

Worth County

Integrated Roadside Vegetation Management

Plan

March, 2018



IRVVM
Integrated Roadside Vegetation Management

Iowa's Roadside Resource

Integrated Roadside Vegetation Management Plan

Worth County, Iowa

Preface

A. Version 1, March 2018

B. Plan Contributors

Mike Bode - Worth County Roadside Manager

Rich Brumm - Worth County Engineer

Jim Hanson - Worth County Conservation Director

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I. Executive Program Elements

A. Goals

The first goal of the Worth County IRVM Program is to create a management tool to address items in Iowa Code Section 314.22-Integrated Roadside Vegetation Management and Iowa Code Section 317-Iowa Weed Law. The roadway corridors' prime purpose is to transport people and goods safely and efficiently. As the main purpose of roadside vegetation is to hold soil in place by reducing erosion, this vegetation must be managed in a way that allows for a safe recovery area for vehicles that leave the roadway, meet minimum sight requirements for vehicles, manage storm-water runoff, and control Iowa's noxious weeds. An underlying task / goal is to identify equipment needs for IRVM and work at acquiring said equipment. Another goal is to implement the Roadside Management plan and to make changes as necessary that best address the needs of Worth County. The long-term goal of the program is to reduce roadside maintenance by the establishment of a strong plant communities using Iowa's native vegetation.

B. Program History

The history of roadside management in Worth County has been hit and miss for weeds, brush, mowing, and plantings. At many points over time, blanket spraying programs were conducted to manage weeds. Brush removal had been addressed as needed. In the past six years, the Secondary Road Department has contracted brush control on a three-year rotation of township tiers. Vegetation along guardrails has been sprayed to control plant growth. Roadside mowing has occurred on both hard-surface and gravel roads throughout the growing season. Secession has been the most common re-seeding practice for any project in the ROW. An official roadside inventory has never been conducted.

In the spring of 2017, serious discussion began, addressing Roadside Vegetation Management. The decision was made to hire a Roadside Vegetation Manager (See Job Description (Appendix B)) The Roadside Manager position became a reality in June of 2017.

A cooperative agreement with the county board of supervisors, county engineer, county conservation department, and county roadside management was approved in March, 2018 (Appendix B).

C. Executive Summary

The main goal these first few years is to develop and begin implementing a plan that addresses the many facets of a comprehensive roadside vegetation management plan. The IRVM Technical Manual will be referenced and used to steer the work and how the work is done. Along with studying roadside management plans from other counties, it will be necessary to

identify the desired vegetation that Worth County has as well as identify the noxious weeds and brush that are growing in the roadsides. Conducting a roadside inventory will greatly aid the path that is taken to further develop the IRVM plan for Worth County.

D. Worth County Map (Appendix C)

E. Program Type

The Worth County Roadside Vegetation Manager is under supervision of the County Engineer. The Roadside Manager will work in cooperation with the County Engineer and County Conservation Director to manage and promote native vegetation on public lands.

II. Jurisdictional Recognition

A. Management

The full-time Roadside Manager decides day-to-day operations concerning roadside vegetation, sets priorities, carries out the business management duties, and performs the needed work. The Roadside Manager also serves as the County Weed Commissioner. The Roadside Manager's duties are outlined further in the Worth County Employee Job Description (Appendix B).

B. County Engineer

In cooperation with the Board of Supervisors, County Conservation Director, and the Roadside Manager, the County Engineer oversees the planning and implementation of the County Roadside Plan. This includes the roadside budget, equipment updates, or plan changes. The Roadside Manager gives the County Engineer an annual report detailing herbicide use, equipment evaluations, future personnel changes, and other pertinent facts.

