FINAL

Compass Report

Wisconsin State Highway
2010
Maintenance, Traffic, and Operations Conditions

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Executive Summary

The "Compass" program collects rating data each year to help the department understand current infrastructure conditions and trends. The data also helps WisDOT managers set reasonable maintenance targets that reflect department priorities and respond to limited resources. To ensure that maintenance targets are consistently reflected in work programs around the state, these priorities are shared with the WisDOT regions to help structure the Routine Maintenance Agreements with counties. And to evaluate the maintenance target setting process, existing conditions are compared to their target levels to see if the annual goals were met or exceeded.

The 2010 Compass Annual Report has been completed based on the yearly field review process and current data from the WisDOT Sign Inventory Management System, WisDOT Annual Winter Maintenance Report and Highway Structures Information System. Below are the significant messages on the current condition of the state highway system and specific examples of how the Bureau of Highway Operations uses the information to manage the system:

- *Continued focus on reducing shoulder drop-off*: There has been continued emphasis on fixing drop-off along unpaved shoulders so that drivers who veer off the traveled way can safety get back onto the paved surface. More aggressive maintenance targets have been set over the last five years to deal with this problem. The actual amount of drop-off for unpaved shoulders increased three percentage points between 2009 and 2010 after a seven percent decrease last year. There will be a continued focus on improving safety by reducing shoulder drop-off. Drop-off on paved shoulders is a feature that was added back to the program in 2009. This feature has the same contribution category and deficiency threshold as drop-off on unpaved shoulders.
- *Removing hazardous debris on shoulders*: For several years the department has emphasized the safety benefits of removing hazardous debris from roadways. This year the backlog for hazardous debris is 8%, maintaining the backlog level in 2009, which is the lowest level recorded during the previous five-year period.
- *More visible, longer lasting traffic signs*: More than 16,000 new high-intensity signs were installed along the state highway system between 2009 and 2010. More than seventy two percent of the 289,000 signs on the state system now have high-intensity face material, providing better illumination to drivers during low light conditions and evenings. An added benefit is that the new signs last 72% longer than the older generation "engineering" grade signs.
- *Targeted replacement of regulatory and warning signs*: Almost 83,000 signs around the state are older than their suggested useful life. This is a reduction of almost 20,000 signs from the 2009 backlog level. With limited sign replacement funds, the routine replacement of regulatory and warning signs (such as stop signs and speed limit signs) has been prioritized over the replacement of other types of signs. Based on this policy, 17% of the regulatory and warning signs are beyond their recommended service life, a six percent improvement from the 2009 level. Forty-four percent of detour/object marker/ recreation/guide signs are older than their suggested useful life. This is a seven percentage point drop from last year.

Compass Annual Report

About this report

The Compass *Annual Report* is issued each year to communicate the condition of Wisconsin's state highway network and to demonstrate accountability for maintenance expenditures. The primary audience for this report includes Maintenance Supervisors and Operations Managers at the Wisconsin Department of Transportation (WisDOT) and partner organizations including the 72 counties. Compass reports are used to understand trends and conditions, prioritize resources, and set future target condition levels for the state highway system. The condition data is also used to estimate the costs to reduce maintenance backlogs to varying levels of service.

This report *includes* data on traveled ways (paved traffic lanes), shoulders, drainage, roadsides, selected traffic devices, specific aspects of winter maintenance activities, and bridges. The report *does not include* measures for preventive maintenance, operational services (like traveler information and incident management), or electrified traffic assets (like signals and lighting). It is important to consider what is not in the report when using this information to discuss comprehensive investment choices and needs.

The first section of this report provides a program overview and scorecard based on current conditions. Subsequent sections of the report provide detailed information on each roadway feature. The document is available on the Compass website (http://dotnet/dtid_bho/extranet/compass/reports/index.shtm from within WisDOT or https://trust.dot.state.wi.us/extntgtwy/dtid_bho/extranet/compass/reports/index.shtm from outside WisDOT.

Feedback on format, content, and other aspects of the report is welcome and should be sent to Scott Bush, Compass Program Manager, at Scott.Bush@dot.wi.gov or (608) 266-8666.

Background

Compass was implemented statewide in 2002 as WisDOT's maintenance quality assurance and asset management program for highway operations. The Compass report is intended to provide a comprehensive overview of highway operations by integrating information from field reviews with inventory data and other information sources.

Process

The Compass report is issued annually in cooperation with the research team from the Wisconsin Transportation Center (WTC) at University of Wisconsin – Madison. Starting in January of each year, WTC and the Compass Program Manager work on the analysis of each element. The project team presents the draft report at the Compass Advisory Team meeting and the WisDOT Operations Managers meeting in the spring. The report is revised based on feedback from these meetings. The report is then finalized and officially published by the end of each year.

This report uses inventory data for bridges, pavement, routine maintenance of signs, and winter storms. It uses sample data for highway maintenance features. The project team collected data from the WisDOT business areas between December 2010 and May 2011.

The highway maintenance data includes data sampled from the field. Two hundred and forty 1/10-mile segments are randomly selected in each of the five WisDOT regions. A WisDOT Maintenance Coordinator and a County Patrol Superintendent collect the field data in each county between August 15 and October 15 every year. The field survey includes a condition analysis of shoulders, drainage features, roadside attributes, pavement markings and signs.

Winter maintenance data is gathered from the winter season 2009-10 and includes Time to Bare Wet, Winter Severity Index, Winter VMT, and crash data. Figures and tables are taken directly from the 2009-10 WisDOT *Annual Winter Maintenance Report* prepared by WisDOT's Winter Operations unit, including the "Winter by the Numbers" table and the statewide snowfalls and Winter Severity Index figures.

Starting with the 2009 Compas Annual Report, pavement data was obtained directly from WisDOT's Pavement Maintenance Management System (PMMS). This completes the transition from the previous method. The transition started with the 2008 Compas Annual Report by reporting condition based on the deficiency thresholds and condition categories in the PMMS while still getting the pavement data from the Program Information Files (PIF). Pavement is not reported in the 2010 Compass Annual Report because of the unavailability of 2010 pavement data due to the reprogramming of PMMS.

The routine replacement needs for signs comes from the Sign Inventory Management System (SIMS) and the bridge data comes from the Highway Structure Information System (HSIS).

Compass identifies backlog percentages for each feature at the county, region and statewide level. Backlog percentages indicate what percent of that feature is in a condition where maintenance work is required, assuming available budget. Therefore, an increasing backlog percentage reflects fiscal constraints rather than inadequate work in the field.

Appendix B identifies when assets are considered backlogged for highway maintenance features. For pavement features, the backlog is determined based on logic in the PMMS. In the PMMS, each segment of road receives a rating for each distress type. The ratings include "excellent", "fair", "moderate", or "bad", depending on the extent and severity of distress. For the Compass report, a pavement segment that receives a rating other than "excellent" requires maintenance and is considered backlogged. Traffic signs are considered backlogged for maintenance if it is in use past its expected service life.

WisDOT Maintenance Supervisors and Operations Managers annually set the targets for backlog percentage levels for each feature. These targets are intended to reflect priorities and goals for the year in light of fiscal constraints. Appendix D provides the maintenance targets for 2010.

Maintenance Report Card

Compass uses predefined backlog percentage thresholds to assign a letter grade to the overall maintenance condition of each feature (from "A" to "F"). A feature grade declines as more of a feature is backlogged. These grading scales are curved to account for the importance of the feature to the motorist and roadway system. The contribution categories include "Critical Safety", "Safety", "Ride/Comfort", "Stewardship", and "Aesthetics". For example, a feature that contributes to critical safety would see its grade decline more rapidly than a feature that is primarily aesthetic in nature. A feature grade of "A" means that all basic routine maintenance needs have been met within the maintenance season and there is not a significant backlog.

Appendix B lists the grading curve for each Compass feature and Appendix C identifies the contribution category for each feature.

System Overview

Below is a summary of the 2010 condition grades for the 29 features that are evaluated in the field each year for the Compass program. The individual grades for the 29 features translate to an overall system condition grade point average of 2.79 or grade level C+. This is a big improvement over the grade point average of 2.5 from last year. The single failing grade this year is for drop-off/build-up on unpaved shoulders, which is targeted this way.

- A grade: 12 features (41%)
- B grade: 5 features (17%)
- C grade: 7 features (24%)
- D grade: 4 features (14%)
- F grade: 1 features (4%)

No roadway feature grades declined during the past year. The condition grade for most features stayed constant between 2009 and 2010. Out of 29 features surveyed, the condition grade remained unchanged for 22 roadway components (76%). Seven features (24%) had improved condition grades during the last year *(in bold below)*.

Nineteen features (66%) met the target condition in 2010, which is defined as within five percentage points of the actual target level. Nine features (31%) exceeded the maintenance target, including three Safety features (delineators, special pavement markings and fences).

The following tables identify the five-year trend in Compass feature grades by contribution category. Key observations are also provided for each contribution category.

Critical Safety Features

The roadway featurers considered critical for safety are those that require immediate action, with overtime pay if necessary, to remedy a problem situation.

Feature	2010	2009	2008	2007	2006	Element
Centerline markings	C	C	B	B	B	Traffic and safety devices
Drop-off/build-up (paved)	**A**	**B**	N/A	N/A	N/A	Shoulders
Drop-off/build-up (unpaved)	F	F	F	F	F	Shoulders
Hazardous debris	C	C	C	C	D	Shoulders
Regulatory/warning signs (emergency repair)	A	A	A	A	A	Traffic and safety devices

- The only Critical Safety feature that changed condition grade during the past year was Drop-off/build-up on paved shoulders, which improved to an “A” grade.
- All Critical Safety features met their condition target.
- Drop-off/build-up of unpaved shoulders continued to receive a grade of F, consistent with the targeted condition level.

- Removal of hazardous debris on roadway shoulders and the emergency repair of regulatory/warning signs received grades of C and A, respectively.

Safety Features

Safety features are highway attributes and characteristics that protect users against -and provide them with a clear sense of freedom from -danger, injury or damage.

Feature	2010	2009	2008	2007	2006	Element
Delineators	C	C	D	C	C	Traffic and safety devices
Edgeline markings	**B**	**C**	A	A	B	Traffic and safety devices
Fences	A	A	A	A	A	Roadsides
Mowing	C	C	C	C	C	Roadsides
Mowing for vision	**A**	**B**	A	A	A	Roadsides
Protective barriers	A	A	A	B	A	Traffic and safety devices
Regulatory/warning signs (routine replacement)	C	C	C	D	D	Traffic and safety devices
Special pavement markings	B	B	B	B	A	Traffic and safety devices
Woody vegetation control	A	A	A	A	A	Roadsides
Woody vegetation control for vision	A	A	A	A	A	Roadsides

- For the third straight year, the 2010 condition grades for all safety features met or exceeded their targets.
- Edgeline markings improved from C to B in 2010 while mowing for vision improved from B to A.
- Fences, protective barriers, woody vegetation control, and control of woody vegetation for vision all maintained the A grades they received in 2009 and 2008. The targets for these features were C, A, B, and A, respectively.
- Delineators maintained the grade C it received in 2009, meeting the target.
- Special pavement markings maintained a B grade, exceeding the target of C.
- The backlog for routine replacement of regulatory and warning signs decreased from 23% in 2009 to 17%.

Ride/Comfort Features

The ride quality and comfort features provide a state of ease and quiet enjoyment for highway users. These features include proper signing and lack of obstructions.

Feature	2010	2009	2008	2007	2006	Element
Cross-slope (unpaved)	**B**	**C**	B	B	C	Shoulders
Detour/object marker/recreation/guide signs (routine replacement)	D	D	D	D	D	Traffic and safety devices
Detour/object markers/ recreation/ guide/signs (emergency repair)	A	A	A	A	A	Traffic and safety devices
Potholes/raveling (paved)	A	A	A	A	A	Shoulders

- Cross-slope of unpaved shoulders improved from C to B in 2010, exceeding the target condition level of C.

- The routine replacement of detour/object marker/recreation/guide signs and potholes/raveling on paved shoulders both maintained the A grade level they have been getting for the past five years.
- The backlog for routine replacement detour/object marker/recreation/guide signs decreased from 51% in 2009 to 44%.

Stewardship Features

Stewardship captures performance on routine and preventive maintenance activities that preserve investments and ensure facilities function for their full expected service life or longer.

Feature	2010	2009	2008	2007	2006	Element
Cracking (paved)	**D**	**F**	D	D	D	Shoulders
Culverts	C	C	C	C	B	Drainage
Curb & gutter	A	A	A	A	A	Drainage
Ditches	A	A	A	A	A	Drainage
Erosion (unpaved)	A	A	A	A	A	Shoulders
Flumes	D	D	D	C	C	Drainage
Noxious weeds	C	C	D	C	C	Roadsides
Storm sewer systems	**B**	**C**	B	B	B	Drainage
Under-drains/edge-drains	**B**	**C**	C	B	B	Drainage

- The condition grade for three Stewardship features improved during the last year. Cracking on paved shoulders improved from F to D, exceeding the target condition. Storm sewer systems improved back to B after its grade declined to C last year. This feature now meets the target. Under-drains/edge-drains improved to B this year, exceeding the target condtion level.
- Curb & gutter, ditches, and erosion all continued to receive feature grades of A. These grades met or exceeded their target levels.
- Culverts received a feature grade of C and flumes received a D grade, both meeting their target.
- Noxious weeds maintained the grade C it received in 2009. This grade is much better than the targeted F grade.

Aesthetics Feature

Aesthetics concerns the display of natural or fabricated beauty along highway corridors including landscaping and architectural features.

Feature	2010	2009	2008	2007	2006	Element
Litter	D	D	D	D	D	Roadsides

- Compass measures the presence of litter, which detracts from roadway sightlines. The grade for litter in 2010 is a D, consistent over the past five years, which meets the target.

Bridges:

- Thirty-two percent of bridge decks statewide are in “Fair” condition and in need of reactive maintenance, based on their NBI ratings of 5 or 6. This is an increase of 1% from the 31% level in 2009.
- Twenty-eight percent of bridge superstructures are in “Fair” condition and in need of reactive maintenance, based on their NBI ratings of 5 or 6. The percentage of bridge superstructures in “Fair” condition stayed the same between 2009 and 2010.
- Twenty-eight percent of bridge substructures are in “Fair” condition and in need of reactive maintenance, based on their NBI ratings of 5 or 6. The percentage of bridge superstructures in “Fair” condition stayed the same between 2009 and 2010.

Wisconsin 2010: Compass Report on Highway Maintenance Conditions

Element	What are we spending? Dollars spent (in millions)[1]					Feature	How much of the system still needs work at the end of the maintenance season? Condition change: 2009 to 2010[2]	% of system backlogged					How well maintained is the system? 2010 Feature grades				
	FY 06	FY 07	FY 08	FY 09	FY 10			**2006**	**2007**	**2008**	**2009**	**2010**	A	B	C	D	F
Shoulders	8.20 8.87 0.26 0.28	9.80 10.31 0.31 0.32	8.20 8.30 0.26 0.26	8.99 9.14 0.28 0.29	13.28 13.28 0.41 0.41	Hazardous debris	-	13	9	9	8	**8**					
						Drop-off/build-up (paved)	↑	N/A	N/A	N/A	4	**2**					
						Cracking (paved)	↑	50	53	53	62	**60**					
						Potholes/raveling (paved)	↑	5	6	6	6	**5**					
						Drop-off/build-up (unpaved)	↓	40	40	44	34	**37**					
						Cross-slope (unpaved)	↑	25	18	18	22	**18**					
						Erosion (unpaved)	↑	3	1	2	3	**1**					
Drainage	5.10 5.52 0.16 0.17	7.20 7.57 0.23 0.24	8.00 8.10 0.25 0.25	9.84 10.00 0.31 0.31	9.13 9.13 0.28 0.28	Ditches	-	3	2	2	2	**2**					
						Culverts	↓	15	20	28	23	**28**					
						Under-drains/edge-drains	↑	13	20	30	24	**21**					
						Flumes	-	27	25	39	36	**36**					
						Curb & gutter	↓	8	8	5	5	**6**					
						Storm sewer system	↑	9	11	16	19	**17**					
Roadsides	21.90 23.69 0.69 0.75	24.00 25.24 0.76 0.80	19.40 19.65 0.61 0.62	20.29 20.62 0.63 0.64	16.48 16.48 0.51 0.51	Litter	↑	64	60	61	66	**62**					
						Mowing	↓	39	36	42	35	**36**					
						Mowing for vision	↑	2	2	3	5	**3**					
						Noxious weeds	↑	34	29	38	33	**32**					
						Woody vegetation	-	3	3	2	4	**4**					
						Woody veg. control for vision	↓	1	2	1	0.4	**1**					
						Fences	↑	3	2	1	3	**2**					

[1] The dollar values listed in each column show the nominal dollars, constant dollars (base year 2010), nominal dollars per thousand lane miles, and constant dollars per thousand lane miles, respectively.

