Integrated Roadside Vegetation Management Plan

Johnson County, Iowa

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Preface

This updated Johnson County IRVM Plan, completed in May, 2015 replaces the existing, less expansive IRVM Plan already on file with the Iowa Department of Transportation.

There have been many contributors to the various IRVM Plans over the past 25 years of the Programs' existence. The Johnson County IRVM Technical Advisory Committee has been instrumental in providing guidance in the crafting of various policies and documents to help better serve County residents.

Table of Contents

I. Executive Program Elements

- **A. IRVM Introduction & History**
- **B. Executive Summary**
- **C. Goals**
- **D. IRVM Decision Making Process**
- **E. Area Map of Johnson County Road System**
- **F. Program Type**

II. Jurisdictional Recognition and Approval

- **A. Management**
- **B. Board of Supervisors**
- **C. Iowa Code and Administrative Rules**
- **D. Local Policies & Ordinances**
- **E. Roadside Maintenance Agreement**
- **F. County Weed Commissioner**

III. Program Organizational Structure

- **A. Staff Organization Chart**
- **B. Staffing Needs**
- **C. Succession Plan**

IV. Public Involvement

V. Inventory and Analysis

VI. Program Operations

VII. Methods

VII. Material Procurement and IRVM Funding History

IX. Research Opportunities

X. Appendices

Introduction:

In the early 1980's, Integrated Roadside Vegetation Management was born out of necessity. The pioneering counties and individuals who implemented the first IRVM Programs were looking for a better, more sustainable way to manage roadside vegetation.

Over time it was realized that extensive herbicide applications were not the answer to every roadside weed or brush problem. Rather it was becoming clearer to see that prevention of weeds through multiple management techniques was the only real way to recognize success in the eradication of problem weeds and brush.

IRVM utilizes many techniques and tools to better take care of County roadsides and Right of Way. No one technique is the solution, however, when techniques are combined together, the solution becomes possible.

This document was created to act as a long-term guide for vegetation management actions and decisions performed by Johnson County IRVM Program. Immediate and long-term goals include reduced maintenance, natural noxious weed control through plant succession, reduced herbicide applications, wildlife habitat and beautification through prairie establishment, improved pollinator habitat, and increased water infiltration.

History and Executive Summary:

Historically, the tallgrass prairie ecosystem covered roughly 85% of Iowa. In Johnson County, the settlers living away from the Iowa River corridor encountered prairie sod so thick that it could not be broken with the equipment available.

Regarding the roadsides, native plants existed in them until the 1930's and 40's when county crews began widening roads, crowning them and improving the roadside to have a fore slope as well as a back slope for drainage. The disturbances created by this necessary construction left bare soil. The roadsides were then planted with non-native, cool season grasses such as brome.

The advent of heavy herbicide use in the early 1970's had almost finished off what was left of the remaining prairie flowers and at the same time weakened the native grasses which then allowed noxious weed invasion.

Until the advent of IRVM in Johnson County, road work and Right of Way disturbances done by county crews had been left for nature to reclaim and soil was not stabilized afterwards. Erosion control, for the most part, had been ignored. An Iowa DOT standard mixture was used containing a few native plants, but for the most part the mixture was comprised of non-native plants, primarily cool season grasses. Approximately 25 years ago, the Johnson County Board of Supervisors, County Engineer, and County Conservation Board implemented a comprehensive IRVM Plan in order to develop a long term approach to roadside vegetation management that :

1. Systematically evaluates each area to be managed.
2. Determines which plant communities best fit the area.
3. Develops procedures that will encourage, enhance or re-establish native plant communities.
4. Provides self-sustaining, diversified, visually interesting vegetation.
5. Keeps safety and an improved environment as priorities.
6. Utilizes the most beneficial methods to prevent or correct undesirable situations caused by disturbance or less than optimum vegetative ground cover.

Jurisdictional Recognition & Approval

A. **Management:**

Management of the IRVM Program and its various facets is conducted by the Roadside Vegetation Manager and Roadside Technician within the Secondary Road Department. This management staff position is overseen by the County Engineer and works directly with the Maintenance Superintendant on daily staffing needs and equipment needs.

B. **Board of Supervisors:**

The elected officials of the Johnson County Board of Supervisors oversee the budgets and activities of the Johnson County Secondary Road Department. IRVM Program personnel coordinate through the County Engineer in most contact with the Board such as annual reports, budget meetings, work sessions, etc. The Board of Supervisors have been strong supporters of the use of IRVM principles to manage Johnson County roadsides since the Programs' inception nearly 25 years ago. Attached in the appendices is the signed Integrated Roadside Vegetation Management General Plan that has been a fluid document since the programs' beginning.

C. **Iowa Code Relevant References (found in Appendices):**

1. Iowa Code Chapter 314 (1988 legislation) Integrated Roadside Vegetation Management
2. Iowa Code Chapter 317 Iowa Noxious Weed Law
3. Iowa Code Chapter 314.17 Iowa Mowing Law

D. **Local Policies and Ordinances (found in Appendices):**

1. Johnson County Brush Control Policy
2. Johnson County Noxious Weed Policy
3. Johnson County Native Plant Community Policy
4. Johnson County Resolution- Stigmatizing Noxious Weeds
5. Johnson County Snow Policy
6. Johnson County Obstruction In Right of Way Policy
7. Adopt A Roadway Program
8. Permit to Work Within the Right of Way
9. Encroachment Agreement

E. **Roadside Maintenance Agreement (found in Appendices)**

The Roadside Maintenance Agreement is available for landowners interested in managing roadside vegetation without the use of herbicides by the IRVM Program to control invasive or noxious weeds, brush species, etc. This program is designed to give the organic farmer, vineyard, etc. a method to work with the IRVM Program to manage the Right of Way without herbicides. It is a 5 year agreement between landowner and the Secondary Road Department. Also available is an Indemnity Agreement for farmers who do not carry Liability Insurance. This document is available in the Appendices.

F. County Weed Commissioner

The Roadside Vegetation Manager position also entails completing the various duties of the County Weed Commissioner. The County Board of Supervisors annually appoints the County Weed Commissioner to carry out the program of Noxious Weed destruction in the county. The County Weed Commissioner is responsible for administration and enforcement of the Code of Iowa, Chapter 317, Noxious Weeds, on both public and private property through inspections, service of notices to destroy noxious weeds, and actually entering property to destroy weeds. Chapter 317, Noxious Weeds, is referenced in more detail in the Appendices. The County Weed Commissioner attends Pesticide Applicator Continuing Education training annually as well as attends the Iowa Weed Commissioners Conference and Southeast Iowa District Meetings. Johnson County hosts its own noxious and invasive weed webpage with identification information, color photographs, and control recommendations available for landowners and resource managers. More information can be found at:

http://www.johnson-county.com/dept_sec_roads.aspx?id=1485

Goals:

The goals of the Johnson County IRVM Program are to:

1. Preserve and provide safe, functional and environmentally improved corridors of travel throughout the county.

2. Utilize a long-term integrated management program that promotes desirable, self-sustaining plant communities utilizing prescribed fire, planting of native vegetation, spot herbicide applications, mowing, and mechanical vegetation management. Encourage those plant communities that are native to Iowa through preservation and re-establish whenever practical.

3. Make more efficient and effective use of chemicals as a control method of undesirable plants.

4. Enhance the scenic qualities of the roadsides and their value as wildlife habitat and pollinator habitat.

IRVM Decision Making Process:

The Roadside Vegetation Manager works within the Secondary Road Department under the authority of the Board of Supervisors and County Engineer to implement the Johnson County IRVM Plan. While the Board of Supervisors and County Engineer are ultimately responsible for the IRVM Program, the day to day decisions, work plan, operations, budgeting, safety, public education, etc. are left to the Roadside Vegetation Manager. County policies have been established (see appendices) and approved to help guide these aspects of the IRVM Program. In circumstances where a different area of knowledge is required, the Roadside Vegetation Manager consults with the Maintenance Superintendent, Engineering and Survey staff, Secondary Roads staff, Conservation Board staff, etc.

Area Map: A map of the Johnson County Secondary Road system is attached in the Appendices.

Program Type: The Johnson County IRVM Program works as part of the Secondary Road Department and occasionally assists the Conservation Department with various seeding and equipment needs, as well as wetland mitigation projects.

Program Organizational Structure

A. Staff Organizational Chart

The Johnson County Secondary Road Department is organized and supervised by the County Engineer, who directs all staff levels in the normal duties and procedures of the Department. The overall Department Organizational Chart is included in the appendices to illustrate the layout and flow of duties and responsibilities within the Department.

B. Staffing Needs

The IRVM Program currently has 2 employees assigned to conduct the day to day business of the Program. Duties of the Roadside Technician also include seasonal snow removal and granular hauling in the spring. Secondary Road Department employees are regularly utilized, when available, for projects requiring more personnel and equipment such as flagging, prescribed burning, brush removal projects, etc. Current staffing levels are adequate to complete current work load but additional personnel would be required in in order to increase acreages managed with prescribed fire, pesticide applications, erosion and sediment control activities, etc.

C. Succession Plan

In the event of a staff change for the Roadside Vegetation Manager position, the Secondary Road Department, after receiving clearance from the Board of Supervisors and Human Resources, would publicly advertise for, evaluate, interview, and hire new staff according to knowledge, skills, and abilities. In the event of a Roadside Technician staff change, because the position is within the Bargaining Unit, the position (with Board approval) would be advertised within the Department, and then be publicly advertised for if no Bargaining Unit personnel receive the job. Currently, the Roadside Vegetation Manager assists with hiring, evaluations, supervision, and discipline of staff, in accordance with County policies. Job position descriptions for the Roadside Vegetation Manager and the Roadside Technician are attached in the Appendices.

Public Involvement

A. Steering Committee

The Johnson County IRVM Program utilizes an IRVM Technical Advisory Committee to assist in policy creation, education, guidance, and outreach. The IRVM Technical Advisory Committee is made up of the following members and meets as needed to discuss issues or policy creation:

1 Member representing the Utility Industry

1 Member representing the Academy of Sciences (University of Iowa)

2 Members representing the Private Sector, including Community Interest Groups

1 Member representing Soil Conservation Interests

1 Member representing County Conservation Boards

2 Members representing the Farming Community

1 Member representing the Iowa Dept. of Natural Resources or Army Corps of Engineers

1 Member representing County interests (Maintenance Superintendant)

Roadside Vegetation Manager

County Engineer

Johnson County also hosts its own Integrated Roadside Vegetation Management webpage with descriptions of the various types of work completed such as prescribed burning, herbicide applications, mowing, brush and tree management procedures, color pictures of native prairie species, etc. More information can be found at the following location:

http://www.johnson-county.com/dept_sec_roads.aspx?id=8541

Inventory & Analysis

A. Roadside Inventories Completed

Formal and informal inventory of the composition and quality of roadside vegetation is a constant process. All planted and remnant native non-woody vegetation is of interest when making management decisions. Johnson County IRVM has completed an exhaustive inventory of the entire road system in the County with the assistance of two LRTF grants as well as one year of funding from the Iowa Science Foundation. Roadside native prairies, woodlands, and wetlands were all surveyed and in the process, detailed Floristic Quality Assessments were conducted by a professional botanist in the areas of highest quality. A complete plant list was generated and Coefficients of Conservatism utilized to determine the top roadside remnant areas in a scientific and unbiased fashion utilizing data rather than observations. This data then feeds into the Native Plant Community Policy crafted by the IRVM Technical Advisory Committee which guides the

identification, management, protection, and mitigation of disturbances of high quality roadside resources by County forces as well as utilities and private landowners. A series of GIS maps of these highest quality locations were created and are posted online, as well as managed online by the Iowa Geological Survey Bureau and are utilized during the Right of Way work permit process by utilities. A copy of the Native Plant Community Policy is attached with the Appendices.

B. IRVM Equipment Inventory

- Chevy 2500 HD Pickup
- Ford F550 Truck with Dump Box
- John Deere 6420 tractor
- Vicon broadcast seeder
- Truax Flex-8 Drill
- Bombardier ATV
- ATV Boomless sprayer with handgun
- Truax ATV broadcast seeder
- Harrowgator, disc, field conditioner, cultipacker
- Finn T170 Hydroseeder
- 10x8 seed storage room with AC
- M100 Rifle Staple Gun
- Virnig Skid Steer Brush Mower
- John Deere PTO Brush Mower
- Virnig Skid Steer Brush Grapple
- 500 Gallon tank/Honda pump skid unit with hose reel
- Nomex pants/shirt/helmet
- Drip torch, fire swatters, backpack blower
- Work Zone Safety signs (tree work, prescribed burning ahead, etc.)
- Stihl MS 192, MS 362, MS 460 Chainsaws
- Stihl HT 101 Pole Saw
- Vermeer BC 1200A Wood Chipper
- Norstar Spray Unit with RMS mounted on GMC 6500 Cab Over Chassis
- Spectrum Technologies Watchdog Portable Weather Stations (2)
- Stihl Backpack Sprayer
- ATV Hay Rake
- Minnesota Wanner 250 Gallon Invert Emulsion Sprayer

The existing equipment inventory is supplemented, when needed, with various equipment from the Secondary Roads Department such as tandem axle dump trucks, trailers, excavators, skid steers, loaders, etc. Equipment replacement schedules have older, large purchases such as the hydroseeder and chipper being replaced in upcoming years as budgets allow and smaller items as needed.

Program Operations

A. Annual Operations

Work schedules and IRVM activities vary seasonally and are weather dependent. Generally, seasonal activities are as follows:

January-March- Cut brush and trees in problem locations, service and repair equipment, assist with road snow and ice removal operations, attend training and educational seminars, present Annual Report to Board of Supervisors, attend AFIRM Winter meeting and Weed Commissioner Meeting, order spring inventory of herbicides, cover crops, lawn seed, fertilizers, etc., present IRVM information at Prairie Preview to publicize the IRVM Program.

April-October- maintenance and construction area seeding operations, prescribed burning activities, erosion and sedimentation mitigation, LRTF Grant preparation, TEA-21 Grant preparation, bareground applications on shoulders and guardrails, brush and noxious weed applications, mowing prairie plantings for establishment, address noxious weed and roadside visibility complaints, Adopt A Roadway Program and Roadside Maintenance Agreement Program management, present IRVM information at County Fair, service and repair equipment, fall herbicide applications to selected perennials, attend annual Roadside Conference.

November-December- cut brush, finalize maintenance seedings and begin dormant native seeding, winterize equipment, begin snow removal operations as needed.

B. Work Area Types

Paved and asphalt roadways are prioritized for management of encroaching brush. Seeding projects and associated maintenance and management vary by construction project (urban vs. rural), size and accessibility, location, traffic counts, etc. Mowing activities are prioritized by road surface type with paved roads being shoulder mowed 3-5 times thru the growing season and granular roads 1-2 times.

C. Vegetation Types for Specific Uses

Johnson County IRVM utilizes native grasses and wildflowers, where appropriate, for landowner desires, overall management goals and public relation goals, etc. Shorter species are utilized in intersections, hydrophytic species in wet ditches, cool season lawn species in urban situations where mowing is desired, etc. Specific grass mixes are discussed in the Methods section.

D. Special Projects

The Johnson County IRVM Program over the last 7-8 years has developed the Hawkeye Cooperative Weed Management Area in Eastern Iowa (HCWMA). The HCWMA is a collective group of County, State, and Federal Agencies, non-profit organizations and community associations who have come together to access grant funding to battle the invasive species problem in Eastern Iowa. The HCWMA is a local organization that integrates invasive species management resources across jurisdictional boundaries in order to benefit the entire region as well as leverage funding and promote public education. A brochure about the Hawkeye CWMA and describing its function is included in the Appendices.

Methods

A. Vegetation Establishment

Vegetation establishment after road construction and maintenance projects (cleanouts, brush removal locations, erosion mitigation) is generally completed as soon as conditions allow. Each site is inspected and management decisions are made based on the site- ie. Does the site get mowed frequently?, is the site predominantly wet or dry? What is the traffic county and future development of the area?, etc. If the site is determined to be a good location for native grasses and wildflowers, an appropriate seed mix is put together to compliment the long term goals of the site. Seed bed preparation also varies according to the site and desired site outcomes. Site preparation may consist of:

1). Hydroseeding with cover crop, native seed mix, and fertilizer directly to the seed bed

2). Use of harrow and field conditioner to level and smooth the site before utilization of a Vicon broadcast seeder. This seeder is used for native grasses, as well as cover crops, fertilizers, and County seed mixes. Johnson County IRVM utilizes two non-native seed mixes in areas where natives will not be actively planted and established:

1). Shoulder Mix- (KY31 Tall Fescue, Annual Rye, Perennial Rye). Used for lawns, intersections, inside curves, and in areas where frequent mowing will take place.
2). Pasture Mix- (Switchgrass, Annual Rye, Perennial Rye). Used for areas that are only mowed occasionally by adjacent landowner and a tall, dense stand of grass is acceptable. This mix typically is used on sites with noxious weed competition as it becomes dense and very hardy. This mix is not used at intersections or locations prone to visibility issues or icing/drifting issues in the winter.

Both mixes above are seeded at approximately 60-80lbs. per acre. Nurse/Cover crops are also utilized for rapid soil stabilization. Species and rates utilized by Johnson County IRVM:

March- July	Seed Oats	100 lbs/AC
August-November	Winter Wheat or Grain Rye	100 lbs/AC
Fertilizer (13-13-13)	Applied at 250-300lbs/AC	

B. Erosion and Sediment Control

Johnson County IRVM utilizes a host of materials for erosion and sediment control depending on the site accessibility, soils, hydrology, drainage, seasonality, budget, and long term site goals. Some of these are:

Hydroseeding- 80/20 Wood & Paper Mulch with tackifier at 1500 lbs/AC
BFM Mulch on difficult locations at 3000-4000 lbs/AC

Rolled Erosion Control Blankets- Single Sided and Double Sided Straw, Single Sided and Double Sided Excelsior, Futerra Netless Blankets, Turf Reinforment Mats (TRM)

Filter socks, straw wattles, rock checks, berms, and silt fence

C. Vegetation Establishment Maintenance/Evaluation

Native vegetation establishment is done thru a combination of seasonal mowing when possible through the first 1-3 growing seasons, utilization of prescribed fire, and utilization of spot spraying to manage noxious and invasive species. Sites are visited periodically throughout the growing season to monitor growth conditions, erosion and sedimentation issues, noxious and invasive species present, etc.

D. Chemical Control for Noxious Weeds, Trees and Brush, Other Invasive Species, and Bare Ground

Johnson County IRVM utilizes a spot spray program to manage State and County listed noxious weeds as well as various problematic invasive species. The IRVM Program strives to reduce chemical environmental load as well as effectively and affordable manage many tough weed and woody species. All applicators are state certified applicators and utilize products chosen for efficacy, safety, affordability, and availability. Products and rates used for chemical control of target species is at the discretion of the Roadside Vegetation Manager and are evaluated regularly. Guardrails and bare ground applications are completed for safety and visibility reasons with state listed products and applicators in order to keep an area vegetation free throughout the growing season. Products and rates used for chemical control of bare ground areas are at the discretion of the Roadside Vegetation Manager and are evaluated regularly. Small trees and brush in the Right of Way are periodically managed with a spot spray application of broadleaf specific products. Applications are designed to minimize impact to native species, while remaining efficacious and safe. Annual survey of approximately 1/3 of the County roads (12 townships) for small, encroaching brush species is the IRVM Programs' goal.

E. Other IRVM Management Methods Utilized

Other vegetation management methods employed are mechanical tree removal (chainsaw, excavators and heavy equipment), prescribed burning for prairie establishment and maintenance, and mowing. Mowing for snow drifting issues and woody species management is completed in accordance with the Iowa Mowing Law and the Johnson County Brush Control Policy (see appendices). Shoulder mowing takes place throughout the growing season, while brush mowing takes place in the fall and winter, allowing ground nesting birds to survive and native plants a chance to grow.

F. Ongoing Maintenance

Maintenance of areas which have been planted into a native grass and wildflower mixtures are one of the duties carried out by the IRVM Program. Sites are evaluated to determine the optimal management methods (ie. Prescribed burning, mowing, haying, chemical usage, etc.) and these areas are prioritized into the normal work schedule. A combination of management methods are generally utilized in order to maintain the plantings on a 3-5 year rotating schedule when possible.

Material Procurement

The IRVM Program has utilized a Seed Bid process in order to obtain competitive bids from dealers on cover/nurse crops, fertilizers, as well as the various grass mixes used in maintenance seedings. The IRVM Program has been fortunate to have received Transportation Enhancement Seed for nearly two decades, substantially reducing stress on the IRVM budget for native grass and wildflower seed used on construction and maintenance seeding projects.

Utilizing County funds, a 10’ x 10’ insulated seed storage room was built 12 years ago and an air conditioner unit installed in order to keep ambient air temperatures low and relative humidity in the room very low. Increased germination and viability of native grass and wildflower seed has been the result of the County’s investment in the seed storage room.

Other materials purchased by the IRVM Program such as erosion control materials, hydroseeding materials, and herbicides and additives, are at the discretion of the Roadside Vegetation Manager and are based on needs, availability, budget constraints, accessibility, safety and efficacy, ease of storage, etc. Materials are currently stored in a small barn on the Secondary Roads Department campus. Because of the limited storage capacity, supplies are ordered as needed, and as storage space becomes available.

Funding History

The history of funding received by Johnson County IRVM from the Iowa Living Roadway Trust Fund is included in the appendices. Future Iowa DOT LRTF funding of new and equipment replacements, Native enhancement seed, research projects, etc. will be critical to supplement overstretched County budgets and to keep the IRVM Program strong.

Research Opportunities

Research opportunities exist within IRVM Programs in areas such as:

- Usage and establishment of turf-type buffalo grass as alternatives for traditional cool season lawns.
- Usage of Black Eyed Susan and Partridge Pea as potential nurse crops
- Potential usage of bioswales/rain gardens in Right of Way

Appendices

1A). Iowa Code Chapter 314.22 Integrated Roadside Vegetation Management
1B). Iowa Code Chapter 314.17 Iowa Mowing Law

1C). Iowa Code Chapter 317 Iowa Noxious Weed Law

2). Johnson County Brush Control Policy

3). Johnson County Noxious Weed Policy

4). Johnson County Native Plant Community Policy

5). Johnson County Resolution- Stigmatizing Noxious Weeds

6). Johnson County Snow Policy

7). Johnson County Obstructions In Right of Way Policy (Code of Iowa Ch. 318)

8). Johnson County Adopt A Roadway Program

9). Permit to Work Within the Right of Way

10). Encroachment Agreement

11). Roadside Maintenance Agreement/Indemnity Agreement

12). Johnson County Road System Map

13). County Organizational Structure

14). Job Position Descriptions
Roadside Vegetation Manager
Roadside Technician

15). Johnson County IRVM Living Roadway Trust Fund- Funding History

16.*)* Jurisdictional Approval (Engineer Signed IRVM Plan)

Appendix 1A

314.22 INTEGRATED ROADSIDE VEGETATION MANAGEMENT.

1. Objectives. It is declared to be in the general public welfare of Iowa and a highway purpose for the vegetation of Iowa's roadsides to be preserved, planted, and maintained to be safe, visually interesting, ecologically integrated, and useful for many purposes. The state department of transportation shall provide an integrated roadside vegetation management plan and program which shall be designed to accomplish all of the following:

a. Maintain a safe travel environment.

b. Serve a variety of public purposes including erosion control, wildlife habitat, climate control, scenic qualities, weed control, utility easements, recreation uses, and sustenance of water quality.

c. Be based on a systematic assessment of conditions existing in roadsides, preservation of valuable vegetation and habitats in the area, and the adoption of a comprehensive plan and strategies for cost-effective maintenance and vegetation planting. d. Emphasize the establishment of adaptable and long-lived vegetation, often native species, matched to the unique environment found in and adjacent to the roadside.

e. Incorporate integrated management practices for the long-term control of damaging insect populations, weeds, and invader plant species.

f. Build upon a public education program allowing input from adjacent landowners and the general public.

g. Accelerate efforts toward increasing and expanding the effectiveness of plantings to reduce wind-induced and water- induced soil erosion and to increase deposition of snow in desired locations.

h. Incorporate integrated roadside vegetation management with other state agency planning and program activities including the recreation trails program, scenic highways, open space, and tourism development efforts. Agencies should annually report their progress in this area to the general assembly.

2. Counties may adopt plans. A county may adopt an integrated roadside vegetation management plan consistent with the integrated roadside vegetation management plan adopted by the department under subsection 1.

3. Integrated roadside vegetation management technical advisory committee.

a. The director of the department shall appoint members to an integrated roadside vegetation management technical advisory committee which is created to provide advice on the development and implementation of a statewide integrated roadside vegetation management plan and program and related projects. The department shall report annually in January to the general assembly regarding its activities and those of the committee. Activities of the committee may include, but are not limited to, providing advice and assistance in the following areas:

(1) Research efforts.

(2) Demonstration projects.

(3) Education and orientation efforts for property owners, public officials, and the general public.

(4) Activities of the integrated roadside vegetation management coordinator for integrated roadside vegetation management.

(5) Reviewing applications for funding assistance.

(6) Securing funding for research and demonstrations.

(7) Determining needs for revising the state weed law and other applicable Code sections.

(8) Liaison with the Iowa state association of counties, the Iowa league of cities, and other organizations for integrated roadside vegetation management purposes.

b. The director may appoint any number of persons to the committee but, at a minimum, the committee shall consist of all of the following:

(1) One member representing the utility industry.

(2) One member from the Iowa academy of sciences.

(3) One member representing county government.

(4) One member representing city government.

(5) Two members representing the private sector including community interest groups.

(6) One member representing soil conservation interests.

(7) One member representing the department of natural resources.

(8) One member representing county conservation boards.

Members of the committee shall serve without compensation, but may be reimbursed for allowable expenses from the living roadway trust fund created under section 314.21. No more than a simple majority of the members of the committee shall be of the same gender as provided in section 69.16A. The director of the department shall appoint the chair of the committee and shall establish a minimum schedule of meetings for the committee.

4. Integrated roadside vegetation management coordinator. The integrated roadside vegetation management coordinator shall administer the department's integrated roadside vegetation management plan and program. The department may create the position of integrated roadside vegetation management coordinator within the department or may contract for the services of the coordinator. The duties of the coordinator include, but are not limited to, the following:

a. Conducting education and awareness programs.

b. Providing technical advice to the department and the department of natural resources, counties, and cities.

c. Conducting demonstration projects.

d. Coordinating inventory and implementation activities.

e. Providing assistance to local community-based groups for undertaking community entryway projects.

f. Being a clearinghouse for information from Iowa projects as well as from other states.

g. Periodically distributing information related to integrated roadside vegetation management.

h. General coordination of research efforts.

i. Other duties assigned by the director of transportation.