C. Iowa Code and Administrative Rules-State Laws and Regulations

As stated earlier, Worth County's IRVM plan will be directed by laws and regulations cited in the Code of Iowa. Examples include, but are not limited to:

1. 314.17 Mowing law-no mowing before July 15 of ROW
2. 314.19 Reseeding Open Ditches
3. 314.21 Living Roadway Trust Fund
4. 314.22 Integrated Roadside Vegetation Management
5. 317 Iowa Weed Law
6. 318.3 Obstructions in Highway Rights-Of-Way

D. Permits

Permits are obtained at the County Engineer's Office. Individuals describe what work is being performed or the issue of concern and the appropriate permit is obtained. After the permit is filled out with the necessary information, the official permit is issued to the individual and a copy is filed with the county. The following permits pertain to areas in the right-of-way that may involve the need to seed after ROW work is completed.

1. Road Access Permit (Appendix D)
2. Utility Permit (Appendix E)

III. Program Organizational Structure and Staffing Needs

The Roadside Manager is currently the sole employee implementing IRVM. This individual will need to stay current with the latest developments in roadside management practices. To help achieve this need, the roadside manager will need to consult with roadside managers in other counties, attend roadside-related conferences, and correspond with the staff at the Tallgrass Prairie Center at the University of Northern Iowa. One particular area that will need to be addressed is erosion and sediment control.

As county weed commissioner this individual will need to maintain their pesticide applicator's license.

As the program develops, additional staff may be needed. This will allow for more work to be done in a timely manner and will also have benefits in the area of safety.

IV. Public Involvement

A. Education

As Worth County begins developing and implementing an IRVM plan, education will also be a critical component. The opportunity to involve the public will be critical to moving the plan forward as well as to the future success of the plan. The vast majority of Worth County is farmed. Utilizing the roadsides for drainage and controlling weeds are a concern to farmers. Landowners and the general public will need to be educated about the benefits of IRVM. Knowing that this program will provide long-term benefits to the public should help sell the new program and lead to the overall success of the program. Several ways to help educate the public will be: public presentations, local media, brochures, and social media.

V. Inventory

A. Natural Resource Inventory

An official vegetation inventory of Worth County has not been done. At this time, an initial inventory should be undertaken to help identify the current state of Worth County roadsides.

Items to be included in the inventory are: vegetative cover, native vegetation stands, weed concerns, brush, encroachment, bare ground, and areas of erosion. These inventory items will aid in implementing a more in-depth IRVM plan. The inventory will also help identify native plant communities that would benefit most from prescribed burns.

B. Equipment

Currently there is minimal equipment specifically designated to the IRVM program. Equipment will be obtained as budget resources allow. The need for certain equipment will continue to be prioritized and purchased as funds are available. An important funding source will be applying for and obtaining grant money through such sources as the Living Roadway Trust Fund (LRTF).

<u>Year</u>	<u>Item</u>	<u>Condition</u>
2017	Polaris Sportsman Utility ATV with two diaphragm sprayers	Excellent
2017	Stihl pole-pruner	Excellent
2017	Stihl chainsaw with 16" bar	Good
2002	F-350 Regular Cab Pickup	Fair
1991	Ford 7710 tractor with Diamond wet-blade mower boom	Fair
1991	Ford 7710 tractor (2 nd unit) with homemade boom-sprayer	Fair
1988	Homemade 250 gallon spray trailer for bare ground control	Fair

VI. Program Operations

A. Initial Work Schedule

- Work on completing a county-wide inventory of roadside vegetation
- Get larger weed infestations under control
- Set up a brush control plan utilizing both mechanical and chemical means
- Get a bare-ground vegetation control plan implemented and into rotation
- Assess and adjust the established shoulder mowing practices / culture
- Get a re-seeding program in place for all clean-outs / any ROW areas needing attention

B. Work Area Types

Worth County IRVM works primarily in rural areas. The most appropriate vegetation will be chosen for given areas. In rural ROW cleanouts, native grass and forb seed will be used to establish vegetation when feasible.

C. Annual Activities

Spring:	Prescribed burns, native plantings, bare-ground treatment, brush control
Summer:	Addressing weed complaints, mowing of shoulders, brush control, spot spraying, inventory, mowing 1 st and 2 nd year plantings
Fall:	Brush control, spot spraying, seedings, prescribed burns
Winter	Education/networking, grant/plan/report writing, brush control, equipment maintenance

VII. Methods

The IRVM Technical Manual will be utilized to a great extent aiding in the development of the management plan as well as the processes involved in the plan. Items include: equipment, obtaining funding for equipment, day-to-day operations, how to seed different areas of the roadsides, what seed to use, erosion control measures, maintenance of new native seedings, weed control, and using fire as a management tool. These are some of the topics that will need to be addressed to implement and advance the IRVM plan.