[2] Arrows indicate a condition change from 2009 to 2010 (↑= improved condition/lower backlog, ↓ = worse condition/higher backlog). Double arrows indicate the backlog changed 8 or more percentage points.

Element	What are we spending?					Feature	How much of the system still needs work at the end of the maintenance season?						How well maintained is the system?				
	Dollars spent (in millions)[1]						Condition change: 2009 to 2010[2]	% of system backlogged					2010 Feature grades				
	FY 06	FY 07	FY 08	FY 09	FY 10			**2006**	**2007**	**2008**	**2009**	**2010**	A	B	C	D	F
Traffic & safety (selected)	16.40 17.74 0.52 0.56	17.30 18.19 0.55 0.57	17.30 17.52 0.54 0.55	17.90 18.19 0.56 0.57	17.61 17.61 0.55 0.55	Centerline markings	-	4	3	3	7	**7**					
						Edgeline markings	↑	6	4	4	12	**8**					
						Special pavement markings	↓	3	10	7	10	**11**					
						Reg./warning signs (emergency repair)	-	1	1	1	1	**1**					
						Reg./warning signs (routine replacement)	↑	31	25	23	23	**17**					
						Detour/object marker/recreation/guide signs (emergency repair)	↓	1	0.3	0.4	0.3	**1**					
						Detour/object marker/recreation/guide signs (routine replacement)	↑	55	56	55	51	**44**					
						Delineators	↑	21	21	26	20	**14**					
						Protective barriers	↑	4	5	3	3	**1**					

Wisconsin 2010: Targets for Highway Maintenance Conditions

Targets are set annually, and are intended to reflect priorities for that year, given fiscal constraints. They are a measure of effective management, not system condition.

			Statewide									Regions		
						Gap if target missed								
						Worse condition			Better condition					
Contribution Category	**Feature**	**Element**	**Actual % backlog 2010**	**Target % backlog 2010**	**On target[3]**	**20**	**10**	**0**	**0**	**10**	**20**	**Worse condition**	**On Target**	**Better condition**
Critical Safety	Centerline markings	Traffic and safety devices	7%	5%	◎							SE	NC, NE, NW, SW	
	Drop-off/build-up (paved)	Shoulders	2%	N/A	N/A									
	Drop-off/build-up (unpaved)	Shoulders	37%	35%	◎							SW	NC, NE, NW, SE	
	Hazardous debris	Shoulders	8%	6%	◎							SE, SW	NC, NE, NW	
	Regulatory/warning signs (emergency repair)	Traffic and safety devices	1%	0%	◎								All	
Safety	Delineators	Traffic and safety devices	14%	25%						**11**				All
	Edgeline markings	Traffic and safety devices	8%	8%	◎							SE	NC, NE, NW, SW	
	Fences	Roadsides	2%	14%						**12**				All
	Mowing	Roadsides	36%	40%	◎							NE, SE	NC	NW, SW
	Mowing for vision	Roadsides	3%	5%	◎								All	
	Protective barriers	Traffic and safety devices	1%	3%	◎								All	
	Regulatory/warning signs (routine replacement)	Traffic and safety devices	17%	25%					**8**				NE, SE	NC, NW, SW
	Special pavement markings	Traffic and safety devices	11%	23%						**12**			SE	NC, NE, NW, SW

[3] ◎ This symbol indicates that the percent backlogged for that feature is the same as the target, or within 5 percentage points.

			Statewide									Regions		
						Gap if target missed								
						Worse condition			Better condition					
Contribution Category	**Feature**	**Element**	**Actual % backlog 2010**	**Target % backlog 2010**	**On target[3]**	**20**	**10**	**0**	**0**	**10**	**20**	**Worse condition**	**On Target**	**Better condition**
	Woody vegetation control	Roadsides	4%	5%	◎								All	
	Woody vegetation control for vision	Roadsides	1%	3%	◎								All	
Ride/Comfort	Cross-slope (unpaved)	Shoulders	18%	20%	◎							NC	NW, SW	NE, SE
	Detour/object markers/recreation/guide signs (emergency repair)	Traffic and safety devices	1%	1%	◎								All	
	Detour/object marker/recreation/guide signs (routine replacement)	Traffic and safety devices	44%	59%						**15**			NE	NC, NW, SE, SW
	Potholes/raveling (paved)	Shoulders	5%	10%	◎								NC, NW, SE, SW	NE
Stewardship	Cracking (paved)	Shoulders	60%	70%						**10**			SE	NC, NE, NW, SW
	Culverts	Drainage	28%	30%	◎								NE, NW, SE, SW	NC
	Curb & gutter	Drainage	6%	10%	◎							NW		NC, NE, SE, SW
	Ditches	Drainage	2%	5%	◎								All	
	Erosion (unpaved)	Shoulders	1%	5%	◎								All	
	Flumes	Drainage	36%	35%	◎							NE, SW		NC, NW, SE
	Noxious weeds	Roadsides	32%	61%							**29**			All
	Storm sewer system	Drainage	17%	15%	◎								All	
	Under-drains/edge-drains	Drainage	21%	30%					**9**			SW	NW	NC, NE, SE
Aesthetics	Litter	Roadsides	62%	81%						**19**				All

2010 Highway Maintenance Conditions: Report on Traffic, Shoulders, Drainage, Roadsides

Data in this section comes from the field review of random road segments performed by WisDOT region Maintenance Coordinators and county Patrol Superintendents. No statistical analysis has been completed on the county level data in Appendix F. Readers should take the number of observations into account when reviewing the information. Extreme caution should be exercised when analyzing data that has less than 30 observations.

Below is a summary of the change between 2009 and 2010 in the percentage of roadways that are backlogged for maintenance. These changes didn't necessarily result in a new level of service grade. Refer to the "Maintenance Report Card" in the front part of the report for a complete summary of condition grade level changes between 2009 and 2010.

- Sixteen features (55%) had a reduction in the percentage of roadways that are backlogged for maintenance.
- Six features (21%) did not have a change in the amount of roadways that are backlogged for maintenance.
- Seven features (24%) had an increase in the percentage of roadways that are backlogged for maintenance.
- All of the changes in backlog levels were seven percentage points or less.

Shoulders:

- The individual grades for the seven Shoulder features translate to an overall condition grade point average of 2.6 or grade level C+.
- Five Shoulder features had a reduction in the percentage of roadways that are backlogged for maintenance. They are drop-off/buildup on paved shoulders (-2%), cracking on paved shoulders (-2%), potholes/raveling on paved shoulders (-1%), cross-slope on unpaved shoulders (-4%), and erosion on unpaved shoulders (-2%)
- One of the seven features (hazardous debris) did not have a change in the amount of roadways that are backlogged for maintenance.
- One feature (drop-off/build-up on unpaved shoulders, +3%) had an increase in the percentage of roadways that are backlogged for maintenance.
- Drop-off /buildup on unpaved shoulders received a feature grade of F for the sixth consecutive year. The percentage of roadways that are backlogged for maintenance increased from 34% in 2009 to 37% in 2009.

Drainage:

- The individual grades for the six Drainage features translate to an overall condition grade point average of 2.8 or grade level C+.
- Two of the six Drainage features had a reduction in the percentage of roadways that are backlogged for maintenance. These features include storm sewer system (-2%) and under-drains/edge-drains (-3%)

- Two features, ditches and flumes, did not have a change in the amount of roadways that are backlogged for maintenance.
- Culverts (+5%) and curb and gutter (+1%) were the two features that had an increase in the percentage of roadways that are backlogged for maintenance. These changes were not significant enough to change the level of service grades.

Roadsides:

- The individual grades for the seven Roadside features translate to an overall condition grade point average of 3.0 or grade level B.
- Four of the seven Roadside features had a reduction in the percentage of roadways that are backlogged for maintenance. These features include litter (-4%), mowing for vision (-2%), noxious weeds (-1%), and fences (-1%).
- Two features had an increase in the percentage of roadways that are backlogged for maintenance. These features include mowing (+1%), and woody vegetation control for vision (+1%).
- Woody vegetation is the only feature that did not have a change in the amount of roadways that are backlogged for maintenance.
- From all of the changes, only one change was significant enough to change the level of service grade. Mowing for vision improved from a B to an A.

Traffic Control and Safety Devices:

- The individual grades for the nine Traffic Control and Safety Devices translate to an overall condition grade point average of 2.8 or grade level C+.
- Five of the nine Traffic Control and Safety Devices features had a reduction in the percentage of roadways that are backlogged for maintenance. These features include edgeline markings (-4%), routine replacement of regulatory/warning signs (-6%), routine replacement of detour/object marker/recreation/guide signs (-6%), delineators (-6%), and protective barriers (-2%).
- Two of the features did not have a change in the amount of roadways that are backlogged for maintenance. These features include centerline markings, and emergency repair of regulatory/warning signs.
- Two features had an increase in the percentage of roadways that are backlogged for maintenance. These features include special pavement markings (+1%) and emergency repair of detour/object marker/recreation/guide signs (+1%). None of these changes were significant enough to change the level of service grades of the features.

Regions 2010: Summary of Highway Maintenance Conditions

Shoulders

- Hazardous Debris: The Southeast Region and the Northeast Region (12%) had a higher backlog level than the other three regions (2% to 8%).
- Paved Shoulders: The maintenance backlog for drop-off/build-up was low (2% to 3%) and evenly distributed between the five regions. The Southeast Region had the most cracking and potholes/raveling.
- Unpaved Shoulders: The North Central Region had the most cross-slope problems and the second highest backlog level of drop-off/build-up in the state. The Southwest Region had the largest amount of drop-off/build-up in the state at 44% (37% statewide average). There was a low level of erosion problems (1% to 2%) around the state.

Drainage

- Ditches: The Southeast Region (8%) had the highest backlog levels than the rest of the regions (1% to 2%).
- Culverts: The Northeast Region and Northwest Region (33%) had the highest amount of deficient culverts while the North Central Region had the fewest deficient culverts (22%).
- Drains: There was a wide disparity in conditions, with the Northeast Region (5%) and the North Central Region (15%) having the fewest deficient drains and the Southwest Region (42%) having the largest backlog.
- Flumes: There also was a wide disparity in flume conditions, with the Southwest Region (53%) and Northeast Region (43%) having the highest backlogs and the Southeast Region (14%) having the lowest backlog level.
- Curb and Gutter: The Northwest Region (25%) had the highest deficiency level while the other regions varied between 3% and 4%.
- Storm Sewer Systems: All of the regions had between a 15% and 20% backlog in storm sewer systems.

Roadsides

- Litter: The Southeast Region (72%) and Southwest Region (71%) had more problems with litter than the other three regions (53% to 58%).
- Mowing: The Southeast Region (56%) and the Northeast Region (50%) had the highest mowing backlog levels while the Southwest Region (24%) has the lowest backlog level.
- Mowing for Vision: The Southwest Region (7%) and the Southeast Region (6%) had backlog levels twice that of the other regions (0% to 3%).
- Noxious Weeds: There was a wide disparity in conditions, with the Northeast Region (51%) having the highest backlog, the Northwest Region (19%) having the fewest deficiencies, and the other three regions having backlog levels between 25% and 38%.

Traffic Control and Safety Devices

- Pavement Markings: The Southeast Region had the highest backlog levels of deficient centerline markings (18%), edgeline markings (21%) and special pavement markings (18%). The other regions had similar backlog levels for centerlines (4% to 8%), edgeline markings (5% to 8%), and special markings (3% to 10%).
- The percentage of regulatory and warning signs backlogged for replacement varies widely, from a low of 12% in the Northwest and Southwest Region to a high of 29% in the Northeast Region. The percentage of other signs (i.e. detour/object marker/recreation/guide) backlogged for routine replacement varies from 36% in the North Central Region to 51% in the Northeast Region.

Regions 2010: Compass Report on Highway Maintenance Conditions

Element	Feature	**How much of the system needs work at the end of the season?** *What did it cost to achieve this condition?* Region Percent of System Backlogged					
		NC	**NE**	**NW**	**SE**	**SW**	**Statewide**
Shoulders	Hazardous debris	8%	6%	2%	12%	12%	8%
	Drop-off/build-up (paved)	2%	3%	2%	2%	3%	2%
	Cracking (paved)	59%	56%	59%	73%	58%	60%
	Potholes/raveling (paved)	5%	3%	5%	10%	6%	5%
	Drop-off/build-up (unpaved)	38%	30%	32%	33%	44%	37%
	Cross-slope (unpaved)	26%	14%	18%	10%	16%	18%
	Erosion (unpaved)	2%	1%	1%	1%	1%	1%
	Dollars spent on shoulders (millions)	3.17	1.60	3.93	1.41	3.17	13.28
Drainage	Ditches	2%	2%	1%	8%	1%	2%
	Culverts	22%	33%	33%	29%	26%	28%
	Under-drains/edge-drains	15%	5%	25%	22%	42%	21%
	Flumes	25%	43%	25%	14%	53%	36%
	Curb & gutter	3%	3%	25%	4%	4%	6%
	Storm sewer system	15%	15%	20%	18%	16%	17%
	Dollars spent on drainage (millions)	0.78	0.71	1.85	2.90	2.89	9.13
Roadsides	Litter	53%	58%	58%	72%	71%	62%
	Mowing	36%	50%	34%	56%	24%	36%
	Mowing for vision	0%	1%	3%	6%	7%	3%
	Noxious weeds	25%	51%	19%	38%	38%	32%
	Woody vegetation control	3%	1%	5%	3%	4%	4%
	Woody vegetation control for vision	2%	1%	1%	0.0%	1%	1%
	Fences	1%	0.0%	2%	4%	2%	2%
	Dollars spent on roadsides (millions)	2.87	2.35	3.34	3.87	4.04	16.48
Traffic and safety (selected devices)	Centerline markings	4%	6%	8%	18%	4%	7%
	Edgeline markings	5%	6%	8%	21%	8%	8%
	Special pavement markings	10%	3%	6%	18%	7%	11%
	Regulatory/warning signs (emergency repair)	2%	0.4%	1%	1%	0.3%	1%
	Regulatory/warning signs (routine replacement)	16%	29%	12%	22%	12%	17%
	Detour/object marker/recreation/guide signs (emergency repair)	2%	1%	1%	2%	2%	1%
	Detour/object marker/recreation/guide signs (routine replacement)	36%	51%	39%	48%	46%	44%
	Delineators	6%	12%	15%	11%	18%	14%
	Protective barriers	0.3%	0.0%	1%	0.3%	1%	1%
	Dollars spent on traffic and safety (selected devices) (millions)	3.44	2.25	3.20	3.56	5.16	17.61

Regions 2010: Regional Trend

Element	Feature	Region	Year				
			2006	2007	2008	2009	2010
Shoulders	Hazardous debris	NC	9%	8%	8%	5%	8%
		NE	15%	8%	8%	14%	6%
		NW	8%	5%	5%	2%	2%
		SE	8%	5%	5%	15%	12%
		SW	19%	18%	18%	9%	12%
	Drop-off/build-up (paved)	NC	-	-	-	2%	2%
		NE	-	-	-	5%	3%
		NW	-	-	-	4%	2%
		SE	-	-	-	6%	2%
		SW	-	-	-	6%	3%
	Cracking (paved)	NC	42%	47%	47%	57%	59%
		NE	54%	56%	56%	63%	56%
		NW	48%	44%	44%	66%	59%
		SE	69%	63%	63%	66%	73%
		SW	46%	53%	53%	59%	58%
	Potholes/raveling (paved)	NC	4%	4%	4%	5%	5%
		NE	2%	5%	5%	6%	3%
		NW	6%	6%	6%	3%	5%
		SE	6%	11%	11%	12%	10%
		SW	5%	4%	4%	9%	6%
	Drop-off/build-up (unpaved)	NC	35%	30%	38%	33%	38%
		NE	34%	45%	46%	38%	30%
		NW	43%	47%	35%	24%	32%
		SE	52%	39%	60%	30%	33%
		SW	42%	36%	44%	45%	44%
	Cross-slope (unpaved)	NC	13%	19%	19%	24%	26%
		NE	21%	17%	17%	27%	14%
		NW	31%	24%	24%	18%	18%
		SE	41%	14%	14%	10%	10%
		SW	25%	15%	15%	24%	16%
	Erosion (unpaved)	NC	0%	1%	0%	2%	2%
		NE	1%	1%	1%	2%	1%
		NW	3%	3%	1%	3%	1%
		SE	5%	2%	2%	1%	1%
		SW	6%	0%	4%	3%	1%
Drainage	Ditches	NC	1%	1%	1%	1%	2%
		NE	2%	1%	1%	1%	2%
		NW	1%	1%	1%	2%	1%

