



**Highway Maintenance Manual**  
**Chapter 07 Roadside Management**  
**Section 05 Herbaceous Vegetation**  
**Subject 15 Use of Herbicides**

**Bureau of Highway Maintenance**  
**July 2015**

## **1.0 Authority**

[s. 84.07, Wis. Stats.](#) Provides for the maintenance and preservation of highways on the state trunk system.

[NR 80](#) Use of Pesticides on Land and Water Areas of the State of Wisconsin. This is a Department of Natural Resources administrative rule. This rule regulates the application of pesticides on land and water areas of the State.

[NR 107](#) Aquatic Plant Management. This is a Department of Natural Resources administrative rule. This rule regulates the application of pesticides on aquatic organisms.

[ATCP 29](#) Pesticide Use and Control. This is the Department of Agriculture, Trade and Consumer Protection administrative rule. It describes posting requirements for herbicide applications and outlines the use and control of pesticides.

[NR 706](#) Hazardous Substance Discharge Notification and Source Confirmation Requirements.

## **2.0 General**

Herbicides must be registered by the Environmental Protection Agency for the intended use. They must be used in accordance with the requirements and regulations of administrative rules ATCP 29, NR80, and NR 107.

Herbicides must be used properly and safely. They are the usual method of choice for controlling large populations of target plant species. Herbicides should be applied only on a spot treatment basis to dense patches of the target plant. Care should be taken to preclude damage to desirable plants and non-target vegetation. In all cases, **read and follow the label directions.**

Herbicides may be applied either by county forces or by a private contractor. In either case, the applicators should be properly trained. Private contractors must be certified and licensed in Category 6.0, Right of way and natural areas. Herbicides classified as "Restricted-use" herbicides may only be applied by certified pesticide applicators. If application is to be by private contractor, see HMM 07-05-20, Herbicide Application Contracts.

State and county employees working with pesticides, including herbicides, as part of their employment responsibilities are considered Commercial Applicators Not for Hire and, as such, are not required to be certified and licensed. However, the Occupational Safety and Health Administration, (OSHA) requires that employers ensure employees exposed to any hazardous substances, including any herbicide, are trained to handle those substances properly. Therefore, it is strongly recommended those involved with applying herbicides, either in a supervisory role or directly with the application, take the appropriate training offered by the University of Wisconsin Extension whether or not they choose to become certified.

OSHA also requires the employer have on record a Material Safety Data Sheet (MSDS) for each hazardous substance that enters the workplace. The MSDS provides important health, safety and environmental information.

It is important the most current label, labeling and MSDS are on file. Labeling refers to the actual label and to all additional information such as brochures and handouts provided by the manufacturer or dealer at the time of purchase. Herbicide labels and material safety data sheets may be accessed online through the manufacture of the herbicide.

Keep a daily record of all herbicide applications for at least **two years** from the date of application. Attachment 1 is an example log for use. ATCP 29 specifies a record of any herbicide application requires the applicator be certified be kept on file for 2 years after the date of application. For department purposes, this means that a daily record must be kept of any application made by an outside (private) contractor hired to apply any herbicide or any application of a restricted use herbicide made by the counties. Though not required, it is recommended a record of **all** herbicide applications, regardless of whether certification is required, be kept by the organization that made the application for at least two years. These records must be made available to the department upon request.

### **3.0 Types of Herbicides**

Herbicides may be non-selective or selective. Non-selective herbicides kill all or most of the vegetation on contact or prevent seeds from germinating. Selective herbicides kill some plants but not others. They may affect broadleaved plants (dicots) but not grassy-leaved plants (monocots) or vice-versa. Some herbicides are even more selective in that they only affect a narrow range of plants. In addition, some herbicides have soil residual, meaning they remain active in the soil for a period of time after they are applied. This may or may not be desirable, depending on the objective of the application.

Care must be taken to select the appropriate herbicide for the objective to be accomplished.

### **4.0 Using Herbicides to Control Vegetation on Highway Shoulders**

Non-selective herbicides may be applied to graveled shoulder areas where vegetation is not desired.

Non-selective herbicides may be used alone or in combination with other herbicides. Combinations are desirable when the spectrum of species controlled needs to be expanded or when an herbicide that prevents the emergence of new vegetation is mixed with an herbicide that kills existing vegetation.