5. Education programs. The department shall develop educational programs and provide educational materials for the general public, landowners, governmental employees, and board members as part of its program for integrated roadside vegetation management. The educational program shall provide all of the following:

a. The development of public service announcements and television programs about the importance of roadside vegetation in Iowa.

b. The expansion of existing training sessions and educational curriculum materials for county weed commissioners, government contract sprayers, maintenance staff, and others to include coverage of integrated roadside management topics such as basic plant species identification, vegetation preservation, vegetation inventory techniques, vegetation management and planning procedures, planting techniques, maintenance, communication, and public relations. County and municipal engineers, public works staffs, planning and zoning representatives, parks and habitat managers, and others should be encouraged to participate.

c. The conducting of statewide and regional conferences and seminars about integrated roadside vegetation management, community entryways, scenic values of land adjoining roadsides, and other topics relating to roadside vegetation.

d. The preparation, display, and distribution of a variety of public relations material, in order to better inform and educate the traveling public on roadside vegetation management activities. The public relations material shall inform motorists of a variety of roadside vegetation issues including all of the following:

(1) Benefits of various types of roadside vegetation.

(2) Long-term results expected from planting and maintenance practices.

(3) Purposes for short-term disturbances in the roadside landscapes.

(4) Interesting aspects of the Iowa landscape and individual landscape regions.

(5) Other aspects relating to wildlife and soil erosion.

e. Preparation and distribution of educational material designed to inform adjoining property owners, farm operators, and others of the importance of roadside vegetation and their responsibilities of proper stewardship of that vegetation resource.

6. Research and demonstration projects. The department, as part of its plan to provide integrated roadside vegetation management, shall conduct research and feasibility studies including demonstration projects of different kinds at a variety of locations around the state. The research and feasibility studies may be conducted in, but are not limited to, any of the following areas:

a. Cost effectiveness or comparison of planting, establishing and maintaining alternative or warm-season, native grass and forb roadside vegetation and traditional cool-season nonnative vegetation.

b. Identification of the relationship that roadsides and roadside vegetation have to maintaining water quality, through drainage wells, sediment and pollutant collection and filtration, and other means.

c. Impacts of burning as an alternative vegetation management tool on all categories of roads.

d. Techniques for more quickly establishing erosion control

and permanent vegetative cover on recently disturbed ground as well as interplanting native species in existing vegetative cover.

e. Effectiveness of techniques for reduced or selected use of herbicides to control weeds.

f. Identification of cross section and slope steepness design standards which provide for motorist safety as well as for improved establishment, maintenance, and replacement of different types of vegetation.

g. Identification of a uniform inventory and assessment technique which could be used by many counties in establishing integrated roadside management programs.

h. Equipment innovations for seeding and harvesting grasses in difficult terrain settings, roadway ditches, and fore-slopes and back-slopes.

i. Identification of the perceptions of motorists and landowners to various types of roadside vegetation and configuration of plantings.

j. Market or economic feasibility studies for native seed, forb, and woody plant production and propagation.

k. Impacts of vegetation modifications on increasing or decreasing wildlife populations in rural and urban areas.

l. Effects of vegetation on the number and location of wildlife road-kills in rural and urban areas.

m. Costs to the public for improper off-site resource management adjacent to roadsides.

n. Advantages, disadvantages, and techniques of establishing pedestrian access adjacent to highways and their impacts on vegetation management.

o. Identification of alternative techniques for snow catchment on farmland adjacent to roadsides.

7. Gateways program. The department shall develop a gateways program to provide meaningful visual impacts including major new plantings at the important highway entry points to the state and its communities. Substantial and distinctive plantings shall also be designed and installed at these points. Creative and artistic design solutions shall be sought for these improvements. Communications about these projects shall be provided to local groups in order to build community involvement, support, and understanding of their

importance. Consideration shall be given to a requirement that gateways projects produce a local match or contribution toward the overall project cost.

8. Vegetation inventories and strategies.

a. The department shall coordinate and compile integrated roadside vegetation inventories, classification systems, plans, and implementation strategies for roadsides. Areas of increased program and project emphasis may include, but are not limited to, all of the following:

(1) Additional development and funding of state gateways projects.

(2) Accelerated replacement of dead and unhealthy plants with native and hardy trees and shrubs.

(3) Special interest plantings at selected highly visible locations along primary and interstate highways.

(4) Pilot and demonstration projects.

(5) Additional snow and erosion control plantings.

(6) Welcome center and rest area plantings with native and aesthetically interesting species to create mini-arboretums around the state.

b. The department shall coordinate and compile a reconnaissance of lands to develop an inventory of sites having the potential of being harvested for native grass, forb, and woody plant material seed and growing stock. Highway right-of-ways, parks and recreation areas, converted railroad right-of-ways, state board of regents' property, lands owned by counties, and other types of public property shall be surveyed and documented for seed source potential.

Sites volunteered by private organizations may also be included in the inventory. Inventory information shall be made available to state agencies' staffs, county engineers, county conservation board directors, and others.

Appendix 1B Iowa Mowing Law

314.17 MOWING ON INTERSTATES AND PRIMARY HIGHWAYS.

On or after January 1, 2003, the department shall not mow roadside vegetation on the rights-of-way or medians on any primary or interstate highway. Mowing shall be permitted as follows:

1. On rights-of-way which include drainage ditch areas.
2. On rights-of-way within three miles of the corporate limits of a city.
3. To promote native species of vegetation or other long- lived and adaptable vegetation.
4. For establishing control of damaging insect populations, noxious weeds, and invader plant species.
5. For visibility and safety reasons.

Appendix 1C Iowa Noxious Weed Law

Chapter 317, Code of Iowa

317.1 Noxious weeds.

The following weeds are hereby declared to be noxious and shall be divided into two classes, namely:

1. Primary noxious weeds, which shall include quack grass (Agropyron repens), perennial sow thistle (Sonchus arvensis), Canada thistle (Cirsium arvense), bull thistle (Cirsium lanceolatum), European morning glory or field bindweed (Convolvulus arvensis), horse nettle (Solanum carolinense), leafy spurge (Euphorbia esula), perennial pepper-grass (Lepidium draba), Russian knapweed (Centaurea repens), buckthorn (Rhamnus, not to include Rhamnus frangula), and all other species of thistles belonging in genera of Cirsium and Carduus.

2. Secondary noxious weeds, which shall include butterprint (Abutilon theophrasti) annual, cocklebur (Xanthium commune) annual, wild mustard (Brassica arvensis) annual, wild carrot (Daucus carota) biennial, buckhorn (Plantago lanceolata) perennial, sheep sorrel (Rumex acetosella) perennial, sour dock (Rumex crispus) perennial, smooth dock (Rumex altissimus) perennial, poison hemlock (Conium maculatum), multiflora rose (Rosa multiflora), wild sunflower (wild strain of Helianthus annus L.) annual, puncture vine (Tribulus terrestris) annual, teasel (Dipsacus) biennial, and shattercane (Sorghum bicolor) annual.

The multiflora rose (Rosa multiflora) shall not be considered a secondary noxious weed when cultivated for or used as understock for cultivated roses or as ornamental shrubs in gardens, or in any county whose board of supervisors has by resolution declared it not to be a noxious weed. Shattercane (Sorghum bicolor) shall not be considered a secondary noxious weed when cultivated or in any county whose board of supervisors has by resolution declared it not to be a noxious weed.

317.2 State botanist.

The secretary of agriculture shall appoint as state botanist the head of the botany and plant pathology section of the Iowa agricultural experiment station whose duty shall be to co-operate in developing a constructive weed eradication program.

317.3 Weed commissioner---standards for noxious weed control.

The board of supervisors of each county may annually appoint a county weed commissioner who may be a person otherwise employed by the county and who passes minimum standards established by the department of agriculture and land stewardship for noxious weed identification and the recognized methods for noxious weed control and elimination. The county weed commissioner's appointment shall be effective as of March 1 and shall continue for a term at the discretion of the board of supervisors unless the commissioner is removed from office as provided for by law. The county weed commissioner may, with the approval of the board of supervisors, require that commercial applicators and their appropriate employees pass the same standards for noxious weed identification as established by the department of agriculture and land stewardship. The name and address of the person appointed as county weed commissioner shall be certified to the county auditor and to the secretary of agriculture within ten days of the appointment. The board of supervisors shall fix the compensation of the county weed commissioner and deputies. In addition to compensation, the commissioner and deputies shall be paid their necessary travel expenses. At the discretion of the board of supervisors, the weed commissioner shall attend a seminar or school conducted or approved by the department of agriculture and land stewardship relating to the identification, control, and elimination of noxious weeds.

The board of supervisors shall prescribe the time of year the weed commissioner shall perform the powers and duties of county weed commissioner under this chapter which may be during that time of year when noxious weeds can effectively be killed. Compensation shall be for the period of actual work only although a weed commissioner assigned other duties not related to weed eradication may receive an annual salary. The board of supervisors shall likewise determine whether employment shall be by hour, day or month and the rate of pay for the employment time.

317.4 Direction and control.

As used in this chapter, *"commissioner"* means the county weed commissioner or the commissioner's deputy within each county. Each commissioner, subject to direction and control by the county board of supervisors, shall supervise the control and destruction of all noxious weeds in the county, including those growing within the limits of cities, within the confines of abandoned cemeteries, and along streets and highways unless otherwise provided. A commissioner shall notify the department of public safety of the location of marijuana plants found growing on public or private property. A

commissioner may enter upon any land in the county at any time for the performance of the commissioner's duties, and shall hire the labor and equipment necessary subject to the approval of the board of supervisors.

317.5 Weeds in abandoned cemeteries.

The commissioner shall control the weeds growing in abandoned cemeteries in the county as needed. Spraying for control of weeds shall be limited to those circumstances when it is not practical to mow or otherwise control the weeds.

317.6 Entering land to destroy weeds---notice.

In case of a substantial failure by the owner or person in possession or control of any land to comply with any order of destruction pursuant to the provisions of this chapter, the county weed commissioner, the weed commissioner's deputies and employees acting under the weed commissioner's direction shall have full power and authority to enter upon any land within their county for the purpose of destroying noxious weeds. Such entry may be made without the consent of the landowner or person in possession or control of the land but actual work of destruction shall not be commenced until five days after the service of a notice in writing on the landowner and on the person in possession or in control of the land. The notice shall state the facts as to failure of compliance with the county program of weed destruction order or orders made by the board of supervisors and shall be served in the same manner as an original notice except as hereinafter provided. The notice may be served by the weed commissioner, the weed commissioner's deputies or any person designated in writing by the weed commissioner and filed in the office of the county auditor. Provided, however, that service on persons living temporarily or permanently outside of the county may be made by sending the written notice of noncompliance by certified mail to said person at the last known address to be ascertained, if necessary, from the last tax list in the county treasurer's office. Where any person, firm or corporation owning land within the county has filed a written instrument in the office of the county auditor designating the name and address of its agent, the notice herein provided may be served on that agent. In computing time hereunder it shall be from the date of service as evidenced on the return or if made by certified mail, from the date of mailing as evidenced by the certified mail book at the post office where mailed.

317.7 Report to board.

Each weed commissioner shall for the territory under the commissioner's jurisdiction on or before the first day of November of each year make a written report to the board of supervisors. Said report shall state:

1. The name and location of all primary noxious weeds, and any new weed which appears to be a serious pest.

2. A detailed statement of the treatment used, and future plans, for eradication of weeds on each infested tract on which the commissioner has attempted to exterminate weeds, together with the costs and results obtained.

3. A summary of the weed situation within the jurisdiction, together with suggestions and recommendations which may be proper and useful, a copy of which shall be forwarded to the state secretary of agriculture.

317.8 Duty of secretary of agriculture or secretary's designee.

The secretary of agriculture or the secretary's designee is vested with the following duties, powers and responsibilities:

1. The secretary or the secretary's designee shall serve as state weed commissioner, and shall co-operate with all boards of supervisors and weed commissioners, and shall furnish blank forms for reports made by the supervisors and commissioners.

2. The secretary or the secretary's designee may, upon recommendation of the state botanist, temporarily declare noxious any new weed appearing in the state which possesses the characteristics of a serious pest.

3. The secretary or the secretary's designee shall aid the supervisors in the interpretation of the weed law, and make suggestions to promote extermination of noxious weeds.

4. The secretary or the secretary's designee shall aid the supervisors in enforcement of the weed law as it applies to all state lands, state parks and primary roads, and may impose a maximum penalty of a ten dollar fine for each day, up to ten days, that the state agency in control of land fails to comply with an order for destruction of weeds made pursuant to this chapter.

317.9 Duty of board to enforce.

The responsibility for the enforcement of the provisions of this chapter shall be vested in the board of supervisors as to all farm lands, railroad lands, abandoned cemeteries, state lands and state parks, primary and secondary roads; roads, streets and other lands within cities unless otherwise provided.

317.10 Duty of owner or tenant.

Each owner and each person in the possession or control of any lands shall cut, burn, or otherwise destroy, in whatever manner may be prescribed by the board of supervisors, all noxious weeds thereon as defined in this chapter at such times in each year and in such manner as shall be prescribed in the program of weed destruction order or orders made by the board of supervisors, and shall keep said lands free from such growth of any other weeds, as shall render the streets or highways adjoining said land unsafe for public travel.

317.11 Weeds on roads---harvesting of grass.

The county boards of supervisors and the state department of transportation shall control noxious weeds growing on the roads under their jurisdiction. Spraying for control of noxious weeds shall be limited to those circumstances when it is not practical to mow or otherwise control the noxious weeds.

Nothing under this chapter shall prevent the landowner from harvesting, in proper season, the grass grown on the road along the landowner's land except for vegetation maintained for highway purposes as part of an integrated roadside vegetation management plan which is consistent with the objectives in section 314.22.

317.12 Weeds on railroad or public lands and gravel pits.

All noxious weeds on railroad lands, public lands and within incorporated cities shall be treated in such manner, approved by the board of supervisors, as shall prevent seed production and either destroy or prevent the spread of noxious weeds to adjoining lands. Gravel pits infested with noxious weeds shall not be used as sources of gravel for public highways without previous treatment approved by board of supervisors.

317.13 Program of control.

The board of supervisors of each county may each year, upon recommendation of the county weed commissioner by resolution prescribe and order a program of weed control for purposes of complying with all sections of this chapter. The county board of supervisors of each county may also by adopting an integrated roadside vegetation management plan prescribe and order a program of weed control for purposes of complying with all sections of this chapter. The program for weed control ordered or adopted by the county board of supervisors shall provide that spraying for control of weeds shall be limited to those circumstances when it is not practical to mow or otherwise control the weeds.

The program of weed control shall include a program of permits for the burning, mowing, or spraying of roadsides by private individuals. The county board of supervisors shall allow only that burning, mowing, or spraying of roadsides by private individuals that is consistent with the adopted integrated roadside vegetation management plan. This paragraph applies only to those roadside areas of a county which are included in an integrated roadside vegetation management plan.

317.14 Notice of program.

Notice of any order made pursuant to section 317.13 shall be given by one publication in the official newspapers of the county and shall be directed to all property owners.

Said notice shall state:

1. The time for destruction.

2. The manner of destruction, if other than cutting above the surface of the ground.

3. That unless said order is complied with the weed commissioner shall cause said weeds to be destroyed and the cost thereof will be taxed against the real estate on which the noxious weeds are destroyed.

317.15 Loss or damage to crops.

The loss or damage to crops or property incurred by reason of such destruction shall be borne by the titleholder of said real estate, unless said real estate shall be sold under contract whereby possession has been delivered to the purchaser, in which event such purchaser shall bear such loss or damage, excepting where a contract has been entered into providing a different adjustment for such loss or damage.

317.16 Failure to comply.

In case of a substantial failure to comply by the date prescribed in any order of destruction of weeds made pursuant to this chapter, the weed commissioner or the deputies may, subsequent to the time after service of the notice provided for in section 317.6 enter upon the land and cause the weeds to be destroyed, or may impose a maximum penalty of a ten dollar fine for each day, up to ten days, that the owner or person in control of the land fails to comply. If a penalty is imposed and the owner or person in control of the land fails to comply, the weed commissioner shall cause the weeds to be destroyed. If the weed commissioner enters the land and causes the weeds to be destroyed, the actual cost and expense of cutting, burning or otherwise destroying the weeds, along with the cost of serving notice and special meetings or proceedings, if any, shall be paid by the county and, together with the additional assessment to apply toward costs of supervision and administration, be recovered by an assessment against the tract of real estate on which the weeds were growing, as provided in section 317.21. Any fine imposed shall be recovered by a similar assessment.

317.17 Additional noxious weeds.

The board of supervisors shall order the weed commissioner, or commissioners, to destroy or cause to be destroyed any new weeds declared to be noxious by the secretary of agriculture, the cost of which shall be borne by the county.

317.18 Order for destruction on roads.

The board of supervisors may order all noxious weeds, within the right-of-way of all county trunk and local county roads to be cut, burned or otherwise controlled to prevent seed production, either upon its own motion or upon receipt of written notice requesting the action from any residents of the township in which the roads are located, or any person regularly using the roads. The order shall be consistent with the county integrated roadside vegetation management plan, if the county has adopted such a plan, and the order shall define the roads along which noxious weeds are required to be cut, burned or otherwise controlled and shall require the weeds to be cut, burned or otherwise controlled within fifteen days after the publication of the order in the official newspapers of the county or as prescribed in the county's integrated roadside vegetation management plan. The order shall provide that spraying for control of noxious weeds shall be limited to those circumstances when it is not practical to mow or otherwise control the weeds.

317.19 Road clearing appropriation.

The board of supervisors may appropriate moneys to be used for the purposes of cutting, burning, or otherwise controlling weeds or brush within the right-of-way of county trunk roads and local county roads in time to prevent reseeding or in a manner consistent with the county's roadside vegetation management plan, if the county has adopted such a plan. The moneys appropriated shall not be spent on spraying for control of weeds except in those circumstances when it is not practical to mow or otherwise control the weeds. The board of supervisors may purchase or hire necessary equipment or contract with the adjoining landowner to carry out this section.

317.20 Equipment and materials---use on private property.

The board of supervisors may appropriate moneys for the purpose of purchasing weed eradicating equipment and materials to carry out the duties of the commissioner for use on all lands in the county, public or private, and for the payment of the necessary expenses and compensation of the commissioner, and the commissioner's deputies, if any. When equipment or materials so purchased are used on private property within the corporate limits of cities by the commissioner, the cost of materials used and an amount to be fixed by the board of supervisors for the use of the equipment shall be returned by the county treasurer upon the collection of the special assessment taxed against the property. In the certification to the county treasurer by the county auditor this apportionment shall be designated along with the special tax assessed under section 317.21. The equipment and its use are subject to the authorization and direction of the county board of supervisors.

317.21 Cost of such destruction.

When the commissioner destroys any weeds under the authority of section 317.16, after failure of the landowner responsible to destroy such weeds pursuant to the order of the board of supervisors, the cost of the destruction shall be assessed against the land and collected from the landowner responsible in the following manner:

1. Annually, after the weed commissioner has completed the program of destruction of weeds by reason of noncompliance by persons responsible for the destruction, the board of supervisors shall determine as to each tract of real estate the actual cost of labor and materials used by the commissioner in cutting, burning, or otherwise destroying the weeds, the cost of serving notice, and of special meetings or proceedings, if any. To the total of all sums expended, the board shall add an amount equal to twenty- five percent of that total to compensate for the cost of supervision and administration and assess the resulting sum against the tract of real estate by a special tax, which shall be certified to the county auditor and county treasurer by the clerk of the board of supervisors, and shall be placed upon the tax books, and collected, with interest after delinquent, in the same manner as other unpaid taxes. The tax shall be due on March 1 after assessment, and shall be delinquent from April 1 after due unless the last day of March is a Saturday or Sunday, in which case the tax becomes delinquent from the following Tuesday. When collected, the moneys shall be paid into the fund from which the costs were originally paid.

2. Before making any such assessment, the board of supervisors shall prepare a plat or schedule showing the several lots, tracts of land or parcels of ground to be assessed which shall be in accord with the assessor's records and the amount proposed to be assessed against each of the same for destroying or controlling weeds during the fiscal year.

3. Such board shall thereupon fix a time for the hearing on such proposed assessments, which time shall not be later than December 15 of the year, and at least twenty days prior to the time thus fixed for such hearing shall give notice thereof to all concerned that such plat or schedule is on file, and that the amounts as shown therein will be assessed against the several lots, tracts of land or parcels of ground described in said plat or schedule at the time fixed for such hearing, unless objection is made thereto. Notice of such hearing shall be given by one publication in official county newspapers in the county in which the property to be assessed is situated; or by posting a copy of such notice on the premises affected and by mailing a copy by certified mail to the last known address of the person owning or controlling said premises. At such time and place the owner of said premises or anyone liable to pay such assessment, may appear with the same rights given by law before boards of review, in reference to assessments for general taxation.

317.22 Duty of highway maintenance personnel.

All officers directly responsible for the care of public highways shall make a complaint to the weed commissioners or board of supervisors, if it appears that the provisions of this chapter may not be complied with in time to prevent the blooming and maturity of noxious weeds or the unlawful growth of weeds or marijuana, whether in the streets or highways for which they are responsible or upon lands adjacent to the same.

317.23 Duty of county attorney.

It shall be the duty of the county attorney upon complaint of any citizen that any officer charged with the enforcement of the provisions of this chapter has neglected or failed to perform the officer's duty, to enforce the performance of such duty.

317.24 Punishment of officer.

Any officer referred to in this chapter who neglects or fails to perform the duties incumbent upon the officer under the provisions of this chapter shall be guilty of a simple misdemeanor.

317.25 Teasel, multiflora rose, and purple loosestrife prohibited---exceptions.

A person shall not sell, offer for sale, or distribute teasel (Dipsacus) biennial, the multiflora rose (rosa multiflora), purple loosestrife (lythrum salicaria), or seeds of them in any form in this state. However, this section does not prohibit the sale, offer for sale, or distribution of the multiflora rose (rosa multiflora) used for understock for either cultivated roses or ornamental shrubs in gardens. This section also does not prohibit the sale, offer for sale, or distribution of varieties of the purple loosestrife (lythrum virgatum) when used for ornamental gardens, and which are sterile or nonaggressive according to a list published by the state weed commissioner pursuant to chapter 17A. A person engaged in the business of selling purple loosestrife shall keep accurate records, as specified by the department of agriculture and land stewardship, of each variety of purple loosestrife sold, offered for sale, or distributed. The person shall allow the department of agriculture and

land stewardship to inspect the records during regular business hours. Any person violating the provisions of this section is subject to a fine of not exceeding one hundred dollars.

317.26 Alternative remediation practices.

The director of the department of natural resources, in cooperation with the secretary of agriculture and county conservation boards or the board of supervisors, shall develop and implement projects which utilize alternative practices in the remediation of noxious weeds and other vegetation within highway rights-of-way.

Appendix 2 Johnson County Brush Control Policy

JOHNSON COUNTY BRUSH CONTROL POLICY

This policy addresses the procedures and methods for the proactive management of woody vegetation adjacent to roads under the jurisdiction of the Johnson County Board of Supervisors. It is the duty of the Board of Supervisors and the Johnson County Secondary Road Department to maintain a county road system that is reasonably safe and convenient for public travel, and to manage roadside resources with an eye toward preservation of beneficial plant communities. In 1990, Johnson County adopted an Integrated Roadside Vegetation Management Plan to address these needs. Johnson County's Roadside Vegetation Management Program has and will continue to make progress toward providing a safe, low maintenance roadside using approved management techniques. In accepting responsibility for the roadway, Johnson County recognizes that even the most skilled and cautious driver is subject to errors or situations which may cause a vehicle to stray from the road surface. The recovery area allows for such situations and can allow vehicles to reenter the road surface without experiencing severe damage. Within financial and practicable limits, it is the Johnson County Secondary Road Department's intent to provide a road system that is reasonably safe and forgiving of human error. The number one concern for a brush removal policy is safety for the traveling and general public.

For the purposes of this policy, the traveled way is that portion of the road used for the movement of vehicles, exclusive of shoulders. The roadside is that portion maintained for safety and public convenience beyond the traveled way.

The roadside serves many purposes. Some of these purposes are to provide for: a space to escape or avoid accidents, improved sight distance, space for maintenance activities such as snow removal and storage, an area which allows for road drainage, areas to plant and manage prairie species for tree, weed and erosion control, areas for overhead and buried utility services, an area of valuable wildlife habitat, and for attempted preservation of existing native plant communities.

Johnson County's Integrated Roadside Vegetation Management Program uses several management techniques to meet all of these purposes and to provide a safe and environmentally sound roadway.

RIGHT OF WAY AREAS TO BE TREATED

For the good of public safety and the traveling public, the Right of Way must be managed to reduce accident severity and to increase driver visibility. The majority of roads within Johnson County have a 66ft. Right of Way. Generally the traveled portion of the road (road surface) is approximately 25 feet wide, which leaves 20.5 feet of area on either side for maintenance and management activities. If not managed for the reasons above, brush and trees can take over the shoulder areas, encroach onto the traveled surface, obstruct driver vision, increase icing hazards, and impact the safety and convenience of the motoring public. In addition, brush growing too close to the road tends to cause snow-drifting problems in the winter, leads to root invasion and road surface heaving, and drainage pattern changes from diverted channels, which encourages erosion. Overgrowth of limbs and brush invoke a response from motorists to cross the centerline to avoid paint scraping and other damage to vehicles.

Tree and brush management priority shall be by road system, with the primary roads having the highest priority. Management priority shall be asphalt or concrete mats (paved), oil and chip seal roads, granular surface roads (gravel), and lastly, Level B Maintenance roads (dirt), in that order. The Johnson County Engineer or designee shall decide the degree of hazard exposure priority.

There are certain conditions within the Right of Way in which brush or trees present clear hazards. In these situations, the brush and trees which are in close proximity to the road surface must be removed. Trees within the Right of Way, but greater than 30 feet from the road surface present reduced hazard and may be considered individually.

Areas in which brush and trees must be managed to promote safety:

1). All brush and trees on the foreslope and ditch bottom must be removed
2). Brush at intersections must be removed to a minimum distance of 350 ft. to provide visibility of hazards or oncoming vehicles.
3). Brush must be removed around traffic warning signs to a minimum distance of 350 feet, allowing viewing at typical road speeds.
4). Brush on inside horizontal curves at points obscuring driver vision.
5). Brush on outside horizontal curves and trees in a target position for errant vehicles.
6). Trees and limbs overhanging road surfaces, creating icing or snow drifting hazards, providing too little vertical or horizontal clearance, or which cause a vehicle to move out of the proper lane must be either pruned or removed.

Trees/brush will also be considered for removal in these instances: Accident frequency (evidence of vehicle/tree accident) either from actual reports or scarring. Also to be considered for removal are problem species which encourage the spread of disease or which have been designated by USDA/IDALS or Johnson County, as invasive, noxious, or undesirable.

If the following conditions exist within the Right of Way, it may be possible to retain trees that would otherwise be considered for removal: 1). There are trees of Endangered/Threatened species, as defined by state or federal listings, 2). Trees are behind nontraversable backslopes or banks, 3). Trees are behind guardrails, providing a minimum of 4 feet of clearance from guardrail to tree, 4). Trees within the Right of Way which are greater than 30 feet from the traveled portion of the road, or 5). Where removal would adversely affect wetlands or water quality. Approved tree or shrub species, which, when located on the backslope, and are not causing drifting, icing, visibility problems, or other road hazards, should be left for wildlife habitat. A list of approved tree or shrub species is attached as Appendix A. Situations will be inspected individually by the Johnson County Engineer or designee. This guideline is subordinate to any federal or state requirements associated with road projects constructed to current engineering design standards.

Johnson County Brush Control Policy Summary

Locations where brush and trees are managed in the County Right of Way

1). All brush and trees will be removed from the shoulder and ditch bottom.