Meeting and developing contacts with roadside managers in other counties is also important. These roadside managers have experience that can be used to help outline what items to address in the plan and how to go about implementing said plan. The best learning tool will be experience: doing the work using the manual and advice obtained from other professionals in the field.

A. Site Preparation

Appropriate site preparation as the terrain allows will increase the success of the planting. Site preparation may include some or all of the following methods: mowing, spraying, disking, and cultipacking.

B. Seed Mixes and Rates

Native seed will need to be acquired, to be used as a means to control long-term erosion of ROW clean-outs. Obtaining TAP seed through the IRVM Program at UNI will be a primary source for native seed. In addition to the native seed, cover crops will be planted to help hold the soil in place until the native plants are established. In the spring and summer, oats and annual rye will be used. In the fall, winter wheat will be used. These cover crops are considered to be nurse or companion crops. The seeding mixes and seeding rates in the IRVM Technical Manual will be used as guidelines. Any seeding rates included with the TAP seed will be adhered to.

C. Seeding Techniques

The seeding method will be dictated by site conditions and slope. The site to be seeded will be inspected prior to any preparation or seeding work. This inspection will help determine what seeding method to use. Consideration for culverts or other obstacles that are present, how large the area is, the presence of gullies, and how much seed is needed will be taken.

On smaller areas with steep grades, hydroseeding (once access to one is obtained) will be used to apply seed, mulch and water in one pass. On larger areas with steep to nominal grades, a two-pass approach with a hydroseeder may be used. The first pass will be the seed, minimal mulch, and sufficient water to cover the area to be seeded. The second pass will be a higher rate of mulch, tackifier, and water. This two-pass approach will allow greater seed-to-soil contact, which should help improve seed germination rates.

On large areas with more level slopes, a drill may be used for the first pass. Drills do a better job of ensuring seed-to-soil contact than hydroseeding. To aid in germination and to help prevent erosion, a second pass will occur using the hydroseeder to apply mulch, tackifier, and water.

D. Erosion and Sediment Control

Erosion control measures in addition to hydromulch may be needed as evaluated on a site-by-site basis. These could include: rolled erosion control blankets, sediment logs, and filter socks.

E. Vegetation Establishment Maintenance

To help reduce competition from weeds, the newly planted areas will be mowed to a height of 6 inches before weeds get tall enough to shade out everything else. This may need to be done one or two times during the first season, and possibly at a higher height in the second season. Native plants need at least two years before they can begin competing with weeds. When enough fuel is present, prescribed burns may be used to aid the establishment of the native vegetation.

F. Noxious Weed and Brush Control

Multiple methods shall be utilized to achieve weed control. The establishment of native vegetation on bare soil will help minimize weeds taking over the disturbed soil. The controlled use of mowing will help prevent weeds from seeding. Using herbicides to carefully spot-treat weeds will be needed to control certain weeds such as Canada thistle. Fire may also be used as a management tool to suppress weeds and lead to a healthier stand of native vegetation. Fire

discourages the growth of invasive and woody plants while invigorating the growth of native plants.

Brush control along roadsides will also require a broad approach similar to weed control. Brush needs to be controlled where visibility is reduced at any intersection. Also the control of brush from the fore slope to ditch bottom should be maintained countywide. As time and resources allow, additional areas of the ROW can be controlled for brush.

Brush cutting will be done by the Roadside Manager and secondary road crews as time and conditions allow. Hand and mechanical cutting will occur. Stumps will be treated with herbicides to help prevent regrowth either via the wet-blade mower or by hand. Foliar applications of herbicides to brush not controlled by other means will occur in each of the three tiers of townships on a three year rotation.

VIII. Material Procurement

Material will be competitively obtained from local sources when possible. The cost of goods will be compared to help maximize the department's budget. As many sources of funding as possible will be utilized to continue to grow the IRVM equipment inventory.

