

# Roadside Views: Stakeholder Perspectives of Integrated Roadside Vegetation Management





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# Origins of Integrated Roadside Vegetation Management in Iowa

## 1986 Groundwater Protection Act



### Chicago Tribune

Wednesday, October 19, 1994

## Herbicides imperil water in Midwest

Studies say farm runoffs tainting numerous systems

By Michael Arndt  
TRIBUNE STAFF WRITER

WASHINGTON—The list of things linked to cancer is mind-numbing: tobacco, asbestos, ultraviolet rays, red meat, charbroiled foods, artificial sweeteners, solvents, radon, preservatives, electromagnetic fields and alcohol.

Now add herbicide-tainted tap water to the list.

Analyzing federal and state environmental data, two interest groups found that more than 14 million Americans—mostly in the Midwest—routinely drink water from municipal water systems contaminated with agricultural weedkillers that cause cancer and birth defects in laboratory animals.

While most of these people consume only minuscule amounts of herbicides and thus face no in-

creased risk of cancer, the groups said Tuesday that 3.5 million people get enough of these poisons in their water to significantly raise the odds of getting cancer over their lifetimes.

The list of the highest concentrations of the herbicides included three Illinois cities—Springfield, Danville and Decatur—as well as Cedar Rapids, Iowa; Indianapolis; Columbus, Ohio; Kansas City, Mo.; and Omaha.

"These are serious contaminants and we simply ought to get rid of the dangerous compounds as soon as possible," said Dr. David Rall, an environmental health expert with Physicians for Social Responsibility, which conducted the study with the Environmental Working Group.

Spokesmen for Monsanto Co. and other chemical manufacturers quickly dismissed the findings, contending that the level of weedkillers in municipal water supplies is inconsequential. Some impartial researchers also were doubtful.

But the Clinton administration

SEE WATER, PAGE 8



Bill Haywood



# Living Roadway Trust Fund Legislation, 1988

## Iowa Code

### 314.21 Living Roadway Trust Fund

Administered by Iowa DOT; works with partners in Iowa to:

- support IRVM programs
- educate public on the benefits and use of native plants in roadsides





## Living Roadway Trust Fund Legislation, 1988

1) 3% of REAP funds (Resource Enhancement and Protection Act – gaming receipts, license plate sales)

2) Tax on utility easements

3) Road use tax fund



2015 - \$889,000 available

Formula to allocate money  
among state, counties, and cities







# IRVM Legislation, 1988

## Iowa Code

### 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.





## IRVM Legislation, 1988

The state department of transportation **shall** provide an integrated roadside vegetation management plan and program....

A county **may** adopt an integrated roadside vegetation management plan....









## Survey Goals

How do county engineers and roadside managers perceive IRVM – what are the challenges and benefits to implementing it?

How is IRVM being implemented?





## Methods



Survey sent to all Iowa Roadside Managers (37) and County Engineers (99)

Mixed-mode: Online and mail-back survey

Data collected: March – April 2016

Response rate

County Engineers,  $n = 64$  (65%)

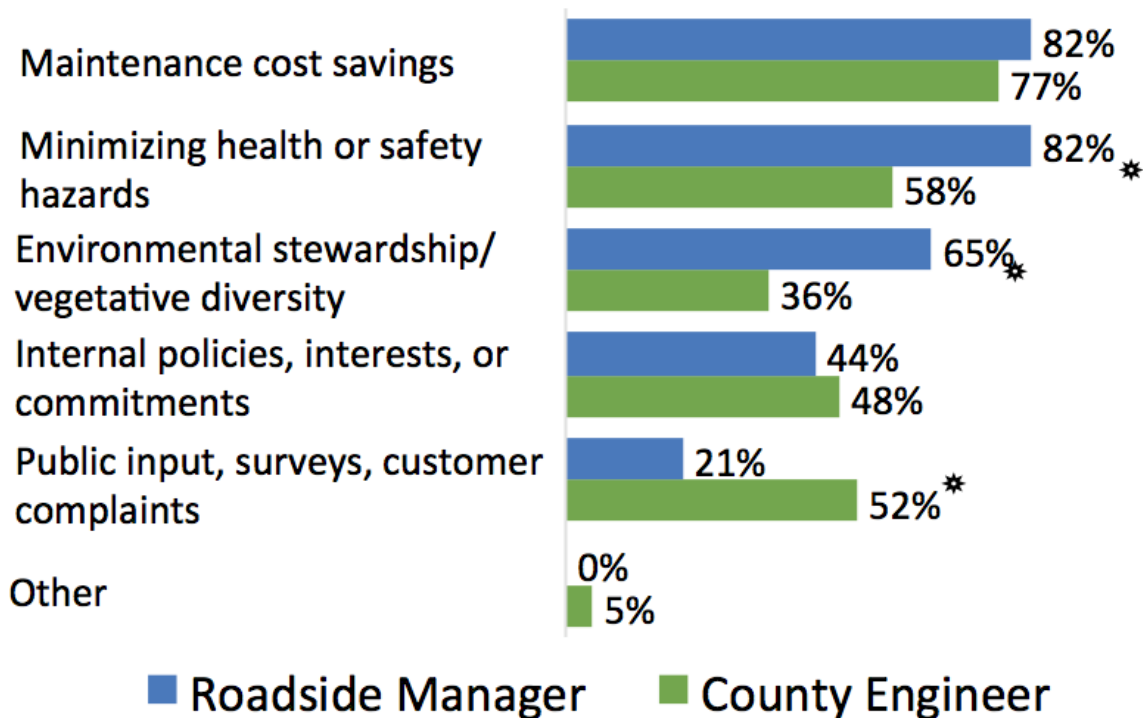
Roadside Managers,  $n = 34$  (92%)





