



MnDOT
District 4
Integrated
Roadside
Vegetation
Management
Plan

*updated
April 2017*



Your Destination... Our Priority



**Integrated Roadside Vegetation Management Plan
MnDOT District 4**

April 2017

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Introduction

MnDOT District 4 developed this integrated roadside vegetation management (IRVM) plan as a proactive way to address roadside management and as a response to the following legislation:

Groundwater act of 1989 (Chapter 326, Article 5, Section 18B.063) under **STATE USES OF PESTICIDES AND NUTRIENTS** -- *The state shall use integrated pest management techniques in its management of public lands, including roadside rights-of-way, parks, and forests; and shall use planting regimes that minimize the need for pesticides and added nutrients.*

1994 Amendment to the Groundwater Act of 1989 (Chapter 558, Section 26) -- The legislature required the Commissioner of Natural Resources (DNR) to prepare a plan for the optimum use of sustainable agriculture and integrated pest management techniques on land owned by the state. A report entitled "Sustainable Agriculture and Integrated Pest Management Plan for State-Owned Lands" published in March 1996 provides the framework for the development of local plans such as the District 4 effort.

This plan supplements the roadside section of MnDOT's Maintenance Operations Manual and with Sec.137. Minnesota Statutes 2004, section 160.232 is amended to read: *To provide enhanced roadside habitat for nesting birds and other small wildlife----- (f) When feasible, road authorities are encouraged to utilize low maintenance, native vegetation that reduces the need to mow, provides wildlife habitat, and maintains public safety. (g) The Commissioner of Natural Resources shall cooperate with the Commissioner of Transportation to provide enhanced roadside habitat for nesting birds and other small wildlife.*

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General Elements of the IRVM Plan

Mission

Manage roadsides with environmental stewardship, using economical methods, for public safety and visual quality.

Principles

1. Promote a safe environment for the traveling public, service employees, and wildlife.
2. Protect, respect, and encourage the natural, native environment.
3. Be receptive and respectful of inputs from other entities.
4. Set a respectable example for all who use, benefit, maintain or adjoin the right-of-way.
5. Search for and/or develop methods that will reduce operating costs.

Goals

1. Reduce roadside hazards.
2. Control state and county listed noxious weeds.
3. Reduce mowing.
4. Improve the catalog and recordkeeping system.
5. Increase and preserve native vegetation.
6. Increase public awareness and enhance MnDOT image.

IRVM Program Components

An integrated roadside vegetation management program will be established to manage all roadsides in District 4. Components of the program will include all operations that are normally conducted to maintain roadside vegetation. These include:

1. Mowing
2. Brush control
3. Herbicide application
4. Biological control methods
5. Planting
6. Tree Trimming/cutting
7. Mulching
8. Erosion control

Each operation will be conducted as though it's an integral part of an overall program. By so doing personnel performing roadside maintenance activities will be aware that there is a program in place and that they are part of an overall program. In addition, customers (public, etc.) will also be informed that there is a program in place with goals.

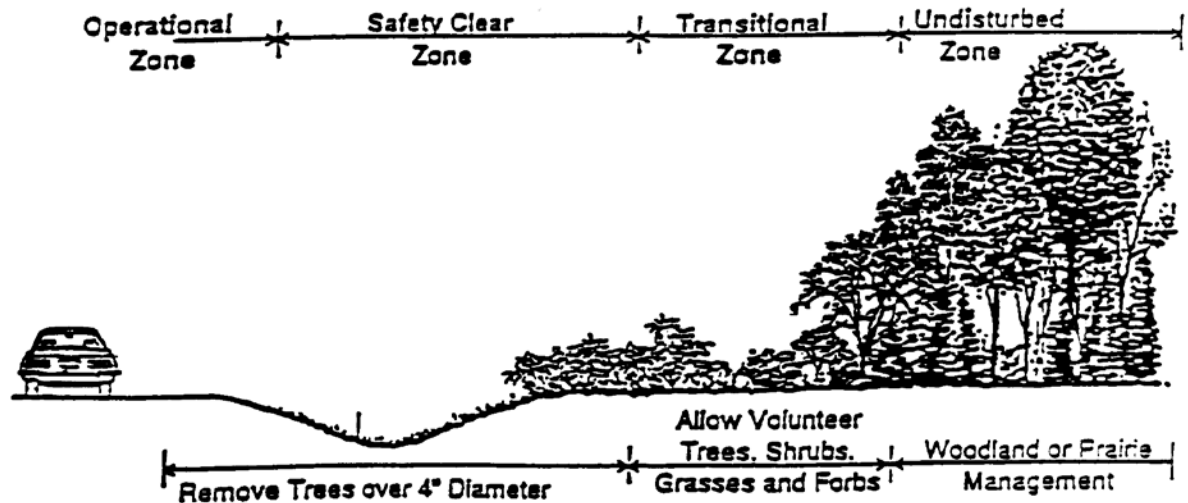
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IRVM Guidelines

