



Highway Maintenance Manual
Chapter 07 Roadside Management
Section 05 Herbaceous Vegetation
Subject 35 Mowing

Bureau of Highway Maintenance
May 2022

1.0 Authority

[Trans 280, Roadside Vegetation Management](#), establishes uniform procedures to maintain, enhance and protect roadside vegetation and ecology (maintenance of trees, shrubs, grasses and forbs).

[Section 66.1037\(1\), Wis. Stats.](#) states “The authority may improve such lands by suitable planting, to prevent the erosion of the soil, or to beautify the highway. “...it shall be unlawful for any person to injure any tree or shrub, or cut or trim any vegetation other than grass, without the consent of the highway authority and under its direction”.

[FDM 27-1-15](#) is the department policy chapter providing a listing of federal transportation rules pertinent to roadway vegetation management.

[NR 40 Invasive Species Identification, Classification and Control](#) is the Wisconsin Department of Natural Resources (DNR) Administrative Code.

2.0 Natural Roadsides Philosophy

The natural roadsides philosophy was adopted in the 1950’s reflecting the fiscal impracticality of mowing the entire highway right of way. Most mowing should be done for safety reasons only.

In 2009, routine maintenance work priorities were further redefined in response to budgetary constraints. Consistent with the natural roadsides philosophy, the mowing policy was curtailed to safety locations such as vision corners when needed and roadside shoulder cuts to once a season.

In the same year, 2009, Invasive Species Rule (NR 40) was passed. This rule lists and regulates a number of non-native invasive species and requires control of these invasive species. To accomplish this control, mowing completion dates were included as part of the philosophy. When proper mowing practices are followed and related precautions taken, compliance with NR 40 can be achieved.

The Bureau of Highway Maintenance (BHM) works with DNR on ways its mowing practices can comply with this regulation and remain within budget. Mowing is an effective, simple, and cost effective tool for controlling unwanted vegetation and WisDOT and DNR coordinate to find a balance.

3.0 Mowing Timing and Frequency

The start of mowing operations will vary depending on growing conditions for the year and location within the state. Only safety mowing may be completed between the identified mowing completion date and October 10th, unless approval for an extension comes from both region maintenance and BHM.

Invasive species must be mowed before they go to seed and during periods of low energy reserves, thereby reducing its ability to propagate. This can be accomplished by completing the one long-line mowing by the dates identified for each county in [Figure 1](#) to comply with NR 40.

Long-line mowing happens once a season. Safety mowing can be done as deemed necessary to maintain clear vision areas at intersections and along curves. When mowing for safety reasons happen after invasive species have gone to seed, the best management practices (BMPs) should be followed to comply with NR 40. The BMPs are identified in section 3.1.

Mowing for woody vegetation control should only be done every three years and be considered two (2) mower passes or a maximum of thirty (30) feet. When feasible, this should also be done in conjunction with the once a

season long-line mowing and not as a separate mowing event. Mowing for woody vegetation control must not occur between the mowing completion date and October 10th. This is not intended to be a fence line to fence line mowing. In some cases, when two mower passes or a maximum of thirty (30) feet goes to the fence line, this fence line to fence line mowing may occur. Anything outside of the thirty (30) foot maximum and within the right of way must not be mowed. In areas of Karner Blue Butterfly or Rusty Patched Bumble follow guidance in section 3.2 and 3.3.

3.1 Invasive Species Rule (NR 40)

NR 40 identifies, classifies, and controls invasive species. Regulation includes the movement of invasive plants or their seeds, either intentionally through planting or unintentionally through construction, mowing or other operations. To comply with NR 40, the need to control the movement of invasive plants and their seeds is essential. This means the one long-line mowing needs to be completed by the dates for each county identified in [Figure 1](#) and/or best management practices (BMPs) are being followed to minimize the spread.

