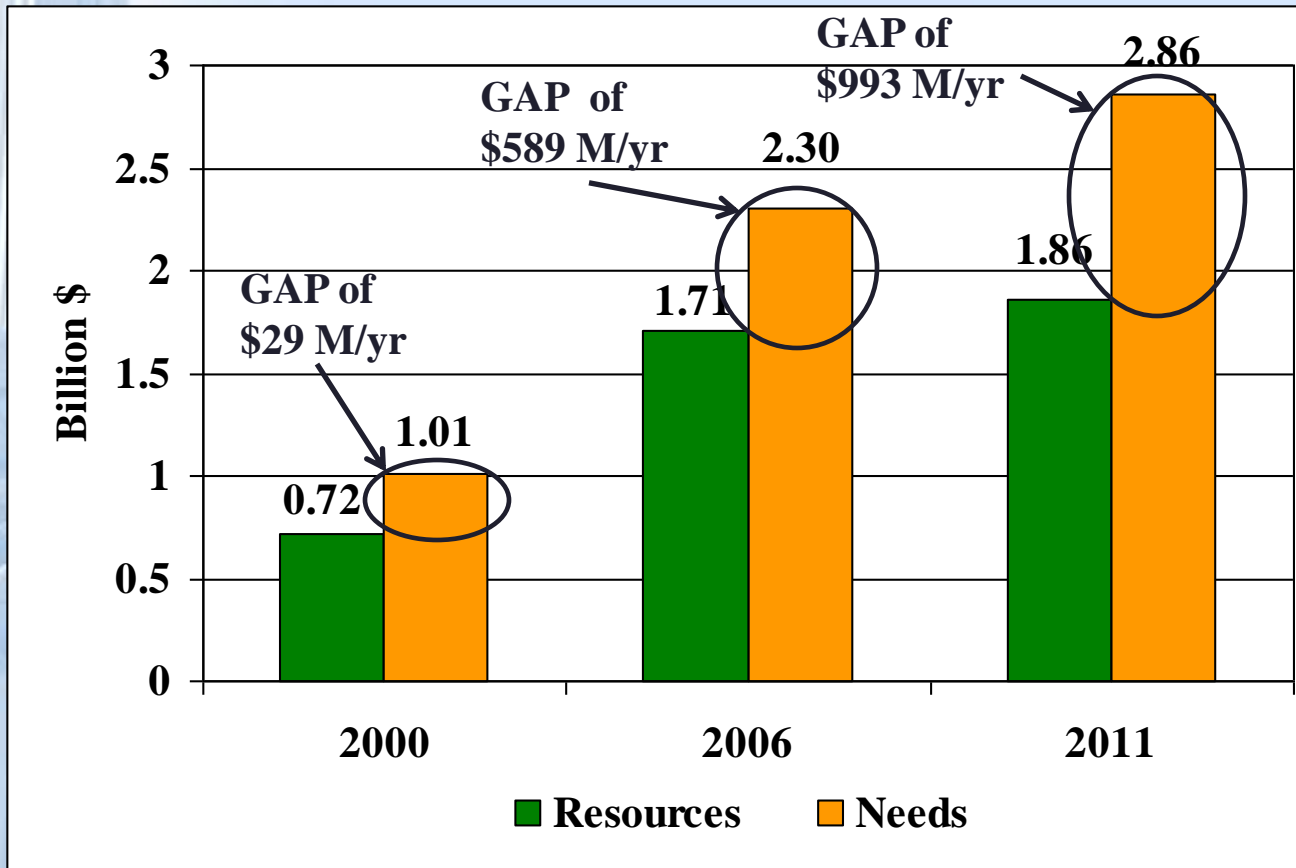
Comparison of 10-year Needs and Resources



Gap \$ 9.93 B

Gap/Year \$ 993 M

Trends in GAP



Options

Increase Resources

- More state user revenue to state roads
- Increase user fees
- Bonds
- Public Private Partnerships & tolls
- Congestion pricing
- Increase federal funds
- State infrastructure bank

The background of the slide features a light blue gradient with a faint, semi-transparent image of classical architectural columns on the left side. The columns are detailed with capitals and fluted shafts, creating a sense of depth and structure.

Options

Reduce Needs

- Limit project selection
- Raise criteria for treatment
- Lengthen repair cycles
- Reduce travel demand
- Privatize some functions
- Interim measures
- Access management
- Reduce maintenance

The background of the slide features a light blue gradient with a faint, semi-transparent image of classical architectural columns on the left side. The columns are detailed with fluted shafts and ornate capitals. The entire slide is framed by a thin brown border.

Options

Reduce Needs (continued)

- Shift costs to others
- Speed up road improvements
- Design roads to last longer
- Innovative contracting

Summary

- 10-yr needs \$28.56 B
- 10-yr resources \$18.63 B
- GAP \$9.93 B
- Existing resources cover about 65% of the prudent needs
- Gap between resources & needs is growing
- Issue needs attention