Integrate vegetation management can be used on highly maintained areas such as golf courses to undisturbed prairies. Therefore, IRVM guidelines are warranted. The guidelines are:

Figure 1. Roadside Management Zones



1. Following a **mowing** effort that allows mature vegetation height where appropriate and also addresses safety and aesthetic issues. Mowing will also be used to control annual weeds and to knock down perennial weeds prior to spraying. Quality not quantity is our goal.
2. Using **brush control** where brush needs to be controlled and is higher than 6 feet in height. Brush control should be done in accordance with Figure 1. Allow naturalization of woody plants beyond the ditch line (except where the clear zone goes beyond the ditch line).
3. Following a **herbicide application** effort that controls noxious weeds. Unwanted brush less than 6 feet in height may also be sprayed in accordance with Figure 1.
4. Working with other agencies on attempting **biological control** of noxious weed and insect pests in selected areas.
5. Incorporating a **planting** effort for visual aesthetics, and in places where the turf is sparse and/or in weed infested areas.
6. **Trimming and/or cutting** hazard trees (defective trees with a target like people, cars and other property) in rest areas and other roadside areas.
7. Appropriate methods of **rodent/insect control** when infestations become a problem.
8. **Mulching/fertilizing** specifically in landscape plantings, higher visibility and maintenance areas such as rest areas etc.
9. Integrating the use of appropriate types of vegetation by seeding or planting in areas where **erosion control** is needed.

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Ongoing Program Requirements

To conduct a successful program, several ongoing requirements must be met. These are:

1. **Budgeting**
2. Conducting resource inventories
3. Having established lines of authority
4. Providing employee training
5. Encouraging employee input
6. Interacting with technical experts
7. Reviewing and determining equipment needs
8. Determining how State resources are to be used
9. Reviewing and evaluating the program

Program Development

Many, if not all of the requirements for running a successful IRVM program have been initiated and are already in place. However, continuing with consistency is very important. Therefore, yearly goals will be established for each of the requirements above.

Implementing a quality IRVM program requires technical expertise in many aspects of vegetation management, as well as teamwork with regulatory agencies and personnel. The District 4 network includes the following resource personnel:

- Subarea Personnel
- County SWCD Personnel
- USFWS Personnel
- DNR Personnel
- Department of Agriculture
- MnDOT Turf Unit
- MnDOT Forestry Unit

Yearly goals will be established. These goals will be based on a review of previous year's accomplishments. The yearly goals will form the basis for the upcoming season. The goals will be established by early spring.

An annual meeting is held early each spring to discuss the vegetation plan with District 4 Herbicide Applicators. Items discussed are how the weed program went the previous year, what the plan is for the upcoming summer season, MnDOT funding that is available and any new information to share with all parties.

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District 4 Action Plan

Mowing

- Begin mowing for safety cut when vegetation height approaches 24 inches.
- Set cutting height so that grass is left at 6 inches after mowing.
- Safety (or top) cut = one pass.
- Winter cut = vegetation cut below shoulder P.I., or back slopes with snow problem areas.
- Median cut = first cut, one pass wide on each side of median.
- Winter median cut = vegetation cut below shoulder P.I or areas with snow problems.
- Ramp cut = one pass on each side of each ramp.
- Urban mowing = mow for appearance within city limits. (See Attachment A for detailed locations; 18-inch maximum vegetation height.)
- Sight corners, passing zones, small brush and clear zone areas shall be mowed if causing or will cause a safety sight-distance problem.