		SE	8%	6%	5%	3%	8%
		SW	2%	2%	2%	2%	1%
	Culverts	NC	10%	14%	21%	14%	22%
		NE	23%	24%	23%	24%	33%
		NW	21%	25%	25%	30%	33%
		SE	5%	15%	36%	25%	29%
		SW	17%	24%	34%	22%	26%
	Under-drains/edge-drains	NC	1%	7%	7%	15%	15%
		NE	12%	11%	9%	9%	5%
		NW	6%	21%	0%	33%	25%
		SE	21%	16%	36%	43%	22%
		SW	32%	45%	76%	32%	42%
	Flumes	NC	36%	10%	32%	56%	25%
		NE	11%	21%	25%	22%	43%
		NW	45%	50%	33%	53%	25%
		SE	26%	24%	42%	36%	14%
		SW	17%	19%	67%	30%	53%
	Curb & gutter	NC	6%	11%	8%	6%	3%
		NE	3%	5%	3%	2%	3%
		NW	23%	12%	9%	10%	25%
		SE	3%	3%	3%	2%	4%
		SW	2%	10%	16%	8%	4%
	Storm sewer system	NC	0%	9%	15%	7%	15%
		NE	13%	7%	13%	17%	15%
		NW	8%	23%	26%	15%	20%
		SE	16%	9%	16%	22%	18%
		SW	10%	7%	21%	22%	16%
Roadsides	Litter	NC	68%	49%	49%	59%	53%
		NE	65%	69%	69%	71%	58%
		NW	58%	57%	57%	58%	58%
		SE	60%	57%	57%	77%	72%
		SW	68%	71%	71%	74%	71%
	Mowing	NC	29%	24%	32%	32%	36%
		NE	61%	52%	49%	44%	50%
		NW	32%	34%	41%	26%	34%
		SE	42%	46%	43%	58%	56%
		SW	42%	23%	45%	34%	24%
	Mowing for vision	NC	0%	3%	3%	2%	0.0%
		NE	0%	1%	2%	2%	1%
		NW	5%	0%	4%	6%	3%
		SE	3%	2%	0%	0%	6%

		SW	3%	7%	6%	11%	7%
	Noxious weeds	NC	29%	19%	38%	30%	25%
		NE	47%	39%	50%	38%	51%
		NW	15%	5%	9%	14%	19%
		SE	52%	38%	49%	36%	38%
		SW	43%	48%	45%	49%	38%
	Woody vegetation control	NC	2%	8%	1%	3%	3%
		NE	2%	2%	1%	2%	1%
		NW	1%	2%	4%	2%	5%
		SE	1%	2%	1%	7%	3%
		SW	6%	3%	4%	5%	4%
	Woody vegetation control for vision	NC	3%	3%	0%	0%	2%
		NE	0%	2%	0%	0%	1%
		NW	2%	0%	2%	0%	1%
		SE	2%	3%	1%	3%	0.0%
		SW	1%	2%	0%	0%	1%
	Fences	NC	0%	2%	4%	2%	1%
		NE	0%	0%	0%	0%	0.0%
		NW	7%	5%	0%	10%	2%
		SE	0%	1%	1%	0%	4%
		SW	5%	0%	4%	5%	2%
Traffic and safety (selected devices)	Centerline markings	NC	2%	1%	1%	7%	4%
		NE	5%	2%	2%	3%	6%
		NW	5%	5%	5%	8%	8%
		SE	1%	3%	3%	13%	18%
		SW	3%	3%	3%	6%	4%
	Edgeline markings	NC	6%	6%	6%	4%	5%
		NE	5%	1%	1%	4%	6%
		NW	8%	6%	6%	8%	8%
		SE	0%	5%	5%	20%	21%
		SW	6%	4%	4%	22%	8%
	Special pavement markings	NC	4%	23%	4%	0%	10%
		NE	5%	4%	6%	5%	3%
		NW	3%	11%	0%	12%	6%
		SE	2%	6%	7%	17%	18%
		SW	2%	5%	17%	8%	7%
	Regulatory/warning signs (emergency repair)	NC	0%	0%	0%	0%	2%
		NE	1%	1%	1%	0%	0.4%
		NW	3%	1%	1%	2%	1%
		SE	1%	2%	1%	2%	1%
		SW	3%	1%	1%	1%	0.3%

	Regulatory/warning signs (routine replacement)	NC	35%	25%	18%	18%	16%
		NE	39%	39%	38%	36%	29%
		NW	26%	19%	16%	14%	12%
		SE	30%	28%	28%	28%	22%
		SW	31%	21%	18%	19%	12%
	Detour/object marker/recreation/guide signs (emergency repair)	NC	1%	0%	0%	0%	2%
		NE	0%	0%	0%	0%	1%
		NW	3%	0%	1%	0%	1%
		SE	1%	0%	1%	0%	2%
		SW	2%	1%	0%	1%	2%
	Detour/object marker/recreation/guide signs (routine replacement)	NC	61%	60%	51%	40%	36%
		NE	60%	64%	65%	59%	51%
		NW	52%	54%	55%	48%	39%
		SE	48%	49%	51%	53%	48%
		SW	56%	56%	54%	51%	46%
	Delineators	NC	12%	6%	15%	6%	6%
		NE	18%	10%	15%	18%	12%
		NW	29%	22%	12%	16%	15%
		SE	26%	14%	41%	39%	11%
		SW	20%	20%	34%	23%	18%
	Protective barriers	NC	0%	1%	5%	4%	0.3%
		NE	13%	12%	3%	8%	0.0%
		NW	1%	2%	0%	4%	1%
		SE	10%	3%	3%	3%	0.3%
		SW	0%	8%	5%	2%	1%

Mowing

The following table shows the number of segments that are backlogged for Mowing and the statewide distribution of the deficiencies: 'how' (shown as columns) and 'why' (shown as rows). For the report, all of the segments shown are considered backlogged and contributed to the backlog percentage reported for Mowing. Note that multiple reasons for mowing deficiency are allowed; therefore the sum of percentages for each deficiency type can be more than 100%.

How roadway segments are backlogged for mowing is based on WisDOT policy for grass height and width. The following are the general components of the WisDOT mowing policy:

- Height: Grass should be between six inches and twelve inches.
- Outside shoulder width: Grass should be cut a maximum of fifteen feet in width or to the bottom of the ditch, whichever is less.
- Inside shoulder width (medians): Grass should be cut a maximum of five feet in width or one pass with a single unit mower. If the remaining vegetation width is ten feet or less, the entire median should be mowed.
- No-Mow Zones: Grass should not be cut in areas that have been designated and signed as "No-Mow" zones.

		How is it deficient?			
		# of segments with observed deficiency			
		% of segment			
		Too Wide	Too Short	Too High	In the No Mow Zone
Why is it deficient?	Safety/Equipment	0	0	0	0
		0%	0%	0%	0%
	Mowed by Property Owner	193	387	191	5
		94%	97%	26%	83%
	Woody Vegetation Control	1	1	0	1
		0%	0%	0%	17%
	Maintenance Decision	103	193	741	4
		50%	48%	99%	67%
	Total	205	400	747	6

2010 Signs: Compass Report on Routine Replacement and Age Distribution

Data in this section comes from the Sign Inventory Management System (SIMS). This section covers only routine replacement, not emergency replacement of knocked-down signs and related work.

The analysis looks at the age distribution and service life of highway signs. The expected service life is determined relative to the date signs are manufactured rather than the date they are installed. It is possible that a sign is installed one year or more after it is manufactured.

Regulatory and warning signs on Wisconsin's highways are critically important for the safety of Wisconsin's motorists. As such, WisDOT prioritizes the routine replacement of regulatory and warning signs over the routine replacement of other signs, including detour, object marker, recreation and guide signs.

Key Observations in 2010:

- The backlog for routine replacement of regulatory and warning signs decreased from 23% in 2009 to 17%. Among regions, the percentage of regulatory and warning signs backlogged for replacement varies widely, from a low of 12% in the Northwest and Southwest Region to a high of 29% in the Northeast Region.
- The backlog for routine replacement of other signs (i.e. detour/object marker/recreation/ guide signs) decreased from 51% in 2009 to 44%. By region, the percentage of other signs backlogged for routine replacement varies from 36% in the North Central Region to 51% in the Northeast Region.
- Regulatory and warning signs are being used for an average 5.3 years beyond their recommended service lives. On average, other signs remain in service for 7.7 years beyond their recommended service life.
- There are 16,932 regulatory or warning signs and 38,335 other signs in service more than five years beyond their recommended service life. This represents 10% and 31% respectively of the state highway signs in each category. These percentages are 2% and 3% less than what they were last year, respectively.
- WisDOT is migrating from engineering grade sign face material (i.e. grade 1) to more visible high intensity sign face material (grade 2). The percentage of high intensity signs on the state trunk highway system increased from 65% in 2009 to 72%. Over 16,000 high intensity signs were added to the state system in the last year.

Wisconsin: Trend of Sign Condition

	Regulatory/Warning/School Signs				Detour/object marker/recreation/guide Signs			
	Total Signs	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life[4]**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life[4]**
2005	160,185	41%	65,092	5.7	113,693	59%	67,449	6.0
2006	157,742	31%	49,457	5.0	126,362	55%	69,051	5.9
2007	160,206	25%	40,548	4.8	125,891	56%	70,099	6.3
2008	163,215	23%	37,060	4.7	124,333	55%	68,430	6.3
2009	166,741	23%	37,839	4.9	128,953	51%	65,350	7.3
2010	**168,653**	**17%**	**29,313**	**5.3**	**121,743**	**44%**	**53,561**	**7.7**

Regions 2010: Sign Condition

	Regulatory/Warning/School Signs				Detour/object marker/recreation/guide Signs			
Region	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life[4]**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life[4]**
NC	28851	16%	4506	4.4	18802	36%	6746	6.5
NE	25191	29%	7217	7.3	20063	51%	10185	8.9
NW	33988	12%	4046	5.0	27007	39%	10637	6.9
SE	39451	22%	8510	6.0	26287	48%	12491	7.6
SW	41172	12%	5034	5.1	29584	46%	13502	9.5

[4] When comparing the 'Average years beyond service life column', please note that starting with the 2006 data the useful life standard for signs with high intensity face material changes from 10 years to 12 years. Useful life standard for engineer-grade signs remained at 7 years.

Regions 2010: Routine Replacement of Signs

	Regulatory/Warning/School Signs					Detour/object marker/recreation/guide Signs			
Region	**Total Signs**		**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**
NC	2005	26,164	45%	11,746	6.1	18,480	66%	12,177	6.6
	2006	26,117	35%	9,097	5.4	20,152	61%	12,342	6.5
	2007	26,663	25%	6,660	4.5	19,226	60%	11,494	6.5
	2008	28,917	18%	5,272	4.5	18,477	51%	9,456	6.7
	2009	28,531	18%	5,243	4.5	19,733	40%	7,843	7.0
	2010	28,851	16%	4,506	4.4	18,802	36%	6,746	6.5
NE	2005	22,246	47%	10,346	5.4	20,367	62%	12,647	5.5
	2006	21,520	39%	8,463	5	21,517	60%	12,953	5.5
	2007	21,887	39%	8,459	5.3	21,776	64%	13,831	6.1
	2008	22,375	38%	8,426	5.4	22,138	65%	14,314	6.5
	2009	24,932	36%	8,939	6.8	23,959	59%	14,244	8.8
	2010	25,191	29%	7,217	7.3	20,063	51%	10,185	8.9
NW	2005	36,737	37%	13,606	5.4	29,848	59%	17,541	5.2
	2006	34,087	26%	8,883	4.7	31,874	52%	16,544	5.1
	2007	33,786	19%	6,372	4.4	31,566	54%	16,962	5.3
	2008	32,837	16%	5,321	4.3	29,798	55%	16,337	5.2
	2009	33,400	14%	4,795	4.6	28,522	48%	13,786	6.3
	2010	33,988	12%	4,046	5.0	27,007	39%	10,637	6.9
SE	2005	32,872	32%	10,533	4.9	21,077	50%	10,439	5.7
	2006	35,226	30%	10,426	4.7	26,987	48%	12,835	5.7
	2007	36,390	28%	10,234	5	27,341	49%	13,386	6.2
	2008	37,249	28%	10,461	4.7	27,477	51%	14,133	6.2
	2009	38,563	28%	10,807	5.3	27,203	53%	14,341	6.9
	2010	39,451	22%	8,510	6.0	26,287	48%	12,491	7.6
SW	2005	42,166	45%	18,861	6.3	23,921	61%	14,645	7.0
	2006	40,792	31%	12,588	5.1	25,832	56%	14,377	6.9
	2007	41,480	21%	8,823	4.7	25,982	56%	14,426	7.4

	Regulatory/Warning/School Signs					Detour/object marker/recreation/guide Signs			
Region	**Total Signs**		**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**
	2008	41,837	18%	7,580	3.9	26,443	54%	14,190	7.4
	2009	41,315	19%	8,055	4.4	29,536	51%	15,136	8.2
	2010	41,172	12%	5,034	5.1	29,584	46%	13,502	9.5

Wisconsin and Regions 2010: Sign Face Material Distribution

Face		Region					Statewide	
Grade	**Type**	**NC**	**NE**	**NW**	**SE**	**SW**	**Total**	**Percentage**
1	Non-Reflective	6	65	284	88	32	475	0.2%
	Other or Varies	97	26	290	17	569	999	0.3%
	Reflective - Engineering Grade	10153	15799	14616	19125	19007	78700	27%
2	Type D - Diamond Grade	-	-	-	-	-	-	-
	Type F - Fluorescent	634	530	487	960	911	3522	1.2%
	Type H - High Intensity	13727	11984	21052	18354	24157	89274	31%
	Type HP - Prismatic High Intensity	22366	16619	24026	27071	25779	115861	40%
	Type SH - Super High Intensity	100	122	217	123	197	759	0.3%
Total		47083	45145	60972	65738	70652	289590	100%

Wisconsin and Regions: Sign Face Material Trends

	2007		2008		2009		2010	
Region	**Engineering Grade**	**High Intensity**	**Engineering Grade**	**High Intensity**	**Engineering Grade**	**High Intensity**	**Engineering Grade**	**High Intensity**
NC	20,112	25,777	14,956	32,438	12,701	35,013	10,256	36,827
NE	25,225	18,438	23,466	21,047	23,569	25,282	15,890	29,255
NW	32,395	32,957	24,987	37,648	18,617	43,287	15,190	45,782
SE	31,927	31,804	27,789	36,937	23,549	42,217	19,230	46,508
SW	29,962	37,500	24,910	43,370	23,638	47,096	19,608	51,044
Statewide	139,621	146,476	116,108	171,440	102,074	192,895	80,174	209,416
	49%	**51%**	**40%**	**60%**	**35%**	**65%**	**28%**	**72%**

Wisconsin and Regions 2010: Sign Age Distribution

Regulatory/warning/school signs

	Years prior to the end of service life							Years beyond service life						
	6-10	**5**	**4**	**3**	**2**	**1**	**0**	**1**	**2**	**3**	**4**	**5-10**	**>10**	**Total**
NC	15060	2346	2833	1404	828	747	1127	782	426	547	469	2054	228	28851
	52%	8%	10%	5%	3%	3%	4%	3%	1%	2%	2%	7%	1%	100%
NE	11080	842	2334	1494	903	716	605	403	743	710	860	3114	1387	25191
	44%	3%	9%	6%	4%	3%	2%	2%	3%	3%	3%	12%	6%	100%
NW	18437	3476	3556	2288	897	590	698	379	390	486	649	1965	177	33988
	54%	10%	10%	7%	3%	2%	2%	1%	1%	1%	2%	6%	1%	100%
SE	21274	2810	2771	1978	839	674	595	269	681	1209	1547	3488	1316	39451
	54%	7%	7%	5%	2%	2%	2%	1%	2%	3%	4%	9%	3%	100%
SW	21375	5554	3873	2397	1339	776	824	243	184	369	1035	2202	1001	41172
	52%	13%	9%	6%	3%	2%	2%	1%	0%	1%	3%	5%	2%	100%
State	87226	15028	15367	9561	4806	3503	3849	2076	2424	3321	4560	12823	4109	168653
	52%	9%	9%	6%	3%	2%	2%	1%	1%	2%	3%	8%	2%	100%

Detour/object marker/recreation/guide Signs

	Years prior to the end of service life							Years beyond service life						
	6-10	**5**	**4**	**3**	**2**	**1**	**0**	**1**	**2**	**3**	**4**	**5-10**	**>10**	**Total**
NC	8507	619	837	685	239	866	303	592	407	646	633	3560	908	18802
	45%	3%	4%	4%	1%	5%	2%	3%	2%	3%	3%	19%	5%	100%
NE	6739	368	949	599	429	587	207	356	597	863	731	4718	2920	20063
	34%	2%	5%	3%	2%	3%	1%	2%	3%	4%	4%	24%	15%	100%
NW	11589	1124	1130	1074	269	872	312	264	458	1053	1606	5786	1470	27007
	43%	4%	4%	4%	1%	3%	1%	1%	2%	4%	6%	21%	5%	100%
SE	7898	996	1440	842	1133	1171	316	485	820	1394	1327	4934	3531	26287
	30%	4%	5%	3%	4%	4%	1%	2%	3%	5%	5%	19%	13%	100%
SW	10317	938	1507	1574	725	738	283	258	340	667	1729	5362	5146	29584
	35%	3%	5%	5%	2%	2%	1%	1%	1%	2%	6%	18%	17%	100%
State	45050	4045	5863	4774	2795	4234	1421	1955	2622	4623	6026	24360	13975	121743
	37%	3%	5%	4%	2%	3%	1%	2%	2%	4%	5%	20%	11%	100%

2010 Bridges: Compass Report on Condition, Maintenance, and Inspection Backlog

The Compass bridge report uses data from the Highway Structures Information System (HSI) online report. Data was taken during the period of one week from May 2nd to May 8th, 2011.