**IX. INTEGRATED ROADSIDE VEGETATION MANAGEMENT
STATEMENT OF SUPPORT**

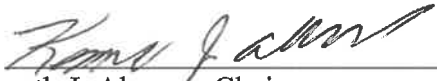
The Worth County Board of Supervisors, Worth County Engineer, Worth County Conservation Director, and the Worth County Roadside Vegetation Manager come together in cooperation, common goals and shared ideas to manage roadsides in Worth County by and through integrated roadside principals.

We realize that IRVM will be beneficial to our roadside management goals while being economically and environmentally beneficent.


We understand that working in unison toward improving roadside vegetation is the most efficient way to accomplish the goal of improved, safe, and weed free roadsides. These roadsides will also add to the habitat and aesthetic beauty of Worth County.

We hereby agree to manage Worth County roadsides according to the provisions described within this management plan.

Worth County Board of Supervisors

By: 
Kenneth J. Abrams, Chairperson
Date: _____


Worth County Engineer


Rich Brumm, P.E. - County Engineer
Date: 03/05/2018

Worth County Conservation


Jim Hanson, Director
Date: 3-5-18

Worth County Roadside Manager


Mike Bode, Roadside Manager
Date: 03/05/2018

APPENDIX B WORTH COUNTY COOPERATIVE AGREEMENT

INTEGRATED ROADSIDE VEGETATION MANAGEMENT

I. INTRODUCTION

The Integrated Roadside Vegetation Management (IRVM) Program was developed to better serve the public using IRVM techniques for vegetation management and maintenance in Worth County. The roadside manager position was created to manage the IRVM program and to assume duties of the weed commissioner.

Roadsides primary function is to handle surface water from the road surface and adjacent land. Because of steep sloping land and poor soil conditions in many roadsides, weed invasion and soil erosion are constant problems in Iowa. Roadside managers have learned to avoid planting species favored in the past (Eurasian grasses and legumes) and tend toward species native to Iowa that are better suited to our soils and climate. IRVM techniques can produce a roadside that is resistant to weed invasion and soil erosion, yet requires less maintenance. The Worth County IRVM program will address weed control, brush control, encroachment, mowing, roadside beautification and public relations in a comprehensive plan.

IRVM is a decision making and vegetation management process for maintaining roadside vegetation that integrates the following:

- Needs of county citizens and roadway users
 - Knowledge of plant ecology and natural processes
 - Design, construction, and maintenance considerations
 - Monitoring and evaluation procedures
 - Government statutes and regulations
 - Mechanical and chemical technology
- ...to manage roadsides economically for safety, and enhance environmental quality and scenic beauty.

The following paragraphs summarize mutual agreements, understandings, and other covenants among and between the **Worth County Board of Supervisors, Worth County Engineer, and the Worth County Conservation Board.**

II. THE PLAN

A comprehensive IRVM plan will be created by the roadside manager, county engineer, and conservation director to guide the Worth County IRVM program and policies as allowed in Chapter 314.22 (IRVM), plus policies concerning Chapter 317 (Weeds) of the Code of Iowa. The plan will be reviewed by the Worth County Board of Supervisors and implemented following their approval. The roadside manager will actively pursue achieving the plan according to priority goals, objectives, and policies identified in the plan. The roadside manager, chairperson of the board of supervisors, the county engineer, and county conservation director will review

the plan's progress quarterly (March 1, June 1, September 1, and December 1). The plan shall be updated and reviewed annually (January), and approved by the Board of Supervisors.

III. THE IRVM ROADSIDE MANAGER

The County Engineer will interview candidates. The IRVM Roadside Manager's job description will be utilized in selecting candidates. The roadside manager shall be directly accountable to the county engineer on a regular basis; and be responsible for implementing the Worth County IRVM Plan established by the roadside manager in consultation with the board of supervisors, county engineer, and conservation board director. With the established IRVM plan, the roadside manager shall be empowered to assume his/her duties without trivial interference from any parties of this agreement. This does not abrogate the authority of the county engineer to oversee the safe, efficient, and effective performance of duties by the roadside manager; nor does it remove authority or responsibilities for the management of right-of-way by the county engineer as defined in the Code of Iowa.