Native grasses

- Maintain current native grasses.

Brush control

- When planned, brush encroachment control is permitted by mechanical or chemical means.
- Spray, mow or hand-cut brush less than 6 feet tall.
- Mechanically or manually cut when brush or trees are over 6 feet tall.
- See Attachment B for routes to be mowed and/or sprayed for brush control. Please also note “no spray” areas in Attachment D.

Noxious weed control

- Spray noxious weeds in early summer and/or late fall; follow up with mowers where spraying was not done and before weeds are mature, then try to follow up mowed out areas with herbicide application in fall as budget allows. Minimum grass cutting height is 12 inches.
- If you plan to spray any areas located in the *White Earth Indian Reservation* call Edward Snetsinger and tell him when and where you plan to spray. Leave message if unavailable: 218-935-2488 (office) or 218-849-2345 (cell).
- Please note “no spray” areas in Attachment D.

Biological control

- See Attachment C for areas where biological insects have been introduced.
NOTE: THERE SHOULD BE NO MOWING OR SPRAYING OF THESE AREAS.
- Areas are identified by placing a pink painted lathe where bugs have been introduced.

Hazard trees

- Remove as directed after identified by a State Forester.

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MnDOT District 4 County Agricultural Inspectors

| Name | County | Phone | Cell | Email |
|---|--------------------|--------------------------|--------------|--|
| Marsha Watland SWCD, 809 8th St. SE Detroit Lakes, MN 56501 | Becker | 218-846-7360 | | mjwatla@co.becker.mn.us |
| Harold Nelson 123 County Road 6 Clinton, MN 56225 | Big Stone | 320-325-5100 | | |
| Kevin Kassenborg Clay County SWCD 1615 30th Ave. S Moorhead, MN 56560 | Clay | 218-287-2255 | | kevin.kassenborg@mn.nacdnet.net |
| Tom Anderson 526 Willow Drive P.O. Box 398 Alexandria, MN 56308 | Douglas | 320-762-2999 | 320-808-1110 | toma@co.douglas.mn.us |
| Greg Lillemon Grant County Courthouse P.O. Box 1007 Elbow Lake, MN 56531 | Grant | 218-685-8225 | | greg.lillemon@co.grant.mn.us |
| Kevin Andring P.O. Box 379 Mahnomen, MN 56557 | Mahnomen | 218-930-0411 | | kevin.andring2@co.mahnomen.mn.us |
| Brad Mergens West Otter Tail SWCD 506 Western Ave. N Fergus Falls, MN 56537 | Otter Tail West | 218-770-1919 | | brad.mergens@mn.nacdnet.net |
| Darren Newville East Otter Tail SWCD 801 Jenny Ave SW #2 Perham, MN 56573 | Otter Tail East | 218-346-4260 | | darren.newville@mn.nacdnet.net |
| Barry Bouwman 24908 County Road 29 Glenwood, MN 56334 | Pope | 320-634-7793 | | barry.bouwman@co.pope.mn.us |
| Matt Solemsaas Stevens County SWCD 12 Highway 28 E Suite 2 Morris, MN 56267 | Stevens | 320-589-4886 Ext. 112 | | matt.solemsaas@stevensswcd.org |
| Tom Orr Swift County SWCD 1430 Utah Ave. Benson, MN 56215 | Swift | 320-842-7201 Ext. 113 | | thomas.orr@mn.nacdnet.net |
| John Fridgen 6609 700th St. Wheaton, MN 56296 | Traverse | 320-563-4544 | 500-251-4856 | traverseag03@yahoo.com |
| Wayne Krump 1977 150 th Ave. Kent, MN 56553 | Wilkin | 701-403-9431 | | krump@rrt.net |