Key observations:

Bridge Deck Condition Distribution

- 32% of decks statewide are in Fair condition and need reactive maintenance, based on their NBI ratings of 5 or 6. These include 26% of concrete bridges and 43% of steel bridges.
- The NW region has the lowest percent of decks in good condition, only 52% of decks in good condition. The SE region however has the highest percentage of decks in poor condition at 4%. The SE region does have the largest deck area to maintain (14,620,127 ft^2).
- The NE region (878 bridges) has the best bridge ratings in the state with 82% of decks in Good condition and an impressive 0% in Poor and Critical condition.

Bridge Maintenance Needs

- Maintenance actions are those recommended by bridge inspectors for each bridge at the time of inspection.
- The following maintenance actions are recommended as needed. As approaches settle, brush continually grows, decks eventually crack and drainage issues arise at wings, these actions become necessary:
  - Decks - Seal Surface Cracks
  - Expansion Joints – Clean
  - Miscellaneous - Cut Brush
  - Approaches - Seal Approach to Paving Block
  - Deck - Patching
  - Drainage - Repair Washouts / Erosion
  - Approach – Wedge Approach

Bridge Special Inspection Backlog

- Backlog for bridge inspection is calculated based on the mandatory inspection frequency for each inspection type. Bridges without a 'Last Inspection Date' are reported in HSI as 'Unknown' and are regarded as non-compliant (backlogged) for this report. All bridges require initial and biennial routine inspections. Initial inspections are the most up to date with 1% of backlogs statewide, while routine inspections is the next lowest with only 2% backlog.
- Nineteen bridges need Load Posting inspections (63% backlog), while the backlog for Underwater Probe/visual inspections is 18% (308 bridges still needs this inspection).

Wisconsin 2010: Bridge Condition Distribution

	Bridges	Deck Area (ft^2)	Component	% of bridges in condition			
				Good[1]	Fair[2]	Poor[3]	Critical[3]
All	5,162	50,750,042	Decks	66%	32%	2%	0%
			Superstructures	71%	28%	1%	0%
			Substructures	71%	28%	1%	0%
Concrete	3,614	28,283,702	Decks	72%	26%	2%	0%
			Superstructures	79%	20%	1%	0%
			Substructures	80%	19%	0%	0%
Steel	1,548	22,466,340	Decks	53%	43%	4%	0%
			Superstructures	54%	44%	2%	0%
			Substructures	52%	46%	2%	0%

Region 2010: Bridge Condition Distribution

Region	Bridges	Deck Area (ft^2)	Component	% of bridges in condition			
				Good[1]	Fair[2]	Poor[3]	Critical[3]
NC	653	5,085,004	Decks	71%	26%	3%	0%
			Superstructures	82%	17%	1%	0%
			Substructures	79%	20%	1%	0%
NE	878	9,210,874	Decks	82%	17%	0%	0%
			Superstructures	81%	18%	1%	0%
			Substructures	77%	22%	1%	0%
NW	1,061	9,365,013	Decks	52%	46%	2%	0%
			Superstructures	66%	32%	2%	0%
			Substructures	69%	29%	2%	0%
SE	1,063	14,620,127	Decks	55%	41%	4%	0%
			Superstructures	54%	45%	1%	0%
			Substructures	56%	43%	0%	0%
SW	1,507	12,469,024	Decks	70%	27%	3%	0%
			Superstructures	76%	23%	2%	0%
			Substructures	75%	24%	1%	0%

[1]Good: Bridges with NBI rating 7-9 should receive Preventive Maintenance
[2]Fair: Bridges with NBI 5-6 should receive Reactive Maintenance. These bridges are considered backlogged for maintenance
[3]Poor and Critical: Bridges with NBI 0-4 should receive Rehabilitation or Replacement.

Wisconsin and Regions 2010: Bridge Condition

Region	Year	Percent of Bridges Feature in Fair condition			Number of state-maintained bridges	Dollar spent on bridges (in millions)
		Decks	Superstructures	Substructures		
NC	2006	19%	14%	17%	604	
	2007	21%	15%	17%	620	
	2008	21%	17%	18%	637	
	2009	22%	16%	18%	654	
	2010	26%	17%	20%	653	
NE	2006	23%	15%	27%	771	
	2007	21%	17%	25%	837	
	2008	19%	18%	24%	859	
	2009	19%	19%	22%	870	
	2010	17%	18%	22%	878	
NW	2006	44%	35%	34%	1040	
	2007	47%	32%	31%	1067	
	2008	45%	31%	29%	1067	
	2009	47%	33%	29%	1072	
	2010	46%	32%	29%	1061	
SE	2006	51%	52%	51%	1034	
	2007	48%	50%	50%	1023	
	2008	45%	47%	47%	1055	
	2009	41%	45%	45%	1052	
	2010	41%	45%	43%	1063	
SW	2006	24%	20%	16%	1451	
	2007	24%	22%	18%	1462	
	2008	24%	23%	22%	1466	
	2009	24%	23%	23%	1470	
	2010	27%	23%	24%	1507	
Statewide	2006	33%	29%	29%	4900	$10.50
	2007	33%	28%	29%	5007	$11.40
	2008	32%	28%	29%	5084	$11.78
	2009	31%	28%	28%	5118	$11.87
	2010	32%	28%	28%	5162	$12.17

Wisconsin and Regions: Trend of Bridge Maintenance Needs

Region	Year	Percent of Bridges needing maintenance								# of Bridges needing maintenance					
		Maintenance Action													
		Deck – Seal Surface Cracks		Expansion Joints – Seal		Misc. – Cut Brush		Approach – Seal Approach to Paving Block		Deck – Patching		Drainage - Repair Washouts / Erosion		Approach - Wedge Approach	
NC	**2006**	24%	144	8%	48	2%	12	1%	4	10%	61	1%	8	2%	14
	2007	39%	241	11%	66	4%	24	1%	5	12%	75	2%	11	3%	17
	2008	45%	287	22%	141	7%	42	2%	11	16%	101	8%	48	4%	26
	2009	56%	364	30%	194	11%	71	2%	12	16%	102	9%	58	5%	31
	2010	63%	413	42%	277	14%	93	3%	20	18%	120	14%	89	6%	39
NE	**2006**	13%	102	22%	167	2%	18	2%	15	6%	48	7%	56	1%	5
	2007	18%	150	25%	209	4%	32	4%	37	9%	78	9%	78	1%	11
	2008	21%	182	28%	238	6%	53	12%	107	12%	103	13%	115	2%	13
	2009	28%	248	31%	268	7%	63	17%	147	15%	135	15%	127	1%	13
	2010	34%	300	33%	293	9%	79	24%	214	17%	150	16%	143	2%	19
NW	**2006**	8%	78	1%	11	8%	85	17%	175	4%	37	5%	50	3%	31
	2007	7%	77	2%	24	5%	57	16%	174	4%	37	4%	45	2%	25
	2008	2%	22	3%	28	1%	16	5%	51	3%	29	5%	49	1%	14
	2009	3%	35	3%	34	2%	21	9%	97	5%	52	6%	67	3%	28
	2010	4%	41	3%	37	4%	43	11%	121	7%	74	9%	93	3%	35
SE	**2006**	12%	122	15%	150	13%	138	6%	63	8%	87	11%	112	11%	109
	2007	14%	140	18%	181	17%	174	9%	89	9%	96	12%	121	12%	126
	2008	15%	153	19%	203	21%	226	14%	147	11%	121	13%	140	14%	147
	2009	16%	172	20%	213	23%	238	17%	177	14%	145	16%	164	15%	159
	2010	18%	192	22%	233	25%	268	21%	226	15%	155	19%	201	17%	176
SW	**2006**	8%	114	3%	39	5%	68	5%	74	2%	33	3%	46	4%	65
	2007	13%	188	4%	51	12%	174	10%	146	4%	65	6%	83	7%	95
	2008	18%	260	4%	61	18%	257	14%	203	6%	94	9%	131	9%	138
	2009	20%	293	4%	66	25%	369	21%	308	8%	112	12%	181	11%	162
	2010	23%	354	5%	69	29%	443	27%	400	9%	134	15%	229	13%	196
statewide	**2006**	11%	560	8%	415	7%	321	7%	331	5%	266	6%	272	5%	224
	2007	16%	796	11%	531	9%	461	9%	451	7%	351	7%	338	5%	274
	2008	17%	904	12%	671	11%	594	10%	519	8%	448	9%	483	6%	338
	2009	22%	1112	15%	775	15%	762	14%	741	11%	546	12%	597	8%	393
	2010	25%	1300	18%	909	18%	926	19%	981	12%	633	15%	755	9%	465

Wisconsin and Regions 2010: Bridge Special Inspection Backlog

Inspection backlogs are shown as ‘percent of bridges in the county/region/state requiring this type of inspection'. Shown under the percentages are the numbers of bridges backlogged for that inspection type in the county/region/state. Data was extracted from WisDOT’s Highway Structures Information System on-line reports.

The special inspection types have a mandatory inspection frequency. The inspection frequencies for each special inspection are as follows:

- Initial: After construction and major rehabilitations, or 48 months
- Routine: 24 months
- Load Posted: 12 months
- In-depth: 72 months
- Fracture Critical: 24 months
- Underwater Diving: 60 months
- Underwater Probe/Visual: 24 months

	Special Inspection Type % of bridges backlogged for inspection type # of bridges backlogged for inspection						
Region	Initial	Routine	Load Posted	In-depth	Fracture Critical	Underwater Diving	Underwater Probe/Visual
NC	2%	0%	100%	5%	25%	3%	6%
	2	0	4	2	2	2	23
NE	0%	1%	--	8%	48%	3%	17%
	0	11	--	1	16	2	48
NW	0%	2%	100%	60%	38%	18%	20%
	0	16	2	9	6	17	105
SE	1%	3%	100%	16%	18%	11%	19%
	2	33	9	15	2	1	43
SW	1%	1%	27%	40%	6%	0%	26%
	2	20	4	8	2	--	89
Statewide	1%	2%	63%	19%	28%	6%	18%
	6	80	19	35	28	22	308

Appendices

A. **Program Contributors**
B. **Feature Thresholds and Grade Ranges**
C. **Feature Contribution Categories**
D. **2010 Maintenance Targets**
E. **2010 Compass Rating Sheet**
F. **County Data:**
    1. **Field Review: Traffic, Shoulders, Drainage and Roadside**
    2. **Signs (routine replacement needs)**
    3. **Bridge Maintenance Needs**

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B. Compass Feature Thresholds and Grade Ranges

Element	Feature	Threshold	Ranges for System Grades *Grade determined by percent backlogged* shown: top of range				
			A	B	C	D	F
Traffic control & safety devices (selected)	Centerline markings	Line with > 20% paint missing (by mile)	2%	5%	9%	15%	>15%
	Edgeline markings	Line with > 20% paint missing (by mile)	4%	9%	18%	30%	>30%
	Delineators	Missing OR not visible at posted speed OR damaged (by delineator)	5%	12%	23%	40%	>40%
	Detour/object marker/recreation/guide signs (emergency repair)	Missing OR not visible at posted speed (by sign)	4%	9%	18%	30%	>30%
	Detour/object marker/recreation/guide signs (routine)	Beyond recommended service life (by sign)	7%	18%	35%	60%	>60%
	Protective barriers	Not functioning as intended (linear feet of barrier)	4%	9%	18%	30%	>30%
	Regulatory/warning signs (emergency repair)	Missing OR not visible at posted speed (by sign)	2%	5%	9%	15%	>15%
	Regulatory/warning signs (routine)	Beyond recommended service life (by sign)	5%	12%	23%	40%	>40%
	Special pavement markings	Missing OR not functioning as intended (by marking)	5%	12%	23%	40%	>40%
Shoulders	Hazardous debris	Any items large enough to cause a safety hazard (by mile)	2%	5%	9%	15%	>15%
	Cracking on paved shoulder	200 linear feet or more of unsealed cracks > ¼ inch (by mile)	7%	18%	35%	60%	>60%
	Drop-off/build-up on paved shoulder	200 linear feet or more with drop-off or build-up > 1.5 inches (by mile)	2%	5%	9%	15%	>15%
	Potholes/raveling on paved shoulder	Any potholes OR raveling > 1 square foot by 1 inch deep (by mile)	6%	15%	29%	50%	>50%
	Cross-slope on unpaved shoulder	200 linear feet or more of cross-slope at least 2x planned slope with the maximum cross slope of 8% (by mile)	7%	18%	35%	60%	>60%
	Drop-off/build-up on unpaved shoulder	200 linear feet or more with drop-off or build-up > 1.5 inches (by mile)	2%	5%	9%	15%	>15%
	Erosion on unpaved shoulder	200 linear feet or more with erosion >2 inches deep (by mile)	7%	18%	35%	60%	>60%
Drainage	Culverts	Culverts that are >25% obstructed OR where a sharp object - e.g., a shovel-can be pushed through the bottom of the pipe OR pipe is collapsed or separated (by culvert)	7%	18%	35%	60%	>60%

Element	Feature	Threshold	Ranges for System Grades *Grade determined by percent backlogged* shown: top of range				
			A	B	C	D	F
	Curb & gutter	Curb & gutter with severe structural distress OR >1 inch structural misalignment OR >1 inch of debris build-up in the curb line (by linear feet of curb & gutter)	9%	22%	41%	70%	>70%
	Ditches	Ditch with greater than minimal erosion of ditch line OR obstructions to flow of water requiring action (by linear feet of ditch)	7%	18%	35%	60%	>60%
	Flumes	Not functioning as intended OR deteriorated to the point that they are causing erosion (by flume)	7%	18%	35%	60%	>60%
	Storm sewer system	Inlets, catch basins, and outlet pipes with >=50% capacity obstructed OR <80% structurally sound OR >1 inch vertical displacement or heaving OR not functioning as intended (by inlet, catch basin & outlet pipes)	7%	18%	35%	60%	>60%
	Under-drains/edge-drains	Under- and edge-drains with outlets, endwalls or end protection closed or crushed OR water flow or end protection is obstructed (by drain)	9%	22%	41%	70%	>70%
Roadsides	Fences	Fence missing OR not functioning as intended (by LF of fence)	4%	9%	18%	30%	>30%
	Litter	Any pieces of litter on shoulders and roadside visible at posted speed, but not causing a safety threat. (by mile)	10%	25%	47%	80%	>80%
	Mowing	Any roadside has mowed grass that is too short, too wide or is mowed in a no-mow zone (by mile)	10%	25%	47%	80%	>80%
	Mowing for vision	Any instances in which grass is too high or blocks a vision triangle (by mile)	4%	9%	18%	30%	>30%
	Noxious weeds	Any visible clumps (by mile)	7%	18%	35%	60%	>60%
	Woody vegetation control	Any instances in which a tree is present in the clear zone OR trees and/or branches overhang the roadway or shoulder creating a clearance problem (by mile)	4%	9%	18%	30%	>30%
	Woody vegetation control for vision	Any instances in which woody vegetation blocks a vision triangle (by mile)	4%	9%	18%	30%	>30%

C. Feature Contribution Categories

		This Feature Contributes Primarily To:				
Element	**Feature**	**Critical Safety**	**Safety/ Mobility**	**Ride/ Comfort**	**Stewardship**	**Aesthetics**
Asphalt Traveled Way	Alligator Cracking				✓	
	Block Cracking				✓	
	Edge Raveling				✓	
	Flushing				✓	
	Longitudinal Cracking				✓	
	Longitudinal Distortion			✓		
	Patch Deterioration			✓		
	Rutting	✓				
	Surface Raveling			✓		
	Transverse Cracking				✓	
	Transverse Distortion			✓		
Concrete Traveled Way	Distressed Joints/Cracks			✓		
	Longitudinal Joint Distress			✓		
	Patch Deterioration			✓		
	Slab Breakup			✓		
	Surface Distress				✓	
	Transverse Faulting			✓		

		This Feature Contributes Primarily To:				
Element	**Feature**	**Critical Safety**	**Safety/ Mobility**	**Ride/ Comfort**	**Stewardship**	**Aesthetics**
Traffic and Safety	Centerline Markings	✓				
	Delineators		✓			
	Edgeline Markings		✓			
	Detour/object marker/recreati on/guide signs (emerg. repair)		✓			
	Detour/object marker/recreati on/guide signs (routine repair)			✓		
	Protective Barriers		✓			
	Reg./Warning Signs (emerg.)	✓				
	Reg./Warning Signs (routine)		✓			
	Special Pavement Markings		✓			
Shoulders	Hazardous Debris	✓				
	Cracking (paved)				✓	
	Drop-off/Build-up (paved)	✓				
	Potholes/Ravel-ing (paved)			✓		
	Cross-Slope (unpaved)			✓		
	Drop-off/Build-up (unpaved)	✓				
	Erosion (unpaved)				✓	

		This Feature Contributes Primarily To:				
Element	**Feature**	**Critical Safety**	**Safety/ Mobility**	**Ride/ Comfort**	**Stewardship**	**Aesthetics**
Drainage	Culverts				✓	
	Curb & Gutter				✓	
	Ditches				✓	
	Flumes				✓	
	Storm Sewer System				✓	
	Under-drains/Edge-drains				✓	
Roadside	Fences		✓			
	Litter					✓
	Mowing		✓			
	Mowing for Vision		✓			
	Noxious Weeds				✓	
	Woody Vegetation		✓			
	Woody Veg. Control for Vision		✓			

Category Definitions:

Critical safety: Critical safety features that would necessitate immediate action – with overtime pay if necessary - to remedy if not properly functioning.