Best Management Practices (BMPs)

For guidelines to minimize the inadvertent spread of invasive species, refer to the voluntary and preventative methods contained within the manual [“Invasive Species Best Management Practices for Transportation and Utility Corridors”](#). Generally, it recommends:

- Adhering to species specific mowing time guidelines.
- Not mowing heavily infested invasive species areas when seed is mature or will ripen after being cut.
- Cleaning off mower decks and other seed collection areas on equipment before mowing un-infested areas or moving equipment to other locations.

3.2 Karner Blue Butterfly (KBB)

In areas identified as having KBB, specific timing and frequency of mowing requirements must be met. These requirements and designated areas of KBB are outlined in the HMM 07-15-10. More information about the KBB high potential range in Wisconsin can be found on the DNR’s [KBB website](#).

3.3 Rusty Patched Bumble Bee (RPBB)

In areas identified as having RPBB, per the Fish and Wildlife Service (FWS) RPBB website, specific timing and frequency of mowing requirements must be met. Routine, long-line mowing in accordance with this policy is not impacted. These requirements are listed below. The current High Potential Zone (HPZ) areas can be found on the [FWS RPBB website](#).

Activities impacted and action required:

Mowing beyond the first fifteen (15) feet must follow these guidelines to comply with the Endangered Species Act.

- Mow outside the active season after October 10th and before March 15th.

Herbicide/pesticide application:

- Follow label directions.
- Avoid broadcast application; apply spot applications to target species.

4.0 Mowing Height and Width

Vegetation is mowed to a minimum height of six (6) inches. Due to the variability of the right of way topography, this setting prevents potential for “scalping” existing turf; consequently, weakening the vigor of individual plants, encouraging erosion, and impacting water quality.

Long-line mowing should to be accomplished in one pass and done in the direction of traffic. Width of cut is measured from the finished shoulder point away from pavements.

Outside Shoulder

Outside shoulder cut should be to the bottom of the ditch or out fifteen (15) feet from the finished base course shoulder point, whichever is less. Apply this standard to all highways and interchange ramps.

Inside Shoulder or Median

Inside shoulder cut (medians) should be five (5) feet or one pass, a maximum width of fifteen (15) feet. Interstate maintenance turnarounds should follow this same standard. Mow out the median if ten (10) feet or less of herbaceous vegetation is left standing.

Median Crossovers

On expressways and other highways with controlled access when not signed for authorized vehicles, the entire median width should be mowed for a length of 300 feet on each side of the crossover. When the crossover is for authorized vehicles, follow the direction for inside shoulder cut above.

Mow the entire median when the distance between crossovers is less than one-quarter mile and less than 60 feet wide.

5.0 Other Mowing Guidelines

- Mowing operations focus on maintaining safety elements inherent to highway design and should not be done for aesthetic reasons unless otherwise specified within interagency or municipal agreements or as a prescribed management requirement contained within recorded scenic easements.
- Prior to mowing, remove all litter and hazardous debris, see HMM 07-01-20.
- Do not mow fence line to fence line.
- Mowing along the access fence line is not routine maintenance. Mowing may be performed along access fencing for temporary access only.
- Mowing equipment should not be run on slopes greater than three to one (3:1) for operator safety and to prevent scalping and rutting of the turf areas. Fragile slopes on sandy soils should not be mowed if equipment causes scalping, rutting, or other damage.
- Mowing is not permitted in wet areas to prevent rutting and erosion.

5.1 Delineator Posts and Sign Posts

- Within normally mowed areas, mow around delineator posts and sign posts with standard mowing equipment.
- Do not trim or use herbicides for posts or signs in addition to mowing unless the vegetation negatively impacts safety.
- Do not mow out to highway signs beyond the normal limits unless the vegetation obscures the sign.
- Outside of normally mowed areas; do not mow, trim, or use herbicides to expose posts or signs unless the vegetation negatively impacts safety.