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MnDOT District 4 Supervisors & Herbicide Applicators

| Name | Subarea/T.S. | Phone | Cell | Email |
|---|---------------------|--------------|--------------|--|
| <i>Subarea Supervisors</i> | | | | |
| Lonnie Hoffman | Alexandria | 320-335-6240 | 320-760-0506 | Lonnie.Hoffman@state.mn.us |
| Darrick Rust | Morris | 320-208-7021 | 218-849-8407 | Darrick.Rust@state.mn.us |
| Brent Holland | Fergus Falls | 218-332-5640 | 320-760-1411 | Brent.Holland@state.mn.us |
| Al Milbradt | Moorhead | 218-304-3030 | 218-849-1929 | Allen.Milbradt@state.mn.us |
| Shawn King | Detroit Lakes | 218-846-7979 | 218-850-1269 | Shawn.King@state.mn.us |
| Jarid Norgren | Wheaton | 320-567-8310 | 218-396-0550 | Jarid.Norgren@state.mn.us |
| <i>Herbicide Applicators</i> | | | | |
| Paul Bakken | Barnesville | 218-354-2408 | | Paul.Bakken@state.mn.us |
| Rosanne Hoffman | Benson | 320-843-3682 | | Rosanne.Hoffman@state.mn.us |
| Nick Persing | Wheaton | 320-563-8310 | | Nicholas.Persing@state.mn.us |
| Dennis Fagerstrom | Fergus Falls | 218-739-7230 | | Dennis.Fagerstrom@state.mn.us |
| Don White | Perham | 218-346-7135 | | Donald.White@state.mn.us |
| Keith Bergren | Hawley | 218-483-3202 | | Keith.Bergren@state.mn.us |
| Dan Rinehart | Wheaton | 320-563-8310 | | Dan.Rinehart@state.mn.us |
| Chad Tischer | Breckenridge | 218-643-4622 | | chad.tischer@state.mn.us |
| Justin Swiers | Detroit Lakes | 218-846-7954 | 218-849-5480 | Justin.Swiers@state.mn.us |
| <i>Maintenance Operations Superintendent</i> | | | | |
| Joe Stegmaier | Detroit Lakes | 218-846-7943 | 218-849-7465 | Joseph.Stegmaier@state.mn.us |

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Attachment A – Urban mowing plan by location

| Subarea | TH | MP | MP | City/Location | Description |
|---------------|------|-------|-------|-----------------------|---|
| Alexandria | MN29 | 75.1 | 79.2 | Alexandria expressway | Mow R/W to R/W |
| Alexandria | MN29 | 80.7 | 81.37 | Alexandria | Mow islands, sight corners, pedestrian walkways |
| Alexandria | MN28 | 76.8 | 76.9 | Glenwood | Mow out around landscape planting |
| Alexandria | MN28 | 77.3 | 77.4 | Glenwood | One pass around ramps at interchange quads |
| | | | | | |
| Moorhead | I94 | 0.0 | 3.4 | Moorhead | Mow R/W to R/W |
| Moorhead | US10 | 2.3 | 4.2 | Dilworth | Mow R/W from 34 th St. to 12 St. NE in Dilworth |
| Wheaton | US75 | 206.5 | 206.9 | Breckenridge | Mow two cuts per side |
| Moorhead | US75 | 245.4 | 247.4 | Moorhead | Mow two cuts per side from 40 th Ave. S to CSAH 12 |
| Moorhead | US75 | 248.3 | | Moorhead | Diverging Diamond |
| Moorhead | US75 | 251.4 | 252.4 | Moorhead | Mow (city of Moorhead usually mows this area) |
| Moorhead | US75 | 252.4 | 253.4 | Moorhead | Mow two cuts per side from 15 th Ave. N to CSAH 18 |
| Moorhead | MN34 | 0.0 | 1.2 | Barnesville | Mow two cuts per side |
| | | | | | |
| Detroit Lakes | US10 | 43 | 44.6 | Detroit Lakes | Mow out median and top two cuts from first crossover west of Wal-Mart to Summit Ave. |
| Detroit Lakes | US10 | 47.3 | 48.9 | Detroit Lakes | Mow out median and top two cuts from CSAH 54 to 250 feet east of East Shore/South Shore Drive (first crossover) |
| Detroit Lakes | US59 | 262.8 | 265.8 | Detroit Lakes | Mow top two cuts from Willow Street to Brolin Beach Road |
| Detroit Lakes | MN34 | 35.5 | 35.7 | Detroit Lakes | R/W to R/W from TH 59 to Elm St. (650 feet east of TH 59) |
| Detroit Lakes | MN34 | 36.5 | 37.0 | Detroit Lakes | Mow out between TH 34 and north service road and top two on south side from Barbara Ave. to CSAH 141 |