Safety: Highway features and characteristics that protect users against – and provide them with a clear sense of freedom from – danger, injury or damage.

Ride/comfort: Highway features and characteristics, such as ride quality, proper signing, or lack of obstructions, that provide a state of ease and quiet enjoyment for highway users.

Stewardship: Actions taken to help a highway element obtain its full potential service life.

Aesthetics: The display of natural or fabricated beauty items, such as landscaping or decorative structures, located along a highway corridor. Also, the absence of things like litter and graffiti, that detract from the sightlines of the road.

WisDOT Highway Operations
2010
Target Service Levels

September 30, 2009

Issued by
David Vieth, Director of the Bureau of Highway Operations

Attached are the 2009 target service levels for highway operations. Highway operations managers expect these targets to provide guidance to central office and regional highway operations staff in selecting activities and expending resources. The 2010 targets are critical for structuring the 2010 Routine Maintenance Agreements (RMA). **The targets are consistent with the 2010 RMA guidance that I also sent to regions today.**

Targets are the conditions expected on state highways at the end of the summer maintenance season. They were selected by highway operations managers in the regions and BHO to set priorities within the budget, and to increase consistency across region and county lines.

The condition measure used is the percent of inventory with backlogged maintenance work. A measure greater than 0% backlogged reflects work left undone at the end of the summer season. Under full funding of operations needs, we would expect to see features at or close to 0%. The following chart provides historical service levels statewide and by region for 2008. Please remember targets have not yet been set for a portion of highway operations expenditures including winter operations, certain traffic devices and electrical operations.

Targets do not reflect an optimal maintenance condition for the highways, but instead reflect a continued commitment to fully fund winter operations, other organizational priorities, existing highway conditions, and most importantly, dollars available. Given constrained resources, these organizational priorities include:

- Focusing our resources on keeping the system safe and operating from day to day. Highway operations will:
    - Decrease the amount of hazardous debris on shoulders.
    - Decrease drop-off on unpaved shoulders.
    - Continue routine replacement of regulatory and warning signs.
    - Repair damaged safety appurtenances and signs.
- Expending far fewer resources based on limited funding.
    - Litter control is limited to once in the spring and Adopt-A-Highway efforts continue to be encouraged.
    - Mowing is limited to one shoulder cut per season. The exception is for spot locations where vision is a safety issue for that specific area. Mowing for woody vegetation shall be accomplished with the normal shoulder cut and shall not be done as a standalone work activity.
    - Routine crack sealing and non-emergency concrete repair for preventive maintenance purposes should not be undertaken with routine maintenance funds.

    - No maintenance of lane-line raised pavement markers and other wet reflective markings. Special pavement markings will only be addressed for the most critical safety needs. Some edgeline markings will be deferred.
- Leveraging improvement funding and better coordinating improvement work to decrease maintenance workload and funding demands.
    - Now and going forward, maintenance supervisors and engineers will put greater emphasis on working with the improvement program to decrease pavement rutting and to improve the condition of culverts.

Thank you to Scott Bush and the Compass program for coordinating this effort and preparing this report.

D. 2009 Highway Operations Targets

Element	Feature	2005 Target Percent Backlogged and Feature Grade - Statewide	2006 Target Percent Backlogged and Feature Grade - Statewide	2007 Target Percent Backlogged and Feature Grade - Statewide	2004 Actual Percent Backlogged and Feature Grade - Statewide	2005 Actual Percent Backlogged and Feature Grade - Statewide	2006 Actual Percent Backlogged and Feature Grade - Statewide*	2008 Target Percent Backlogged and Feature Grade - Statewide	2010 Target Percent Backlogged and Feature Grade - Statewide
Asphalt Traveled Way	Alligator Cracking	5=A	5=A	5=A	1=A	1=A	2=A	5=A	5=A
	Block Cracking	5=A	5=A	5=A	3=A	3=A	2=A	5=A	5=A
	Edge Raveling	15=B	18=B	20=C	15=B	15=B	17=B	20=C	20=C
	Flushing	1=A	1=A	1=A	0=A	0=A	0=A	1=A	1=A
	Longitudinal Cracking	25=C	28=C	30=C	26=C	26=C	62=F	30=C	65=F
	Longitudinal Distortion	1=A	1=A	1=A	0=A	0=A	0=A	1=A	1=A
	Patch Deterioration	10=B	10=B	10=B	9=B	9=B	7=B	10=B	10=B
	Rutting	15=D	13=D	10=D	9=C	9=C	7=B	7=B	7=C
	Surface Raveling	2=A	2=A	2=A	1=A	1=A	0=A	2=A	2=A
	Transverse Cracking	25=C	28=C	30=C	24=C	24=C	62=F	30=C	67=F
	Transverse Distortion	5=A	5=A	5=A	1=A	1=A	0=A	5=A	5=A
Concrete Traveled Way	Distressed Joints/Cracks	43=D	43=D	43=D	34=D	33=D	18=C	43=D	43=D
	Longitudinal Joint Distress	27=C	27=C	27=C	21=C	21=C	0=A	27=C	27=C
	Patch Deterioration	30=D	30=D	30=D	28=C	28=C	18=C	30=D	30=D
	Slab Breakup	45=D	45=D	45=D	45=D	44=D	29=C	45=D	45=D
	Surface Distress	25=C	25=C	25=C	20=C	20=C	8=B	25=C	25=C

	Transverse Faulting	75=F	75=F	75=F	74=F	74=F	61=F	75=F	88=F
Traffic and Safety	Centerline Markings	5=B	5=B	6=C	5=B	5=B	4=B	5=B	5=B
	Delineators	15=C	25=D	25=D	21=C	24=D	21=C	25=D	25=D
	Edgeline Markings	6=B	6=B	7=B	7=B	5=B	6=B	6=B	8=B
	Detour/object marker/recreation/guide signs (emerg. repair)	1=A	1=A	1=A	0=A	1=A	1=A	1=A	1=A
	Detour/object marker/recreation/guide signs (routine repair)	50=D	65=F	70=F	46=D	59=D	55=D	70=F	59=D
	Protective Barriers	3=A	3=A	3=A	3=A	4=A	4=A	3=A	3=A
	Reg./Warning Signs (emerg.)	0=A	0=A	0=A	1=A	1=A	1=A	0=A	0=A
	Reg./Warning Signs (routine)	40=D	35=D	30=D	36=D	41=F	31=D	25=D	25=D
	Special Pavement Markings	25=D	25=D	25=D	13=C	5=A	3=A	25=D	23=C
Shoulders	Hazardous Debris	6=C	6=C	6=C	13=D	12=D	13=D	6=C	6=C
	Drop-off/Build-up (paved)	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	N/A
	Cracking (paved)	60=D	60=D	60=D	51=D	52=D	50=D	60=D	70=F
	Potholes/Raveling (paved)	10=B	10=B	10=B	5=A	7=B	5=A	10=B	10=B
	Cross-Slope (unpaved)	20=C	20=C	20=C	15=B	14=B	25=C	20=C	20=C
	Drop-off/Build-up (unpaved)	35=F	30=D	25=D	37=F	36=F	40=F	20=D	35=F
	Erosion (unpaved)	5=A	5=A	5=A	3=A	3=A	3=A	5=A	5=A

Drainage	Culverts	15=B	15=B	15=B	17=B	18=B	15=B	15=B	30=C
	Curb & Gutter	8=A	10=B	10=B	6=A	7=A	8=A	10=B	10=B
	Ditches	2=A	2=A	2=A	2=A	2=A	3=A	5=A	5=A
	Flumes	30=C	30=C	30=C	32=C	19=C	27=C	30=C	35=C
	Storm Sewer System	10=B	10=B	10=B	9=B	9=B	9=B	10=B	15=B
	Under-drains/Edge-drains	20=B	25=C	25=C	14=B	20=B	13=B	25=C	30=C
Roadside	Fences	14=C	14=C	14=C	4=A	2=A	3=A	14=C	14=C
	Litter	75=D	75=D	75=D	70=D	62=D	64=D	75=D	81=F
	Mowing	40=C	40=C	40=C	40=C	35=C	39=C	40=C	40=C
	Mowing for Vision	5=B	5=B	5=B	26=D	--	2=A	5=B	5=B
	Noxious Weeds	50=D	50=D	50=D	30=C	29=C	34=C	61=F	61=F
	Woody Vegetation	5=B	5=B	5=B	4=A	3=A	3=A	5=B	5=B
	Woody Veg. Control for Vision	5=B	3=A	3=A	1=A	1=A	1=A	3=A	3=A

E. 2010 Compass Rating Sheet

2010 Compass Rating Sheet
Wisconsin Department of Transportation

Segment 1, **Highway 002**, NW, ASHLAND County, Region 5, Undivided
Directions: From (MOCCASIN DR) go E for 0.3 miles

Alternate Directions: From (BIRCH HILL RD) go W for 2.68 miles

Date Survey Taken:	
Start Time:	
Stop Time:	
Reviewed by:	

If a segment is discarded for one of the reasons below, please check the appropriate box and add the next highest numbered "spare" segment for a similar roadway (divided or undivided) to your list of segments to be rated. Please enter the reject reason in the database.

☐ A piece or all of the segment falls on a bridge. ☐ A piece or all of the segment is currently under construction.
☐ We believe it would be unsafe to rate this segment. ☐ We cannot locate this segment.
☐ An organization other than WisDOT is responsible for the maintenance of ANY of the four elements within this section.

Shoulders	Standard	Value	Comments
Hazardous Debris (S-1)	Number of items large enough to cause a safety hazard.....		
Paved Shoulder	☐None (If none, skip to Unpaved Shoulder)		
Drop off/ build-up (S-2)	Linear ft. of paved-to-paved drop-off/build-up greater than 1.5".....		
Cracking (S-3)	Linear ft. of unsealed cracks greater than ¼" (up to 150' on undivided or 300' on divided hwy).....		
Potholes/ Raveling (S-4)	Total sq. ft. of BOTH potholes AND raveling greater than 1 ft^2 x 1" deep.....		
Unpaved Shoulder	☐ None (If none, skip to Drainage) Width_____		
Drop off/ build-up (S-5)	Linear ft. of paved-to-unpaved drop-off/build-up greater than 1.5".....		
Cross Slope (S-6)	Linear ft. with unpaved cross slope greater than 2x planned angle.....		
Erosion (S-7)	Square ft. with ruts deeper than 2 inches.....		

Drainage			Value & Repair/Clean	Comments
Ditches (D-1)	☐ None	Total linear ft. of ditch..... Linear ft. with more than minimal erosion of ditch line OR obstructions to the flow of water requiring action	☐ Repair ☐ Clean	Number of deficient culverts: ____≤4' in diameter ____>4' in diameter
Culverts (D-2)	☐ None	Total number of culverts..... Number and Size with more than 25% obstructed OR where a sharp object (a shovel) can be pushed thru bottom of pipe OR pipe is collapsing.....	☐ Repair ☐ Clean	
Under/ Edge Drain (D-3)	☐ None	Total number of drains..... Number with outlets, endwalls or end protection closed or crushed OR where water flow or end protection is obstructed.....	☐ Repair ☐ Clean	
Flumes (D-4)	☐ None	Total number of flumes..... Number not functioning as intended OR deteriorated to the point that they are causing erosion.....	☐ Repair ☐ Clean	
Curb & Gutter (D-5)	☐ None	Total linear ft. of curb and gutter..... Linear ft. with severe structural distress OR more than 1" structural misalignment OR more than 1" of debris build up in the curb line.....	☐ Repair ☐ Clean	
Storm Sewer (D-6)	☐ None	Total number of inlets, catch basins and outlet pipes..... Number with more than 50% capacity obstructed OR less than 80% structurally sound OR more than 1" vertical displacement OR not functioning as intended.....	☐ Repair ☐ Clean	

Roadsides			Value	Comments
Litter (R-1)	Number of pieces (up to 15) of litter & non-natural encroachments on shoulders & roadside visible at posted speed, but not causing a safety threat			☐ Canada Thistle ☐ Field Bindweed ☐ Leafy Spurge
Mowing (R-2)	Mowing meets standard If NO, grass is mowed: ☐ too wide ☐ too short ☐ too tall ☐ in a no mow zone If NO, why: ☐ safety/equipment ☐ mowed by property owner ☐ woody vegetation control ☐ maintenance decision		☐yes ☐no	
Mowing Vision (R-2)	☐ None	Grass blocks a vision triangle or sightlines	☐yes ☐no	
Noxious Weeds (R-3)	Visible clumps of noxious weeds are present and type(s) of noxious weeds present		☐yes ☐no	
Woody Vegetation (R-4)	Number of instances in which a tree > 4" in diameter is present in the clear zone OR trees and/or branches overhang the roadway or shoulder creating a clearance problem			
Woody Vegetation Vision (R-4)	Woody vegetation causes a vision problem		☐yes ☐no	
Fences (R-5)	☐ None	Total linear ft. of right-of-way fence Linear ft. missing OR not functioning as intended		

Traffic Control and Safety			Value	Comments
Centerline Markings (T-1)	☐ None	Over total segment, > 20% centerline material missing	☐yes ☐no	
Edgeline Markings (T-1)	☐ None	Over total segment, > 20% edgeline material missing	☐yes ☐no	
Special Pavement Markings (T-2)	☐ None	Total number of special pavement markings Number missing OR not functioning as intended		
Regulatory/ Warning Signs (T-3)	☐ None	Total number of regulatory/warning signs Number missing OR damaged		
Other Signs (T-4)	☐ None	Total number of other signs Number missing OR damaged		
Delineators (T-5)	☐ None	Total number of delineators Number missing OR damaged		
Protective Barriers (T-6)	☐ None	Total linear ft. of beam guard, concrete barrier, and cable guard Linear ft. of protective barriers not functioning as intended and type of deficient protective barrier(s)	☐ Beam Guard ☐ Damaged Terminal ☐ Concrete Barrier ☐ Cable Guard	

Indicates some or all of feature rating must be completed while driving at posted speed OR rated through the eyes of a driver traveling at posted speed.