### **5.0 Using Herbicides to Control Vegetation around Guardrails**

Non-selective herbicides should be used with great care in turf areas because some products can damage the soil structure and, in turn, the highway facility itself. Furthermore, if used improperly, these herbicides can damage desirable vegetation through runoff or leaching (Photo 1). For more information on herbicide use and guardrails, see HMM 07-05-35, Mowing.



**Photo 1: Herbicide runoff damage**

### **6.0 Waters of the State**

A permit from the DNR is required to apply an herbicide to a water of the state. Waters of the state include but are not limited to lakes, streams, ponds and ditches, whether public or private. Ponds that exist due to flooding are not considered waters of the state. If a drainage ditch has constant water flow, it is considered a water of the

state. Contact the [DNR Aquatic Plant Management Coordinator](#) for the appropriate county with aquatic plant management questions or to obtain herbicide application permits

No permit is needed if there is no standing water. Apply the “wet sock” test to determine if there is standing water. If your socks get wet when standing in the ditch without shoes, it is considered to be standing water.

According to [NR 107.11\(4\)\(e\)](#), drainage ditches on rights of way are exempt from the permit requirements if the Department of Natural Resources determines fish and wildlife resources are insignificant. .

### **7.0 No-Spray Areas**

Occasionally, adjacent landowners/residents request the department not use herbicides on the right of way adjacent to their property. These requests may be honored if a written agreement is obtained from the person(s) making the request stating they will maintain the portion of right of way in question to the minimum standards required by department guidelines. The agreement should contain a clause stating if the requester fails to abide by the agreement, the department will resume normal maintenance activities. See HMM 07-05-25, Pesticide-free Zones.

Since January, 1999 the department has participated in a multi-partner Habitat Conservation Plan (HCP) to protect the endangered Karner blue butterfly. See HMM 07-15-10, Karner Blue Butterfly Accommodations, for specific requirements of the HCP.

### **8.0 Purchase and Storage of Herbicides**

Herbicide purchases should be carefully planned for immediate and complete use; the amount purchased should reflect the amount to be applied within the current year.

Store herbicides and other pesticides in their original container and in a protected and secured area to prevent access by unauthorized people and animals. **Do not store near food.** Post signs clearly indicating herbicides are stored in the building. To prevent damage to the herbicide or the container, keep the temperature of the storage area between 40° F and 100° F. Keep the area well-ventilated. Be sure containers that have been opened are tightly sealed to avoid leakage.

### **9.0 Spills**

The department’s responsibilities when a spill of a hazardous substance occurs are described in administrative rule NR 706.05.

### **10.0 Container Disposal**

Empty metal or plastic containers should be triple rinsed, punctured and recycled or landfilled unless they can be reconditioned and reused by the herbicide manufacturer. Rinsate, leftover diluted pesticides from cleaning pesticide application equipment or containers, waste should be disposed of by applying it to target plants.

Dispose of empty paper containers in a sanitary landfill.

Burning or burying pesticide containers is illegal in Wisconsin, regardless of what the label says.

### **11.0 Disposal of Excess Products**

Left-over product is best avoided by purchasing only what will be used during the current season. Unopened containers left at the end of the season should be returned to the dealer from who purchased, if possible. Other remaining product should be stored as described above and used during the next season. Always use the oldest product first.

If a herbicide becomes outdated or cannot be used according to label directions, it is considered hazardous waste and disposal must follow regulations found in administrative code [NR 660](#), Hazardous Waste Management.

### **12.0 Posting Requirements**

Posting requirements are governed by administrative rule ATCP 29. According to [Section 29.52](#), if a pesticide label prescribes a specific re-entry interval (such as one hour, two days, etc.), the area must be posted at the time of treatment with warning placards. The re-entry interval is the time between when the pesticide was applied and when it is considered safe to re-enter the treated area. A statement such as “Do not enter until dry” does not qualify as a re-entry interval so does not require posting. The warning placards shall bear the words “DANGER – AREA TREATED WITH PESTICIDE – DO NOT ENTER” or symbols having the same meaning and effect. Placards shall be at least 8½ inches by 11 inches, white with red letters that are at least 2½ inches high and clearly legible.

Most of the herbicides commonly used on WisDOT rights of way do not contain re-entry statements so do not require posting. However, every label should be read carefully and complied with fully. If placards are required, they must be posted at regular intervals with one placard for every ¼ mile of treated area. For areas less than ½ mile in length, at least one placard must be posted.