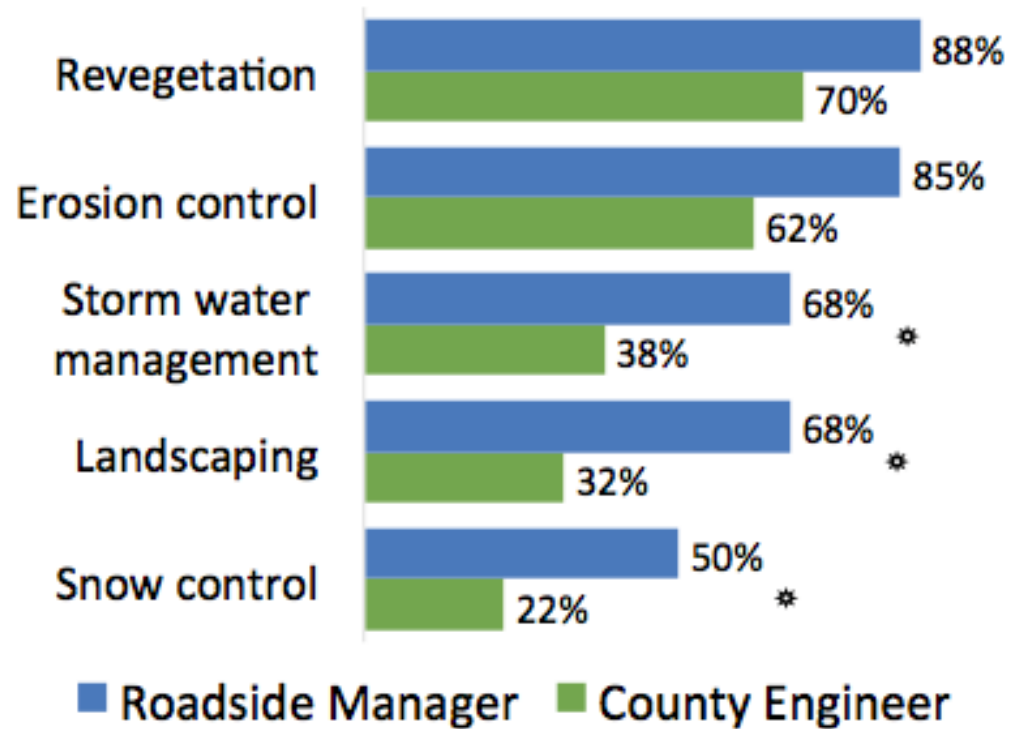


## Most influential factors in implementing roadside management strategies