5.2 Guardrail

Generally only mow, trim or use herbicides in front or behind guardrails when they are within the width of the long-line mowing operations or the vegetation is impacting safety. For example, the vegetation is obscuring the view of the guardrail and/or hangs over the rail and blocks the view of reflectors.

- On four-lane divided highways, do not mow in front of the guardrail section crossing the median between the twin bridges.
- Mow in front of guardrails mounted parallel with and at the edge of the shoulder.
- Pre-and post-emergent herbicides may be used in lieu of mowing in front of guardrails. See HMM 07-05-15 for more about the use of herbicide use and guardrails.
- Mowers may be operated behind the guardrail for woody vegetation control when all of the following conditions exist:
 1. It is safer to drive the mower behind the guardrail than to run along the shoulder in front of the guardrail.
 2. The slope behind the guardrail is not so steep that it would endanger the operator.
 3. The soils are not so fragile that the slope would be subject to rutting or other damage.
 4. There is no obstruction such as a fence or waterway to prevent passing continuously behind the guardrail from one end to the other.

5.3 Newly Seeded Areas

On new construction projects, check with improvement project managers for the current status of the construction contract prior to mowing newly seeded or planted areas. Contractual plant establishment requirements, including mowing the area, may still be the responsibility of the contractor.

When there is no contractor responsibility, seeded areas may be mowed during the first two growing seasons to decrease the competition from weeds. Mowing height should be a minimum of six inches in all newly seeded areas.

6.0 Mowing by Others

There are instances when WisDOT will allow other governmental entities or private individuals to mow on state right of way. The Maintenance and Operations Sponsorship Policy, HMM 07-01-45, could be used in development of these agreements.

6.1 Municipal Agreements

To maintain a street or boulevard beyond current WisDOT policy, an agreement between WisDOT and the local municipality may be developed allowing additional mowing to happen at the expense of the municipality. WisDOT will only enter into an agreement with the local municipality where the municipality will be responsible for all costs associated with the work over and above the cost of the typical mowing cycle.

The Region should create a memorandum of understanding (MOU) to document the municipality's commitment to additional mowing within the state right of way at no cost to WisDOT.

6.2 Private Individuals

The following guidelines have been established for the mowing of highway right of way by private individuals:

1. Private individuals may mow the right of way on non-controlled access highways between the right of way line common to their property line and the edge of the gravel shoulder. This type of activity does not require a work on highway right of way permit.
2. Mowing on Interstate highways, controlled access highways, and medians is performed by county highway departments and municipalities only. Under the following circumstances mowing by individuals may be allowed:
 - Only medians of highways 45 mph and lower.

- Interstate and controlled access highways where safety considerations can be met.
 - A *Work on Highway Right of Way* permit, [form DT1812](#), shall be obtained from WisDOT. The permit would be effective only during the calendar year in which it is issued.
 - The permit must identify the type of equipment intended for use.
 - The permit must identify the anticipated number of times they intend to mow that season.
3. Those individuals who are found without a permit on Interstate highways or other controlled access highways shall be asked to leave the right of way. If necessary, WisDOT shall work with law enforcement authorities to remove the individual.

6.3 Mowing Guidelines

The following guidelines apply to mowing operations by others. Cutting or trimming of woody vegetation, fences, posts, etc. on Interstates or other freeways will not be allowed.

Mowing Timing and Frequency

Start of mowing operations will vary depending on growing conditions for the year and location within the state.

There is no restriction to how many times they can mow, but it is imperative they adhere to NR 40 as identified in 3.1 and the negotiated municipal agreement if one exists.

Mowing Height and Width

Vegetation may be mowed to a minimum height of four inches (4"), as long as no damage is done to the highway right of way.

Mowing width will vary depending on the location of the segment in question. Mowing, cutting, or trimming of woody vegetation is not allowed.

Mowing Equipment

WisDOT has the right to restrict the type of equipment. Certain equipment is not appropriate for right of way mowing.

Figure 1