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Attachment B – Mechanical Brush Control

Brush control areas

| TH | MP | MP | Location | Remarks |
|---------------|--------|--------|----------|---------------|
| Alexandria | | | | |
| MN 27 | 58.29 | 76.78 | | Mow for Brush |
| MN 55 | 31.21 | 45.7 | | Mow for Brush |
| Detroit Lakes | | | | |
| MN 34 | 38 | 65 | | Mow for Brush |
| MN 87 | 5 | 34 | | Mow for Brush |
| MN 113 | 15 | 55 | | Mow for Brush |
| Fergus Falls | | | | |
| I 94 | 51 | 71 | | Mow for Brush |
| MN 210 | 26 | 45 | | Mow for Brush |
| Moorhead | | | | |
| MN 108 | 0 | 30 | | Mow for Brush |
| MN 34 | 0 | 18.8 | | Mow for Brush |
| Morris | | | | |
| MN 55 | 47 | 68 | | Mow for Brush |
| MN 104 | 15 | 38 | | Mow for Brush |
| Wheaton | | | | |
| MN 27 | 0 | 24 | | Mow for Brush |
| MN 9 | 119.82 | 146.59 | | Mow for Brush |

*Mowing for native grass establishment
(ROW or new construction)*

NOTE: District 4 does not have any current plans to mow for native grass establishment (March 2017).

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Attachment C – Biological Control

Leafy spurge beetle release areas (known)

| Intro Year | TH | MP | MP | Location | Remarks |
|-------------------|-----------|-----------|-----------|---------------------|--|
| | I94 | 50.9 | 51.4 | Median & west side | Trees & river area; spurge still present 2012 |
| 2012 | I94 | 60.7 | | Median | 2,500 released |
| | I94 | 60.9 | | WB, east side | Trees & residential area; spurge still present 2012 |
| | I94 | 61.3 | | WB, right side | Trees & creek area; spurge still present 2012 |
| 2012 | I94 | 61.3 | | Median | 2,000 released |
| | I94 | 72 | 76.6 | | Spurge still present 2012 |
| | I94 | 84.2 | | | Spurge still present 2012 |
| | I94 | 87.1 | 90.4 | | Spurge still present 2012 |
| 2012 | I94 | 91.2 | | Brandon interchange | 2,000 released; NE quad between WB & exit ramp |
| | I94 | 96.2 | | | Spurge still present 2012 |
| | I94 | 97.6 | 98.3 | | Spurge still present 2012 |
| 2010 | I94 | 98.327 | | LT | 2,000 released in 2010; spurge still present 2012 |
| | I94 | 103.1 | 104 | | |
| 2012 | I94 | 108.25 | | WB at CR 17 bridge | 500 released |
| | I94 | 109.6 | 113 | | |
| 2010 | MN7 | 14.691 | | East side | 2,000 released in 2010; no spurge or beetles 2012 |
| 2010 | MN7 | 16.484 | | East side | 2,000 released in 2010; no spurge or beetles 2012 |
| 2010 | MN9 | 33.943 | | LT | 2,000 released |
| 2010 | MN9 | 34.014 | | RT | 2,000 released |
| 2002 | MN9 | 155 | 155.5 | Downer area | |
| 2002 | US10 | 31 | | Median | |
| 2002 | US10 | 31.8 | | WB, north side | |
| 2002 | US10 | 32 | | South side | |
| 2002 | US10 | 33 | | WB, north side | Near Lake Park |
| 2012 | US10 | 57 | 57.3 | WB | 2,000 released |
| 2012 | US10 | 57.2 | | EB | 1,000 released |
| 2002 | US10 | 70 | | Median | East of Perham |
| 2002 | MN27 | 61.4 | | East side | |
| 2010 | MN27 | 61.9 | | LT | 2,000 released |
| 2002 | MN27 | 63.8 | | East side | |
| 2012 | MN27 | 64 | | North side | 500 released |
| 2002 | MN27 | 65.8 | | East side | |
| 2002 | MN27 | 68.6 | | West side | Douglas County |
| 2010 | MN28 | 20.803 | | South side | 2,000 released in 2010; small amount of spurge, beetles present 2012 |
| 2010 | MN29 | 49.751 | | RT | 2,000 released |
| 2012 | MN55 | 54.71 | | North side | 500 released |
| 2010 | MN55 | 62.473 | | LT | 2,000 released |