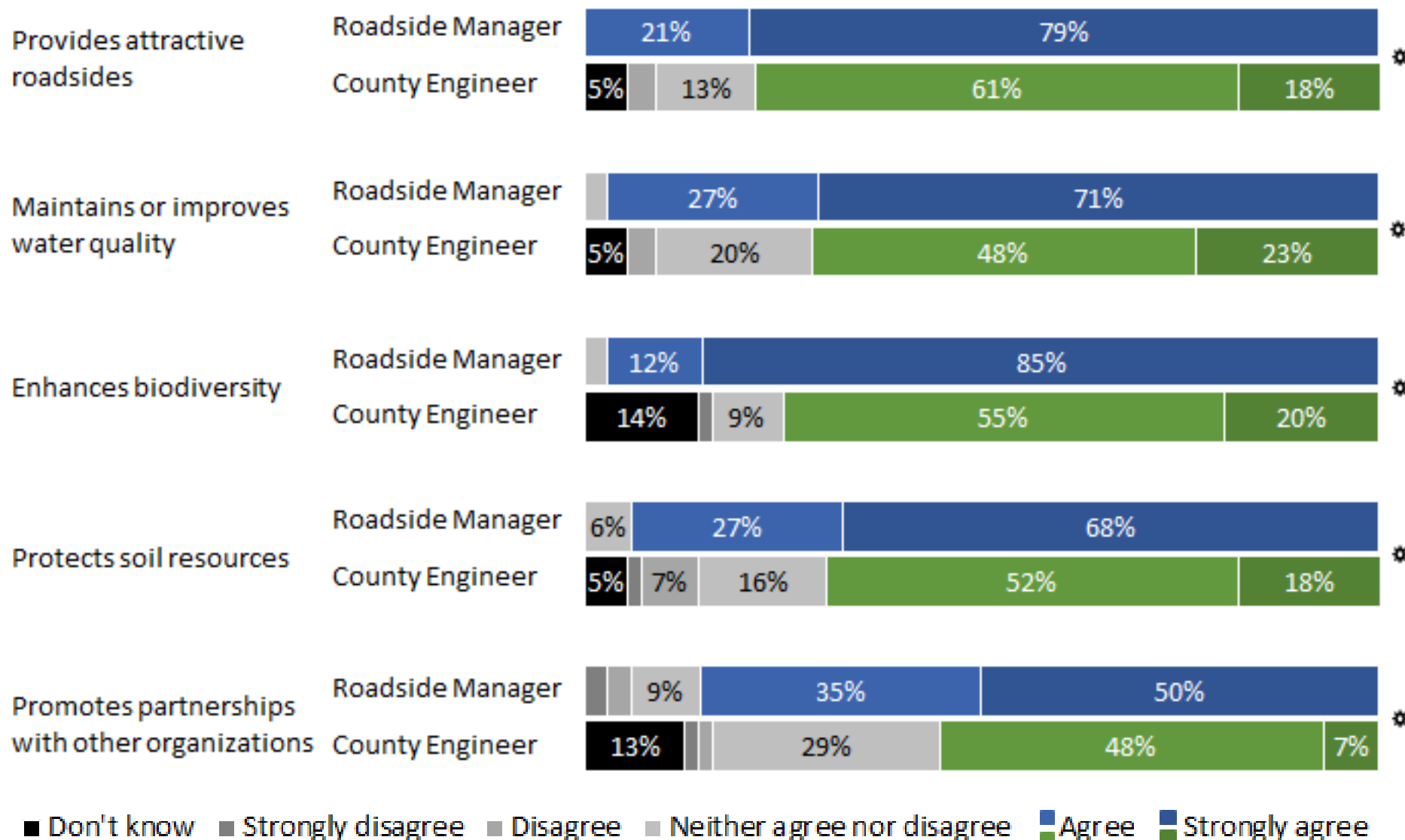




## Agency activities that rely on native grasses or wildflowers

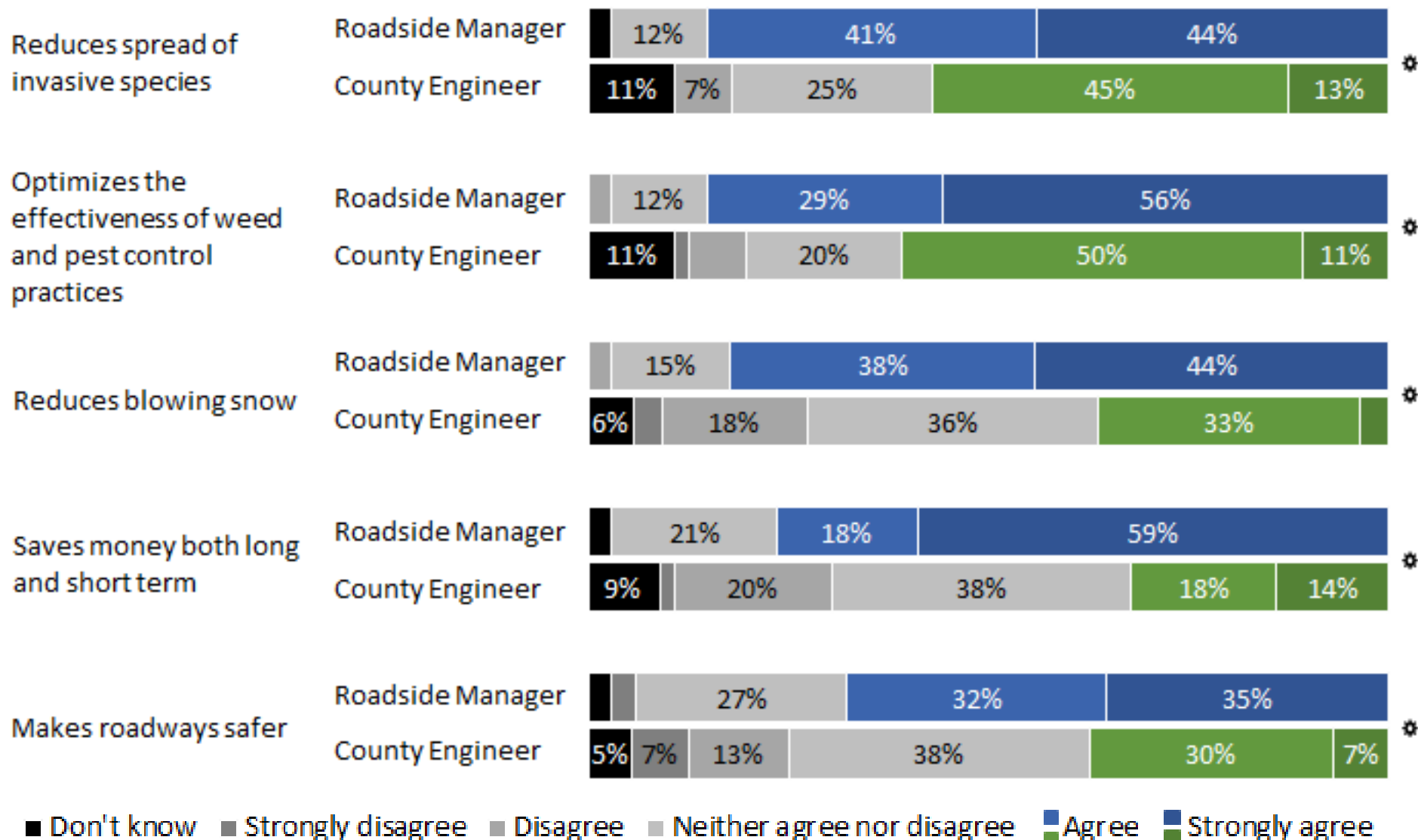