2). All brush and trees will be removed at least 350 ft. from all intersections and in front of traffic warning signs.

3). All brush and trees on inside or outside corners.

4). All brush and trees in locations:
- Obstructing driver vision
- Causing drifting or icing hazards
- Which make a vehicle move out of its appropriate travel lane
- Which are in a target position for errant vehicles will be removed or pruned

5). Brush and trees overhanging the traveled portion of the road- 25 feet minimum height required.

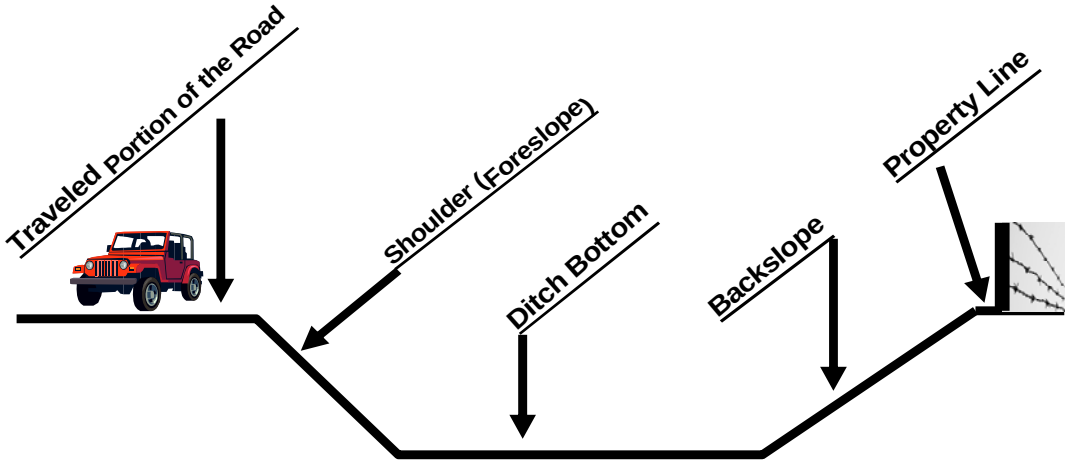
6). Brush located on the backslope of the road which will exceed 4 (four) inches in diameter at maturity will be removed (ie. Elm, Mulberry, Oak, Boxelder, etc.).

Possible Suitable Locations for Brush and Trees in Johnson County Right of Way

1). Brush and tree species with less than 4 (four) inch stem diameter at maturity, which, when located on the backslope, and are not causing a visibility, drifting, icing or other problem may be left. Requirements of #2 and #4 above must still be met for signs and intersections. Examples of suitable species are listed in the Brush Control Policy.

2). Brush and tree species with greater than 4 (four) inch stem diameter at maturity, which, when located greater than 30 feet from the traveled portion of the road and do not present a hazard for errant vehicles will be considered individually for management.

3). Brush and trees behind guardrails with at least 4 feet of clearance between guardrail and tree.



Typical Road Cross Section and Locations

TREATMENT METHODS

Johnson County will provide regular, on going training on various brush and tree control methods to employees. Training will be on topics such as: traffic and equipment safety, tree and plant identification, safe and correct use of herbicide application equipment and products, proper pruning techniques, IRVM fundamentals (i.e. prescribed burning, prairie planting, etc.), seeding and mowing techniques. The County is committed to providing education to employees about Right of Way vegetation management and ways to improve roadsides. Training will be conducted by the Roadside Vegetation Manager or by using appropriate training professionals.

Mechanical- Physical removal of trees and brush with large equipment (excavators, bulldozers, etc.), or hand cut with chainsaws, etc. Brush control may be either by mechanical means or hand cutting consistent with the physical and cost restraints of limited equipment, time, personnel, and funds for this purpose. Naturally occurring remnant prairies will have brush removed by hand. Reconstructed prairies will be subject to listed management methods, with the goal of avoiding disturbance to beneficial plant communities.

Mowing- Mowing of small trees or brush and chemically treating stumps (when practical) to prevent resprouting. This may entail mowing of foreslope, ditch bottom, or backslope, which are infested with brush and small trees. Ditch bottom and backslope mowing will take place primarily in the late summer through early spring, with the exception of brush in locations causing road hazards. Brush on backslopes will be mowed when it is in appropriate safe zones, as defined by this policy.

Prescribed Burning- Using controlled fire to stunt or kill small brush species and to prevent woody encroachment into remnant or established prairie locations. This is generally not effective on larger trees (i.e. >2-3 inches diameter).

Chemical- Using a spot herbicide application program with IRVM goals to control small brush within the Right of Way. The spot application is designed to target specific problem species to avoid disturbance to more beneficial plant communities. The herbicides used will be only those approved by appropriate state and federal agencies for this purpose and in this location. All applicators shall receive annual training on herbicide use and safety, and plant identification. Herbicides shall be applied only by state licensed and properly trained or supervised personnel, using appropriate equipment, and shall be applied in a timely fashion, with the intent of killing, or significantly retarding, woody plant growth. This includes cut stump, frill, basal bark, and limited foliar applications. Foliar applications shall be limited to spot spraying of small individual brush in problem locations. No blanket foliar spraying will be done. Foliar applications will only be used in areas where other treatment methods are ineffective. No foliar application for woody species control will be done in naturally occurring remnant prairies. A Roadside Maintenance Agreement, available from the Roadside Vegetation Manager, allows the property owner to manage vegetation within the Right of Way adjacent to their property without the use of spot herbicide applications. Vegetation must be maintained in accordance with Johnson County Brush Control & Noxious Weed Policies. The property owner may request this

annual Agreement which explains the property owner's responsibility in order to avoid the spot herbicide application. Organic producers, beekeepers, etc. are encouraged to obtain Roadside Maintenance Agreements, and post Official County signs at property borders.

Competitive Seeding- Planting of native prairie vegetation or other hardy perennial plants, where feasible, to help control encroaching brush and weeds, and to reduce long-term area maintenance costs. This method shall be used in large brush removal areas as time and funds permit.

Tree Pruning- The purpose of tree pruning is twofold. The primary purpose is to remove limbs necessary to obtain appropriate horizontal and vertical roadside recovery area (above the road and roadside), and to preserve or extend the life of the tree. Tree pruning shall also take place to increase sunlight onto the road surface to aid in snowmelt. Trees shall be pruned to obtain a minimum of 25 feet vertical clearance. This allows taller vehicles, such as school buses, farm equipment, or dump trucks to use the road without damage to the vehicle or tree. If possible, and where feasible, trees in front of dwellings shall be pruned to increase horizontal and vertical clearance, rather than direct removal. Brush which is growing close to the road, where the driver feels they must move out of their lane to avoid it, must be removed or pruned. Trees which originate from private property and overhang the roadway shall be pruned back to the Right of Way line using accepted arboricultural practices, where feasible. The secondary purpose of pruning is to remove dead, dying, or weakened tree limbs, which, in the opinion of the County Engineer or designee, present a hazard.

Stump Removal- Where trees exceeding six inches in diameter are removed, the remaining stump shall not exceed four inches above ground level. Stump removal for other than hazardously positioned trees should be considered lower priority than tree removal or pruning, but it is the intent that stumps shall be flush cut and treated with herbicide to prevent regrowth.

TREE AND SHRUB PLANTINGS

Trees or shrubs shall not be planted or allowed to grow in the Right of Way within 30 feet of the traveled portion of a public road. Existing trees or shrub plantings adjacent to a home or dwelling which have been planted in close proximity to the roadway, or are causing a vision problem, i.e. inside curves, intersections, or are causing a snow drifting or icing problem, will be removed. Landowners shall have the option to transplant these trees or shrubs, at their expense, out of the public Right of Way adjacent to their property. Landowners shall be notified to remove these trees or undesirable vegetation, with 30 days to complete the work (unless otherwise specified). This gives the landowner ample time to move the trees or vegetation to a more desirable location. If, after 30 days, the work has not been satisfactorily completed, a follow up letter will be sent, specifying the removal will be done by Secondary Roads when conditions permit. Tree and shrub species planted as part of the Adopt-A-Roadway Program landscaping section shall not exceed 4 inches in stem diameter at maturity. A list of these approved species is attached as Appendix A, and all species must be approved by the Roadside Vegetation Manager prior to planting. No tree or shrub species will be planted in naturally occurring remnant or reconstructed prairies.

OTHER CONSIDERATIONS

An ongoing inventory of roadside vegetation resources and problems will be developed in order to facilitate better management. The inventory will contain information on prairie locations, areas of tree and brush infestations, noxious weed infestations, etc. This inventory process can help to identify areas which need special consideration and treatment, as well as problem areas which need attention. This inventorying process will also help to identify and protect naturally occurring remnant plant communities.

Trees/limbs within the Right of Way which are diseased/dead and could fall onto the roadway shall be removed. Trees which fall off of private property onto the roadway will be removed/trimmed within the borders of the public Right of Way. Trees which fall off the public Right of Way onto private land will be removed by the County. The County assumes no liability for damages caused by, or removal of, said trees.

Brush and trees removed within the Right of Way will be handled differently depending on situation and location. Brush will be either: chipped into roadside, chipped and hauled away, left in roadside, buried, hauled away, or burned. Low impact control methods shall be used, if possible, in areas of naturally occurring native plant communities including prairies, savanna, and wetlands.

This policy is proposed because of the need to address woody plant species within the County Right of Way. There is a clear need to have a set policy in regards to tree and brush removal, which is based on public safety, and sound environmental management practices. Using Integrated Roadside Vegetation Management to provide a proactive approach to brush and tree management is both publicly and environmentally friendly. Additionally, using several management tools for woody plant species control gives the IRVM program the flexibility needed to provide Johnson County with a safe and attractive roadside, along with improved wildlife habitat and erosion control.

APPENDIX A of Brush Control Policy

JOHNSON COUNTY
APPROVED SHRUB LIST
08-31-00

This list is a work in progress of trees and shrubs which are considered suitable within the Right of Way in the locations set forth in the Johnson County Brush Control Policy. This list is not all-inclusive, and may be edited to include or remove certain species as conditions or situations dictate. Emphasis will be placed on using native plant species with mature stem diameter of 4 inches or less. The Johnson County Engineer or designee should approve corrections or additions to this list.

APPROVED NATIVE SHRUB SPECIES

Allegany Blackberry	*Rubus allegheniensis*
American Black Currant	*Ribes americanum*
American Bladdernut	*Staphylea trifolia*
American Elder	*Sambucus canadensis*
American Hazelnut	*Corylus americana*
Atlantic Leatherwood	*Dirca palustris*
American Plum	*Prunus americana*
Beaked Filbert	*Corylus cornuta*
Black Haw	*Viburnum prunifolium*
Black Raspberry	*Rubus occidentalis*
Black Chokeberry	*Aronia melanocarpa*
Buffalo Currant	*Ribes odoratum*
Bunchberry Dogwood	*Cornus canadensis*
Canada Yew	*Taxus canadensis*
Carolina Rose	*Rosa carolina*
Common Buttonbush	*Cephalanthus occidentalis*
Common Juniper	*Juniperus communis*
Common Ninebark	*Physocarpus opulifolius*
Common Snowberry	*Symphoricarpus albus*
Cranberrybush Viburnum	*Viburnum trilobum*
Creeping Juniper	*Juniperus horizontalis*
Dwarf Bushhoneysuckle	*Diervilla lonicera*
Dwarf Chinkapin Oak	*Quercus prinoides*
Dwarf Wild Indigo	*Amorpha nana*
Early Wild Rose	*Rosa blanda*
Fragrant Sumac	*Rhus aromatica*
Gray Dogwood	*Cornus racemosa*
Hortulan Plum	*Prunus hortulana*
Indiancurrent Coralberry	*Symphoricarpos orbiculatus*

Indigobush	*Amorpha fruticosa*
Juneberry	*Amelanchier alnifolia*
Leadplant	*Amorpha canescens*
Long-beaked Willow	*Salix bebbiana*
Low-bush Blueberry	*Vaccinium angustifolium*
Missouri Gooseberry	*Ribes missouriense*
Meadowsweet Spirea	*Spirea alba*
Mountain Alder	*Alnus incana*
Nannyberry	*Viburnum lentago*
Northern Arrowwood	*Viburnum molle*
New Jersey Tea	*Ceanothus americanus*
Pagoda Dogwood	*Cornus alternifolia*
Prairie Crabapple	*Malus ioensis*
Prairie Rose	*Rosa setigera*
Prairie Willow	*Salix humilus*
Prickly Gooseberry	*Ribes cynosbati*
Pussy Willow	*Salix discolor*
Redbud	*Cercis canadensis*
Red Raspberry	*Rubus strigosus*
Redosier Dogwood	*Cornus stolonifera*
Rough-leafed Dogwood	*Cornus drummondii*
Sand Cherry	*Prunus pumila*
Scarlet Elder	*Sambucus pubens*
Serviceberry	*Amelanchier arborea*
Shining Willow	*Salix lucida*
Shrubby St. Johnswort	*Hypericum prolificum*
Silky Dogwood	*Cornus amomum*
Silver Buffaloberry	*Sheperdia argentea*
Smooth Sumac	*Rhus glabra*
Staghorn Sumac	*Rhus typhina*
Wafer Ash	*Ptelea trifoliata*
Wahoo	*Euonymus atropurpurea*
Winterberry	*Ilex verticillata*
Witch Hazel	*Hamamelis virginiana*

ACCEPTABLE NON-NATIVE SHRUB SPECIES

These species are included as horticultural possibilities for private landowners and will not normally be planted by Johnson County.

Bottlebrush buckeye	*Aesculus parviflora*
Bridalwreath Spirea	*Spiraea prunifolia*
Bush Cinquefoil (Potentilla)	*Potentilla fruticosa*
Flowering Almond	*Prunus triloba*
Forsythia	*Forsythia spp.*
Hydrangea	*Hydrangea arborescens*

Lilac	*Syringa vulgaris*
Mock Orange	*Philadelphus pubescens*
Nanking Cherry	*Prunus tomentosa*
Northern Bayberry	*Myrica pennsylvanica*
Potentilla	*Potentilla fruticosa*
Rose of Sharon	*Hibiscus syriacus*
Rugosa Rose	*Rosa rugosa*
Spicebush	*Lindera benzoin*
Weigelia	*Weigelia florida*

UNACCEPTABLE SHRUB SPECIES

A list of unacceptable plant species is included below. Plant species which occur on this list are considered invasive or noxious, and are unsuitable for use within the Right of Way. This list is subject to additions or corrections, as more information and growth characteristics become available.

Autumn Olive	*Elaeagnus umbellata*
Barberry	*Berberis thunbergii*
Burning Bush	*Euonymus alatus*
Buckthorn	*Rhamnus species (All)*
Honeysuckle	*Lonicera* species including *japonica, tatarica; mackii;* etc.
Multiflora Rose	*Rosa multiflora*
Russian Olive	*Elaeagnus angustifolia*

Appendix 3 Johnson County Noxious Weed Policy

JOHNSON COUNTY
NOXIOUS WEED POLICY

INTEGRATED ROADSIDE VEGETATION MANAGEMENT

This policy addresses the control of invasive and noxious weeds within the Johnson County Secondary Road System public right of way. The County is required to control Primary and Secondary noxious weeds as listed in the *Code of Iowa*, Chapter 317, and by Board of Supervisors Resolution 04-26-01-01 *Stigmatizing Noxious Weeds* (see Appendix A).

INTRODUCTION

In 1990, the Johnson County Board of Supervisors approved an Integrated Roadside Vegetation Management Program (IRVM) to better serve the public by using an integrated approach to roadside vegetation maintenance. Integrated Roadside Vegetation Management is a long-term approach to evaluating, developing, improving and maintaining vegetation on road rights of way. IRVM is also a decision-making and quality management process for maintaining roadside vegetation that integrates the following:

-needs of local communities and highway users,
-knowledge of plant ecology and plant processes,
-design, construction, and maintenance considerations,
-monitoring and evaluation procedures,
-government statutes and regulations, and
-technology,

...with cultural, biological, mechanical, and chemical pest control methods to economically manage roadsides for safety, environmental benefits, and visual quality.

The ultimate purpose of any Roadside Vegetation Management program is to provide a safe, healthy, and environmentally sustainable roadway, and also to preserve and improve aesthetics and native biodiversity along the county's secondary road system. IRVM is a program for accomplishing these objectives in the most economically and environmentally responsible manner possible. The IRVM program is based on the belief that Johnson County's approximately 5,000 acres of rights of way represent a significant resource worth managing by the most sustainable methods possible to the greatest benefit to the county. The IRVM objective is to manage vegetation along County rights of way using several tools, rather than relying on just one. These techniques include: planting of native prairie plants to outcompete weeds and trees, use of prescribed burning, use of mowing for safety, vision, and weed control, attempted preservation of native plant communities for competitive ground cover, and a spot herbicide application program.

Historically, the vegetation management practice was to blanket spray the roadside with herbicide to eliminate weeds. This killed the weeds, but also stressed, weakened, and often killed the desirable species, including native wildflowers, which created opportunities for more weeds to grow. Since that

time, it has been shown that a spot application program, rather than blanket spraying, along with the previous techniques mentioned, gave a more economically maintained, and more environmentally friendly roadside. In the 1980's, the Johnson County Board of Supervisors decided to eliminate roadside herbicide applications for weed and tree control and to evaluate the effects of not using herbicides. Current vegetation management practices within the disturbance prone right of way are mowing, prescribed burning, and competitive seedings. Without the careful use of a spot herbicide application program, these methods are of limited effectiveness to control or eliminate some noxious weed species, and difficult to implement fully, because of time and manpower, on over 1800 miles of roadside.

WHY CONTROL NOXIOUS WEEDS?

Noxious weeds are often exotic, introduced plant species which have no natural controls, spread rapidly, produce abundant seed, and can displace native plant communities. Noxious weeds quietly suffocate and lower diversity and quality of native plant communities. Once well established, most species of noxious weeds are very difficult, if not impossible, to control or eradicate, as well as being expensive and time-consuming to do so. A primary weed management goal is to keep plants from producing seeds and becoming well established. Without proper control, most of these exotic species can quickly expand their populations and encroach into farm lands, lawns, pastures, roadsides, etc. Because of the amount of disturbances in roadsides, coupled with plant communities which are not highly competitive, and generally poor soil conditions, weeds can move quickly into ditches. Roadsides can serve as an entry point for exotic species to rapidly travel into uninfested areas via vehicles, cargo, livestock, road maintenance equipment, etc. Noxious weeds degrade approximately 4000 acres of land per day in the United States. The Integrated Roadside Vegetation Management Program focuses its resources only on plant species which have been declared Noxious by the Code of Iowa or Johnson County, and encourages the growth of non-noxious and more competitive plants, often native prairie species. A complete list of noxious species is attached as Appendix A.

Noxious weeds need to be controlled because of their detrimental effects on agriculture such as lowered yield, decreased crop market values, decreased forage values, and competition for light, water, and nutrients. Noxious weeds can also amplify potential for run off and soil erosion, which can increase sedimentation and hurt water quality and fish populations. Land values and home aesthetics can also be reduced by unsightly noxious weeds and soil erosion. Noxious weeds can impair recreational opportunities, clog waterways, and can directly affect human and animal health.

HOW WEEDS ARE CONTROLLED

Johnson County will provide regular, ongoing training on various noxious weed control methods to employees. Training will be on topics such as: traffic and equipment safety, weed and plant identification, safe and correct use of herbicide application equipment and products, IRVM fundamentals (i.e. prescribed burning, prairie planting, etc.), seeding and mowing techniques, etc. The County is committed to providing education to employees about right of way vegetation management and ways to improve roadsides. Training will be conducted by the Roadside Vegetation Manager or by using other training professionals.

Of the 99 counties in Iowa, over half now have IRVM programs. These counties have adopted roadside vegetation management plans to better serve the public by using several of the techniques outlined below.

Competitive Seeding- Planting of native prairie vegetation or other hardy perennial plants, where feasible, to help control encroaching brush and weeds, and to reduce long-term area maintenance costs.

Prescribed Fire- Using controlled burning to manage noxious weeds. Expanded use of spring and fall burning can help to eliminate seeds and stress weeds. Prescribed burning works best in combination with competitive seeding to help establish warm season prairie grasses to outcompete some of the weeds. Burning can also be a valuable management tool to improve restored or remnant prairie areas, in place of, or in conjunction with, other weed management methods.

Mowing- Mowing is an effective tool in controlling population growth and seed production of most noxious weeds. However, several tough perennial weeds (*eg*. Canada Thistle- C*irsium arvense*) are insufficiently controlled by mowing and continued growth or spread may be stimulated in some species. Infested areas may require repeated mowing to reduce weed seed production and plant vigor. Mowing may be used in areas of the roadside which are not too steep or too wet to use equipment. Mowing works best in combination with competitive seeding to help establish warm season prairie grasses to outcompete some of the weeds.

Chemical- A critical tool employed by IRVM programs is a spot herbicide application program designed to control and reduce noxious weed populations. A spot application program:

1). Targets and treats specific noxious weeds,
2). Identifies growth characteristics and cycles,
3). Uses herbicides labeled specifically for that weed species and location,
4). Uses appropriate equipment to minimize drift and off site movement,
5). Attempts to minimize disturbance to beneficial plant communities, and
6). Weighs the effectiveness and safety of all management activities.

A spot application program reduces the amount of herbicide entering the roadside, while giving improved weed control results. In addition, preliminary use of herbicides can help to establish prairie plantings with less costly labor by controlling competition and speeding up prairie grass and wildflower growth. Careful use of herbicides for prairie plantings and weed control can improve grass stand success and establishment times, which result in less soil erosion, and lowered maintenance costs from seedbed preparation and mowing. Every effort will be made to avoid using herbicides on naturally occurring native plant communities or prairie reconstructions. All applicators of herbicides for noxious weed

control will be required to be licensed by the State of Iowa, Category 6, Right of Way Herbicide Application. In addition, all applicators will receive annual training on the topics listed above.

ROADSIDE MAINTENANCE AGREEMENT

A Roadside Maintenance Agreement, available from the Roadside Vegetation Manager, allows property owners to manage vegetation within the right of way adjacent to their property without the use of spot herbicide applications. Vegetation must be maintained in accordance with Johnson County Brush Control & Noxious Weed Policies. The property owner may request this annual Agreement which explains the property owner's responsibilities in order to avoid the spot herbicide application. Organic producers, beekeepers, etc. are encouraged to obtain Roadside Maintenance Agreements, and post official County signs at property borders.

CONCLUSION

Johnson County needs to take a strong stand to control weed invasion from the right of way onto private land, and weeds from private lands encroaching into the right of way. Millions of dollars are spent yearly on weed control in Iowa, and landowners are justifiably concerned about noxious weeds in the right of way. Many rural residents with noxious weed problems are not controlling weeds on their property because they perceive the adjacent right of way is infested.

This policy is proposed because of the need to proactively control noxious weeds in accordance with Iowa's Noxious Weed Law and Board of Supervisors' Resolutions. Weed control in the past has been a subject for many debates. Using all of the weed management techniques outlined in this policy, Johnson County's Integrated Roadside Vegetation Management Program can provide a more economically maintained, environmentally friendly roadside for residents to enjoy.

APPENDIX A

NOXIOUS & INVASIVE WEED SPECIES TO BE CONTROLLED

The Iowa Department of Agriculture and Land Stewardship and the Code of Iowa have declared 27 species of plants as noxious weeds which need to be controlled. Johnson County lists an additional 4 species of noxious weeds to be controlled. The following weeds have been declared noxious by the State of Iowa:

Buckhorn Plantain	*Plantago lanceolata*
Buckthorn	*Rhamnus* species
Bull Thistle	*Cirsium vulgare*
Butterprint (Velvetleaf)	*Abutilon theophrasti*
Canada Thistle	*Cirsium arvense*
Cocklebur	*Xanthium strumarium*
Field Bindweed	*Convolvulus arvensis*
Horse Nettle	*Solanunum carolinense*
Leafy Spurge	*Euphorbia esula*
Multiflora Rose	*Rosa multiflora*
Musk Thistle	*Carduus nutans*
Perennial Peppergrass (Hoary Cress)	*Cardaria draba*
Perennial Sow Thistle	*Sonchus arvensis*
Poison Hemlock	*Conium maculatum*
Puncture Vine	*Tribulus terrestris*
Purple Loosestrife	*Lythrum salicaria*
Quackgrass	*Agropyron repens*
Red Sorrel (Sheep Sorrel)	*Rumex acetosella*
Russian Knapweed	*Centaurea repens*
Shattercane	*Sorghum bicolor*
Smooth Dock (Pale Dock)	*Rumex altissimus*
Sour Dock (Curly Dock)	*Rumex crispus*
Tall Thistle	*Cirsium altissimum*
Teasel	*Dipsacus* species
Wild Carrot (Queen Anne's Lace)	*Daucus carota*
Wild Mustard	*Brassica kaber*
Wild Sunflower	*Helianthus annuus*

In addition to the State of Iowa Noxious Weed List, Johnson County lists an additional 4 species of noxious weeds. These species are listed below:

Japanese Knotweed	*Polygonum cuspidatum*
Marijuana	*Cannabis sativa*
Poison Ivy	*Toxicodendron radicans*
Wild Parsnip	*Pastinaca sativa*

INVASIVE WEED SPECIES WHICH MERIT MANAGEMENT CONSIDERATION

New exotic weed pests are continually being discovered encroaching into the State of Iowa. Many of these weed species can be controlled early in the discovery phase, and before infestation. The IRVM Program and the County Weed Commissioner, while focusing on noxious weeds, also evaluates the spread and the environmental impacts of new weeds on Johnson County. If a weed species is considered to have a significant detrimental impact on the resources of Johnson County, the Weed Commissioner can seek to have that species declared noxious by the Board of Supervisors. That weed species can then be included as part of the overall weed management plan.

This is a list of plant species which are considered invasive or aggressive by the Johnson County IRVM Program and County Weed Commissioner. These species are unsuitable for use or growth in roadside plant communities. Because of concern for their spread into public right of ways, planting these species in adjacent private lands is discouraged. This plant species list is not all-inclusive, and may be edited to include or remove certain species as conditions or situations dictate.

Pampas Grass	*Miscanthus* species
Garlic Mustard	*Alliaria petiolata*
Crown Vetch	*Coronilla varia*

Appendix 4 Native Plant Community Policy

Johnson County
Native Plant Community Policy

Integrated Roadside Vegetation Management

2006

Abstract

The intent of this *Native Plant Community Policy* is to provide guidance for the identification, care, and preservation of native remnants/restorations and reconstructions (including prairies, woodlands, wetlands, and mixtures of these communities) in Johnson County's right-of-ways, and to provide objective criteria for evaluating and ranking these communities. This policy addresses any roadway right-of-ways managed by the Secondary Road Department, and activities performed either by County personnel or by private individuals or companies seeking permits to work therein. Furthermore, this policy allows the incorporation of fact-based native-vegetation-related considerations into daily decision-making processes related to the ongoing maintenance of roads and utilities (including ditch maintenance), the siting and construction of roads and utilities, and other public uses of roadside right-of-ways. Although routine activities of private landowners in the right-of-ways are not regulated by county policies, these individuals are also encouraged to consider the suggestions made in the management section of this policy.