IV. PROGRAM ADMINISTRATION

The following statements define IRVM program covenants as agreed by the parties to this agreement.

A. Roadside Seeding

The roadside manager shall be responsible for seeding disturbed roadsides, clean-outs, re-graded rights of way, new construction, and other locations. The engineer shall notify the roadside manager of probable timetable. The roadside manager shall be responsible for selecting and obtaining seed according to the provisions of the IRVM plan.

B. Spraying

The roadside manager will be responsible for spraying noxious weeds and/or brush as described in the IRVM plan. The roadside manager will be responsible for researching and selecting the best equipment available within budget limitations. The purchase of spray equipment shall be upon the approval of the county engineer.

C. Roadside Mowing

Roadside mowing shall be accomplished by the secondary road department crews according to the IRVM plan and overseen by the county engineer and roadside manager.

D. Brush Control and Removal

Brush control and removal shall be coordinated and administered by the roadside manager. Secondary road department crews will assist the roadside manager seasonally when available as determined by the engineer in locations identified by the roadside manager and engineer. Control of brush shall be by mechanical means, chemical, or both.

E. Chemical Usage

The roadside manager shall select and spray chemicals to control vegetation according to IRVM principles and the IRVM plan.

F. Prescribed Fires

The roadside manager shall be responsible for conducting safe roadside burns according to the IRVM plan. The engineer and conservation director may allow staff to assist in this capacity. The roadside manager may assist the conservation department with prescribed fires on areas managed by Worth County conservation areas. The conservation department and Roadside Manager may share firefighting and control equipment.

G. Vehicles

The county engineer shall provide the roadside manager a safe and efficient vehicle capable of handling staff and equipment necessary to carry out the provisions of the IRVM plan. The secondary road department shall maintain same with the expense for maintenance and repairs.

H. Office Space

The secondary road department and county engineer shall provide office space at the engineer's office. The roadside manager shall have use of necessary office equipment and telephone.

I. Insurance

The secondary roads department shall be responsible for paying for insurance costs for IRVM vehicles.

J. Education/Training

The roadside manager shall be permitted to attend conferences and continuing education that promotes professionalism and competency.

K. Other Equipment

Equipment not described in this agreement shall be arranged separately by verbal or written terms in order to accomplish terms of this agreement.

Resolution #2018.03.05

Witnesseth:

WHEREAS, the Worth County Board of Supervisors, Worth County Engineer, and the Worth County Conservation Department, in a spirit of cooperation, common goals, and shared vision to manage roadside vegetation within Worth County by and through an Integrated Roadside Vegetation Management (IRVM) program; and

WHEREAS, the parties of this agreement recognize the benefits of an IRVM program, including the economically and environmentally sustainable objectives; county beautification and safety; and

WHEREAS, the implementation of this plan is pivotal to the joint creation, monitoring and updating of an IRVM program, that incorporates public participation, input, education; and

WHEREAS, the signors of this agreement will meet quarterly to review the plan, update the plan, and work toward joint approval annually according to the timetable described herein.


THEREFORE, BE IT RESOLVED that the Worth County Board of Supervisors shall establish an Integrated Roadside Vegetation Management plan according to the provisions described herein.

WORTH COUNTY
BOARD OF SUPERVISORS


By 
Kenneth J. Abrams, Chairperson
Date: _____

IN WITNESS WHEREOF, these signors agree to the terms of this agreement:


WORTH COUNTY
ENGINEER

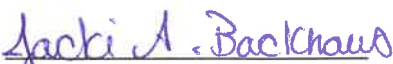

Rich Brumm
Date: 03/05/2018

WORTH COUNTY
CONSERVATION DIRECTOR


Jim Hanson
Date: 3-5-18

WORTH COUNTY
ROADSIDE MANAGER


Mike Bode
Date: 03/05/2018

Attest: 
Jacki A. Backhaus
Worth County Auditor