Posting of lawn areas at roadside sites such as rest areas, waysides, etc., [Section 29.56\(1\)\(d\)](#) addresses posting of “landscape applications” but the definition of “landscape” in the rule specifically excludes utility or transportation right of way areas. Therefore, there is no legal requirement to post these areas when treated for dandelions or other weeds. However, from a public relations standpoint, it is recommended that the areas be posted anyway.

These warning signs should be 4 inches by 5 inches, professionally printed with red lettering on a white background. See ATCP 29 Appendix B for the sign format. ATCP 29.56 requires the signs in landscape areas show the date on which they can be removed. The date may be hand written on the sign. These should be posted about every 300 feet around the perimeter of the treated areas. In particular, signs should be posted at the most likely point(s) of entry to the treated area. They may be removed at sunset of the day following the day of application unless the herbicide label specifies a longer re-entry interval. If a longer re-entry interval is specified, the placards described in paragraph 1 above should be used and left in place for the duration for the re-entry period.

Where contractors are making the application, they should be able to furnish the placards.

### **13.0 Herbicide Application Contracts**

If it is deemed to be in the best interest of the department to apply herbicides to woody plants via private contractor, refer to Sections 3.0 and 4.0 of HMM 07-05-20, Herbicide Application Contracts.

### **14.0 Payments**

The cost of herbicide applications conducted for the purpose of herbaceous plant control should be charged to Activity Code 044, Control of Unwanted Plants. The cost of work performed or contracted by the county should be submitted on the county’s Routine Maintenance Agreement monthly invoice. Charge the cost of work contracted through Wisconsin Department of Transportation regional offices to the appropriate project ID number.

### **15.0 Damage Claims**

The department is not responsible for damages to crops or other claims from adjacent property owners when herbicides are applied to state trunk highway rights of way in accordance with the labeling and applicable laws and regulations. If claims are brought against the department, refer the complainant to the organization that applied the herbicide (i.e. the private contractor or the county highway department).

**16.0 Additional Information**

[Wisconsin Department of Agriculture, Trade and Consumer Protection \(DATCP\) Pesticides](#)

[Wisconsin Department of Natural Resources \(WDNR\) Aquatic Pesticides](#)

[UW extension Pesticide Applicator Training](#)

[UW extension Integrated Pest and Crop Management Resources](#)

Attachment 1

PESTICIDE APPLICATION RECORD

(Must be filled out on the day of the application)

- 1. Applied for WisDOT Region \_\_\_\_\_  
Contact Name \_\_\_\_\_ Contact Phone \_\_\_\_\_
  - 2. Application Date \_\_\_\_\_  
Starting Time \_\_\_\_\_ Ending Time \_\_\_\_\_
  - 3. Application Location: County \_\_\_\_\_ Highway \_\_\_\_\_  
From \_\_\_\_\_ To \_\_\_\_\_  
Side of Highway (North, Northeast, Median, etc.) \_\_\_\_\_
  - 4. Application Equipment Loading Location:  
Description \_\_\_\_\_  
Address \_\_\_\_\_
  - 5. Applied By (Business Name) \_\_\_\_\_  
Individual Applicator's Name \_\_\_\_\_  
Address \_\_\_\_\_  
Applicator's Certification Number \_\_\_\_\_
  - 6. Target Pest or Plant \_\_\_\_\_
  - 7. Pesticide (Herbicide) Brand or Product Name \_\_\_\_\_  
Manufacturer \_\_\_\_\_ EPA Registration Number \_\_\_\_\_  
EPA Classification: Restricted Use \_\_\_\_\_ General Use \_\_\_\_\_
  - 8. Amount of Pesticide (Herbicide) Applied:  
Gallons or Pounds of Concentrate \_\_\_\_\_  
Formulation (Liquid, wettable Powder, etc.) \_\_\_\_\_  
Additives \_\_\_\_\_  
Gallons of Spray Mixture \_\_\_\_\_ Total Area Treated \_\_\_\_\_  
Application Rate \_\_\_\_\_  
Spot Sprayed \_\_\_\_\_ Broadcast Sprayed \_\_\_\_\_
  - 9. Type of Area or Site Treated \_\_\_\_\_  
\_\_\_\_\_
  - 10. Weather Conditions: Temperature \_\_\_\_\_ Cloud Cover \_\_\_\_\_  
Wind Direction \_\_\_\_\_ Velocity \_\_\_\_\_ Humidity \_\_\_\_\_
- Comments and Remarks:

Signed \_\_\_\_\_

Applicator

Distribution: County and Transportation Region. Retain for 2 years.