Native Plant Community Policy
Table of Contents

Introduction

Identification and Assessment of Native Plant Communities
- **A. Native Remnants/Restorations**
- **B. Reconstructions**

County Management of Native Plant Communities
- **A. Native Remnants/Restorations**
- **B. Reconstructions**

County Engineering and Construction Considerations
- **A. Native Remnants/Restorations**
- **B. Reconstructions**

Utility Company/Private Permits
- **A. Native Remnants/Restorations**
- **B. Reconstructions**

Bibliography

APPENDIX A: Definitions and their Application to Johnson County Right-of-Ways

APPENDIX B: Map of Native Roadside Plant Communities

APPENDIX C: Remnant Ranking System

APPENDIX D: Site Evaluations

APPENDIX E: Floristic Quality Assessment, FQA

Introduction

In 1990, the Johnson County Board of Supervisors approved an Integrated Roadside Vegetation Management (IRVM) program to better serve the public by using an integrated approach to roadside vegetation maintenance. The ultimate purpose of the IRVM program is to provide safe, healthy, and environmentally sustainable roadways. Objectives of the County's IRVM plan state that the program "be based on a systematic assessment of conditions existing in roadsides, preservation of valuable vegetation and habitats in the area, and the adoption of a comprehensive plan and strategies for cost-effective maintenance and vegetation planting." The intent of the Native Plant Community Policy (hereafter referred to as "this policy") is to provide guidance for the identification, care, and preservation of native remnants/restorations and planted vegetation (including prairies, woodlands, wetlands, and mixtures of these communities) in the County's right-of-ways, and to provide objective criteria for evaluating and ranking these communities.

If the guidance in this policy is followed, the likely benefits will be:

- To recognize and consider native plant communities as valuable natural resources when carrying out road construction/maintenance.
- To identify and maintain potential sources of seed for future plantings.
- To preserve habitat for wildlife.
- To preserve native biodiversity in Johnson County roadsides.
- To encourage the preservation of native plant communities by private landowners.
- To recognize native plant communities as valued cultural, historical, and educational resources for present and future generations.
- To provide a reminder of the aesthetic pleasure that native plants have afforded to past and present residents.
- To reduce County expenditures for seeding, reseeding, and maintenance.

This policy addresses any roadway right-of-ways managed by the Secondary Road Department, and activities performed either by County personnel, or by private individuals or

companies seeking permits to work therein. Furthermore, this policy allows the incorporation of fact-based vegetation-related considerations into daily decision-making processes. These processes relate to the ongoing maintenance of roads and utilities (including ditch maintenance), the siting and construction of roads and utilities, and other public uses of road right-of-ways. A more proactive stance enables the County to make informed maintenance and management decisions while attempting to conserve native biodiversity. Although routine activities of private landowners in the right-of-ways are not regulated by county policies, these individuals are also encouraged to consider the suggestions made in the management section (page 5) of this policy. This policy is not intended to unduly restrict road construction or magnify problems with maintaining the County's roads.

In Johnson County, the Secondary Road right-of-ways contain the following four mixtures of herbaceous ground cover: a) domestic grass stands, b) native remnants/restorations, c) reconstructions, and d) weeds. (See definitions in Appendix A.) This policy addresses only two of the above types: native remnants/restorations and reconstructions. Native remnants/restorations will be treated separately from reconstructions in this policy for the following reasons:

- Very few native remnants remain in Johnson County. These remnants harbor genetic resources adapted over the millennia to local conditions. This valuable genetic reservoir can only decline as the County's continued development homogenizes the roadsides with groomed plantings of exotic turf and ornamental species.
- Reconstructions are covering an increasing area of roadsides as public and private parties recognize the value of native plant materials as attractive, low-maintenance roadside cover.
- Only a limited portion of roadsides can be targeted for the special management and other considerations outlined herein. Thus, such considerations are concentrated on plant communities of maximum worth, irreplaceable native remnants, which must not compete for protection with the constantly expanding reconstructions.

Native remnants/restorations on level B roads are not currently being considered due to Board of Supervisors policy. Current Board policy directs minimal management of level B

roads, to include the roadside. Therefore, vegetation on level B roadsides will be managed only with site-specific permission from the Board of Supervisors. In addition, roadsides that lie in Johnson County but are maintained by other counties are not considered in this policy.

Educational activities (e.g., web information, tours, fair booths, programs) regarding this policy and the value of native roadside plant communities are considered an integral part of the policy.

At the regularly scheduled IRVM meeting, the Roadside Vegetation Manager (RVM) will include an update regarding County and permittee activities that may impact native remnants/restorations and reconstructions. Whenever possible, the RVM will inform the IRVM committee members when County or permittee activities will significantly impact any identified remnant.

Identification and Assessment of Native Plant Communities

No two native plant communities are identical. They may differ significantly in type, quality, size, diversity, and presence of non-native species. They also change through time in species composition, size, and location. Native plant communities may improve in quality or lose significant species, expand or contract, become more dominated by native species or negatively impacted by invasive plants, and even slowly migrate from one location to another. Therefore, identification and assessment of native plant communities must be an ongoing process. A brief explanation of this process is provided below.

A. Native Remnants/Restorations:

The first and ongoing step in the assessment of native plant communities is the identification and documentation of native remnants/restorations. To date, information has been compiled for this purpose from the following sources: a) a roadside survey performed by Professor Lon Drake, 1983; b) map data from former Johnson County RVM Russ Bennett, 1990-1999; c) natural areas inventory by Professor Steve Hendrix, 1993; d) map data from current Johnson County RVM Chris Henze, 1999-present; and e) the 2002 Johnson County Roadside Inventory prepared by the Iowa Valley Resource Conservation & Development (Iowa Valley

RC&D). The resulting data have been digitized and are in a Geographic Information System (GIS) database maintained by the Iowa Geological Survey. This continually evolving geodatabase and the corresponding maps found in Appendix B will be updated periodically as new information becomes available, and are the basis for the identification and ranking of native remnants/restorations covered in this policy.

Once identified, native plant communities will be further assessed, prioritized, and ranked through a system that utilizes the following factors: 1) adjacency, 2) native species conservativeness, 3) existence of threatened and/or endangered species, 4) remnant size, and 5) ecological diversity. This ranking system was developed in an attempt to remove subjectivity from the process of selecting sites, and to take into account those factors most important in preserving sites. The rationale for including each of these factors is provided below. A complete explanation of the ranking system can be found in Appendix C.

1) Adjacency: Right-of-ways remnants that are adjacent to other remnants beyond the right-of-ways become part of a larger unit with greater integrity and functional value. Such right-of-ways remnants also might serve as corridors between disjunct remnants on adjacent lands.
2) Native Species Conservativeness: If a native species is more conservative (i.e., if it has a larger "coefficient of conservatism" or C value), the plant is indicative of an un-degraded, mature native community that reflects our state's presettlement condition.
3) Existence of State-Listed Threatened , Endangered , and/or Special Concern Species: Endangered, threatened, and special concern species are protected by Iowa law and possibly indicate the presence of other rare or sensitive species.
4) Remnant Size: Larger remnants are better able to maintain habitat integrity and viable plant populations than are smaller remnants.
5) Ecological Diversity: The presence of multiple community types within a given remnant implies that the site will have greater native biodiversity.

The ranking system has been used to identify the sites that will receive maximum protection in the siting and construction for maintenance, construction, or utility usage. Site rankings are presented in Appendix D. This appendix will be amended as new sites are

evaluated. Native remnants that have been identified as quality sites but are not one of the top designated sites will be included in the geodatabase and the RVM will manage them according to the low impact techniques outlined in the management section of this policy.

In the future, more detailed assessments will likely be required, especially for road segments scheduled for major maintenance or construction efforts that would have significant impact on native plant communities. Primary among such assessments would be a Floristic Quality Assessment (FQA, see Appendix E). Additional vegetation assessments are suggested in the "County Engineering and Construction Considerations" section, and may be requested or completed as directed by the County Engineer or designee.

B. Reconstructions:

Reconstructions have been identified from planting maps provided by the RVM and are included on the maps shown in Appendix B. Right-of-ways reconstructions are areas intentionally planted into a mix of native species for several purposes, such as:

- long-term control of erosion, using the plants' extensive fibrous root system,
- wildlife habitat and improved diversity of wildlife species,
- aesthetic purposes, and
- noxious weed and brush control.

Reconstructions represent an investment of time, money, and effort by Johnson County to plant, establish, and maintain these plant communities. Although these reconstructions are valuable resources, their importance falls below that of remnant areas in terms of historical and ecological significance. Thus they are not the proposed recipients of the same strong management practices and interventions suggested for native remnants.

County Management of Native Plant Communities

The roadside inventory database will be routinely updated by the Secondary Roads Department in conjunction with the Iowa Geological Survey in order to better guide the daily decisions that are made by the maintenance sector of the Secondary Roads Department. Secondary Roads Department employees will have a regularly updated map that will pinpoint

areas that need special management methods. Practices such as ditch cleaning, spot spraying, brush removal, mowing, and snow trap removal that may be affected by this policy can then be adjusted accordingly, as directed by the County Engineer or designee. Safety will be a primary factor in deciding how to handle a project. Suggested management practices are considered below.

A. Native Remnants/Restorations:

In order to promote a healthy, sustainable plant community in the County-managed roadsides, this policy seeks to identify, recognize, and implement low-impact maintenance methods for existing native remnants. Once a site has been identified as a native remnant/restoration via past and current surveys or through ongoing observations, vegetation management techniques should be evaluated to minimize detrimental disturbances wherever possible, regardless of the site's ranking.

The *Johnson County Noxious Weed* and *Brush Control* policies specify how native plant communities will be managed with regard to noxious weeds and woody plant control. This policy goes further in specifying low-impact management techniques for these native plant communities regardless of weed or brush invasion. Specifically, it is recommended that all roadside remnant communities, regardless of their ranking score, be managed to improve the plant community biodiversity and to lessen impacts associated with County maintenance activities whenever possible. Examples of low impact control methods include:

- Use of prescribed fire.
- Hand cutting of trees and brush.
- Very limited use of spot spraying to control invasive species.
- Interseeding of locally harvested seed to improve stand quality and density.
- Limited and strategically timed mowing.
- Encouraging landowners to explore the use of federal and state conservation programs to preserve adjacent native communities.

The RVM will also address sources of sediment deposition in roadsides containing native plant communities by collaborating with the Soil and Water Conservation District to provide

technical assistance and possible cost-share incentives to interested landowners. Solutions to prevent sedimentation and associated weed populations in roadside ditches may include the utilization of conservation buffers parallel to roadways and the repair of degraded waterway outlets. The RVM will refer landowners to the Soil and Water Conservation District office for more information.

B. Reconstructions:

Management techniques utilized for reconstructions will be similar to the tools used in native remnants/reconstructions. Interseeding of locally harvested seed may be done on an as-needed basis by the RVM. While efforts are made to protect reconstructions, more detrimental disturbances may be tolerated than in native remnants/restorations.

County Engineering and Construction Considerations

This policy addresses all the county's road projects, beginning with the planning stage of road and structure construction. The policy suggests that the County work with the road design engineers in an attempt to protect valuable native plant communities.

A. Native Remnants/Restorations:

Existing records identify known remnants/restorations, but are not necessarily comprehensive. Thus further inventories should be completed on right-of-ways to be heavily impacted by planned road construction. Specifically, three to four years prior to construction, vegetation surveys (i.e., windshield or walk through) of right-of-ways adjacent to planned construction sites will be conducted several times during the growing season to identify desired or indicator native species. If the right-of-ways contain indicator species or exhibit conservative species, the RVM will do a more complete evaluation using the ranking system found in Appendix D, or an FQA. As planning/design for a construction project continues, identified native plant communities will be factored into the design of the new structures/roads. Whenever possible, from an engineering and resource standpoint, native remnants are to be considered for a design exception, or methods will be implemented to reduce the adverse impact to these remnants from sediments, construction equipment, topsoil storage, or other adverse practices.

In the event that native remnants will be destroyed or severely impacted, other management methods should be used to preserve native plants and local germplasm. For example, seed from potentially disturbed locations may be harvested prior to construction and stored for later reseeding of the area. The IRVM Committee, local conservation groups, landowners, garden clubs, etc. may be engaged by the RVM to assist County efforts in salvaging plants and placing them in suitable locations. In addition to the methods stated above, topsoil may need to be stripped away and stored with the intent of being returned to an appropriate area. Collected seed and stored topsoil can provide propagules, which can gradually re-establish vegetative cover and conserve local ecotypes on sites disturbed during the construction process. Disturbed sites can also be reseeded with local seed. As new management methods are investigated and evaluated, they can provide a valuable information base for future applications and efforts.

B. Reconstructions:

In the event that a reconstruction will be impacted by County construction activities, provisions will be made to account for the County's past investment of both time and materials. When appropriate, the County will reseed the disturbed area with a seed mixture equivalent to that used originally. Adjacent landowners will be consulted to ensure cooperation with these efforts.

Utility Company/Private Permits

This section addresses those utility companies and other private entities which must disturb the vegetation in the roadsides of Johnson County. All permit applications will be checked to determine if the permit site crosses a native remnant or a reconstruction known to the Secondary Roads Department staff. In addition, a map of Johnson County roadsides with the location of known remnants and reconstructions (Appendix B) will be maintained by the County Engineer or designee and made available to the permittee. If the County Engineer or designee determines that the permit crosses a native remnant or reconstruction, that person will route the permit to the RVM for review.

A. Native Remnants/Restorations:

If the entity seeking the permit proposes to disturb a site that is one of the highest quality native remnant areas listed in Appendix D, it will be incumbent upon the permittee to provide proof that no alternative routes are economically feasible. If no such route is available, the permittee will be directed to the RVM who will assist in developing a plan that preserves the native germplasm and the remnant site to the greatest degree possible. This plan will be developed in consultation with a public official trained in conservation or restoration ecology from one of the following agencies: County Conservation Board, Soil and Water Conservation District, IDNR (Iowa Department of Natural Resources), or a State Regents institution. The plan must:

1. Document that the financial and/or safety consideration of following an alternative route outweigh mitigation considerations.
2. Account for minimizing disturbance of the remnant site, to the greatest degree possible.
3. Account for minimizing the introduction of noxious weed seeds to the site and to the soil stockpile.
4. Account for minimizing soil loss and compaction.
5. Incorporate provisions for preserving the remnant site's germplasm (e.g., seed and plant harvest, soil stockpiling, and/or any new, appropriate technologies as they become available). Mitigation costs are to be borne by the entity seeking the permit.
6. Specify the exact location of a mitigation site on public land. This site must be three times the area of the disturbed site.
7. Be approved by the County Engineer.

If the permit seeks to cross a native remnant/restoration that is not one of the highest quality protected sites, or if it is a remnant that has been identified and mapped but not evaluated, the RVM and staff of the Secondary Roads Department will work with the permittee to seek other ways to work around the remnant area. Areas where native remnants/restorations are disturbed will be revegetated by the RVM at a one-to-one ratio. The cost of the seed and labor will be borne by the entity seeking the permit.

B. Reconstructions:

If the area to be disturbed is a reconstruction, the entity seeking the permit will be required to have the disturbed area reseeded by an approved contractor using a native seed mixture equivalent in quality and origin to that used originally, as approved by the Johnson County RVM. The entity should look at ways to avoid disturbing the vegetation, such as using smaller equipment, minimizing weed seed introduction, boring rather than trenching, and finding additional ways of avoiding soil compaction. The RVM will keep a list of qualified contractors who will provide seed and can accomplish the seeding. If the Secondary Road Department needs to revegetate a roadside reconstruction area, an appropriate native seed mix will be used. The cost of the seed and labor will be borne by the entity seeking the permit.

BIBLIOGRAPHY

Drake L. 1983. Unpublished inventory of Johnson County Roads, results reported via lists and maps to the Secondary Roads Department.

Hendrix S. 1992. *Report: Preliminary Assessment of Natural Areas in Johnson County and Recommendations for a Natural Areas Inventory*. Unpublished report, prepared for the Johnson County Conservation Board. 13 pp plus maps.

Iowa Valley Resource Conservation and Development (C. Taliga). 2002. *Johnson County Roadside Inventory*. Report funded by the Iowa DOT's Living Roadway Trust Fund, prepared for Johnson County Secondary Roads Department. 74 pp plus maps.

Swink, F. and G. Wilhelm (1994). *Plants of the Chicago Region, 4th ed.*, Indiana Academy of Science, Indianapolis, 921 pp.

APPENDIX A

Definitions and their Application to Johnson County Right-of Ways

Conservative Species:

Species with very low tolerance of disturbance and high fidelity to habitat integrity. A conservative species is defined in this policy as having a C-value of six or greater.

Domestic Grass Stands:

A plant community composed nearly entirely of exotic species, such as brome. These either have been intentionally planted or have invaded from adjacent agricultural ground (e.g., resulting from being rotated through pasture).

Indicator Species:

A species that provides information on the overall condition of the ecosystem, and on other species in that ecosystem, or a species that flags changes in biotic or abiotic conditions. These species reflect the quality and changes in environmental conditions as well as aspects of community composition.

Local Ecotype:

Seed, root stock, or established populations of native plants believed by appropriate authorities to have been derived from germplasm present in Johnson or adjacent counties prior to Euro-American settlement.

Native Plant:

A plant species believed by appropriate authorities to have grown in Iowa prior to Euro-American settlement in the mid-1800s. Determination of native status is to be made by the RVM, in concurrence with the IRVM Committee, and should be based on authoritative sources such as historic records and botanical guide books.

Native Remnant:

An area where populations of naturally occurring local ecotype native plant species are believed by appropriate authorities to have survived or regenerated spontaneously after a greater or lesser amount of disturbance since Euro-American settlement. Such stands are derived from Johnson County's original prairie, wetland, and woodland communities. However, remnants may have been degraded from their parental communities by impoverishment (i.e., loss of many prominent species) and/or by the invasion of aggressive exotic species. Disturbances attendant to agricultural and recreational activities, utility services, and landscape grooming by private parties along with road building and maintenance have contributed to significant degradation. Therefore, the occurrence of pristine remnant communities would be unlikely.

Plant Community:

A grouping of populations of different species of plants found living together and interacting in a particular environment.

Reconstruction:

An intentionally planted area, by private or public parties, consisting primarily of native plants for either aesthetic and/or practical reasons. These plantings are intended to resemble native communities. Species composition is likely to differ from naturally occurring remnants because many native species may be excluded from reconstructions. Species may be excluded because of propagation difficulties, expense, unavailability of stock, drab or unkempt appearance, or aggressive tendencies.

Restoration:

An area generally comprised of naturally occurring remnant vegetation which has been enhanced by the interseeding and/or management practices outlined in this policy.

Right-of-Ways:

An area of land, the right to possession of which is temporarily or permanently secured or reserved by the state or a governmental subdivision, for roadway purposes. The right-of-ways for the majority of secondary roads are 66 feet in width, unless otherwise specified by the Johnson County Board of Supervisors.

Weeds:

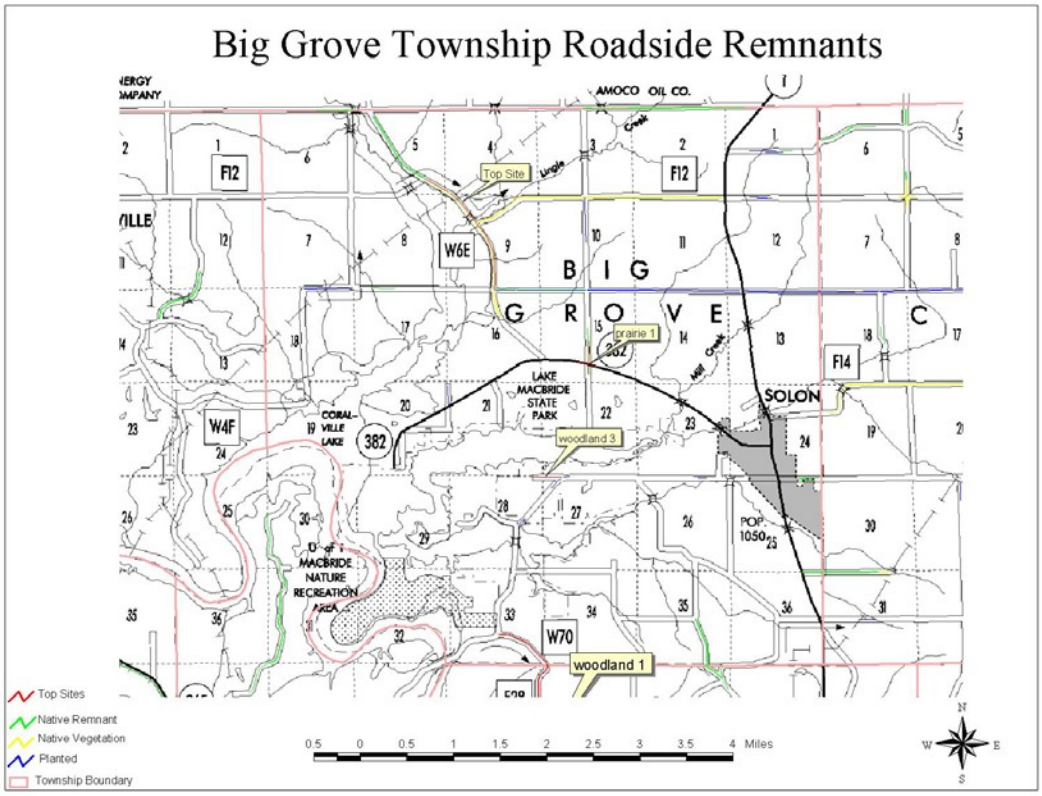
Aggressive annual or biennial plant species, either exotic or native in origin. Repeated disturbance makes this normally transitory ground cover persistent in some areas.

APPENDIX B:

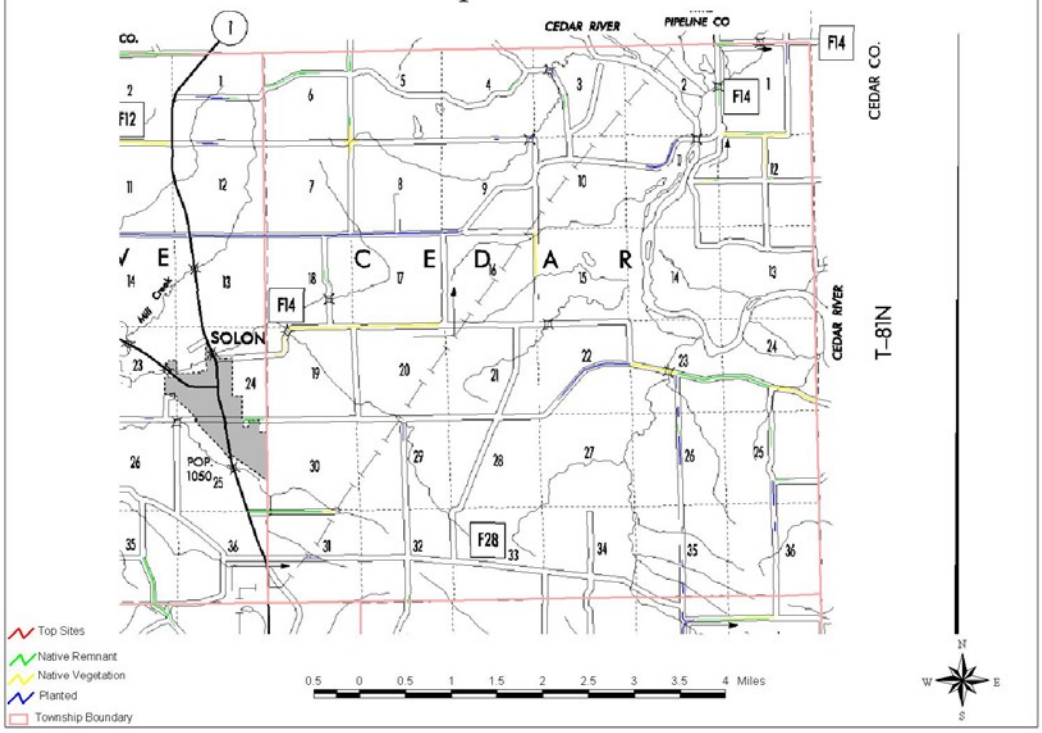
Maps of Native Roadside Plant Communities

Maps are also avaible on the internet at the following location (`zoom into johnson county to see the roadside layer`).