1/10-mile	528 ft
X2	1056 ft
X3	1584 ft
X4	2112 ft

Rating Sheets should be entered into the LAN database **by October 15, 2010.** Please send the hardcopy Rating Sheets Inter-D to Scott Bush, Hill Farms, Room 501 **by October 15, 2010.**

Questions? Please call Scott Bush, Compass Program Manager at 608-266-8666 or email him at Scott.Bush@dot.wi.gov

F. County Data

Counties 2010: Shoulders and Drainage

		Condition % backlogged # of observations												
		Shoulders							Drainage					
Region	County	Hazardous Debris	Paved Dropoff	Paved Cracking	Paved Potholes/Raveling	Unpaved Dropoff	Unpaved Cross slope	Unpaved Erosion	Ditches	Culverts	Under-drains/edge-drains	Flumes	Curb & Gutter	Storm Sewer
NC		20%	0%	78%	11%	50%	0%	0%	0%	50%	--	0%	6%	0%
	ADAMS	10	9	9	9	10	10	10	10	2	--	2	2	1
		0%	0%	71%	14%	43%	86%	0%	0%	100%	--	--	--	--
	FLORENCE	7	7	7	7	7	7	7	7	2	--	--	--	--
		0%	0%	57%	0%	33%	27%	7%	0%	20%	--	--	7%	100%
	FOREST	16	14	14	14	15	15	15	14	5	--	--	3	1
		43%	0%	71%	14%	29%	14%	0%	1%	100%	--	100%	31%	--
	GREEN LAKE	7	7	7	7	7	7	7	6	1	--	1	1	--
		17%	0%	38%	0%	25%	25%	0%	0%	0%	--	--	--	--
	IRON	12	8	8	8	12	12	12	12	4	--	--	--	--
		0%	0%	75%	0%	27%	20%	0%	0%	0%	--	33%	5%	--
	LANGLADE	15	12	12	12	15	15	15	15	2	--	2	2	--
	LINCOLN	25%	7%	73%	20%	38%	81%	6%	10%	40%	0%	0%	1%	25%

		Condition % backlogged # of observations												
		Shoulders							Drainage					
Region	County	Hazardous Debris	Paved Dropoff	Paved Cracking	Paved Potholes/Raveling	Unpaved Dropoff	Unpaved Cross slope	Unpaved Erosion	Ditches	Culverts	Under-drains/edge-drains	Flumes	Curb & Gutter	Storm Sewer
		16	15	15	15	16	16	16	16	4	3	1	1	3
		0%	7%	48%	4%	63%	52%	4%	10%	58%	8%	0%	1%	14%
	MARATHON	28	27	27	27	27	27	27	27	10	9	1	3	5
		0%	0%	89%	22%	67%	0%	0%	1%	0%	--	--	4%	0%
	MARQUETTE	9	9	9	9	9	9	9	9	4	--	--	2	2
		0%	0%	100%	0%	25%	25%	0%	0%	0%	--	--	--	--
	MENOMINEE	4	1	1	1	4	4	4	4	1	--	--	--	--
		0%	0%	69%	0%	38%	31%	6%	0%	14%	--	0%	0%	--
	ONEIDA	17	16	16	16	16	16	16	16	5	--	1	4	--
		13%	0%	40%	0%	20%	0%	0%	0%	0%	80%	100%	0%	6%
	PORTAGE	16	15	15	15	15	15	15	14	2	2	1	3	7
		19%	0%	77%	0%	44%	19%	0%	0%	33%	0%	--	35%	--
	PRICE	16	13	13	13	16	16	16	16	5	1	--	1	--
		0%	12%	71%	0%	53%	47%	0%	0%	10%	19%	14%	0%	20%
	SHAWANO	19	17	17	17	19	19	19	19	8	6	2	2	3
		20%	0%	27%	13%	64%	14%	7%	1%	0%	--	0%	3%	--
	VILAS	15	15	15	15	14	14	14	15	4	--	1	1	--

		Condition % backlogged # of observations												
		Shoulders							Drainage					
Region	County	Hazardous Debris	Paved Dropoff	Paved Cracking	Paved Potholes/Raveling	Unpaved Dropoff	Unpaved Cross slope	Unpaved Erosion	Ditches	Culverts	Under-drains/edge-drains	Flumes	Curb & Gutter	Storm Sewer
		5%	0%	44%	0%	24%	5%	5%	0%	0%	50%	50%	0%	0%
	WAUPACA	21	18	18	18	21	21	21	21	7	2	1	2	1
		7%	0%	46%	0%	0%	0%	0%	1%	0%	0%	--	0%	0%
	WAUSHARA	14	13	13	13	14	14	14	14	4	2	--	2	1
		0%	0%	73%	0%	28%	6%	0%	0%	50%	0%	0%	0%	--
	WOOD	18	11	11	11	18	18	18	18	2	1	1	1	--
		6%	6%	88%	0%	45%	27%	0%	2%	50%	--	--	--	8%
NE	BROWN	16	16	16	16	11	11	11	16	5	--	--	--	5
		11%	0%	89%	0%	22%	0%	0%	1%	50%	--	100%	2%	--
	CALUMET	9	9	9	9	9	9	9	9	2	--	1	1	--
		9%	0%	9%	0%	18%	9%	0%	0%	0%	--	--	0%	0%
	DOOR	11	11	11	11	11	11	11	11	1	--	--	4	3
		5%	0%	65%	5%	25%	10%	0%	3%	17%	10%	0%	0%	0%
	FOND DU LAC	20	20	20	20	20	20	20	19	9	7	1	1	3
		0%	0%	67%	17%	67%	17%	0%	1%	--	--	100%	44%	--
	KEWAUNEE	6	6	6	6	6	6	6	6	--	--	1	1	--
	MANITOWOC	7%	0%	73%	0%	55%	45%	0%	3%	0%	--	0%	0%	--

		Condition % backlogged # of observations												
		Shoulders							Drainage					
Region	County	Hazardous Debris	Paved Dropoff	Paved Cracking	Paved Potholes/Raveling	Unpaved Dropoff	Unpaved Cross slope	Unpaved Erosion	Ditches	Culverts	Under-drains/edge-drains	Flumes	Curb & Gutter	Storm Sewer
		15	15	15	15	11	11	11	13	1	--	2	5	--
		6%	0%	38%	0%	13%	13%	0%	0%	14%	--	67%	3%	0%
	MARINETTE	16	16	16	16	16	16	16	15	7	--	1	1	1
		0%	12%	53%	6%	24%	0%	0%	0%	50%	0%	--	--	33%
	OCONTO	17	17	17	17	17	17	17	17	3	2	--	--	3
		0%	0%	41%	0%	32%	16%	0%	2%	63%	--	50%	3%	27%
	OUTAGAMIE	19	17	17	17	19	19	19	18	8	--	3	5	5
		24%	6%	59%	6%	41%	29%	6%	4%	0%	0%	50%	5%	25%
	SHEBOYGAN	17	17	17	17	17	17	17	16	4	1	1	2	2
		0%	0%	38%	0%	13%	0%	0%	6%	100%	0%	--	3%	0%
	WINNEBAGO	16	13	13	13	15	15	15	16	1	2	--	3	1
		8%	0%	70%	10%	42%	25%	8%	2%	100%	--	--	--	--
NW	ASHLAND	12	10	10	10	12	12	12	11	1	--	--	--	--
		7%	0%	67%	7%	20%	0%	0%	0%	17%	--	50%	1%	0%
	BARRON	15	15	15	15	15	15	15	14	5	--	4	5	2
		6%	0%	55%	9%	31%	25%	0%	2%	33%	--	--	54%	--
	BAYFIELD	17	11	11	11	16	16	16	16	6	--	--	2	--

		Condition % backlogged # of observations												
		Shoulders							Drainage					
Region	County	Hazardous Debris	Paved Dropoff	Paved Cracking	Paved Potholes/Raveling	Unpaved Dropoff	Unpaved Cross slope	Unpaved Erosion	Ditches	Culverts	Under-drains/edge-drains	Flumes	Curb & Gutter	Storm Sewer
		0%	0%	67%	22%	81%	63%	0%	2%	38%	0%	--	90%	0%
	BUFFALO	16	9	9	9	16	16	16	13	10	1	--	1	1
		0%	0%	63%	0%	25%	8%	8%	4%	0%	--	--	--	--
	BURNETT	12	8	8	8	12	12	12	12	1	--	--	--	--
		0%	10%	95%	0%	36%	9%	0%	0%	43%	50%	100%	3%	50%
	CHIPPEWA	22	21	21	21	22	22	22	22	7	2	1	2	1
		0%	6%	29%	0%	12%	12%	0%	0%	100%	0%	0%	--	--
	CLARK	17	17	17	17	17	17	17	17	3	3	1	--	--
		6%	0%	47%	7%	25%	13%	0%	0%	0%	0%	--	100%	100%
	DOUGLAS	16	15	15	15	16	16	16	16	1	1	--	1	1
		0%	0%	52%	5%	33%	24%	0%	0%	0%	--	--	0%	25%
	DUNN	21	21	21	21	21	21	21	20	6	--	--	1	2
		13%	0%	81%	13%	63%	6%	0%	0%	56%	100%	0%	25%	9%
	EAU CLAIRE	16	16	16	16	16	16	16	16	6	2	1	4	2
		0%	0%	63%	0%	10%	0%	0%	0%	82%	--	33%	45%	0%
	JACKSON	20	16	16	16	20	20	20	20	9	--	1	4	1
	PEPIN	0%	0%	80%	0%	40%	60%	0%	9%	0%	--	--	--	--

		Condition % backlogged # of observations												
		Shoulders							Drainage					
Region	County	Hazardous Debris	Paved Dropoff	Paved Cracking	Paved Potholes/Raveling	Unpaved Dropoff	Unpaved Cross slope	Unpaved Erosion	Ditches	Culverts	Under-drains/edge-drains	Flumes	Curb & Gutter	Storm Sewer
		5	5	5	5	5	5	5	5	1	--	--	--	--
		0%	7%	80%	13%	29%	0%	6%	0%	13%	--	100%	15%	--
	PIERCE	17	15	15	15	17	17	17	17	6	--	1	2	--
		0%	0%	25%	6%	35%	12%	0%	0%	0%	--	0%	9%	0%
	POLK	17	16	16	16	17	17	17	17	6	--	1	4	1
		0%	0%	43%	0%	27%	36%	0%	2%	20%	--	0%	43%	33%
	RUSK	11	7	7	7	11	11	11	10	4	--	1	2	1
		6%	0%	31%	0%	12%	6%	0%	1%	25%	--	--	--	--
	SAWYER	17	13	13	13	17	17	17	16	4	--	--	--	--
		0%	0%	70%	0%	50%	35%	0%	3%	30%	--	0%	11%	31%
	ST. CROIX	20	20	20	20	20	20	20	20	9	--	2	3	6
		0%	0%	27%	0%	8%	0%	0%	6%	33%	--	0%	--	--
	TAYLOR	12	11	11	11	12	12	12	11	3	--	1	--	--
		0%	0%	81%	13%	16%	53%	5%	12%	30%	--	--	--	--
	TREMPEALEAU	19	16	16	16	19	19	19	16	7	--	--	--	--
		0%	15%	38%	0%	54%	8%	0%	0%	0%	--	--	22%	0%
	WASHBURN	14	13	13	13	13	13	13	13	4	--	--	1	1

		Condition % backlogged # of observations												
		Shoulders							Drainage					
Region	County	Hazardous Debris	Paved Dropoff	Paved Cracking	Paved Potholes/Raveling	Unpaved Dropoff	Unpaved Cross slope	Unpaved Erosion	Ditches	Culverts	Under-drains/edge-drains	Flumes	Curb & Gutter	Storm Sewer
SE		0%	0%	44%	0%	63%	25%	0%	3%	--	0%	--	1%	17%
	KENOSHA	11	9	9	9	8	8	8	10	--	3	--	7	5
		24%	0%	80%	7%	67%	17%	0%	47%	50%	50%	50%	9%	27%
	MILWAUKEE	17	15	15	15	6	6	6	8	1	2	1	12	13
		0%	29%	71%	29%	14%	14%	0%	0%	0%	--	--	0%	0%
	OZAUKEE	8	7	7	7	7	7	7	7	5	--	--	2	1
		0%	0%	73%	9%	36%	45%	9%	7%	50%	8%	0%	1%	14%
	RACINE	15	11	11	11	11	11	11	12	4	3	1	7	8
		29%	0%	57%	14%	24%	0%	0%	3%	33%	42%	--	16%	100%
	WALWORTH	21	21	21	21	21	21	21	21	7	4	--	2	1
		0%	0%	85%	8%	36%	0%	0%	2%	0%	25%	--	1%	10%
	WASHINGTON	18	13	13	13	14	14	14	15	3	2	--	6	8
		15%	0%	88%	8%	26%	0%	0%	6%	50%	0%	0%	1%	7%
	WAUKESHA	27	24	24	24	23	23	23	19	3	1	1	11	9
SW		16%	10%	72%	7%	84%	56%	0%	4%	80%	100%	--	2%	--
	COLUMBIA	32	29	29	29	32	32	32	28	4	1	--	3	--
	CRAWFORD	0%	0%	59%	6%	0%	0%	5%	0%	0%	--	50%	0%	0%

		Condition % backlogged # of observations												
		Shoulders							Drainage					
Region	County	Hazardous Debris	Paved Dropoff	Paved Cracking	Paved Potholes/Raveling	Unpaved Dropoff	Unpaved Cross slope	Unpaved Erosion	Ditches	Culverts	Under-drains/edge-drains	Flumes	Curb & Gutter	Storm Sewer
		20	17	17	17	19	19	19	17	7	--	1	8	4
		32%	11%	78%	11%	55%	0%	0%	2%	27%	93%	60%	10%	55%
	DANE	41	37	37	37	40	40	40	40	11	5	5	7	10
		25%	4%	61%	0%	70%	48%	0%	7%	55%	100%	50%	14%	29%
	DODGE	24	23	23	23	23	23	23	22	8	1	2	6	2
		0%	0%	54%	0%	15%	4%	0%	0%	0%	--	100%	4%	--
	GRANT	27	24	24	24	26	26	26	25	10	--	1	4	--
		0%	0%	45%	0%	15%	0%	0%	0%	0%	--	--	0%	0%
	GREEN	13	11	11	11	13	13	13	13	9	--	--	2	1
		6%	0%	69%	15%	72%	6%	6%	2%	0%	--	0%	0%	0%
	IOWA	18	13	13	13	18	18	18	16	2	--	3	5	2
		0%	0%	67%	0%	7%	13%	7%	0%	14%	--	0%	0%	0%
	JEFFERSON	18	18	18	18	15	15	15	16	7	--	2	6	4
		10%	5%	58%	11%	18%	6%	0%	0%	31%	25%	--	0%	0%
	JUNEAU	21	19	19	19	17	17	17	19	8	4	--	2	2
		43%	0%	78%	56%	79%	7%	0%	0%	67%	--	--	3%	11%
	LA CROSSE	14	9	9	9	14	14	14	12	3	--	--	1	3

		Condition % backlogged # of observations												
		Shoulders							**Drainage**					
Region	County	Hazardous Debris	Paved Dropoff	Paved Cracking	Paved Potholes/Raveling	Unpaved Dropoff	Unpaved Cross slope	Unpaved Erosion	Ditches	Culverts	Under-drains/edge-drains	Flumes	Curb & Gutter	Storm Sewer
		0%	0%	25%	0%	46%	0%	8%	0%	50%	--	--	0%	0%
	LAFAYETTE	14	12	12	12	13	13	13	13	4	--	--	1	2
		8%	0%	38%	4%	20%	0%	0%	0%	22%	--	0%	3%	--
	MONROE	25	24	24	24	25	25	25	19	8	--	1	4	--
		13%	0%	36%	0%	13%	0%	0%	0%	50%	--	100%	11%	--
	RICHLAND	16	14	14	14	16	16	16	13	7	--	2	4	--
		0%	0%	59%	0%	15%	0%	0%	0%	0%	0%	50%	0%	14%
	ROCK	24	22	22	22	20	20	20	23	7	2	3	3	3
		17%	0%	28%	0%	67%	63%	0%	0%	50%	--	83%	10%	100%
	SAUK	24	18	18	18	24	24	24	23	7	--	2	3	1
		14%	0%	73%	7%	84%	26%	0%	2%	25%	--	33%	2%	--
	VERNON	22	15	15	15	19	19	19	20	14	--	3	3	--

Counties 2010: Roadsides and Traffic

		Condition % backlogged # of observations													
		Roadsides							Traffic						
Region	County	Litter	Mowing	Mowing for Vision	Noxious Weeds	Woody Vegetation Control	Woody Vegetation Control for Vision	Fences	Centerline Markings	Edgeline Markings	Special Pavement Markings	Regulatory/Warning Signs	Detour/object marker/recreation guide Signs	Delineators	Protective Barriers
NC		20%	60%	0%	0%	0%	0%	--	0%	0%	33%	0%	0%	0%	0%
	ADAMS	10	10	4	10	10	10	--	10	10	2	4	3	1	1
		0%	29%	0%	29%	29%	0%	--	0%	0%	--	0%	0%	0%	--
	FLORENCE	7	7	5	7	7	7	--	7	7	--	3	1	1	--
		19%	31%	0%	13%	0%	13%	--	13%	0%	0%	0%	5%	--	--
	FOREST	16	16	6	16	16	16	--	16	15	1	6	9	--	--
		71%	43%	0%	86%	0%	0%	--	0%	0%	50%	0%	0%	0%	0%
	GREEN LAKE	7	7	1	7	7	7	--	7	7	2	5	3	1	1
		92%	42%	0%	0%	0%	0%	--	8%	8%	--	8%	0%	--	--
	IRON	12	12	5	12	12	12	--	12	12	--	4	3	--	--
		47%	20%	0%	47%	0%	0%	--	0%	0%	0%	0%	0%	--	--
	LANGLADE	15	15	6	15	15	15	--	15	15	1	4	7	--	--
		81%	44%	0%	69%	0%	0%	0%	0%	0%	0%	0%	0%	9%	--
	LINCOLN	16	16	4	16	16	16	5	16	16	3	5	4	6	--
		57%	46%	0%	64%	0%	0%	3%	0%	0%	0%	0%	0%	12%	0%
	MARATHON	28	28	5	28	28	28	3	28	27	3	13	7	10	2