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| Intro Year | TH | MP | MP | Location | Remarks |
|-------------------|-----------|-----------|-----------|----------------------|---|
| | US59 | 211.5 | 212 | West side | Farmstead and field; mowed out 2012 |
| 2012 | US59 | 244.3 | | East side | 2,000 released |
| 2002 | US59 | 245.2 | 245.5 | West side | Jct 460 th St. |
| 2002 | US59 | 248.3 | | West side | Dunvilla hill |
| 2002 | US59 | 266 | 267.2 | Both sides | North of Detroit Lakes (Johanson Implement) |
| 2012 | MN108 | 12.8 | | South side | 2,000 released |
| 2002 | MN210 | 33.3 | | Wall Lake north side | Steep banks; spurge still present 2012 |

Spotted knapweed weevil locations

| Intro Year | TH | MP | MP | Location | Remarks |
|-------------------|-----------|-----------|-----------|---|---|
| | MN78 | 41.1 | | Between Rush & Buchanan lakes | Rush, T 135N, R 39W |
| | I94 | 59.2 | | Behind guardrail | Buse, T 132N, R 43W |
| | MN210 | 43.6 | | | Clitherall, T 132N, Ran 40W; still present 2012 |
| | MN210 | 48.6 | | | Still present 2012 |
| 2012 | MN34 | 64.97 | | Southwest corner of TH 225 intersection | 40 root weevils released in September |

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Attachment D – Herbicide-Sensitive Areas

The following areas are designated as no spray areas where MnDOT has made an agreement with landowners not to spray if landowners agree to control noxious weeds in that area:

| TH | MP | MP | Location | Remarks |
|-------|-------|-------|--------------------|--|
| MN55 | 38.15 | 38.25 | East side of road | From Front Street in Barrett to approximately 500 feet south |
| US59 | 165 | 167 | Both sides of road | Do not spray along pastures |
| MN78 | 15 | 17 | East side of road | Do not spray ditches |
| MN329 | 0 | 1.1 | Both sides of road | Only spray guardrail area |
| I-94 | 98 | 99 | South Side of road | Vineyard |
| MN34 | 15.80 | 17.75 | South Side of road | Organic Land (Don't Not Spray) |

Areas documented on www.DriftWatch.org:

(Do not spray unless absolutely necessary)

(updated 04/25/2016)

| TH | MP | Location | Remarks |
|-------|-------|----------|--|
| US75 | 263.5 | NB & SB | South of Georgetown, south of CR 108, organic |
| I-94 | 17 | EB | South of Downer, corn/alfalfa |
| MN29 | 94 | NB | North of Miltona near Lake Irene, grapes |
| MN114 | 14 | SB | Southwest of Alexandria near Lake Mary, grapes |
| US75 | 164.5 | SB | South of Dumont, south of CR 68, grapes |
| MN29 | 43.5 | NB | North of Benson, south of CR 2, organic |

Attachment E – Insecticide Areas

The following areas are treated with an insecticide for mosquito larvicide control:

| TH | MP | Location | Feature | Remarks |
|------|--------|----------|----------------|---|
| US75 | 265.75 | NB | Retention pond | In Georgetown, just north of the bridge |