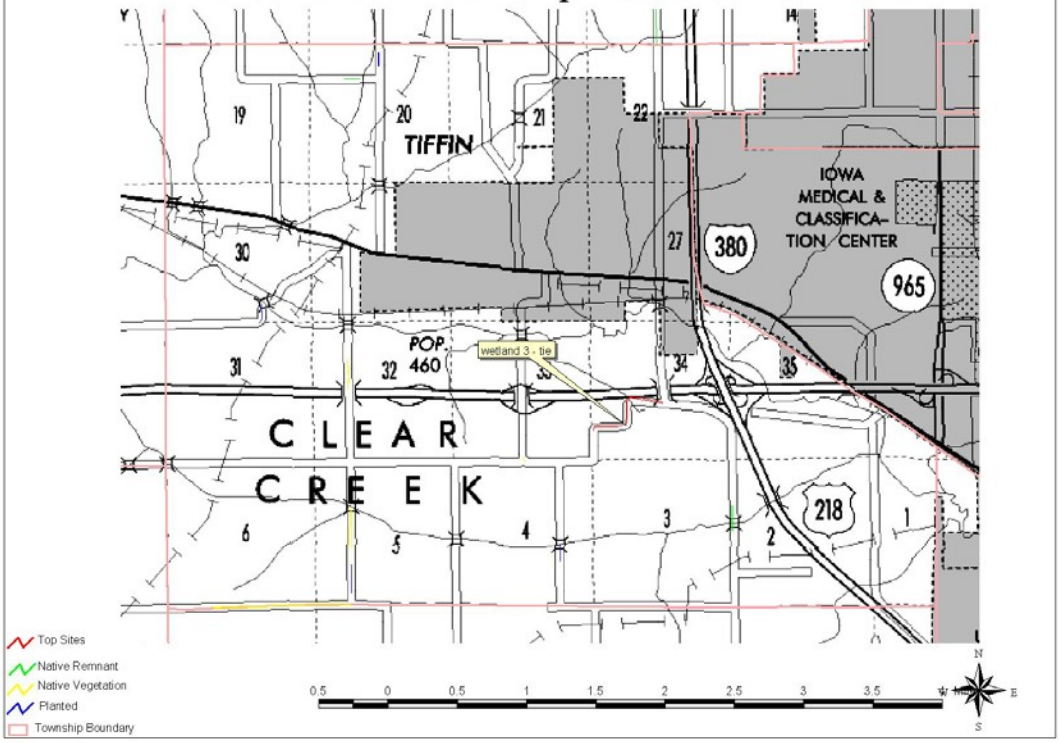
http://igsims.igsb.uiowa.edu/website/Species_Risk/viewer.htm



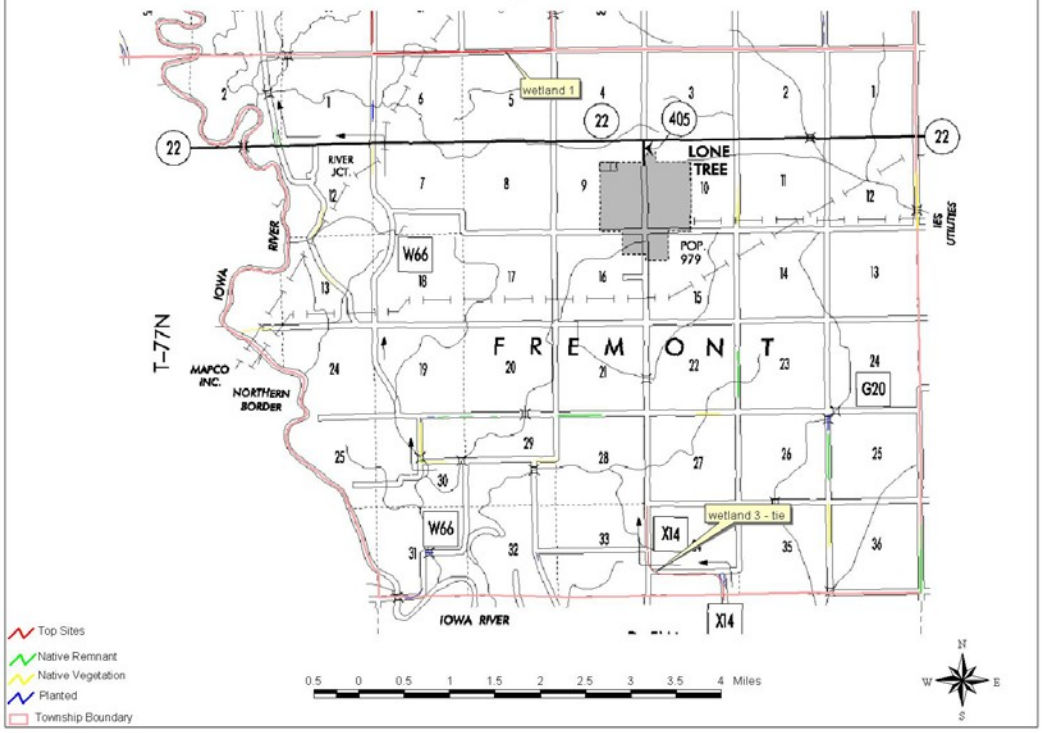
Cedar Township Roadside Remnants



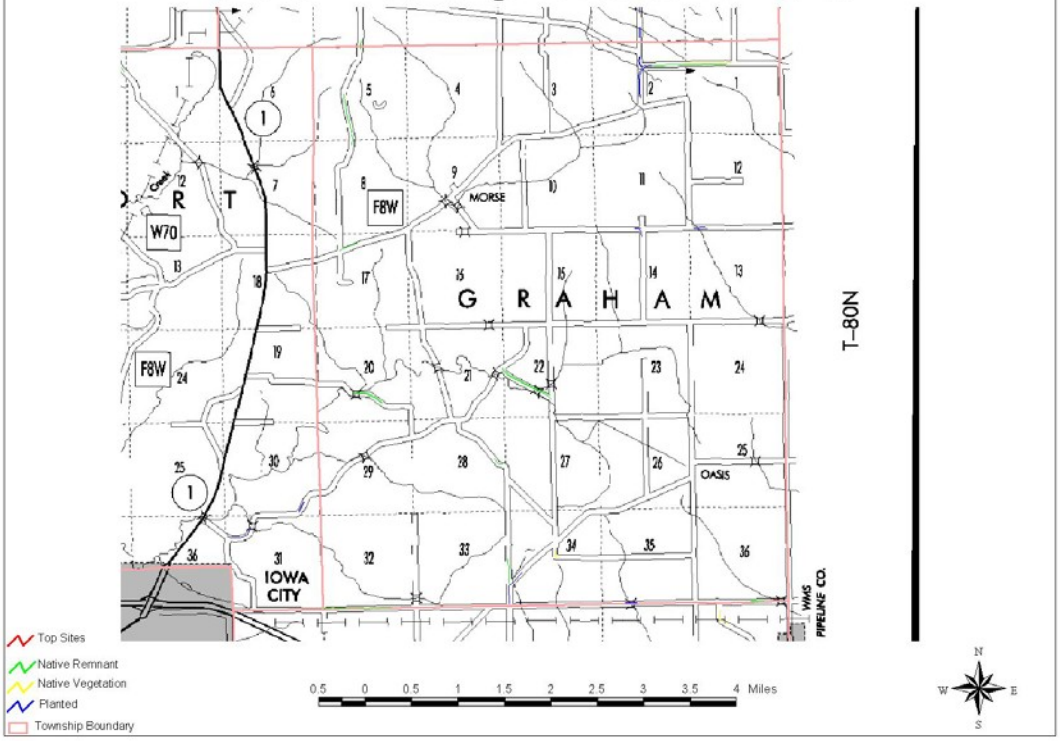
Clear Creek Township Roadside Remnants

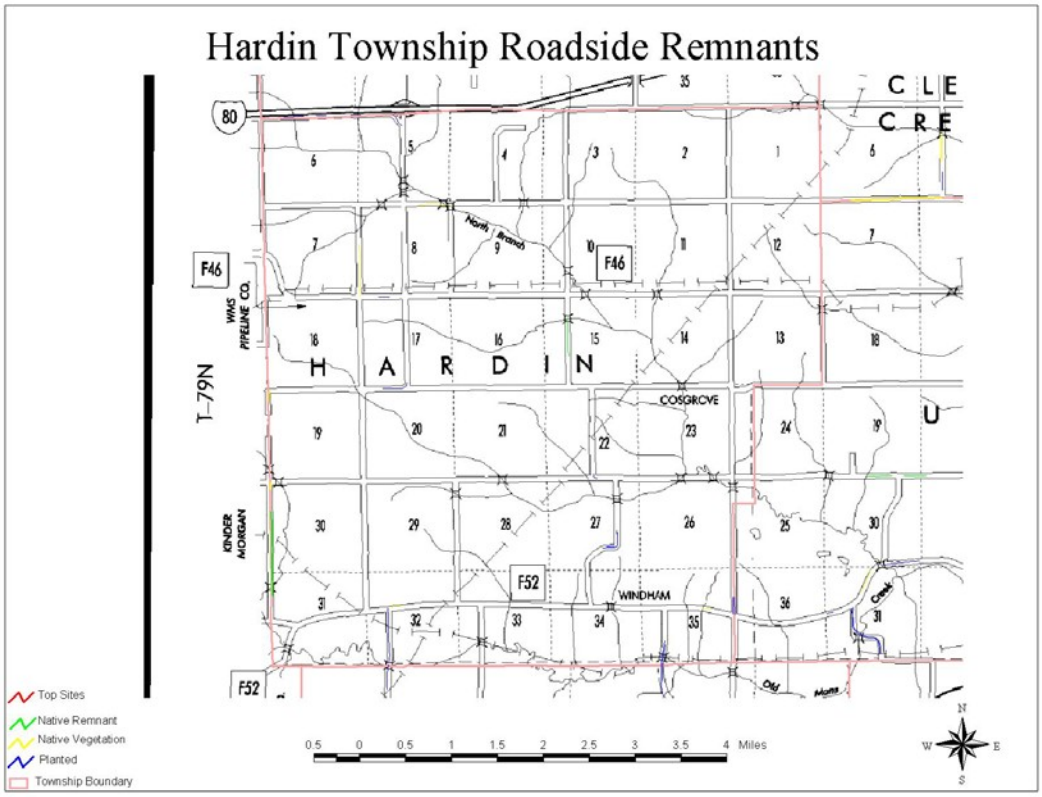


Fremont Township Roadside Remnants

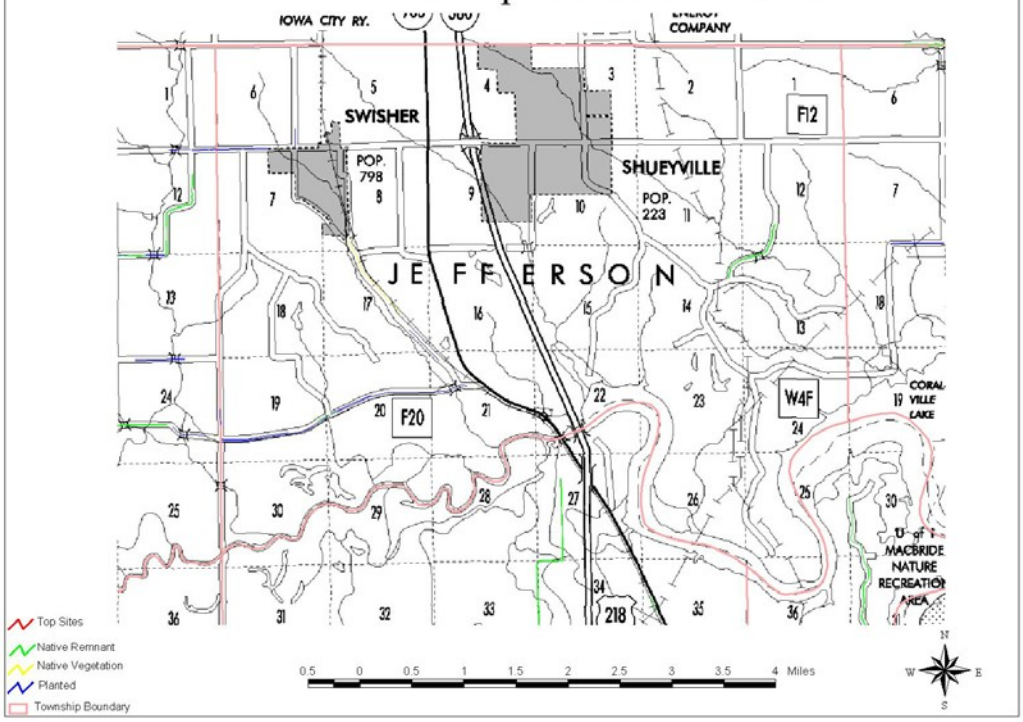


Graham Township Roadside Remnants

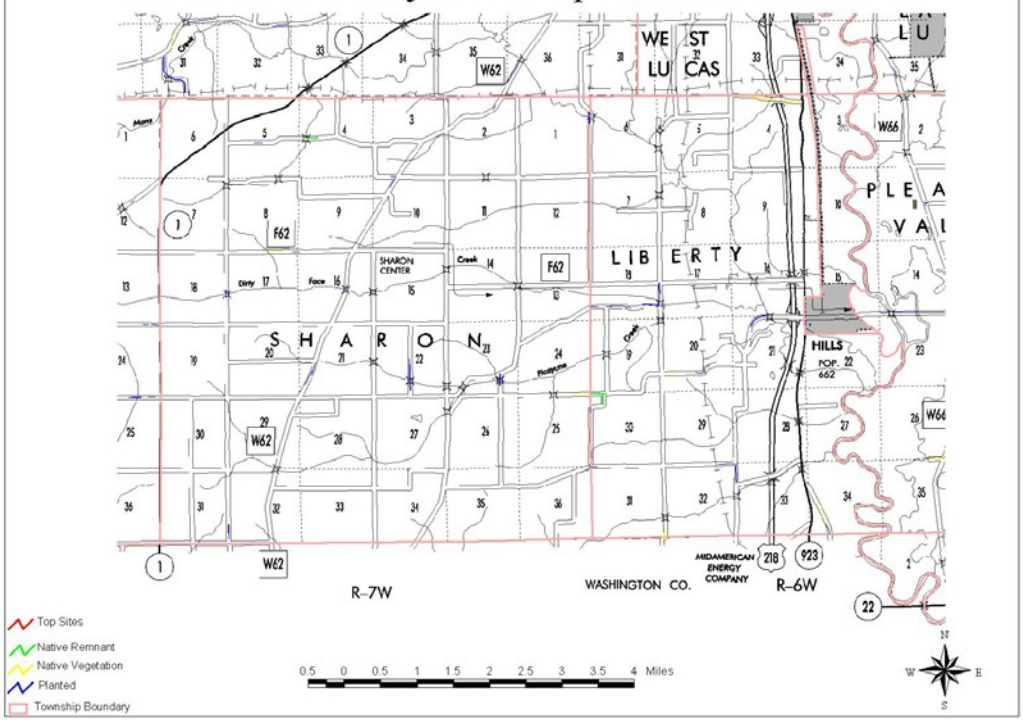



Hardin Township Roadside Remnants
80
F46
F52
WMS PIPELINE CO.
KINDER MORGAN
T-79N
H A R D I N
COSGROVE
WINDHAM
North Branch
Old Mans Creek
C L E
C R E
U
Top Sites
Native Remnant
Native Vegetation
Planted
Township Boundary
0.5 0 0.5 1 1.5 2 2.5 3 3.5 4 Miles
N
W
E
S

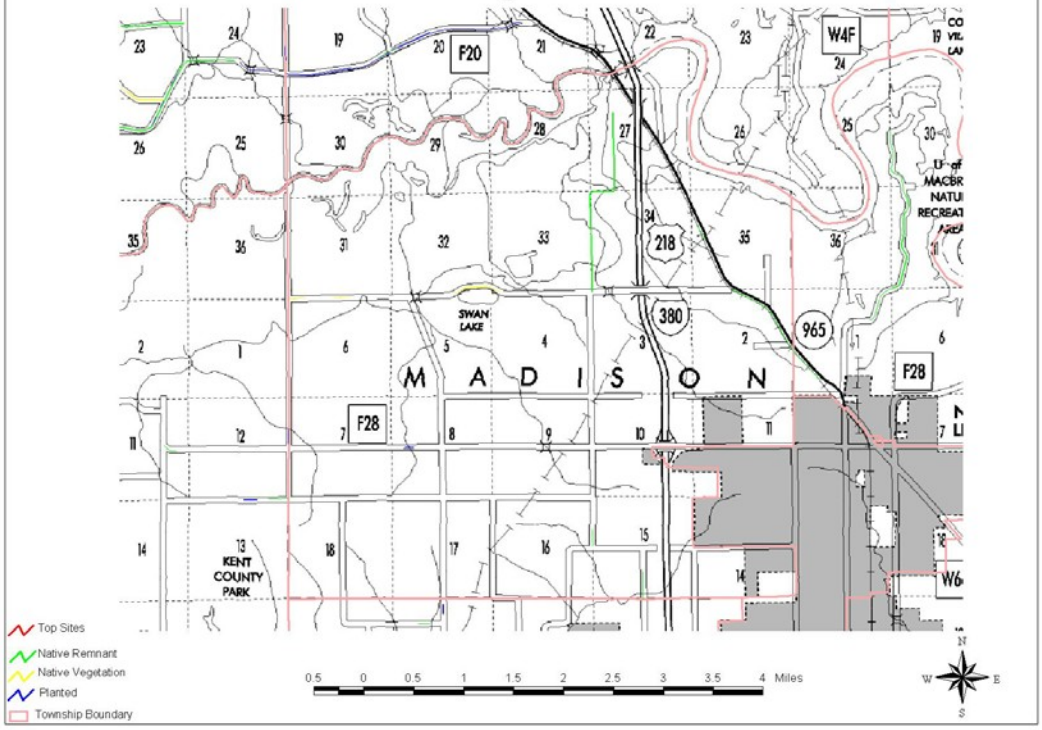
Jefferson Township Roadside Remnants



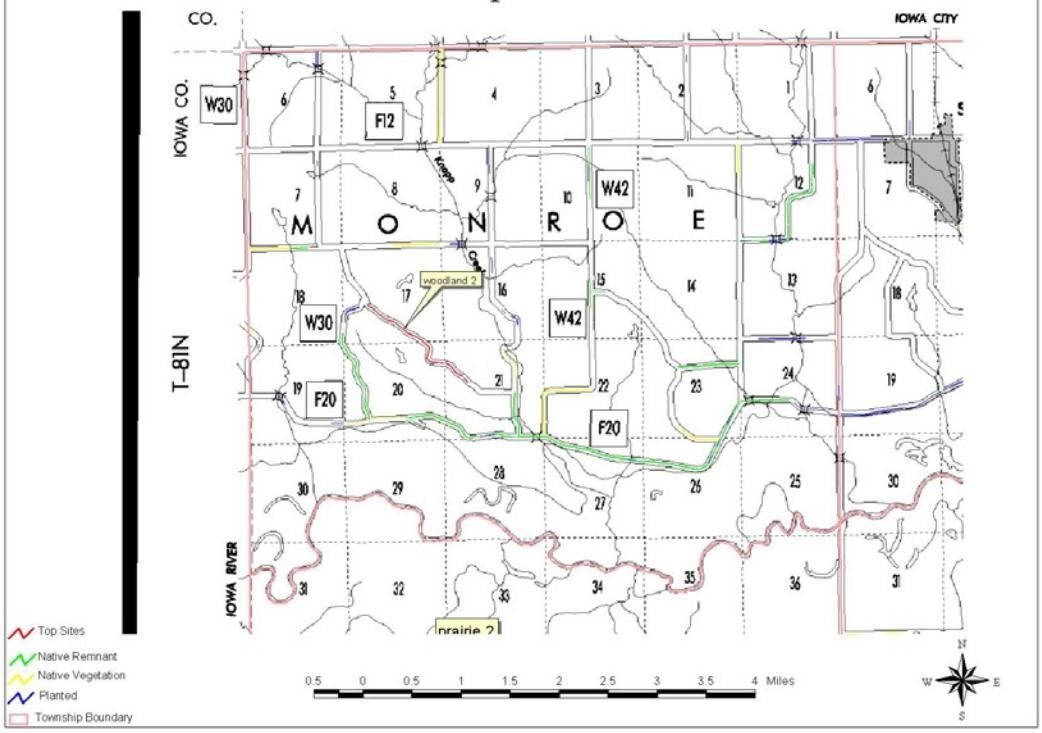
Sharon and Liberty Township Roadside Remnants



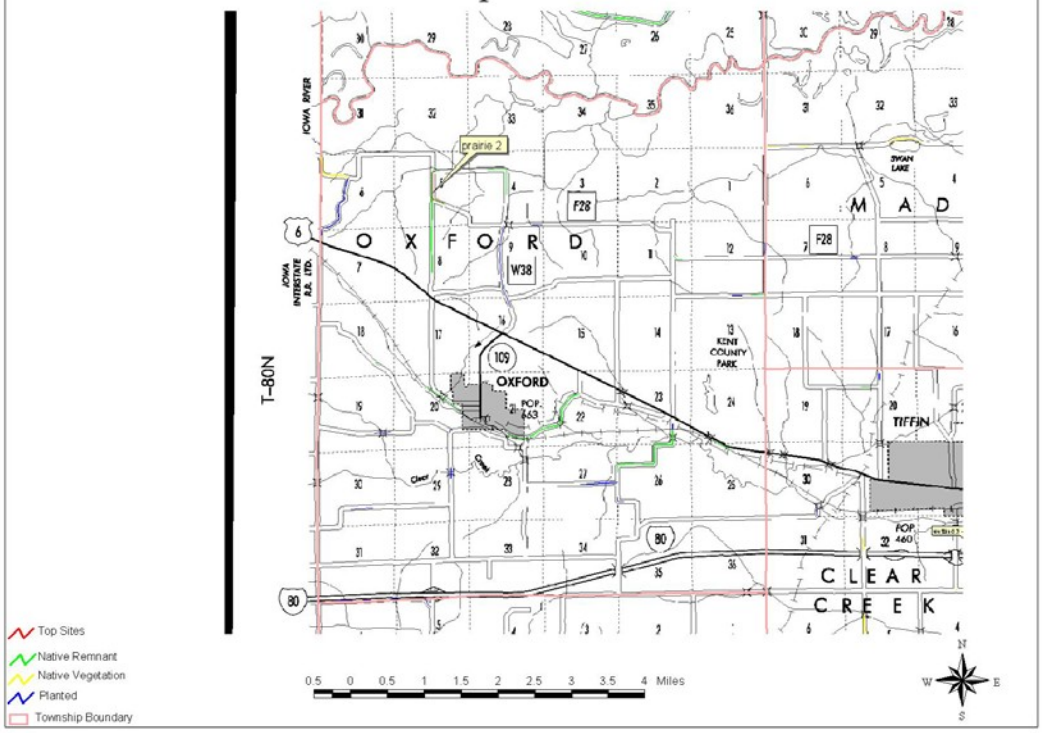
Madison Township Roadside Remnants



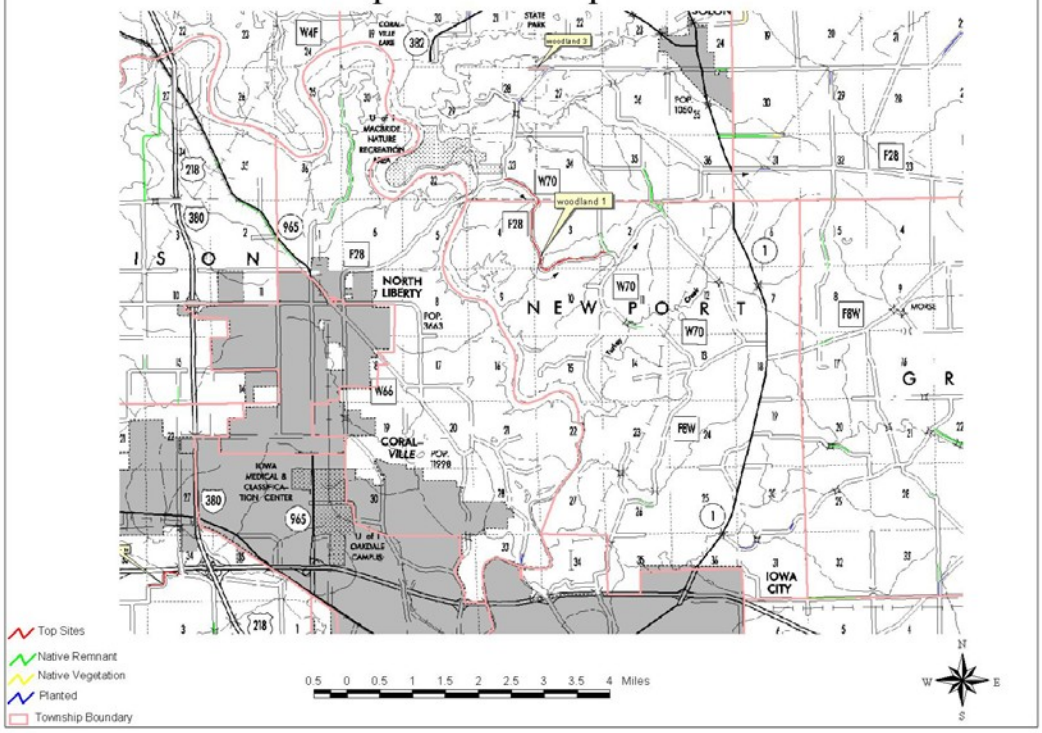
Monroe Township Roadside Remnants



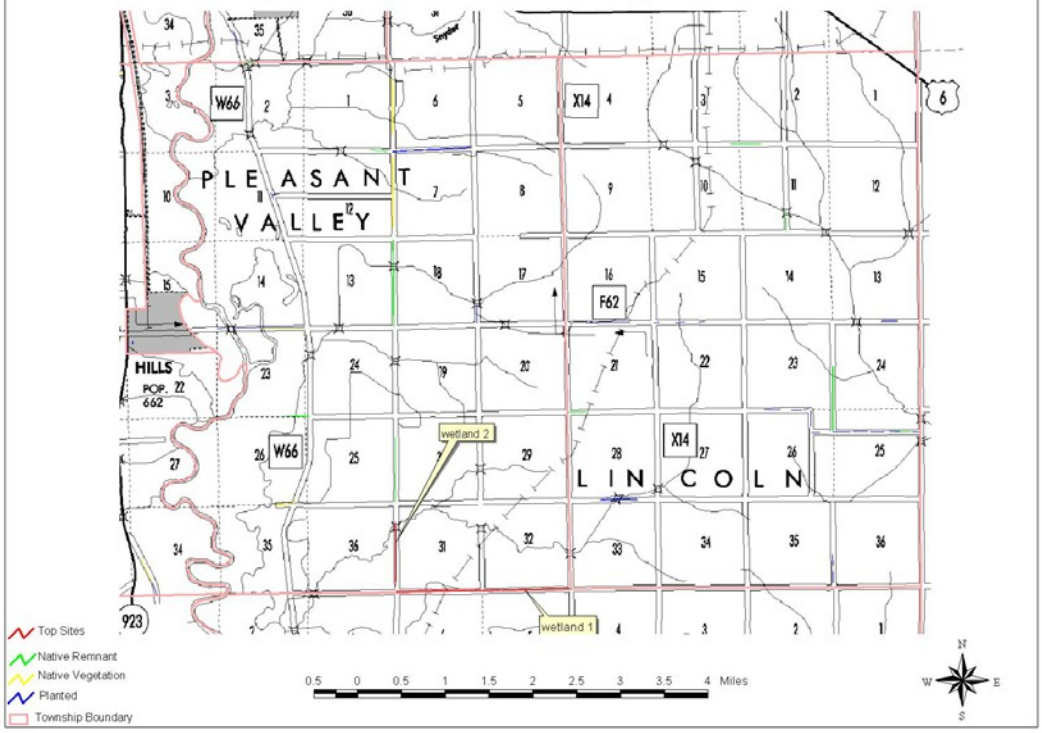
Oxford Township Roadside Remnants



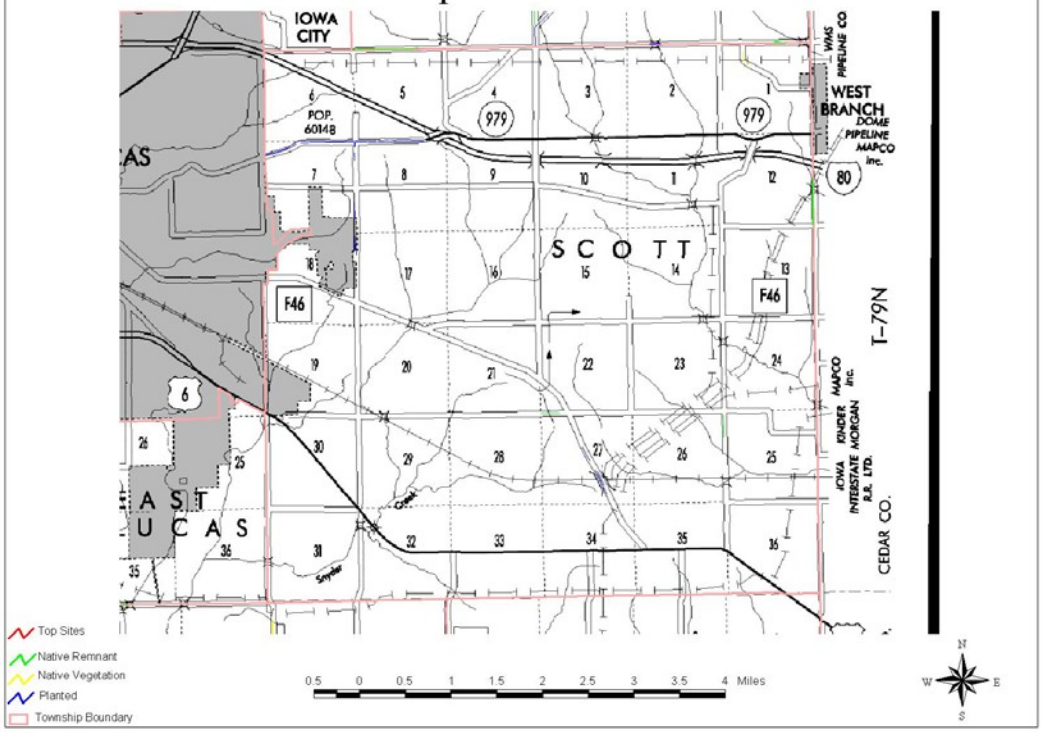
Penn and Newport Township Roadside Remnants