		Condition % backlogged # of observations													
		Roadsides							Traffic						
Region	County	Litter	Mowing	Mowing for Vision	Noxious Weeds	Woody Vegetation Control	Woody Vegetation Control for Vision	Fences	Centerline Markings	Edgeline Markings	Special Pavement Markings	Regulatory/Warning Signs	Detour/object marker/recreation guide Signs	Delineators	Protective Barriers
		44%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12%	2%
	MARQUETTE	9	9	3	9	9	9	2	9	9	2	3	5	4	1
		50%	25%	--	0%	0%	0%	--	0%	100%	100%	0%	18%	--	0%
	MENOMINEE	4	4	--	4	4	4	--	4	4	1	2	4	--	1
		47%	12%	0%	6%	18%	12%	11%	0%	0%	0%	0%	0%	--	--
	ONEIDA	17	17	12	17	17	17	1	17	17	4	5	7	--	--
		69%	31%	0%	19%	0%	0%	0%	19%	13%	16%	0%	0%	0%	0%
	PORTAGE	16	16	2	16	16	16	5	16	16	6	7	8	7	1
		69%	38%	0%	13%	13%	0%	--	0%	0%	--	0%	0%	--	--
	PRICE	16	16	5	16	16	16	--	16	16	--	4	4	--	--
		37%	21%	0%	11%	0%	0%	--	11%	21%	14%	10%	0%	0%	0%
	SHAWANO	19	19	3	19	19	19	--	19	19	2	6	9	6	3
		100%	33%	0%	0%	0%	0%	--	0%	0%	--	0%	0%	80%	0%
	VILAS	15	15	7	15	15	15	--	15	15	--	6	4	1	1
		62%	33%	0%	33%	0%	0%	--	10%	10%	0%	0%	4%	0%	0%
	WAUPACA	21	21	7	21	21	21	--	21	21	5	8	7	6	2
		21%	36%	0%	7%	0%	0%	0%	0%	0%	--	0%	0%	0%	--
	WAUSHARA	14	14	5	14	14	14	3	14	14	--	7	4	3	--

		Condition % backlogged # of observations													
		Roadsides							Traffic						
Region	County	Litter	Mowing	Mowing for Vision	Noxious Weeds	Woody Vegetation Control	Woody Vegetation Control for Vision	Fences	Centerline Markings	Edgeline Markings	Special Pavement Markings	Regulatory/Warning Signs	Detour/object marker/recreation guide Signs	Delineators	Protective Barriers
		39%	67%	0%	22%	6%	6%	--	0%	6%	0%	8%	0%	--	0%
	WOOD	18	18	3	18	18	18	--	18	18	3	5	4	--	1
		31%	56%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
NE	BROWN	16	16	10	16	16	16	5	16	16	1	7	9	7	1
		78%	33%	0%	44%	0%	0%	--	0%	0%	0%	0%	0%	--	--
	CALUMET	9	9	2	9	9	9	--	9	9	1	3	5	--	--
		64%	82%	0%	64%	9%	0%	--	0%	0%	0%	0%	0%	--	0%
	DOOR	11	11	5	11	11	11	--	11	11	2	6	4	--	1
		80%	50%	25%	65%	0%	5%	0%	20%	20%	17%	0%	0%	11%	0%
	FOND DU LAC	20	20	4	20	20	20	4	20	20	3	8	5	6	5
		67%	33%	0%	33%	0%	0%	--	0%	0%	--	0%	0%	0%	0%
	KEWAUNEE	6	6	2	6	6	6	--	6	6	--	4	1	1	1
		40%	40%	0%	20%	0%	0%	0%	0%	0%	0%	7%	0%	29%	0%
	MANITOWOC	15	15	15	15	15	15	5	15	15	3	9	12	6	1
		44%	25%	0%	25%	0%	0%	0%	20%	20%	0%	0%	0%	15%	0%
	MARINETTE	16	16	8	16	16	16	3	15	15	1	7	5	4	2
		71%	59%	0%	65%	0%	0%	0%	0%	0%	--	0%	0%	0%	--
	OCONTO	17	17	1	17	17	17	2	17	17	--	6	9	3	--

		Condition % backlogged # of observations													
		Roadsides							Traffic						
Region	County	Litter	Mowing	Mowing for Vision	Noxious Weeds	Woody Vegetation Control	Woody Vegetation Control for Vision	Fences	Centerline Markings	Edgeline Markings	Special Pavement Markings	Regulatory/Warning Signs	Detour/object marker/recreation guide Signs	Delineators	Protective Barriers
		21%	63%	0%	37%	0%	0%	--	5%	5%	4%	0%	0%	--	--
	OUTAGAMIE	19	19	14	19	19	19	--	19	19	5	13	7	--	--
		71%	53%	0%	71%	0%	0%	0%	6%	6%	0%	0%	7%	20%	0%
	SHEBOYGAN	17	17	5	17	17	17	3	17	17	3	12	5	5	2
		88%	44%	0%	75%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	WINNEBAGO	16	16	4	16	16	16	3	16	16	2	10	6	3	1
		67%	25%	50%	8%	42%	8%	--	33%	25%	0%	14%	0%	--	0%
NW	ASHLAND	12	12	2	12	12	12	--	12	12	1	6	4	--	1
		67%	7%	0%	20%	7%	0%	0%	0%	0%	25%	0%	0%	56%	0%
	BARRON	15	15	6	15	15	15	3	15	15	4	6	8	6	3
		47%	35%	0%	6%	29%	6%	--	0%	0%	0%	0%	0%	0%	0%
	BAYFIELD	17	17	3	17	17	17	--	17	17	1	9	7	2	1
		56%	31%	0%	81%	0%	0%	--	25%	19%	--	8%	0%	17%	0%
	BUFFALO	16	16	3	16	16	16	--	16	16	--	8	2	4	2
		25%	42%	0%	0%	0%	0%	--	0%	8%	--	0%	0%	0%	--
	BURNETT	12	12	2	12	12	12	--	12	12	--	4	5	1	--
		55%	45%	0%	9%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%
	CHIPPEWA	22	22	2	22	22	22	5	22	22	1	7	9	8	3

		Condition % backlogged # of observations													
		Roadsides							Traffic						
Region	County	Litter	Mowing	Mowing for Vision	Noxious Weeds	Woody Vegetation Control	Woody Vegetation Control for Vision	Fences	Centerline Markings	Edgeline Markings	Special Pavement Markings	Regulatory/Warning Signs	Detour/object marker/recreation guide Signs	Delineators	Protective Barriers
		41%	6%	0%	12%	0%	0%	--	6%	0%	--	0%	0%	0%	--
	CLARK	17	17	1	17	17	17	--	17	17	--	6	4	4	--
		69%	31%	33%	0%	0%	6%	--	13%	0%	0%	0%	0%	0%	--
	DOUGLAS	16	16	3	16	16	16	--	15	15	1	7	5	3	--
		81%	38%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	11%	0%
	DUNN	21	21	2	21	21	21	1	21	21	1	9	4	6	6
		94%	25%	0%	19%	0%	0%	0%	0%	0%	0%	0%	0%	24%	0%
	EAU CLAIRE	16	16	2	16	16	16	4	16	16	2	7	6	4	1
		45%	25%	0%	40%	0%	0%	48%	30%	15%	0%	4%	0%	13%	0%
	JACKSON	20	20	3	20	20	20	1	20	20	1	6	6	4	1
		60%	80%	--	40%	0%	0%	--	0%	0%	--	0%	--	0%	0%
	PEPIN	5	5	--	5	5	5	--	5	5	--	2	--	2	2
		82%	65%	0%	0%	0%	0%	--	0%	0%	--	0%	0%	40%	11%
	PIERCE	17	17	6	17	17	17	--	17	17	--	7	4	4	3
		53%	59%	0%	6%	0%	0%	--	0%	0%	0%	0%	0%	0%	--
	POLK	17	17	10	17	17	17	--	17	17	3	9	7	2	--
		27%	27%	0%	0%	0%	9%	--	9%	27%	0%	0%	0%	--	--
	RUSK	11	11	4	11	11	11	--	11	11	1	6	5	--	--

		Condition % backlogged # of observations													
		Roadsides							Traffic						
Region	County	Litter	Mowing	Mowing for Vision	Noxious Weeds	Woody Vegetation Control	Woody Vegetation Control for Vision	Fences	Centerline Markings	Edgeline Markings	Special Pavement Markings	Regulatory/Warning Signs	Detour/object marker/recreation guide Signs	Delineators	Protective Barriers
		41%	24%	--	0%	6%	0%	--	24%	24%	--	0%	0%	--	0%
	SAWYER	17	17	--	17	17	17	--	17	17	--	1	1	--	1
		85%	40%	0%	30%	0%	0%	0%	0%	0%	11%	0%	0%	0%	0%
	ST. CROIX	20	20	3	20	20	20	5	20	20	2	10	10	8	2
		33%	42%	0%	0%	0%	0%	--	0%	0%	0%	0%	0%	0%	--
	TAYLOR	12	12	3	12	12	12	--	12	12	1	7	4	1	--
		74%	32%	0%	95%	11%	0%	--	11%	42%	0%	0%	20%	50%	0%
	TREMPEALEAU	19	19	6	19	19	19	--	19	19	1	10	3	2	2
		29%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	--
	WASHBURN	14	14	1	14	14	14	2	14	14	2	4	5	6	--
		73%	91%	0%	82%	18%	0%	--	9%	0%	20%	4%	0%	0%	0%
SE	KENOSHA	11	11	3	11	11	11	--	11	10	5	9	6	1	1
		94%	41%	0%	41%	0%	0%	14%	29%	47%	34%	0%	5%	--	0%
	MILWAUKEE	17	17	10	17	17	17	7	17	15	15	10	15	--	9
		63%	38%	0%	25%	13%	0%	0%	0%	13%	0%	0%	0%	15%	0%
	OZAUKEE	8	8	2	8	8	8	1	8	8	2	4	2	3	3
		73%	67%	0%	80%	0%	0%	0%	13%	7%	7%	0%	0%	0%	0%
	RACINE	15	15	6	15	15	15	1	15	15	4	10	7	1	1

		Condition % backlogged # of observations													
		Roadsides							Traffic						
Region	County	Litter	Mowing	Mowing for Vision	Noxious Weeds	Woody Vegetation Control	Woody Vegetation Control for Vision	Fences	Centerline Markings	Edgeline Markings	Special Pavement Markings	Regulatory/Warning Signs	Detour/object marker/recreation guide Signs	Delineators	Protective Barriers
		90%	48%	67%	52%	0%	0%	0%	0%	0%	0%	0%	0%	19%	4%
	WALWORTH	21	21	3	21	21	21	8	21	21	4	5	11	7	2
		39%	78%	0%	17%	6%	0%	0%	0%	6%	0%	2%	0%	0%	0%
	WASHINGTON	18	18	9	18	18	18	3	18	16	5	12	5	4	1
		67%	41%	0%	0%	0%	0%	0%	48%	52%	11%	0%	0%	9%	0%
	WAUKESHA	27	27	1	27	27	27	10	27	27	11	21	7	7	9
		66%	6%	11%	38%	16%	3%	0%	3%	22%	0%	0%	0%	14%	0%
SW	COLUMBIA	32	32	9	32	32	32	3	32	32	3	19	11	6	4
		40%	15%	0%	0%	0%	0%	--	0%	0%	--	0%	0%	41%	0%
	CRAWFORD	20	20	2	20	20	20	--	20	20	--	7	3	10	11
		93%	32%	0%	20%	0%	0%	0%	3%	3%	0%	0%	0%	10%	0%
	DANE	41	41	14	41	41	41	19	40	40	7	10	17	11	12
		79%	13%	20%	63%	4%	4%	21%	8%	13%	60%	0%	0%	58%	0%
	DODGE	24	24	5	24	24	24	1	24	23	2	8	9	4	2
		26%	22%	0%	4%	0%	0%	0%	7%	7%	0%	0%	0%	3%	0%
	GRANT	27	27	6	27	27	27	2	27	27	1	11	10	7	5
		69%	23%	0%	92%	0%	0%	0%	0%	8%	0%	0%	40%	0%	0%
	GREEN	13	13	2	13	13	13	1	13	13	1	6	3	2	2

		Condition % backlogged # of observations													
		Roadsides							**Traffic**						
Region	County	Litter	Mowing	Mowing for Vision	Noxious Weeds	Woody Vegetation Control	Woody Vegetation Control for Vision	Fences	Centerline Markings	Edgeline Markings	Special Pavement Markings	Regulatory/Warning Signs	Detour/object marker/recreation guide Signs	Delineators	Protective Barriers
		78%	39%	0%	61%	0%	0%	0%	0%	6%	0%	0%	0%	0%	--
	IOWA	18	18	5	18	18	18	2	18	18	2	9	7	1	--
		89%	67%	20%	56%	0%	0%	0%	6%	0%	0%	0%	0%	0%	0%
	JEFFERSON	18	18	5	18	18	18	2	18	17	5	12	9	2	2
		57%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	JUNEAU	21	21	6	21	21	21	4	21	20	1	4	3	5	1
		71%	21%	0%	57%	7%	0%	17%	0%	0%	--	0%	14%	32%	0%
	LA CROSSE	14	14	5	14	14	14	4	14	14	--	6	6	5	2
		93%	7%	0%	86%	0%	0%	0%	36%	46%	--	0%	0%	0%	0%
	LAFAYETTE	14	14	1	14	14	14	1	14	13	--	6	1	1	3
		88%	4%	0%	4%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	MONROE	25	25	24	25	25	25	3	24	24	3	5	7	2	4
		44%	56%	0%	31%	6%	0%	--	0%	0%	--	0%	0%	0%	0%
	RICHLAND	16	16	1	16	16	16	--	16	16	--	7	3	3	2
		71%	42%	0%	75%	0%	0%	0%	8%	22%	0%	0%	0%	3%	0%
	ROCK	24	24	6	24	24	24	5	24	23	6	12	7	4	3
		75%	17%	0%	50%	17%	0%	--	4%	8%	0%	5%	0%	--	--
	SAUK	24	24	2	24	24	24	--	24	24	2	8	5	--	--

		Condition % backlogged # of observations													
		Roadsides							**Traffic**						
Region	County	Litter	Mowing	Mowing for Vision	Noxious Weeds	Woody Vegetation Control	Woody Vegetation Control for Vision	Fences	Centerline Markings	Edgeline Markings	Special Pavement Markings	Regulatory/Warning Signs	Detour/object marker/recreation guide Signs	Delineators	Protective Barriers
		86%	32%	44%	45%	5%	5%	--	0%	0%	0%	0%	0%	24%	13%
	VERNON	22	22	9	22	22	22	--	22	22	1	12	7	5	5

Counties 2010: Sign Condition

		Regulatory/Warning/School Signs				Detour/object marker/recreation/guide Signs			
Region	**County**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**
NC	ADAMS	920	18%	163	3.9	638	34%	217	6.1
	FLORENCE	481	1%	4	3.5	351	35%	122	8.9
	FOREST	1249	3%	34	4.7	827	20%	169	5.9
	GREEN LAKE	867	18%	159	3.9	703	40%	278	7.1
	IRON	1065	1%	13	3.5	575	12%	71	8.1
	LANGLADE	1217	13%	158	4.8	718	18%	126	6.9
	LINCOLN	1415	16%	220	4.1	1028	31%	315	7.0
	MARATHON	4053	16%	649	4.6	2737	38%	1034	5.8
	MARQUETTE	947	11%	103	3.8	901	58%	524	7.6
	MENOMINEE	678	13%	91	6.0	215	15%	32	5.4
	ONEIDA	1961	5%	95	4.0	1040	12%	120	4.8
	PORTAGE	2224	11%	236	4.7	1790	46%	832	7.0
	PRICE	1021	1%	12	4.5	815	27%	221	5.4
	SHAWANO	1964	55%	1084	5.3	1378	58%	799	5.3

		Regulatory/Warning/School Signs				Detour/object marker/recreation/guide Signs			
Region	**County**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**
	VILAS	1539	14%	208	7.1	954	16%	152	5.9
	WAUPACA	3121	17%	515	3.7	1791	43%	768	6.7
	WAUSHARA	1901	20%	384	4.1	1067	41%	439	6.7
	WOOD	2228	17%	378	3.9	1274	41%	527	5.9
NE	BROWN	3592	33%	1189	6.8	2951	62%	1833	9.0
	CALUMET	1327	20%	265	10.0	772	51%	395	9.6
	DOOR	2002	37%	740	6.6	776	52%	406	7.5
	FOND DU LAC	2577	22%	566	6.6	2187	34%	753	8.0
	KEWAUNEE	675	14%	95	6.6	390	48%	189	12.2
	MANITOWOC	2201	34%	746	7.0	2048	78%	1591	8.7
	MARINETTE	1714	37%	626	7.4	1304	42%	544	8.2
	OCONTO	2029	23%	468	5.6	1418	40%	571	6.6
	OUTAGAMIE	3566	20%	727	8.1	2875	29%	821	11.4
	SHEBOYGAN	2918	42%	1216	7.0	3123	74%	2304	8.3
	WINNEBAGO	2590	22%	579	8.2	2219	35%	778	8.6

