# 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] FY 06 | FY 07 | FY 08 | FY 09 | FY 10 | 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 2006 | 2007 | 2008 | 2009 | 2010 | How well maintained is the system? 2010 Feature grades A | B | C | D | F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Shoulders | 8.20<br>8.87<br>0.26<br>0.28 | 9.80<br>10.31<br>0.31<br>0.32 | 8.20<br>8.30<br>0.26<br>0.26 | 8.99<br>9.14<br>0.28<br>0.29 | 13.28<br>13.28<br>0.41<br>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<br>5.52<br>0.16<br>0.17 | 7.20<br>7.57<br>0.23<br>0.24 | 8.00<br>8.10<br>0.25<br>0.25 | 9.84<br>10.00<br>0.31<br>0.31 | 9.13<br>9.13<br>0.28<br>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<br>23.69<br>0.69<br>0.75 | 24.00<br>25.24<br>0.76<br>0.80 | 19.40<br>19.65<br>0.61<br>0.62 | 20.29<br>20.62<br>0.63<br>0.64 | 16.48<br>16.48<br>0.51<br>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<br>17.74<br>0.52<br>0.56 | 17.30<br>18.19<br>0.55<br>0.57 | 17.30<br>17.52<br>0.54<br>0.55 | 17.90<br>18.19<br>0.56<br>0.57 | 17.61<br>17.61<br>0.55<br>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**<br>% of bridges backlogged for inspection type<br># 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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The Wisconsin Department of Transportation appreciates the significant contributions to the Compass program that were made by the following people:

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Hal Mayer, Rock County
Jeff McLaughlin, Waukesha County

Brenda McNallan, WisDOT NW Region
Carl Meverden, Marinette County
Randy Miller, Washington County
Michael Mischnick, Calumet County
George Molnar, Price County
Phil Montwill, Rusk County
Todd Myers, Crawford County
Gordy Nesseth, Barron County
Pat Nolan, Racine County
Emil "Moe" Norby, Polk County
Clair "Jeep" Norris, WisDOT SW Region
Charles Oleinik, WisDOT NC Region
Donnie Olsen, Jackson County
Al Olson, Oconto County
Shaun Olson, Dane County
Bill Patterson, Waushara County
Jon Pauley, Monroe County
Tim Pawelski, WisDOT NW Region
Lance Penney, Waupaca County
Dale Petersen, Portage County
Carl "Buzz" Peterson, Lafayette County
Gregg Peterson, Manitowoc County
Neil Pierce, Rock County
Patricia Pollock, WisDOT NW Region
Rick Potter, Juneau County
Dennis Premo, Adams County
Larry Price, Walworth County
Dan Raczkowski, Marathon County
Perry Raivala, WisDOT NW Region
Gale Reinecke, Dunn County
Randall Richardson, Richland County
Michael Roberts, WisDOT SW Region
Dave Rogers, WisDOT NC Region
Randy Roloff, Outagamie County
Dennis Schmunck, WisDOT SE Region
Joel Seaman, WisDOT
Stacy Shampo, Forest County
Charles Smith, WisDOT NW Region
Ken Stock, Dodge County
Pete Strachan, WisDOT SW Region
Randy Sudmeier, Iowa County
William Tackes, Ozaukee County
Michael Thompson, Buffalo County
Alan Thoner, Pierce County
Jarrod Turk, WisDOT SW Region
Paul Vetter, Dane County
Gail Vukodinovich, WisDOT
Don Walker, Clark County
Richard Walthers, Eau Claire County
Ken Washatko, Langlade County
Jim Weiglein, WisDOT
David Woodhouse, Walworth County
Jack Yates, Marquette County
John Zettler, Fond du Lac County
John Ziech, Sauk County

## Additional Compass Resources

Mike Adams, WisDOT Central Office (winter)
Dr. Teresa Adams, University of Wisconsin – Madison (data analysis, report)
Dave Babler, WisDOT Central Office (bridge)
Scott Erdman, WisDOT Central Office (segment data)
Julie Crego & Chuck Failing, WisDOT Central Office (mapping)
Emil Juni, University of Wisconsin - Madison (data analysis, report development)
Mary Kirkpatrick, WisDOT Central Office (desktop publishing)
Mike Malaney, WisDOT Central Office (pavement)
Tim Nachreiner, WisDOT Central Office (database, Rating Sheets)
Matt Rauch, WisDOT Central Office (signs)
Mike Sproul, WisDOT Central Office (winter)

## *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/recreation/guide signs (emerg. repair) | | ✓ | | | |
| | Detour/object marker/recreation/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/Raveling (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

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

**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

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<br>☐ Field Bindweed<br>☐ Leafy Spurge |
| **Mowing** (R-2) | Mowing meets standard<br>If NO, grass is mowed: ☐ too wide ☐ too short ☐ too tall ☐ in a no mow zone<br>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<br>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<br>Number missing OR not functioning as intended | | |
| **Regulatory/ Warning Signs** (T-3) | ☐ None | Total number of regulatory/warning signs<br>Number missing OR damaged | | |
| **Other Signs** (T-4) | ☐ None | Total number of other signs<br>Number missing OR damaged | | |
| **Delineators** (T-5) | ☐ None | Total number of delineators<br>Number missing OR damaged | | |
| **Protective Barriers** (T-6) | ☐ None | Total linear ft. of beam guard, concrete barrier, and cable guard<br>Linear ft. of protective barriers not functioning as intended and type of deficient protective barrier(s) | ☐ Beam Guard<br>☐ Damaged Terminal<br>☐ Concrete Barrier<br>☐ 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% backlogged<br># 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<br>% backlogged<br># 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**<br>% backlogged<br># 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**<br>% bridges backlogged for inspection type<br># 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**<br>% bridges backlogged for inspection type<br># 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**<br>% bridges backlogged for inspection type<br># 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**<br>% bridges backlogged for inspection type<br># 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 |