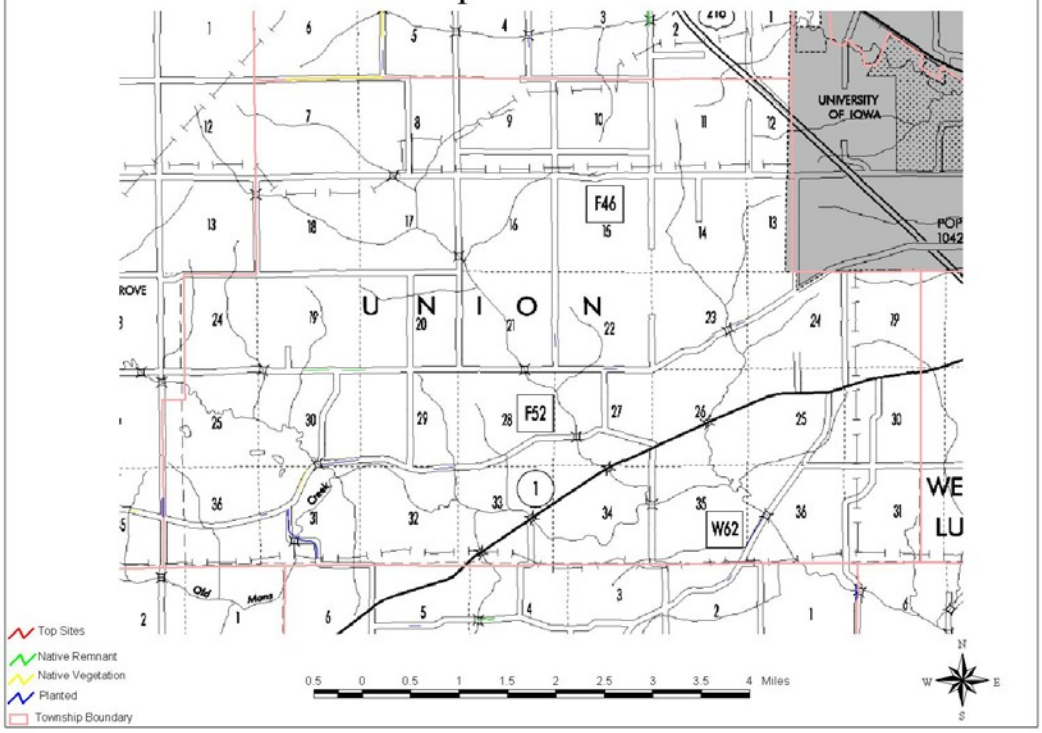
Pleasant Valley and Lincoln Township Roadside Remnants



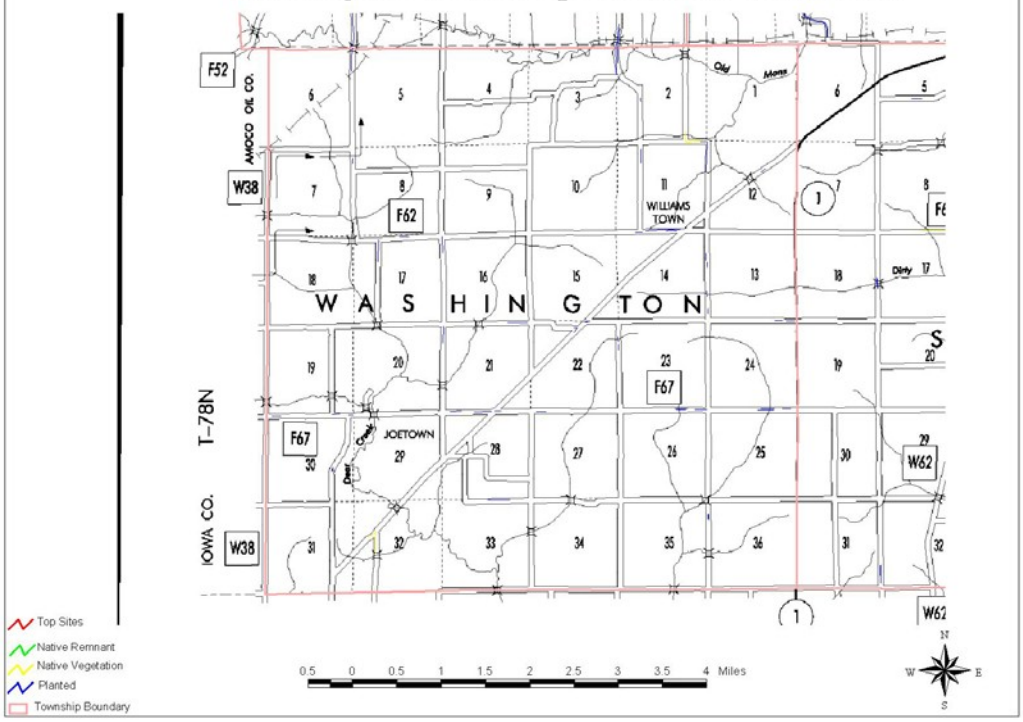
Scott Township Roadside Remnants



Union Township Roadside Remnants



Washington Township Roadside Remnants



APPENDIX C

Remnant Ranking System

This ranking system gives priority to remnants that a) are adjacent to other remnants, b) contain more sensitive, "conservative" species, c) contain state-listed threatened, endangered, and/or special concern species, d) are longer in length, and e) contain multiple types of communities. Each of these five factors is discussed below, as is the rational for how points are to be awarded. The discussion is followed by the Remnant Scoring Guide, which demonstrates how the scoring criteria are to be applied.

Adjacency

If a roadside remnant is adjacent to a remnant that lies outside the right-of-ways, the two together form a larger unit in which each remnant protects the integrity of the other, and the functional value of both remnants is increased. In such cases, the roadside remnant might serve as a buffer for invasive species or other intrusions and help create a larger habitat for remnant-dependant species. Such roadside remnants also might serve as corridors between adjacent but disjunct remnants on adjacent lands. Because of all these assets, roadside remnants adjacent to clearly identifiable remnants receive 25 points. Roadside remnants adjacent to sites that appear to be degraded remnants (typically unplowed but heavily grazed pasture land) receive 10 points, acknowledging the degraded sites' potential for restoration but also their greater uncertainties. Thus a site could receive 0, 10, or 25 points for this factor.

Native Species Conservativeness

Ranking the quality of a site is accomplished by considering the "coefficients of conservatism" (C values) of inventoried plants. C values, which range from 0 to 10, reflect whether a plant species is likely to occur in a landscape relatively unaltered from its pre-settlement condition - i.e., whether the species has high fidelity to un-degraded, mature native communities or high-quality natural areas. Plants with such limitations are given a high C value. Those with low C values, in contrast, may be found in a variety of habitats and are more tolerant of disturbance and degraded conditions. (Swink & Wilhelm, 1994)

C values for Iowa's plants are listed at: http://www.public.iastate.edu/~herbarium/Cofcons.xls. If the roadside remnant has at least one species that falls into one or more of the following C-value categories, it is assigned the number of points indicated in the following table:

C-value	Points
<5	0
5	5
6 or 7	10
8 or 9	15
10	25

The roadside remnant can receive points for each C-value category. Based on these criteria, a given site could receive 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, or 55 points for this factor.

Existence of State-Listed Threatened, Endangered, and/or Special Concern Species

State-listed threatened, endangered, and/or special concern species are protected by Iowa Law, in Iowa Administrative Code [571] Chapter 77. The identification of any such species in a given remnant constitutes a legal reason for protection. The presence of state-listed species also may indicate that other sensitive or rare species are present, a possibility that multiplies the remnant's worth. Thus, 100 points are awarded for each endangered species present in a remnant, 75 points are awarded for any threatened species, and 50 points are awarded for any special concern species. There is no upper limit to the number of points a given site could receive.

Remnant Size

Other factors being equal, larger remnants are better able to maintain their integrity and viable plant populations than smaller remnants. Thus remnants longer than 1/2 mile receive 15 points, remnants between 1/4 and 1/2 mile long receive 10 points, and remnants under ¼ mile in length receive 5 points. Based on these criteria, a site could receive 5, 10, or 15 points for this factor.

Ecological Diversity

Native communities in Johnson County consist of prairies, wetlands, and woodlands. If more than one type of community is present in a given remnant site that site is likely to include

species typical of both community types, enhancing the site's native ecological diversity. Thus 25 points are awarded for each type of remnant community present, for a total of 25, 50, or 75 points.

Remnant Scoring Guide

Remnant Name: _____ **Date Assessed:** _____

Remnant Location: _____ **Person Completing Assessment:** _____

Factors	Points Possible	Points Awarded
1) Adjacency		
Roadside is adjacent to a known remnant beyond the county right- of-ways	25	
Roadside is adjacent to a potential remnant beyond the county right-of-ways, but that remnant is not identifiable due to land use/condition	10	
Roadside is not adjacent to a known or potential remnant	0	
	Total	
2) Native species Conservativeness: The roadside plant population contains 1 or more species with a coefficient of conservatism within the following categories. (Points can be awarded for each category only once.)		
C= 10	25	
C= 8 or 9	15	
C= 6 or 7	10	
C=5	5	
C<5	0	
	Total	
3) Existence of state-listed threatened, endangered, and or special concern species (Points are awarded on a per species basis.)		
Endangered	100 per species	
Threatened	75 per species	
Special Concern	50 per species	
	0	
	Total	
4) Remnant size		
Greater than ½ mile long	15	
¼ to ½ mile long	10	
Less than ¼ mile	5	
	Total	
5) Ecological diversity (Points can be awarded for each category)		
Wooded	25	
Wetland	25	
Prairie	25	
	Total	
Total Score		

APPENDIX D

Site Evaluations

The highest ranking site (regardless of ecosystem type) is considered the site of highest priority. Then, within each of the three ecosystems (i.e., woodland, wetland, prairie) the three sites with the highest scores have been selected. In cases where two or more sites have the same score, additional factors such as road type will be considered and decided by the committee. It is anticipated that the selection of only the ten top remnants should provide a manageable and workable number of sites to receive special protection without unduly restricting road maintenance, construction, or utility usage. The following is the current list of top ranked sites.

legend:
- Prairie
- Woodland
- Wetland
- Shrub/Edge

Top sites	Location ID Code	Habitat Type	Adjacency	Existence of State-Listed Threatened, Endangered, and/or Special Concern Species	Size-length	Ecological diversity	C value	Ranking using the Remnant Scoring Guide
prairie 1	BG3	Prairie	25	0	5	50	30	110
prairie 2	A170	Prairie	25		10	50		85
prairie 3	WA1	Prairie	0	0	5	25	20	50
Top Site	BG2	Prairie	25	125	15	50	30	245
wetland 1	PV1	Wetland	0	50	15	25	15	105
wetland 2	PV3	Wetland	25	0	15	50	15	105
etland 3 - t	CC1	Wetland	0	0	5	25	40	70
etland 3 - t	FR5	Wetland	0	0	15	25	30	70
woodland 1	NE2	Woodland	25	0	15	50	55	145
woodland 2	MO5	Woodland	25	50	15	25	30	145
woodland 3	BG1	Woodland	25	50	5	25	30	135

APPENDIX E

Floristic Quality Assessment, FQA

Floristic Quality Assessment, *FQA*

Floristic quality assessment is a standardized tool for natural area assessment developed by Floyd Swink and Gerald Wilhelm (1994). The method replaces very subjective measures of quality, such as "high" or "low," with a more dispassionate and quantitative assessment. The method assigns a numerical coefficient of conservatism (C) to each native plant species based on that species' tolerance for disturbance and its fidelity to a particular pre-settlement plant community type. The aggregate conservatism of all the plants inhabiting a site determines its floristic quality index (*I*). This index allows comparison of the floristic quality among many sites and tracks changes at the same site over time. It is not intended to be used as a stand-alone method, but rather to complement and corroborate other methods of evaluating the natural quality of a site.

Coefficient of Conservatism, *C*

The concept of species conservatism is the foundation of floristic quality assessment. Each native species has been assigned a coefficient of conservatism (*C*) by professional botanists in the state of Iowa. These coefficients range from zero to ten and represent the estimated probability that a plant is likely to occur in a landscape relatively unaltered from what is believed to be a pre-settlement condition. For example, a C of zero is given to plants such as *Acer negundo*, box elder, that have demonstrated little fidelity to any remnant natural community(i.e., may be found almost anywhere). Similarly, a C of ten is applied to plants like *Potentilla fructicosa* (shrubby cinquefoil) that are almost always restricted to a pre-settlement remnant (i.e., a high quality natural area). Introduced plants were not part of the pre-settlement flora, so no C value is applied to these plants.

Although C values are assigned based on collective extensive experience with the flora throughout an area, the assignments are still somewhat subjective. The conceptual difference between a value of zero and a value of one, or between nine and ten, is slight, while the difference between a value of zero and a value of three is more distinct.

Floristic Quality Index, *I*

The emphasis in this assessment procedure is not on individual species. Rather, the floristic quality index (*I*) value is derived from an analysis of all the native plant species in a community or community complex. The density, apparent dominance, and frequency of individual plant species are not relevant factors when considering the qualitative value of a site. Abundance and frequency are often artifacts of the season or year and may fluctuate greatly. Some species which are "dominant" (big or obvious) in spring can be scarcely evident in fall, when they have been replaced by species that were scarcely evident earlier in the year. Regardless of size, comeliness, or ease of identification, every species at a site provides information relative to the diffuse and scattered populations.

The *I* is used to discriminate among areas that have similar mean C values, but otherwise differ significantly. *I* is calculated by multiplying the *mean C* for all plant species present by the square root of the number of native species (*N*).

Appendix 5 Johnson County Resolution 04-26-01-01

Johnson County Resolution 04-26-01-01

Stigmatizing Noxious Weeds

Be it resolved: Pursuant to Chapter 317 of the *Code of Iowa* (1997) and upon recommendation of the Johnson County Weed Commissioner that the following weeds be declared noxious: Buckhorn Plantain, Buckthorn, Bull Thistle, Canada Thistle, Cocklebur, Field Bindweed, Hoary Cress, Horse Nettle, Japanese Knotweed, Leafy Spurge, Marijuana, Multiflora Rose, Musk Thistle, Perennial Peppergrass, Perennial Sow Thistle, Poison Hemlock, Poison Ivy, Puncturevine, Purple Loosestrife, Quackgrass, Red Sorrel, Russian Knapweed, Shattercane, Smooth Dock, Sour Dock, Tall Thistle, Teasel, Wild Parsnip, Wild Mustard and any other species listed as noxious under the *Code of Iowa* or deemed by the Weed Commissioner to present a major economic or environmental problem to Johnson County.

Be it further resolved that the Johnson County Board of Supervisors may order all noxious weeds within the right-of-way of all County trunk and local County roads to be cut, burned or otherwise controlled to prevent seed production either upon its own motion or upon receipt of written notice requesting said action from any residents of the township in which the affected roads are located, or any person regularly using these roads. The order and action shall be consistent with the Johnson County Integrated Roadside Vegetation Management Plan and in accord with the provisions of Section 317.18 of the *Code of Iowa*.

Be it further resolved that all noxious weeds shall be ordered to be destroyed by all landowners and tenants on or before the date of **June 1st**, so as to prevent the production of seed by all varieties of listed noxious weeds.

Be it further resolved that the Johnson County Weed Commissioner shall, upon failure of any landowner or tenant or both to comply with orders to destroy listed noxious weeds, be entitled to proceed to enter upon any lands within the County to destroy said noxious weeds upon notice as provided by Section 317.6 of the *Code of Iowa*, and to assess the actual costs thereof in accordance with Sections 317.6, 317.13 and 317.21 of the *Code of Iowa*. Actual costs of removal of weeds shall be estimated at not less than $50.00 per hour.

Be it further resolved that it is the policy of Johnson County that the Weed Commissioner shall direct control of all noxious weeds on public lands of Johnson County, Iowa, by cutting or mowing or by controlled burning or by the planting of competitive native vegetation as deemed necessary. Landowners, tenants or both may post "Do Not Spray" signs adjacent to their properties if deemed necessary and will be requested by the Weed Commissioner to respect areas of native vegetation planted to compete with noxious weeds if such treatment is applied adjacent to their properties. Designating signs shall be provided upon request and at no cost by the County and shall be observed in the event of any spraying operations or other treatment programs undertaken, providing that the landowner or tenant shall thereby assume responsibility for the destruction of all noxious weeds on those posted rights-of-way within Johnson County.

Be it further resolved that the Johnson County Weed Commissioner shall make every effort to provide treatment of all problem areas within the County without the use of chemical herbicides and to substitute appropriate methods of integrated vegetation management techniques wherever possible. A program of suitable alternative practices shall be developed and implemented to provide environmentally

sound and long-term solutions to noxious weed problems within Johnson County under the direction of the Johnson County Roadside Vegetation Manager.

Be it further resolved that the Weed Commissioner shall act to encourage the good stewardship of land in Johnson County in order to further the control of noxious weeds which may cause any health or safety hazard to the residents of Johnson County. The control and eradication of noxious weeds has been deemed compatible with wise land management practices and wildlife protection policies. Noxious weeds shall not be substituted for appropriate ground covers, food supplies or protection for wildlife.

Appendix 6 Johnson County Snow Policy

As Adopted March 31, 2011

JOHNSON COUNTY SNOW AND ICE REMOVAL POLICY

In 2011 the Johnson County Board of Supervisors adopted the following Snow and Ice Removal Policy. The Secondary Road Department will follow this policy during the winter season. All rural residents are encouraged to read the policy, taking special note of Section IV: Miscellaneous.

SECTION I: PURPOSE.

The purpose of this policy is to set forth Johnson County's policy and level of service in respect to removal of snow or ice and regarding placing sand, salt, chemical, or other abrasive material on its secondary road system pursuant to the provisions of Section 309.67 and Section 668.10 of the Code of Iowa. The policy describes the minimum service expected to be provided by the County. The County reserves the right, however, to provide services under this policy which exceed the minimum standards set out herein.

SECTION II: POLICY AND LEVEL OF SERVICE

A. GENERAL

Removal of snow or ice and placing of sand, salt, chemicals, or other abrasive material on the secondary road system is primarily for the benefit of local residents of this county. Each storm has individual characteristics and must be dealt with accordingly. The portion of a roadway improved for travel will have upon it snow and ice in a compacted condition. These conditions may be continuous, or they may be more concentrated on hills, in valleys, curves, intersections and/or other locations of particular topographical or traffic features. On occasion, some Johnson County personnel may be rendered unavailable due to the requirements of the Omnibus Transportation Employee Testing Act of 1991. If this occurs, service under this policy will be scaled back accordingly based upon the personnel available.

B. REMOVAL/ABRASIVE PLACEMENT CAPACITY

The County's existing snow removal equipment will be utilized to implement this policy. The level of salting and/or placing of chemicals or other abrasive material during the winter season shall be accomplished within the amount of money budgeted for this service as contained in the County's secondary roads budget adopted by the Board of Supervisors and submitted to and approved by the Iowa Department of Transportation. As such, frequency of material application may be adjusted based upon the availability of material or sufficiency of resources.

C. REMOVAL OPERATIONS

The entire width of that portion of the road improved for travel may not be cleared of snow, ice, compacted snow and ice, or frost. Snow cleared from that part of the roadway improved for travel shall be placed on or in the adjacent shoulder, ditch, or right-of-way except that during snow removal operations, snow may be temporarily stored on a portion of the traveled way. Snow can be expected to accumulate adjacent to the traveled portions to the extent that a motorists' sight distance to both the left and the right may be greatly reduced or impaired. The snow removed from intersections will be piled in their corners and may result in piles of unequal height. The line of sight, sight distances, or visibility of motorists approaching these intersections may be greatly reduced or impaired. Property owners shall not push snow from their driveways or property in general onto the

County right-of-way, including the roadway, shoulders or any adjacent sidewalk/trail. Property owners acting in violation of this policy may be cited for a violation of Iowa Code Section 318.3 regarding obstructions in highway right-ofway. The County shall not be responsible for snow pushed or otherwise placed on the roadway or shoulders by others.

D. MOTOR VEHICLE OPERATIONS

In general, Motorists should be sure to adjust their driving in a manner that is appropriate for the existing conditions. Motorists shall operate their vehicles during these conditions with additional caution and watchfulness, especially in respect to the surface of the roadway, and reduced or impaired visibility. In respect to roadways that have only one lane open to traffic, further extreme watchfulness and caution should be exercised by the motorist, and their speed should be reduced to a speed which is reasonable and proper for the existing conditions, but not to exceed 10 miles per hour. During these conditions no additional warning or regulatory signs will be placed warning of impaired sight distances, visibility at intersections, road blockage, one-lane conditions, or that the road surface is slick or slippery, or what the advise speed should be.

E. MUNICIPAL ROADS

Snow removal, chemical, or abrasive placement will be performed within the corporate limits of a municipality only in accordance with agreements with those municipalities.

SECTION III: SEQUENCE OF SERVICE

A. GENERAL

This Section indicates the general sequence of service the County will provide with respect to snow and ice removal and chemical and abrasive placement on County roads. In the implementation of this policy, however, the County Engineer and his/her delegated representative reserve the right to select the actual sequence of roads for service as conditions warrant, and shall determine when drifting, wind velocity, and additional snow or snowstorms require that the snow removal equipment be removed from the roadway, for reasons of hazardous visibility or due to lack of progress in removal or that additional clearance of paved routes be accomplished prior to the clearance of other roads.

B. PRIORITES

Generally, priorities will be all paved and oiled roads. Stone surfaced roads with residents will be the next priority with the main Farm to Market routes having preference in this category while dead end roads will be last in this category. Stone surfaced roads will first be plowed to enable everyone access from one direction. These roads then will be opened to two-way traffic. Next, the connecting type stone- surfaced roads will be plowed to provide for more direct travel between various points. Finally, stone surfaced roads with no residences along them and dirt roads will be the last priority and may not be plowed. Stonesurfaced or dirt roads may be plowed out of sequence where it would contribute to efficiency or snow removal unit routing or progress. For the purposes of this policy, roads that are oiled, or partially oiled, only as the result of a formal or informal agreement with the County may be treated as though they are stone surfaced roads.

C. HOURS OF OPERATION

Snow removal units, including those applying abrasive materials, normally will operate only during daylight hours, or shortly before daylight, Monday through Friday (approximately 4:00 a.m. through 6:00 p.m.), and if possible may be confined to normal work hours of 7:30 a.m. to 4:00 p.m., Monday through Friday. On Saturdays, Sundays or holidays, the normal level of service will be implemented if conditions warrant. Only in cases of “emergency” as set out in this policy will snow removal units operate from 6:00 p.m. to 4:00 a.m. In the event of a severe storm with severe drifting, all roads will be opened to one-way traffic until all rural residences have a way out. Then plowing will continue to develop two-way traffic. There is no time limit after a storm subsides within which any portion of the policy shall be implemented.

D. PAVED AND OILED ROUTES

1. The initial effort will be to get all routes open to one-lane traffic as soon as possible during daylight hours after a storm has subsided.
2. After one-lane travel is possible, subsequent snow removal will be carried on only during normal working hours.
3. It is not the policy of the county to provide dry pavement conditions.
4. After roads have been plowed as provided in this section, sand, salt, chemical, or other abrasive materials may be placed on them as necessary and as materials allow. Priority will be given to intersections, hills and curves. This spreading will normally stop when air temperature is 20 degrees Fahrenheit or lower. Sand, salt, chemical and other abrasive material application on paved and oiled routes shall take precedence over application of abrasive materials on stone surfaced and dirt routes.
5. Subject to the normal hours of operation described above, snow removal units will normally begin operation no later than after an accumulation of two (2) inches of snow.

E. STONE SURFACED AND DIRT ROUTES

1. The initial effort will be to get a one-lane access open to residences as soon as possible during daylight hours after a storm has subsided.
2. After one-lane travel is possible to residences, subsequent snow removal will be carried on only during normal working hours.
3. After roads have been plowed as provided in this section, abrasive materials may be applied upon portions of stone roads as necessary and as materials allow. Priority will be given to intersections, hills and curves.
4. Snow removal units may not operate at all on dirt roads without residences.
5. Subject to the normal hours of operation described above, snow removal units will normally begin operation no later than after an accumulation of four (4) inches of snow or when the accumulation of snow has ended, whichever occurs later.

SECTION IV: MISCELLANEOUS

A. RURAL MAILBOXES

The County shall not pay for or replace mailboxes damaged as a result of snow removal unless actual contact is made by County equipment. Residents should mark mailboxes in drift prone areas to help road workers avoid them. Claims, for damage are to be submitted to the Secondary Roads Department within 48 hours

to be considered for payment or repair.

B. FENCES

The County shall not pay for or replace fences damaged as a result of snow removal unless actual contact is made by County equipment. Fence gates shall not obstruct snow removal equipment within the County right of way and shall not be covered for damage claims as part of this ordinance. Claims for damaged fences are to be submitted to the Secondary Roads Department within 30 days to be considered for payment or repair.

C. OBSTRUCTIONS

Obstructions on the road right-of-way such as hay bales, vehicles, or fences which might cause drifting shall be removed by the owners. The County shall not be liable for damage to stalled or stranded vehicles on the traveled portion of the roadway or other obstructions which will interfere with snow and ice removal and abrasive placement. The owners of stalled or stranded vehicles should immediately notify the Sheriff's Office. Owners shall remove stalled or stranded vehicles as soon as possible.

D. AGRICULTURAL NECESSITIES

Feed, livestock and other agricultural necessities should be removed from areas accessible only by dirt roads without residences because they may be impassable.

E. PRIVATE ROADS

The County will not operate snow removal units on private roads. Normal county removal operations may result in snow or ice being deposited in private roads and drives adjacent to public roads. Snow from private drives shall not be placed on the shoulders or roadways of a public road.

F. EQUIPMENT

Motor vehicle travel on the Johnson County secondary roads system when adverse conditions of snow or ice exist shall be undertaken only by vehicles which are properly equipped for the conditions present.

SECTION V: LIMITATION ON SERVICE

THE FOLLOWING SERVICES SHALL NOT BE PERFORMED

1. Sidewalks, trails within the County right-of-way, and trails separate from the County right-of-way will not be plowed or have sand, salt, chemical or other abrasive material applied on them.
2. Paved shoulders may be plowed or have abrasives applied in conjunction with dealing with the traveled portion of the road, but special efforts may not be made to clear and treat the shoulders.
3. The County will not place additional warning or regulatory signs warning of impaired sight distances, visibility at intersections, road blockages, one-lane conditions, or that the road surface is slick or slippery, or what the advised speed should be.
4. Sanding, salting or placing of other abrasives, outside normal working hours, upon a roadway which is slick or slippery due to the formation of frost.
5. These limitations supersede any policies previously adopted which may set forth different levels of service.

SECTION VI: EMERGENCIES/DISASTERS

A. RESPONSE

In an “Emergency” or “Disaster” condition, the County may deviate from the above-described sequence of service and/or level of service for whatever period of time necessary to appropriately respond to the emergency or disaster. The County will attempt to continue its normal snow and ice removal and abrasive material application activities as soon as practicable after the emergency or disaster condition has ended.