		Regulatory/Warning/School Signs				Detour/object marker/recreation/guide Signs			
Region	**County**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**
NW	ASHLAND	1219	16%	193	5.3	871	47%	411	6.2
	BARRON	1756	14%	244	5.5	1641	49%	804	7.7
	BAYFIELD	1445	22%	312	5.2	1164	56%	651	5.9
	BUFFALO	1620	5%	74	4.1	1063	26%	279	9.8
	BURNETT	1181	20%	242	5.6	739	45%	334	6.9
	CHIPPEWA	2424	6%	137	4.6	2043	29%	594	6.9
	CLARK	1682	7%	118	4.2	1159	28%	330	5.9
	DOUGLAS	1908	28%	538	4.9	1563	53%	822	6.6
	DUNN	2030	9%	178	4.6	1992	47%	929	6.3
	EAU CLAIRE	2584	5%	130	6.1	1949	17%	337	7.3
	JACKSON	1550	7%	104	5.8	1421	26%	364	10.0
	PEPIN	571	6%	33	4.8	431	24%	103	5.4
	PIERCE	1754	12%	207	4.4	1465	43%	626	7.2
	POLK	2167	12%	255	5.2	1423	48%	689	6.7
	RUSK	1021	13%	136	4.9	761	39%	296	5.1

		Regulatory/Warning/School Signs				Detour/object marker/recreation/guide Signs			
Region	**County**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**
	SAWYER	1425	10%	149	4.2	1079	46%	499	5.5
	ST. CROIX	2771	12%	325	4.7	2444	41%	1005	6.3
	TAYLOR	984	6%	55	5.0	802	24%	189	6.7
	TREMPEALEAU	1947	9%	180	5.2	1556	36%	563	8.9
	WASHBURN	1949	22%	436	5.2	1441	56%	812	7.1
SE	KENOSHA	4045	28%	1115	6.6	3095	52%	1604	7.9
	MILWAUKEE	11787	22%	2619	6.7	8502	53%	4517	8.4
	OZAUKEE	1992	14%	287	4.4	1235	56%	690	7.7
	RACINE	4785	29%	1376	6.1	3265	55%	1802	7.5
	WALWORTH	3876	16%	626	5.8	2420	42%	1012	7.7
	WASHINGTON	3779	20%	748	6.0	2656	44%	1181	7.5
	WAUKESHA	9187	19%	1739	6.2	5114	33%	1685	6.4
SW	COLUMBIA	3003	4%	115	5.1	1812	36%	653	9.6
	CRAWFORD	2200	13%	275	4.5	1515	57%	860	8.4
	DANE	6509	33%	2165	9.7	4071	42%	1690	10.3

		Regulatory/Warning/School Signs				Detour/object marker/recreation/guide Signs			
Region	**County**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**	**Total Signs**	**%Backlog**	**Deficient Signs**	**Average Years Beyond Service Life**
	DODGE	2862	6%	164	4.8	1849	46%	852	9.3
	GRANT	3045	8%	256	7.4	2081	45%	937	10.2
	GREEN	1332	5%	69	4.8	767	50%	383	9.9
	IOWA	2011	7%	143	5.5	1366	46%	630	10.0
	JEFFERSON	1920	5%	94	4.9	1254	49%	609	10.8
	JUNEAU	1758	9%	153	3.6	1706	46%	791	9.2
	LA CROSSE	2686	12%	313	3.6	2775	48%	1333	8.9
	LAFAYETTE	1307	8%	104	5.2	883	49%	431	12.4
	MONROE	2555	10%	266	3.3	2415	40%	958	8.7
	RICHLAND	1887	10%	185	4.3	1525	46%	695	7.9
	ROCK	2217	12%	271	6.3	1813	47%	844	10.3
	SAUK	3211	6%	198	3.4	1648	28%	465	7.4
	VERNON	2669	10%	263	4.7	2104	65%	1371	8.3

Counties 2010: Bridge Maintenance Needs

			% of bridges recommended for maintenance							
Region	**County**	**Number of state bridges**	**Deck - Seal Surface Cracks**	**Approach - Seal Approach to Paving Block**	**Misc - Cut Brush**	**Expansion Joints - Seal**	**Drainage - Repair Washouts / Erosion**	**Deck - Patching**	**Approach - Wedge Approach**	**Misc - Other Work**
NC	ADAMS	8	6			6	1		1	1
	FLORENCE	8	2					2	1	
	FOREST	11		1	1		1	1	1	
	GREEN LAKE	10	5		2	6			2	3
	IRON	18	2	1	4	1		4	1	
	LANGLADE	11	2	1	1					
	LINCOLN	52	16		5	2		3	3	4
	MARATHON	162	118	1	29	97	27	34	11	33
	MARQUETTE	37	21		7	33	12	6	9	10
	MENOMINEE	3	1	1	1					
	ONEIDA	14	7	4	1		1	4		1
	PORTAGE	91	71	3	15	52	12	34	1	40
	PRICE	21	5	1	1			1	1	2
	SHAWANO	53	54	5	10	1	10	1	2	22
	VILAS	13	9		1			2	1	1
	WAUPACA	67	34	1	2	46	15	5	1	31
	WAUSHARA	22	12			17	7	11	1	2
	WOOD	55	48	1	13	19	4	12	4	9
NE	BROWN	246	67	44	23	65	28	49	2	35
	CALUMET	13	2		1	5	7	2	1	2
	DOOR	19	10		1	4				4
	FOND DU LAC	80	45	30		16	12	3	3	6
	KEWAUNEE	17	1	1	1	2	2	3	1	
	MANITOWOC	90	24	20	5	27	7	13	2	6

			% of bridges recommended for maintenance							
Region	**County**	**Number of state bridges**	**Deck - Seal Surface Cracks**	**Approach - Seal Approach to Paving Block**	**Misc - Cut Brush**	**Expansion Joints - Seal**	**Drainage - Repair Washouts / Erosion**	**Deck - Patching**	**Approach - Wedge Approach**	**Misc - Other Work**
	MARINETTE	48	10	14	5	13		6	1	4
	OCONTO	46	17	3	1	21	7	3		
	OUTAGAMIE	80	32	19	13	53	26	10	6	9
	SHEBOYGAN	85	27	22	11	29	15	27	1	1
	WINNEBAGO	151	65	61	18	55	38	34	1	27
NW	ASHLAND	19		2			1	7	2	
	BARRON	65	5	5	6		3	14		1
	BAYFIELD	34		6	2		5	3	2	1
	BUFFALO	71	2	5	2	1	1			
	BURNETT	14	1	3			1	1	1	
	CHIPPEWA	135	8	5		20	13	5	6	2
	CLARK	43		22	1	1		2	3	
	DOUGLAS	60	1	4	4	1	3	7		
	DUNN	93		2	2		10	6	3	
	EAU CLAIRE	110	7	11	3	2	11	2	5	
	JACKSON	74	1	9	1	5	6	1	2	1
	PEPIN	16		2		1	2			
	PIERCE	57		6	6	2	11	1	3	1
	POLK	13	2				2	7	1	
	RUSK	28	2		8	1	2	4	1	
	SAWYER	19	1	7	2		1	5	2	
	ST. CROIX	97	5	8	3	3	13	2	3	1
	TAYLOR	20	3					3		2
	TREMPEALEAU	73	2	18	1		7	2	1	
	WASHBURN	20	1	6	2		1	2		

			% of bridges recommended for maintenance							
Region	**County**	**Number of state bridges**	**Deck - Seal Surface Cracks**	**Approach - Seal Approach to Paving Block**	**Misc - Cut Brush**	**Expansion Joints - Seal**	**Drainage - Repair Washouts / Erosion**	**Deck - Patching**	**Approach - Wedge Approach**	**Misc - Other Work**
SE	KENOSHA	56	13	14	2	19	10	3	6	18
	MILWAUKEE	528	89	90	170	154	53	82	46	269
	OZAUKEE	50	9	14	18	4	12	15	15	41
	RACINE	62	6	19	8	8	7	1	12	24
	WALWORTH	118	19	20	19	21	24	8	19	93
	WASHINGTON	74	3	18	4	7	5	1	8	27
	WAUKESHA	175	53	51	47	20	90	45	70	109
SW	COLUMBIA	97	21	27	52	2	17	10	7	21
	CRAWFORD	67	49	16	12	2	15	5	33	8
	DANE	281	19	116	162	18	70	18	24	101
	DODGE	64	11	13	19	3	9	1	5	9
	GRANT	70	24	10	9	1	10	4	14	6
	GREEN	28	7	4	6	1	2	4		5
	IOWA	57	10	9	19		8	6	5	9
	JEFFERSON	99	4	21	16	4	5	8		19
	JUNEAU	80	28	13		14	5	10	1	1
	LA CROSSE	109	42	37	31	5	16	18	13	12
	LAFAYETTE	40	4	7	14		13	5	5	1
	MONROE	154	57	37	17	6	12	20	31	14
	RICHLAND	78	40	18	19	3	5	13	19	5
	ROCK	121	15	38	39	6	14	6	9	23
	SAUK	89	13	28	10	1	7	3	1	13
	VERNON	73	10	6	18	3	21	3	29	2

Counties 2010: Bridge Special Inspection Backlog

		Special Inspection Type % bridges backlogged for inspection type # of bridges backlogged for inspection						
Region	County	Initial	Routine	Load Posted	In-depth	Fracture Critical	Underwater Diving	Underwater Probe/Visual
NC	ADAMS	0%	0%	--	--	--	0%	0%
		0	0	--	--	--	0	0
	FLORENCE	100%	0%	--	--	0%	0%	0%
		1	0	--	--	0	0	0
	FOREST	0%	0%	--	--	--	--	33%
		0	0	--	--	--	--	1
	GREEN LAKE	--	0%	--	--	--	--	0%
		--	0	--	--	--	--	0
	IRON	--	0%	--	--	--	0%	0%
		--	0	--	--	--	0	0
	LANGLADE	0%	0%	--	--	0%	--	50%
		0	0	--	--	0	--	2
	LINCOLN	0%	0%	--	0%	0%	0%	50%
		0	0	--	0	0	0	3
	MARATHON	0%	0%	--	7%	100%	0%	4%
		0	0	--	2	2	0	4
	MARQUETTE	0%	0%	--	--	--	0%	4%
		0	0	--	--	--	0	1
	MENOMINEE	0%	0%	--	--	--	--	100%
		0	0	--	--	--	--	1
	ONEIDA	0%	0%	--	--	--	0%	25%
		0	0	--	--	--	0	1
	PORTAGE	0%	0%	--	0%	--	0%	6%
		0	0	--	0	--	0	3
	PRICE	0%	0%	--	--	--	50%	0%
		0	0	--	--	--	2	0
	SHAWANO	0%	0%	--	--	0%	0%	25%
		0	0	--	--	0	0	2
	VILAS	0%	0%	--	--	--	0%	25%
		0	0	--	--	--	0	1
	WAUPACA	9%	0%	--	0%	--	0%	6%
		1	0	--	0	--	0	3
	WAUSHARA	0%	0%	--	--	--	--	0%
		0	0	--	--	--	--	0
	WOOD	0%	0%	--	0%	0%	0%	2%
		0	0	--	0	0	0	1
NE	BROWN	0%	0%	--	0%	13%	13%	2%
		0	1	--	0	1	2	1
	CALUMET	0%	0%	--	--	--	--	0%
		0	0	--	--	--	--	0

		Special Inspection Type % bridges backlogged for inspection type # of bridges backlogged for inspection						
Region	County	Initial	Routine	Load Posted	In-depth	Fracture Critical	Underwater Diving	Underwater Probe/Visual
		0%	21%	100%	--	86%	0%	0%
	DOOR	0	4	4	--	6	0	0
		0%	0%	--	--	--	--	55%
	FOND DU LAC	0	0	--	--	--	--	17
		0%	0%	--	--	--	0%	6%
	KEWAUNEE	0	0	--	--	--	0	1
		0%	2%	--	--	100%	--	10%
	MANITOWOC	0	2	--	--	1	--	3
		0%	0%	--	--	0%	0%	6%
	MARINETTE	0	0	--	--	0	0	1
		0%	0%	--	--	0%	--	7%
	OCONTO	0	0	--	--	0	--	2
		0%	0%	--	0%	--	0%	4%
	OUTAGAMIE	0	0	--	0	--	0	1
		0%	0%	--	--	--	--	55%
	SHEBOYGAN	0	0	--	--	--	--	16
		0%	3%	--	33%	67%	0%	23%
	WINNEBAGO	0	4	--	1	8	0	6
		0%	0%	--	--	--	0%	25%
	ASHLAND	0	0	--	--	--	0	2
		0%	0%	--	--	--	0%	5%
	BARRON	0	0	--	--	--	0	1
		0%	0%	--	--	--	0%	4%
	BAYFIELD	0	0	--	--	--	0	1
		0%	0%	--	--	100%	36%	8%
	BUFFALO	0	0	--	--	1	5	3
		0%	0%	--	--	--	0%	50%
	BURNETT	0	0	--	--	--	0	3
		0%	10%	--	0%	100%	0%	18%
	CHIPPEWA	0	14	--	0	1	0	10
NW		--	0%	--	--	--	--	35%
	CLARK	--	0	--	--	--	--	8
		0%	0%	--	--	0%	44%	4%
	DOUGLAS	0	0	--	--	0	8	1
		0%	1%	--	100%	50%	0%	15%
	DUNN	0	1	--	2	1	0	9
		0%	0%	--	75%	--	0%	55%
	EAU CLAIRE	0	0	--	3	--	0	17
		0%	0%	--	--	--	50%	42%
	JACKSON	0	0	--	--	--	2	11
		0%	0%	--	--	--	0%	60%
	PEPIN	0	0	--	--	--	0	9
	PIERCE	--	0%	--	100%	67%	33%	5%

		Special Inspection Type % bridges backlogged for inspection type # of bridges backlogged for inspection						
Region	County	Initial	Routine	Load Posted	In-depth	Fracture Critical	Underwater Diving	Underwater Probe/Visual
		--	0	--	1	2	1	2
		0%	0%	--	0%	0%	0%	0%
	POLK	0	0	--	0	0	0	0
		--	0%	--	100%	--	0%	16%
	RUSK	--	0	--	1	--	0	3
		0%	0%	--	--	--	0%	0%
	SAWYER	0	0	--	--	--	0	0
		0%	1%	100%	0%	--	25%	32%
	ST. CROIX	0	1	1	0	--	1	19
		0%	0%	--	100%	0%	--	0%
	TAYLOR	0	0	--	1	0	--	0
		0%	0%	100%	100%	100%	0%	29%
	TREMPEALEAU	--	--	1	1	1	--	6
		0%	0%	--	--	--	--	0%
	WASHBURN	0	0	--	--	--	--	0
		0%	0%	--	--	0%	--	0%
	KENOSHA	0	0	--	--	0	--	0
		1%	2%	100%	16%	20%	0%	29%
	MILWAUKEE	1	12	2	14	2	0	17
		0%	2%	100%	--	--	100%	57%
	OZAUKEE	0	1	1	--	--	1	8
SE		0%	0%	--	--	--	--	17%
	RACINE	0	0	--	--	--	--	4
		8%	17%	100%	50%	--	--	25%
	WALWORTH	1	20	6	1	--	--	8
		0%	0%	--	0%	--	0%	4%
	WASHINGTON	0	0	--	0	--	0	1
		0%	0%	--	0%	--	--	9%
	WAUKESHA	0	0	--	0	--	--	5
		0%	0%	100%	0%	0%	0%	14%
	COLUMBIA	0	0	1	0	0	0	3
		17%	1%	67%	0%	0%	0%	18%
	CRAWFORD	1	1	2	0	0	0	3
		0%	1%	--	100%	0%	0%	32%
	DANE	0	2	--	1	0	0	8
		0%	0%	--	--	--	0%	20%
SW	DODGE	0	0	--	--	--	0	2
		0%	0%	--	--	0%	0%	0%
	GRANT	0	0	--	--	0	0	0
		0%	0%	--	--	--	0%	0%
	GREEN	0	0	--	--	--	0	0
		25%	0%	--	100%	33%	0%	46%
	IOWA	1	0	--	1	1	0	6

		Special Inspection Type % bridges backlogged for inspection type # of bridges backlogged for inspection						
Region	County	Initial	Routine	Load Posted	In-depth	Fracture Critical	Underwater Diving	Underwater Probe/Visual
		0%	0%	--	--	--	0%	9%
	JEFFERSON	0	0	--	--	--	0	2
		0%	21%	0%	--	0%	0%	74%
	JUNEAU	0	17	0	--	0	0	37
		0%	0%	--	33%	0%	0%	0%
	LA CROSSE	0	0	--	2	0	0	0
		0%	0%	--	--	--	0%	7%
	LAFAYETTE	0	0	--	--	--	0	1
		0%	0%	50%	100%	0%	--	0%
	MONROE	0	0	1	1	0	--	0
		0%	0%	0%	--	0%	0%	0%
	RICHLAND	0	0	0	--	0	0	0
		0%	0%	--	50%	50%	0%	43%
	ROCK	0	0	--	2	1	--	13
		0%	0%	--	100%	0%	0%	34%
	SAUK	0	0	--	1	0	0	12
		0%	0%	--	0%	0%	--	8%
	VERNON	0	0	--	0	0	--	2