B. DEFINITION/DETERMINATION OF AN EMERGENCY

An “Emergency” condition shall be considered as one where a loss of life or serious injury has occurred or is probable, or where extensive loss of property has occurred or is imminent. The existence of an emergency condition may be declared by the County Engineer, or designee, or the County Sheriff, or designee. Citizen reports of potential emergencies should be made directly to the Joint Emergency Communications Center (319.356.6800) or the Johnson County Sheriff’s Office (319.356.6020), which office shall then contact the County Engineer, or designee, for determination of the appropriate response, if any.

C. DEFINITION/DETERMINATION OF A DISASTER

A “Disaster” under this section shall mean an event qualifying as a disaster under either Iowa Code § 29C.2(1), as amended, or the All-Hazard Emergency Operations Plan for Johnson County. A disaster condition occurs when the All-Hazard Emergency Operations Plan for Johnson County is activated by a disaster declaration from either the Governor or the Board of Supervisors.

Appendix 7 Johnson County Obstruction Policy (Code of Iowa Ch. 318)

CHAPTER 318 OBSTRUCTIONS IN HIGHWAY RIGHTS=OF=WAY

318.1 DEFINITIONS.
318.2 PURPOSE.
318.3 OBSTRUCTIONS IN HIGHWAY RIGHT-OF-WAY.
318.4 DUTY OF HIGHWAY AUTHORITIES.
318.5 REMOVAL AND COST.
318.6 PUBLIC NUISANCE.
318.7 INJUNCTION TO RESTRAIN OBSTRUCTIONS.
318.8 PERMIT REQUIRED.
318.9 UTILITY STRUCTURES.
318.10 FENCES.
318.11 BILLBOARDS AND SIGNS.
318.12 ENFORCEMENT.

318.1 DEFINITIONS.

As used in this chapter, unless the context otherwise requires:

1. *"Department"* means the state department of transportation.

2. *"Highway authority"* means the county board of supervisors, in the case of secondary roads, and the department, in the case of primary roads.

3. *"Highway right-of-way"* means the total area of land, whether reserved by public ownership or easement, that is reserved for the operation and maintenance of a legally established public roadway. This area shall be deemed to consist of two portions, a central traveled way including the shoulders and that remainder on both sides of the road, between the outside shoulder edges and the outer boundaries of the right-of-way.

4. *"Obstruction"* means an obstacle in the highway right-of-way or an impediment or hindrance which impedes, opposes, or interferes with free passage along the highway right-of-way, not including utility structures installed in accordance with an approved permit.

5. *"Officer"* means any department employee, county employee, or elected county official.

6. *"Traveled portion of the right-of-way"* means that area of the highway right-of-way, not including the shoulders, on which vehicles normally travel.

7. *"Utility"* means all private, public, municipal, or cooperative owned systems for water, sewer, natural gas, electric, telegraph, telephone, transit, pipeline, heating plants, railroads, bridges, street lights, or traffic control signals.

8. *"Utility structures"* means the aboveground devices, required by a utility, including poles, lines, and wires, used for telephone, electric, natural gas, and other distribution or transmission purposes, and natural gas and electrical substations.

Section History: Recent Form

2006 Acts, ch 1097, §1

318.2 PURPOSE.

The purpose of this chapter is to enhance public safety for those traveling the public roads and allow economical maintenance of highway rights-of-way.

Section History: Recent Form

2006 Acts, ch 1097, §2

318.3 OBSTRUCTIONS IN HIGHWAY RIGHT-OF-WAY.

A person shall not place, or cause to be placed, an obstruction within any highway right-of-way. This prohibition includes, but is not limited to, the following actions:

1. The excavation, filling, or making of any physical changes to any part of the highway right-of-way, except as provided under section 318.8.
2. The cultivation or growing of crops within the highway right-of-way.
3. The destruction of plants placed within the highway right-of-way.
4. The placing of fences or ditches within the highway right-of-way.
5. The alteration of ditches, water breaks, or drainage tiles within the highway right-of-way.
6. The placement of trash, litter, debris, waste material, manure, rocks, crops or crop residue, brush, vehicles, machinery, or other items within the highway right-of-way.
7. The placement of billboards, signs, or advertising devices within the highway right-of-way.
8. The placement of any red reflector, or any object or other device which shall cause the effect of a red reflector on the highway right-of-way which is visible to passing motorists.

Section History: Recent Form

2006 Acts, ch 1097, §3
Referred to in § 318.6, 318.8
See also §318.5, 318.10, and 318.11

318.4 DUTY OF HIGHWAY AUTHORITIES.

The highway authority shall cause all obstructions in a highway right-of-way under its jurisdiction to be removed.

Section History: Recent Form

2006 Acts, ch 1097, §4

318.5 REMOVAL AND COST.

1. An obstruction in a highway right-of-way which constitutes an immediate and dangerous hazard shall, without notice or liability in damages, be removed by the highway authority.
2. An obstruction not constituting an immediate and dangerous

hazard shall be removed by the highway authority without liability after forty-eight-hour notice served in the same manner in which an original notice is served, or in writing by certified mail, or in any other manner reasonably calculated to apprise the person responsible for the obstruction that the obstruction will be removed at the person's expense. The highway authority shall assess the removal cost.

3. Upon removal of the obstruction, the highway authority may immediately send a statement of the cost to the person responsible for the obstruction. If within ten days after sending the statement the cost is not paid, the highway authority may institute legal proceedings to collect the cost of removal. The removal costs shall be assessed against the following persons, as applicable:

a. The vehicle owner in the case of an abandoned vehicle.

b. The abutting property owner in the case of a fence, other than a right-of-way line fence, or other temporary obstruction placed within the highway right-of-way by the owner or tenant of the abutting property.

c. The owner or person responsible for placement of any other obstruction.

4. All removals shall be without liability on the part of any officer ordering or effecting such removal.

Section History: Recent Form

2006 Acts, ch 1097, §5
Referred to in § 68A.406, 318.9, 318.10
Manner of service, R.C.P. 1.302--1.315

318.6 PUBLIC NUISANCE.

1. Any person who places, or causes to be placed, any obstruction in a highway right-of-way as prohibited under section 318.3 is deemed to have created a public nuisance punishable as provided in chapter 657.

2. If a person is found guilty of placing an obstruction within a highway right-of-way, the court may, in addition to any fine imposed, or judgment for damages or costs for which a separate execution may issue, order that the obstruction be abated or removed at the expense of the defendant. The costs for abatement or removal of the obstruction may be entered as a personal judgment against the defendant or assessed against the property where the obstruction occurred, or both.

Section History: Recent Form

2006 Acts, ch 1097, §6

318.7 INJUNCTION TO RESTRAIN OBSTRUCTIONS.

A highway authority may maintain a suit in equity aided by injunction to restrain an obstruction in a highway right-of-way. In such actions, the highway authority may cause the legal boundary lines of the highway to be adjudicated provided all interested parties are impleaded.

Section History: Recent Form

2006 Acts, ch 1097, §7

318.8 PERMIT REQUIRED.

A person shall not excavate, fill, or make a physical change within a highway right-of-way without obtaining a permit from the applicable highway authority. At the request of a permittee, a modification may be granted in the discretion of the highway authority. Work performed under the permit shall be performed in conformity with the specifications prescribed by the highway authority. If the work does not conform to permit specifications, the person shall be notified to make the conforming changes. If after twenty days the changes have not been made, the highway authority may make the necessary changes and immediately send a statement of the cost to the responsible person. If within thirty days after sending the statement the cost is not paid, the highway authority may institute legal proceedings to collect the cost of correction. A violation of the permit specifications shall be considered a violation of section 318.3. A public utility subject to section 306A.3 is exempt from this section.

Section History: Recent Form

2006 Acts, ch 1097, §8
Referred to in § 318.3

318.9 UTILITY STRUCTURES.

1. *a.* A utility structure in a highway right-of-way used for telephone, electric, natural gas, or other distribution or transmission purposes shall be removed by the owner or operator of the transmission lines upon written notice from the highway authority of not less than ninety days, to the owner and operator. The notice shall, with reasonable certainty, specify the utility structure to be removed and shall be served in the same manner that original notices are required to be served. If the owner or operator of the transmission line is unable to remove the utility structure within the required time due to circumstances beyond the control of the owner or operator, the owner or operator shall file a request with the highway authority for an extension of time to complete the work.

b. If the owner or operator of a transmission line needs authorization from the utilities board or other governmental authority to relocate a utility structure or to obtain a new private easement right for relocation of the utility structure, the owner or operator shall request an extension of time within which to remove the utility structure. The highway authority shall grant an extension of time for at least ninety days following the date authorization is granted or the easement right is obtained.

2. Upon written application, the highway authority shall locate the construction of new telephone, electric, or transmission lines or parts of lines, including natural gas pipeline, for the roads within the highway authority's jurisdiction, subject to the jurisdiction of the utilities board under chapters 476, 478, and 479, as follows:

a. The county engineer, or the board of supervisors if a county engineer is not available, shall locate the lines for secondary roads.

b. The department shall locate the lines for primary roads.

3. The department and the county engineer, or the board of supervisors if a county engineer is not available, may designate the location of a utility structure within a highway right-of-way. A utility structure that is not properly located within the highway right-of-way shall be removed within a time prescribed to a designated location. If not so removed, the highway authority may remove the utility structure and recover costs as provided in section 318.5.

Section History: Recent Form

2006 Acts, ch 1097, §9
Referred to in § 306.46
Manner of service, R.C.P. 1.302--1.315

318.10 FENCES.

1. A fence which constitutes an immediate and dangerous hazard shall, without notice or liability in damages, be removed by the highway authority. In all other cases where a fence is an obstruction in a highway right-of-way, notice in writing of not less than thirty days shall be given to the owner, occupant, or agent of the land enclosed by the fence.

2. The notice shall, with reasonable certainty, specify the line to which the fences shall be removed and shall be served in the same manner that original notices are required to be served, or in writing by certified mail, or in any other manner reasonably calculated to apprise the person responsible for the fence.

3. The department and the county engineer, or the board of supervisors if a county engineer is not available, may designate the location of a fence within a highway right-of-way. A fence that is not properly located within the highway right-of-way shall be removed within a time prescribed to a designated location. If not so removed, the highway authority may remove the fences and recover costs as provided in section 318.5.

Section History: Recent Form

2006 Acts, ch 1097, §10
Manner of service. R.C.P. 1.302--1.315

318.11 BILLBOARDS AND SIGNS.

1. No billboard or advertising sign or device, except a sign or device authorized by law or approved by the highway authority, shall be placed or erected upon a highway right-of-way.

2. A billboard or advertising sign, whether on public or private property, that obstructs the view of any portion of a public highway or of a railway track making the use of the traveled portion of the right-of-way dangerous is a public nuisance and shall be abated. The person responsible for the erection and maintenance of the billboard or sign may be punished as provided in chapter 657.

Section History: Recent Form

2006 Acts, ch 1097, §11
Referred to in § 331.756(57)

318.12 ENFORCEMENT.

A highway authority shall enforce the provisions of this chapter by appropriate civil or criminal proceeding or by both such proceedings.

Section History: Recent Form

2006 Acts, ch 1097, §12
Nuisances in general, chapter 657

Previous Chapter 317 Next Chapter 319

Appendix 8 Johnson County Adopt A Roadway Program

JOHNSON COUNTY, IOWA SECONDARY ROADS DEPARTMENT

GUIDELINES FOR THE ADOPT-A-ROADWAY PROGRAM

PROGRAM OBJECTIVES

The objective of this voluntary program is to increase public awareness of the environmental and maintenance needs along Johnson County's roadways by using adopted sections of roadsides as an example of the opportunities available for the public to improve the condition and appearance of our County.

GENERAL STATEMENT

There is a clear need to improve the quality of our roadsides. This improvement may take the form of litter pick-up, wildflower and native prairie plantings, preservation of existing native plant communities, landscaping or erosion control projects, the improvement of wildlife habitats and the control of invasive weeds or brush within the right-of-way. These activities are generally labor intensive, expensive and often considered as a lower priority to pavement maintenance or public safety needs. In order to provide the most effective management of County roadside areas, participation by public service and private groups should be encouraged.

The Adopt-A-Roadway Program allows groups or individuals to adopt a specific section of a County road. Through this adoption they may assume responsibility for any or all of the eligible items listed below. The available activities have the potential to:

a) Reduce litter along Johnson County's roadways

b) Enhance the environmental quality and beauty of our roadsides

c) Build broad-based community support for anti-litter and Iowa beautification programs

POTENTIAL ADOPT-A-ROADWAY ACTIVITIES

The following activities are eligible to be included in Adopt-A-Roadway sponsorships:

a) Litter pickup

b) Participation in wildflower and prairie grass plantings

c) Assist with the design or improvement of native prairie sites or wildlife habitat areas

d) Landscaping and landscape maintenance

e) Hand weeding of sensitive areas to improve environmental quality

IMPORTANT DEFINITIONS

ADULT SUPERVISION: Any child volunteer or worker under age 16 must have an adult on-site to supervise their work. The required ratio is at least one adult for every four children.

*LAND MONUMEN*T: Government or other permanent survey markers that have been placed within the right-of-way.

LIABILITY: Responsibility; being in a position to incur financial or other obligations according to law or equity.

NOXIOUS WEEDS: Those plants listed under the Iowa Weed Law and which have proven undesirable characteristics or interfere with agriculture or human health.

PRAIRIE: A diverse and increasingly rare native plant community dominated by grasses and associated plants that provide a perennial groundcover in open areas.

WETLANDS: Sensitive areas in which native plant communities and soils are periodically saturated with water and which serve as important hydrologic features of the landscape.

RIGHT-OF-WAY: That portion of roadway and adjacent ground, to a width defined by survey which the governmental unit that has control over the roadway either owns or has an easement allowing access and use.

SENSITIVE AREAS: Those sites where endangered vegetation or desired plant species or biologic communities are to be preserved or where conditions exist that prevent access without degrading the existing groundcover or soil stability.

SPONSOR: The adjacent landowner, governing body of a community, organization, club or individual that voluntarily contracts to adopt a roadway within Johnson County.

WILDFLOWERS: Those flowering plants native to a given area, growing without cultivation and which present desirable or attractive displays when in bloom.

PROGRAM REQUIREMENTS

The Johnson County Roadside Vegetation Manager will work with the adopting group to determine the specific section of roadway to be adopted and the priority needs for the given site.

The sponsor will be made aware of the problems that can occur along roadways and will be expected to instruct their personnel in safety precautions. Whenever possible, the sponsor shall secure access to their site from off the right of way rather than from the road surface or shoulders as a safety precaution.

It shall be the sponsor's responsibility to obtain and assure use of signs, safety vests and other items from the Roadside Vegetation Manager and to return materials to the Manager upon completion of work.

All sponsors and participants shall agree to indemnify and hold harmless Johnson County, its Board of Supervisors, its officers and employees from all liability, judgment, costs, expenses and claims growing out of damages or alleged damages of any nature whatsoever to any person or property arising from the performance or non-performance of any roadside work.

Sponsors agree that in the performance or non-performance of any work within the right-of-way that they are initiators and volunteers and are in no way to be considered employees of Johnson County.

First preference for adoption of any section of roadway will be given to adjacent landowners. Second preference will be given to the governing bodies of local communities or urban areas. The third preference shall be given to organizations, clubs or individuals.

Sponsorship shall be for a period of two (2) years and in areas of not less than one (1) mile. If litter pick-up is involved it must include both sides of the designated roadway section.

Sponsorship will not be granted to political parties, political candidates, elected officials, or entities which would constitute any partisan endorsement.

A sponsor may adopt only one entryway into a city.

Litter must be removed a minimum of twice yearly dependent upon the area and conditions.

It shall not be the responsibility of the sponsors to pick up litter from road surfaces or from within four (4) feet of the road surface.

Parking upon the road shoulders while doing litter pick-up or other projects shall be prohibited.

All program participants shall be required to wear orange safety vests while working within the right-of-way.

Sponsors of plantings or landscape maintenance projects or native seed harvest sites shall control noxious weeds as necessary using County approved methods before the weeds produce seed.

All plant species to be used in landscape and prairie planting projects must be approved by the Johnson County Roadside Vegetation Manager prior to placement within the right-of-way.

All seed harvested from County roadsides must be reseeded back onto public lands within the County. Seed harvested from the right-of-way shall not be sold.

If, in the sole judgment of the Johnson County and the County Roadside Vegetation Manager, it is found that the sponsor is not meeting the terms and conditions of the agreement, the County may terminate the agreement at any time.

JOHNSON COUNTY RESPONSIBILITIES

The County shall be responsible for:

a) Furnishing advance traffic warning signs to be used in all adopted areas during sponsored activities.

b) Providing trash bags, orange reflective safety vests, safety literature and other materials to assure public and sponsor safety on the worksite.

c) Removal of filled trash bags upon completion of litter pick-up projects and upon notification by the group sponsor.

d) Removal of large, heavy or hazardous items discovered within an adopted roadside section.

e) Providing educational assistance, training or other supervision deemed necessary to assure successful completion of sponsored activities.

f) Coordination of efforts to obtain publicity and recognition for completion of sponsored activities.

PROCEDURE FOR ROADWAY ADOPTION

a) A representative of an interested group or individual should contact the Johnson County Roadside Vegetation Manager at the County Secondary Roads Department, 4810 Melrose Ave. West, Iowa City, Iowa, 52246, or by telephone at (319) 356-6046.

b) The County Roadside Vegetation Manager will explain the Program and will provide a sponsorship application.

c) The sponsor should select the location desired, complete the sponsorship application and return it to the County Roadside Vegetation Manager for review and approval.

d) The County Roadside Vegetation Manager will provide training or other information necessary as well as appropriate safety items as needed and assist in coordinating activities for the sponsoring group.

e) It is the sponsor's responsibility to notify the Secondary Roads Department 72 hours prior to project activities, to obtain and use required safety equipment and to notify the Department within 72 hours of completion of work to assure prompt return of safety items and litter bag removal.

f) It shall be the sponsor's responsibility to provide a $25.00 refundable deposit upon picking up safety signs and materials from the Secondary Roads Department. These items must be returned to the County within 72 hours of project completion to allow their use by other groups.

g) The sponsor shall insure that all workers will be properly equipped and will follow prescribed safety procedures while on the worksite.

h) The sponsor will collect litter in the furnished orange trash bags and place them off the road surface adjacent to a pre-arranged site designated by the County for pick-up.

i) The County will pick up the filled trash bags upon completion of a scheduled clean-up and upon notification by sponsors. The County will also be responsible for removal of any large, heavy or hazardous items discovered at the site.

SAFETY RULES FOR ADOPT-A-ROADWAY PROGRAM

Johnson County's new Adopt-A-Roadway Program has been established to offer members of our community the opportunity to help restore the quality of our roadside environment. Since this process will involve placing volunteer groups within the rights-of-way, it is necessary for us to abide by certain safety rules. This sheet contains a list of these safety rules as well as some suggestions for making the job as easy for the workers as possible. Please help us by following the enclosed guidelines when in the field.

As a part of the sponsor's obligations it is important that a safety meeting be held prior to each scheduled work day. This is also a good chance to organize crews and delegate jobs. The County will be glad to advise you and will assist whenever possible.

THE FOLLOWING RULES SHALL APPLY TO ANY CREWS INVOLVED IN ANY PROJECT WITHIN THE COUNTY RIGHT-OF-WAY:

1. All roadside workers will wear orange reflective safety vests while in the field.

2. One adult supervisor will be provided for each four youths (under age 16) working in the field.

3. All vehicles will be parked away from the traveled road surfaces. Parking permission should be arranged with adjacent landowners if possible.

4. Work by volunteers will not be allowed in project areas if any construction work is in progress.

5. Advance warning signs will be posted at both ends of the work site prior to start of activities by the sponsor, will be removed after work is completed and will be returned to the Secondary Road Department.

6. Heavy or hazardous objects discovered will be removed by the County workers and should be left in place by volunteers until the objects can be properly removed.

7. A pre-work site survey should be conducted by the sponsor to determine presence of hazards or dangerous conditions.

8. For health and safety reasons, volunteers should dress properly. Such clothing should include: Hats or caps, gloves, long-sleeved shirts, leather boots or sturdy shoes and if possible the clothing should be light or brightly colored to increase visibility to motorists.

9. Filled trash bags are to be placed only at pre-determined sites for later pickup by County employees.

10. Volunteers are not expected to pick up litter from medians or to provide maintenance in trafficked areas. Work should not be done within four (4) feet of the road surface at any time.

11. Be careful if using a litter pick-up stick to prevent injury.

12. Work should be stopped and crews should leave the site in the event of any inclement weather.

13. Workers should plan their activities so they will face oncoming traffic as they proceed along the right-of-way.

14. Sponsors are responsible for the health and safety of their crews. It is important to have water or other refreshments available and to have a first aid kit. It is a good practice to be able to contact emergency services in the event of an injury.

15. Working with plants within the right-of-way may expose crews to poisonous weeds or insects. It is a good idea to know of any allergies or problems ahead of time and avoid areas that are densely overgrown if possible.

ALWAYS REMEMBER THAT YOU ARE WORKING IN A POTENTIALLY DANGEROUS ENVIRONMENT--A PUBLIC HIGHWAY.

REMEMBER THAT WHATEVER YOUR PROJECT, YOU MUST BE PREPARED FOR THE POSSIBILITY OF AN EMERGENCY.

THE GOAL OF OUR PROGRAM IS TO ALLOW PUBLIC PARTICIPATION IN THE IMPROVEMENT OF OUR ROADWAYS. YOUR SAFETY IS OUR MOST IMPORTANT CONCERN.

FOR INFORMATION AND ASSISTANCE, CONTACT THE JOHNSON COUNTY SECONDARY ROADS DEPARTMENT AS FOLLOWS:

CHRIS HENZE
ROADSIDE VEGETATION MANAGER
4810 MELROSE AVE WEST
IOWA CITY, IA 52246
319-356-6046

APPLICATION TO ADOPT-A-ROADWAY

JOHNSON COUNTY ROADSIDE MANAGEMENT PROGRAM

_____

SPONSOR NAME (Organization, Group, or Individual)

_____

MAILING ADDRESS (Street, P.O. Box, City, State and Zip Code)

SPONSOR TELEPHONE NUMBER_____

THE PROPOSED WORKSITE IS LOCATED AT:

TOWNSHIP NAME_____

ON COUNTY ROAD_____

COMMENCING AT _____

AND TERMINATING AT_____

APPROVAL IS HEREBY REQUESTED TO ENTER WITHIN THE ABOVE NAMED COUNTY ROADWAY RIGHT-OF-WAY TO PERFORM THE FOLLOWING WORK:

Check (√) all that apply:

☐ LITTER REMOVAL	☐ HARVEST OF SEED
☐ WILDFLOWER PLANTING	☐ HAND WEEDING
☐ PRAIRIE MAINTENANCE	☐ LANDSCAPE MAINTENANCE

AGREEMENTS:

The sponsor(s) agree that in granting of a permit to do said work, the following stipulations shall govern:

1) This application shall be approved prior to commencement of any operations as requested herein.
2) Sponsors shall agree to indemnify and hold harmless Johnson County, its Board of Supervisors, officers and employees from any and all liability or judgment, costs, expenses and claims growing out of damages or alleged damages of any nature whatsoever to any person, property or third party arising out of the performance or nonperformance of work within the right-of-way.
3) No vehicles, equipment or materials are to be parked or stored on the public right-of-way.
4) Right-of-way markers, posted traffic signs and land monuments shall not be removed, altered or damaged.
5) This permit shall be subject to any applicable laws, rules and regulations of Local, State and Federal agencies.

6) The sponsor agrees to give the County at least 72 hours notice of intent to start project operations. Notification shall be made to the Johnson County Roadside Vegetation Manager and to the Johnson County Secondary Roads Department.

7) All sponsored groups will be required to obtain and use prescribed safety equipment and materials from the Secondary Roads Department and to return signs, safety vests and unused materials to the Department office within 72 hours after work completion.

8) A refundable deposit of $25.00 shall be required as a security for materials obtained from the Department. This deposit shall be refunded immediately upon return of said materials to the Department.

9) The sponsor shall carry on the work as required and authorized by this agreement with serious regard for the safety of the traveling public, adjacent property owners and of the volunteers or employees of the sponsor. Traffic protection shall be in accord with Part VI of the current manual on *Uniform Traffic Control Devices for Streets and Highways*.

10) The sponsor acknowledges that all personnel involved in this project are initiators and volunteers directed by the sponsor and that the sponsor accepts full responsibility for any injuries or damages sustained or caused by such personnel. The sponsor acknowledges that they or their volunteers are in no way to be considered employees of Johnson County or the Department of Secondary Roads.

11) The sponsor acknowledges that this is a binding contract and that the sponsor has received valid and sufficient consideration. Said consideration shall include but not be limited to positive publicity and other recognition arranged with the assistance of the County Roadside Vegetation Manager.

In consideration of the above, the sponsor and Johnson County further agree to abide by the terms and conditions listed in this application and in the Guidelines for the Adopt-A-Roadway Program as supplied with this form.

Johnson County reserves the right to deny or revoke sponsorships that might be deemed as partisan endorsement or have an adverse effect on the overall program.

Johnson County also reserves the right to terminate this agreement when in the sole judgment of the County it is found that the sponsor has not met the terms of this agreement.

This agreement shall remain in force from _____, 20_____ until _____, 20_____. If this agreement includes litter removal, the sponsor agrees to pick up litter _____ times per year.

APPLICANT_____

BY_____

ADDRESS_____

DAY TELEPHONE _____

EVE TELEPHONE _____

RECOMMENDED FOR APPROVAL

BY_____ DATED_____

Appendix 9 Johnson County Permit to Work in the Right of Way

SECONDARY ROAD DEPARTMENT
4810 MELROSE AVENUE WEST
IOWA CITY, IOWA 52246
TEL (319) 356-6046 FAX (319) 339-6133

Permit #	
Fee	$50.00
Cash	Check

*Permit Fee is Non-Refundable

PERMIT TO PERFORM WORK WITHIN COUNTY RIGHT OF WAY

PLEASE PRINT

APPLICANT NAME: _____

MAILING ADDRESS: _____

CITY, STATE, ZIP: _____

PHONE NUMBER(S): _____

ADDRESS/LOCATION OF PROPOSED WORK: _____

_____

SECTION _____ TOWNSHIP _____ RANGE _____ 1/4 SECTION _____

SUBDIVISION NAME: _____ LOT #: _____

ZONING APPLICATION #: _____

DETAILED DESCRIPTION OF PROPOSED WORK (driveway entrance, field entrance, pave driveway, clean ditch, cut brush, 50-50 rock sharing, etc.) _____

_____

DATE THE SITE WILL BE MARKED WITH A FLAG: _____

PERSON/CONTRACTOR DOING PROPOSED WORK: _____

I, (Print Full Name) _____, do solemly swear that I have read the entire permit application and have fully completed all statements and provided all data called for herein truthfully and correctly and I agree to abide by all General Provisions and Special Provisions set forth herein.

_____ _____

SIGNATURE OF APPLICANT DATE

FOR COUNTY USE

PRELIMINARY INSPECTION BY: _____ DATE: _____

FINAL INSPECTION BY: _____ DATE: _____

THE CULVERT DIAMETER REQUIRED AT THIS LOCATION IS _____ INCHES.

THE FOLLOWING SIGNATURE IS YOUR AUTHORITY TO PROCEED WITH THE WORK AS STATED ABOVE AND WITH REGARD TO THE SPECIAL PROVISIONS.

APPROVED BY: _____ DATE: _____

COUNTY ENGINEER

APPLICATION IS VALID FOR ONE (1) CALENDAR YEAR FROM APPROVAL DATE

Appendix 10 Johnson County Encroachment Agreement

SECONDARY ROAD DEPARTMENT

JOHNSON COUNTY ENGINEER
Greg S. Parker, P.E.

ASSISTANT COUNTY ENGINEER
Rob Winstead, P.E. & P.L.S.

ASSISTANT COUNTY ENGINEER
Ed Bartels, P.E. & P.L.S

ASSISTANT COUNTY ENGINEER
Neil Shatek, P.E.

MAINTENANCE SUPERINTENDENT
Kevin Braddock

ASST. MAINTENANCE SUPERINTENDENT
Mike Hennes

ROADSIDE VEGETATION MANAGER/
WEED COMMISSIONER
Chris Henze

4810 MELROSE AVE. WEST, IOWA CITY IOWA 52246 TEL (319) 356-6046 FAX (319) 339-6133 www.johnson-county.com

ENCROACHMENT AGREEMENT

This agreement made on the _____ day of _____, 20_____ by and between Johnson County, Iowa and _____ _____.Witnesseth:That (PLEASE PRINT FULL NAME)_____ _____ agrees to permit Johnson County, its agents, or contractors to encroach on the property located on the _____side of _____Road / Avenue, in Section _____of _____Township for the purpose of _____ _____

That _____hereby considers that the improvements to consist of :

(A) FENCE

Removed and disposed of by Johnson County _____yes _____no

Length of fence removed:_____ _____

Removed and replaced by Johnson County _____yes _____no

If "Yes", type of fence:_____ _____

If "Yes", footage of fence_____ _____

(B) SEEDING

Describe what Johnson County uses in our ditches and if Landowner wants anything different. List type requested.

(C) TREES

Any large trees or hardwoods to be removed should be marked out with the Landowner or delegate. Are trees to be disposed of by Johnson County or by Landowner?

_____Johnson County to dispose of trees.

_____Landowner to dispose of trees.

Additional information:_____ _____

(OVER)

(D) WORK AREA

Johnson County will be encroaching _____feet beyond the existing right of way line. Draw a sketch of the work area.

JOHNSON COUNTY SIGNATURE:_____

JOHNSON COUNTY SIGNATURE:_____

LANDOWNER'S SIGNATURE:_____

ADDRESS:_____

_____

PHONE:_____

Appendix 11 Roadside Maintenance Agreement/Indemnity Agreements

SECONDARY ROAD DEPARTMENT

JOHNSON COUNTY ENGINEER
Greg S. Parker, P.E.

ASSISTANT COUNTY ENGINEER
Rob Winstead, P.E. & P.L.S.

ASSISTANT COUNTY ENGINEER
Ed Bartels, P.E. & P.L.S

ASSISTANT COUNTY ENGINEER
Neil Shatek, P.E.

MAINTENANCE SUPERINTENDENT
Kevin Braddock

ASST. MAINTENANCE SUPERINTENDENT
Mike Hennes

ROADSIDE VEGETATION MANAGER/ WEED COMMISSIONER
Chris Henze

4810 MELROSE AVE. WEST, IOWA CITY IOWA 52246 TEL (319) 356-6046 FAX (319) 339-6133 www.johnson-county.com

ROADSIDE MAINTENANCE AGREEMENT REQUEST

Name:_____**Phone**_____
Address:_____
City/State/Zip:_____**Email:**_____

I request Johnson County Secondary Road Department not to apply herbicides within the right of way adjacent to the land designated below located in Section ___, of Township _____

Areas That Are Not To Be Treated

(Please be as specific as possible- feel free to include an illustration of the area on back)

County Road _____ Side of Road ___N S E W____
From_____
To_____
County Road_____ Side of Road __N S E W____
From_____
To_____

In return, I ask permission to work within the public right of way to remove noxious weeds and to remove brush by cutting and treating the stumps. A completed Permit to Work Within the Right of Way must also be on file with the Secondary Roads Dept. Roadside Maintenance Agreement signs must be posted in **visible** locations at each end of the Maintenance Agreement area to define boundaries. Signs must have an unobstructed view from the road and must be a minimum of 5 feet above the ground. This agreement **does not** prohibit herbicide applications by utility companies or other entities.

I fully understand that I am to destroy State & County listed noxious weeds by **June 1st of every year**, and remove all brush and trees in accordance with Johnson County Noxious Weed and Brush Control Policies, or the same may be removed by Johnson County and this or future permits may be revoked. This is a long-term agreement, and is effective until **five (5) years** from date below.

DATE: _____ DATE: _____

_____
Applicant Name

_____
Roadside Vegetation Manager

_____
Property Owner (if other than applicant)

_____
Johnson County Engineer

SECONDARY ROAD DEPARTMENT

JOHNSON COUNTY ENGINEER
Greg S. Parker, P.E.

ASSISTANT COUNTY ENGINEER
Rob Winstead, P.E. & P.L.S.

ASSISTANT COUNTY ENGINEER
Ed Bartels, P.E. & P.L.S

ASSISTANT COUNTY ENGINEER
Neil Shatek, P.E.

MAINTENANCE SUPERINTENDENT
Kevin Braddock

ASST. MAINTENANCE SUPERINTENDENT
Mike Hennes

ROADSIDE VEGETATION MANAGER/ WEED COMMISSIONER
Chris Henze

4810 MELROSE AVE. WEST, IOWA CITY IOWA 52246 TEL (319) 356-6046 FAX (319) 339-6133 www.johnson-county.com

INDEMNITY AGREEMENT

This agreement is made this _____day of _____, 20___, by and between (PRINT)_____,whose address is _____ _____, hereinafter called indemnitor, and JOHNSON COUNTY, IOWA, hereinafter called indemnitee, witnesseth:

Whereas, indemnitor has applied for a permit to _____**Manage Roadside Vegetation**, along a public roadway in Johnson County, Iowa, known and described as follows _____

Whereas, Johnson County, Iowa, by and through the County Engineer, has approved said application subject to execution of this indemnity agreement;

Now, therefore, in consideration of approval by the County of said application, indemnitor agrees that he/she will at all times hereafter indemnify and hold harmless the indemnitee from any and all liability arising from or an account of the _____**Manage Roadside Vegetation**_____ application made by indemnitor pursuant to or on account of the construction work involved or the conditions resulting from the work described on the application made by the indemnitor pursuant to this approval. This indemnification includes any and all claims, demands, suits, actions or proceedings of any kind or nature of or by anyone whomsoever, in any way arising out of the _____**Manage Roadside Vegetation**____ work application by indemnitor regardless of when the same is made, filed, or otherwise asserted.

This agreement shall be binding on the heirs, executors, administrators, successors and assigns of the indemnitor.

In witness whereof, I have hereunto set my hand and seal this _____day of _____20____.

INDEMNITOR: NAME (Signature) _____

NAME (Print) _____

ADDRESS _____

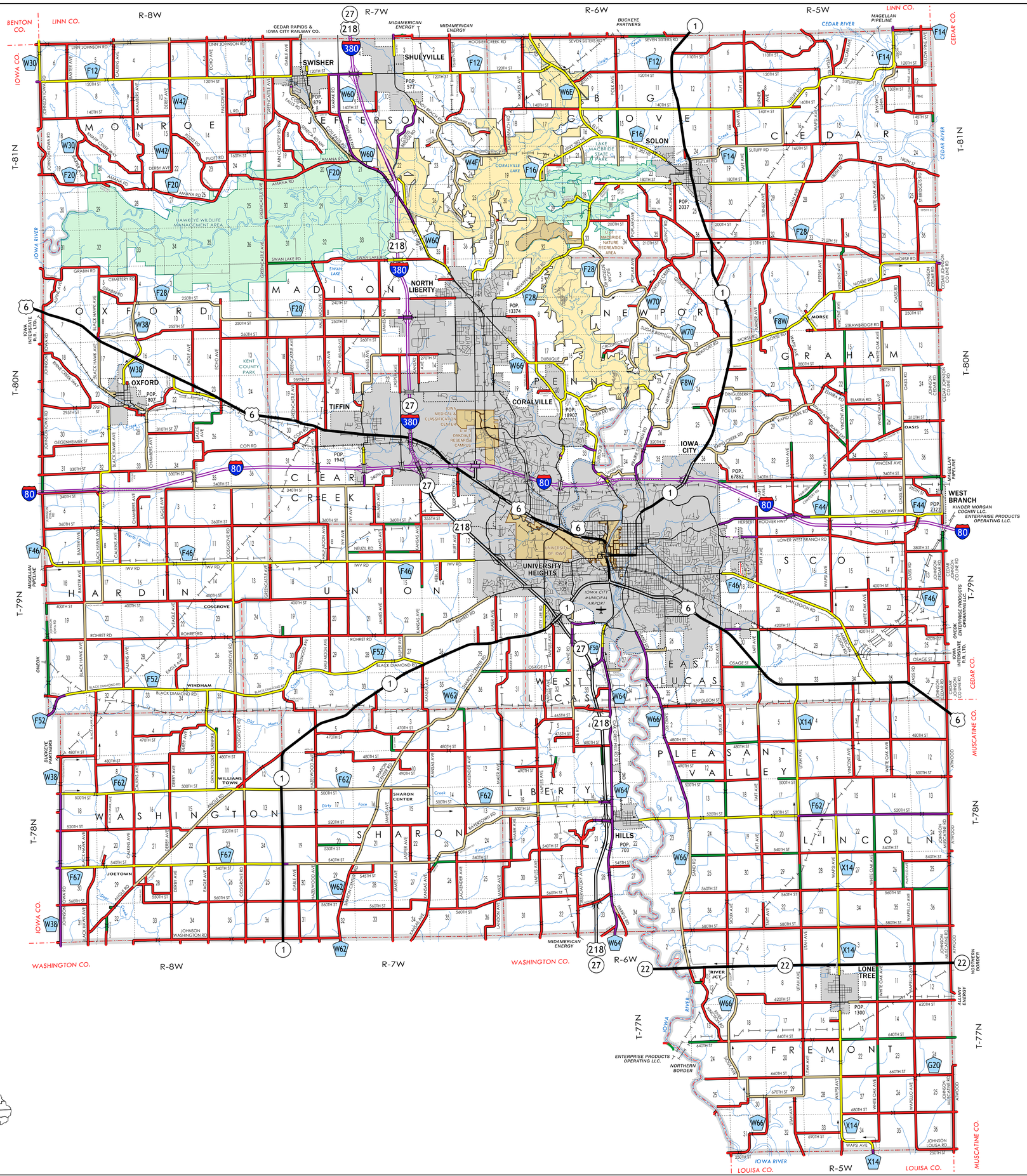
TEL. NO. _____

WITNESS: NAME (Signature) _____

NAME (Print) _____ADDRESS_____

_____

Appendix 12 Johnson County Road System Map



HIGHWAY AND TRANSPORTATION MAP

JOHNSON COUNTY IOWA

Prepared By

IOWA DOT

OFFICE OF SYSTEMS PLANNING
Phone: (515) 239-1289
WWW.IOWADOT.GOV/MAPS

In Cooperation With
United States
Department of Transportation

JANUARY 1, 2014

MILES 0 1 2 3 4
KILOMETERS 0 1 2 3 4 5 6

6 - 1 - 14

LEGEND

- INTERSTATE HIGHWAY
- PRIMARY HIGHWAY-DIVIDED
- PRIMARY HIGHWAY
- PORTLAND CEMENT CONCRETE ROAD
- ASPHALT ROAD
- BITUMINOUS ROAD
- GRAVEL ROAD
- EARTHEN ROAD

- INTERSTATE HIGHWAY 80
- UNITED STATES HIGHWAY 65
- STATE HIGHWAY 237
- COUNTY HIGHWAY 527

- RAILROAD
- PIPELINE
- AIRPORT
- HYDROLOGY
- BRIDGE

- STATE BOUNDARY
- COUNTY BOUNDARY
- CORPORATE BOUNDARY
- TOWNSHIP LINE
- SECTION LINE
- ROAD NAMES — ABBEY ROAD
- UNINCORPORATED PLACE — ELWOOD

- STATE PARKS
- STATE INSTITUTIONS
- FEDERAL LAND

52

Appendix 13 County Organizational Structure

Secondary Roads Department

COUNTY ENGINEER
Organizes and directs all road planning, engineering, roadside vegetation, construction and maintenance activities. Managing the department and supervising its employees

Administrative Assistant
Provides administrative support to the Engineer & mgmt staff, maintain accounts & other records, help prepare budgets, supervise office personnel

Secretary
Serves as department receptionist & provides secretarial support to staff

Asst. County Engineer
Perform civil engineering duties ranging from design to project and staff management. Assist the County Engineer in the administration of the dept.

Maintenance Superintendent
Supervises employees engaged in a variety of maintenance, construction & repair activities on county roads, bridges, culverts & rights of way in a safe & efficient manner.

Roadside Vegetation Manager
Manage roadsides within Johnson County

Roadside Tech.

Engineering Tech II
performs skilled technical engineering and/or surveying related work including lead responsibility for construction project inspection and/or a survey crew

Asst. Maint. Superintendent
Assist in the supervision of a wide variety of maintenance and repair activities.

Engineering Tech I
perform technical engineering and/or surveying related work including lead responsibility for construction project inspection and/or a survey crew

Lead Person
Leads a crew of workers or contracted personnel for a period of time.

District Patrol Person
performs skilled work & is responsible for the inspection and maint. of a specified district. Leads a crew of workers or contracted personnel for a period of time.
.

Operator/Fabricator
performs specialized skilled work with equipment in a wide range of highway maintenance and construction activities

Mechanic
performs skilled mechanical work in the maintenance, alteration, and repair of wheeled, tracked, and related equipment of the road maintenance field

Road Maintenance
performs manual labor and operates equipment in a wide range of highway maintenance and construction activities

Sign Technician
Perform skilled work in the layout, fabrication, maint. & placement of road & traffic signs. Operate & maintain sign machine & specialized roadside equipment. Maintain records, monitor inventory & order supplies. Lead a crew of workers or contracted personnel for a period of time. Oversee and perform manual cleaning work required at the maintenance buildings and grounds

Seasonal Laborer
provides manual labor in a variety of maintenance and construction projects
Temp position 40+ hrs per week

Appendix 14 Job Position Descriptions
Roadside Vegetation Manager/Roadside Technician

JOHNSON COUNTY
JOB DESCRIPTION

Roadside Vegetation Manager/Weed Commissioner

DEFINITION AND DUTIES:
Work within the Secondary Road Department, in a working management position, under the direction of the County Engineer, or his/her designee, to manage roadsides within Johnson County.

Knowledge of:
- ◊ Secondary Road practices and procedures
- ◊ Prairie grass establishment and maintenance
- ◊ Principles and practices of noxious weed control and safe use of roadside chemicals
- ◊ IDOT signing and safety procedures
- ◊ Planning and budgeting skills
- ◊ Computer applications including word processing and spreadsheets

Ability to:
- ◊ Identify species of plants, flowers, and noxious weeds
- ◊ Identify environmentally sensitive areas within existing County right of ways and future construction right of way areas including but not limited to wetlands and woodlands
- ◊ Effectively apply knowledge and common sense to achieve work objectives
- ◊ Routinely stand, walk, sit, operate hand power tools, bend, kneel, stoop, balance and climb
- ◊ Work outdoors in extreme weather conditions and be exposed to dust, fumes and loud noises
- ◊ Routinely lift 75 lbs.
- ◊ Establish and maintain effective working relationships with co-workers and the public
- ◊ Effectively supervise staff
- ◊ Perform routine maintenance on vehicles and equipment
- ◊ Maintain records and prepare reports

MINIMUM EDUCATION, TRAINING AND EXPERIENCE:

High school graduate or equivalent with additional education in botany, horticulture, natural resources or related areas. Experience in weed control activities, supervision, public relations, or any combination of training and experience which provides the required knowledge, skills and abilities.

Special requirements: Must possess a valid commercial pesticide applicator license in Category 6, right of way pest control or be able to obtain within 30 days. Must have a valid driver's license and have, or be able to obtain, a Commercial Driver's License. Johnson County residency required.

SPECIFIC DUTIES: *To be performed satisfactorily with or without reasonable accommodation*

The following duties are normal for this position. These are not to be construed as exclusive or all inclusive. Other duties may be required and assigned.

- ◊ Work with the County Engineer, the Maintenance Superintendent, and other Secondary Road Department staff to supervise, schedule and administer the Johnson County roadside vegetation management program.
- ◊ Responsibilities include all aspects of managing roadside vegetation including but not limited to: noxious weed/brush control, mowing, develop erosion control plans and seeding of construction and maintenance projects, prairie restoration/management, wetlands establishment/maintenance, equipment operation and maintenance, maintaining records, develop budget requirements and track costs, writing grants, woodland and wetland identification, and perform duties of weed commissioner.
- ◊ Inform and educate the public concerning roadside management techniques and policies, and serve on the Johnson County Roadside Vegetation Management Technical Advisory Committee.

FLSA Status: Non-exempt

Pay Range: 18

Date Established: 1990

Date Revised: June 13, 2000

I have carefully read and understand the contents of this job description. I understand the responsibilities, requirements and duties expected of me. I understand that this is not necessarily an exhaustive list of responsibilities, skills, duties, requirements, efforts or working conditions associated with the job. While this list is intended to be an accurate reflection of the current job, the Employer reserves the right to revise the functions and duties of this job or to require that additional or different tasks be performed as directed by the Employer. I understand that I may be required to work overtime, different shifts or hours outside the normally defined workday or workweek. I also understand that this job description does not constitute a contract of employment nor alter my status as an at-will employee. I have the right to terminate my employment at anytime and for any reason, and the Employer has a similar right.

_____	_____	_____	_____
Employee's Signature	Date	Department Head	Date

The county of Johnson is an Equal Employment Opportunity Employer. In compliance with the Americans Disabilities Act, the County will provide reasonable accommodations to qualified individuals with disabilities and encourages prospective employees and incumbents to discuss potential accommodations with the Employer.

JOHNSON COUNTY
JOB DESCRIPTION

Roadside Technician

DEFINITION AND DUTIES:
Under general supervision, performs skilled work with specialized roadside and road maintenance equipment. Assists with implementation of the Integrated Roadside Vegetation Management Program. Supervises a crew of workers or contracted personnel for a period of time. Duties may vary in accordance with seasonal, climatic, or program conditions.

Knowledge of:

◊ Basic mechanical principles
◊ Safe operation of specialized equipment
◊ Basic methods and techniques in vegetation establishment, management and control
◊ Basic principles and practices of noxious weed control and safe use of roadside chemicals
◊ Elementary engineering principles and practices involved in road maintenance and construction
◊ Basic erosion control principles

Ability to:

◊ Correctly identify relevant species of trees, shrubs, grasses, flowers, and noxious weeds
◊ Operate medium to heavy trucks, trailers, tractors and attachments, mowers, loaders, and other equipment normally used in highway construction or maintenance including auxiliary or truck mounted attachments
◊ Maintain appropriate seeding and spraying records
◊ Operate acetylene, arc welding, wire welding and plasma cutting equipment
◊ Operate spraying equipment and utilize roadside chemicals safely
◊ Be on-call in emergency conditions
◊ Notify utility companies for planned work areas through “one-call” system
◊ Use a computer for the purposes of data entry and word processing
◊ Understand and follow written and oral directions
◊ Perform manual labor (moderate to heavy) for extended periods of time
◊ Work outdoors in extreme weather conditions and be exposed to dust, fumes and loud noises
◊ Establish and maintain effective working relationships with co-workers and the public
◊ Handle moderate levels of stress appropriate to the position
◊ Lift, move, carry, push and/or pull up to approximately 50 to 100 pounds
◊ Stand, sit, bend, climb, balance, stoop, kneel, twist, crouch, and crawl
◊ Have clarity of speech and hearing which permits effective communication
◊ Have sufficient vision which permits production and review of a wide variety of materials both electronic and hardcopy forms
◊ Have sufficient manual dexterity to operate a computer keyboard and make handwritten notations
◊ Provide supervision of workers
◊

MINIMUM EDUCATION, TRAINING AND EXPERIENCE:

High school graduate or equivalent. Employment experience may be substituted on a year to year basis for each year of required education with a maximum substitution of four (4) years. Six (6) years experience in road maintenance and construction field using special equipment including 2 years of experience in roadside vegetation activities.

Special requirements: Possession of a valid Class A Commercial Driver's License with air brake and tanker endorsement (or ability to obtain within 30 days of hire or transfer) and insurable under county liability coverage. Possession of a valid State of Iowa Commercial Pesticide Applicator's license - Category 6, Right of Way (or ability to obtain within 30 days of hire or transfer). Johnson County residency required.

SPECIFIC DUTIES: *to be performed satisfactorily with or without reasonable accommodation*

The following duties are normal for this position. These are not to be construed as exclusive or all-inclusive. Other duties may be required and assigned.

◊ Perform manual labor and operate equipment in a wide range of highway construction and maintenance activities such as but not limited to:
  - Maintaining roadside vegetation using various treatment methods including but not limited to mechanical, mowing, prescribed burning, chemical application, and competitive seeding
  - Hauling equipment and/or materials in trucks or trucks with trailers
  - Plowing snow
  - Spreading salt and sand on roadway surfaces for winter roadway maintenance
  - Hauling and spreading rock on roadway surfaces
  - Performing traffic control duties including sign installation and flagging
  - Surface maintenance of pavements and or seal coating (oiling) roads including patching with asphaltic cement, concrete and/or Portland cement concrete, and crack sealing
  - Cleaning up debris within road right-of-ways

◊ Operate assigned equipment skillfully, safely, and in conformance to regulations and directions.

◊ Perform preventative maintenance functions on Secondary Roads equipment.

◊ Supervise a crew for various types of work including but not limited to noxious weed/brush control, mowing, prescribed burning, seeding, and equipment operation.

◊ Assist with identification of noxious weed problem areas and weed control programs in supporting weed commissioner duties.

◊ Design and fabricate special equipment, inspect, adjust, repair or replace worn out or defective parts of equipment.

◊ Responsible for proper safety devices, equipment and signs on construction and maintenance projects.

◊ Train employees in the operation of specified equipmentPerform duties of Road Maintenance Person, Operator/Fabricator, Roadside Vegetation Manager, or District Patrol Person when necessary.

◊ Attend work regularly at the designated place and time.

FLSA Status: Non-Exempt

Pay Grade: 6

Date Established: August 28, 2003

Date Revised:

The County of Johnson is an Equal Employment Opportunity Employer. In compliance with the Americans Disabilities Act, the County will provide reasonable accommodations to qualified individuals with disabilities and encourages prospective employees and incumbents to discuss potential accommodations with the Employer

Appendix 15
Johnson County IRVM Living Roadway Trust Fund- Funding History

Johnson County LRTF Funding History through FY 2015

DOTProjectNumber	Applicant	Award	FiscalYear	Description
90-52-LRTF-001	Johnson County	$3,879.00	1990	Special Seeding
90-52-LRTF-003	Johnson County	$9,872.85	1990	Equipment - Truax drill
90-52-LRTF-101	Johnson County	$9,569.00	1991	Special Seeding
90-52-LRTF-102	Johnson County	$2,892.00	1991	Special Equipment
90-52-LRTF-103	Johnson County	$5,535.00	1991	Special Equipment
90-52-LRTF-201	Johnson County	$8,790.00	1992	Seed
90-00-LRTF-303	Johnson County Conservation Board	$4,225.89	1993	Seed
90-52-LRTF-401	Johnson County	$5,000.00	1994	Native seed
90-52-LRTF-501	Johnson County	$6,750.00	1995	Seed & equipment
90-52-LRTF-002	Johnson County	$4,500.00	2000	Inventory - Iowa Valley RC&D
90-52-LRTF-101	Johnson County	$4,500.00	2001	Inventory
90-52-LRTF-201	Johnson County	$2,000.00	2002	Equipment - Burn
90-52-LRTF-401	Johnson County	$3,500.00	2004	Equipment - Utility vehicle
90-52-LRTF-501	Johnson County IRVM	$525.00	2005	Equipment - Fire (leaf blower)
90-52-LRTF-601	Johnson County	$3,000.00	2006	Equipment - Vicon PS 403 Spreader
90-52-LRTF-701	Johnson County IRVM	$1,600.00	2007	Equipment - Erosion control
90-52-LRTF-801	Johnson County IRVM Program	$575.00	2008	Equipment - Truax ATV-mounted seed slinger
90-52-LRTF-901	Johnson County Conservation Board	$526.85	2009	Native planting
90-52-LRTF-902	Johnson County Conservation Board	$1,552.00	2009	Native planting
90-52-LRTF-903	Johnson County IRVM	$1,680.00	2009	Equipment - Weather data logger
90-52-LRTF-904	Johnson County IRVM	$724.00	2009	Equipment - Rake
90-52-LRTF-001	Johnson County IRVM	$3,494.00	2010	Equipment - GPS
90-52-LR14-(310)	Johnson County IRVM	$450.00	2014	IRVM educational signage
90-52-LR14-(309)	Johnson County IRVM	$10,000.00	2014	IRVM equipment storage facility
90-52-LR15-(320)	Johnson County IRVM	$1,850.00	2015	Educational field day

Total LRTF Funding Awarded FY1990 - FY2015	$ 96,990.59

Appendix 16
Jurisdictional Approval- County Engineer Signed IRVM Plan

SECONDARY ROAD DEPARTMENT

JOHNSON COUNTY ENGINEER Greg S. Parker, P.E.
ASSISTANT COUNTY ENGINEER Rob Winstead, P.E. & P.L.S.
ASSISTANT COUNTY ENGINEER Ed Bartels, P.E. & P.L.S
ASSISTANT COUNTY ENGINEER Neil Shatek, P.E.

MAINTENANCE SUPERINTENDENT Kevin Braddock
ASST. MAINTENANCE SUPERINTENDENT Mike Hennes
ROADSIDE VEGETATION MANAGER/ WEED COMMISSIONER Chris Henze

4810 MELROSE AVE. WEST, IOWA CITY IOWA 52246 TEL (319) 356-6046 FAX (319) 339-6133 www.johnson-county.com

Johnson County IRVM Statement of Support

Whereas, the Johnson County Engineer, and the Johnson County Roadside Vegetation Manager, in spirit of cooperation, common goals and shared vision to manage roadsides, weeds and brush, within Johnson County by and through an Integrated Roadside Vegetation Management 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 Program is pivotal to the joint creation, monitoring, and updating of an Integrated Roadside Vegetation Management Plan, that incorporates public participation, input, education; and shall strive to achieve the goals and objectives of the IRVM Program;

Therefore, be it resolved that the Johnson County Engineer, and the Johnson County Roadside Vegetation Manager shall establish an Integrated Roadside Vegetation Management Program and plan according to the provisions described herein.

JOHNSON COUNTY ENGINEER

May 20, 2015

Greg Parker, PE

JOHNSON COUNTY ROADSIDE VEGETATION MANAGER

May 20, 2015

Chris Henze