## Perceived Benefits of IRVM



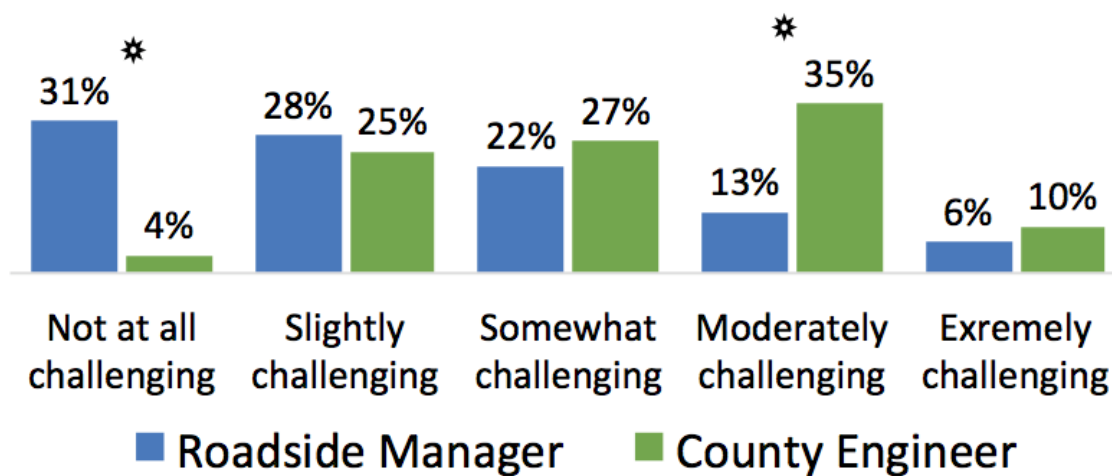


## Perceived Benefits of IRVM continued



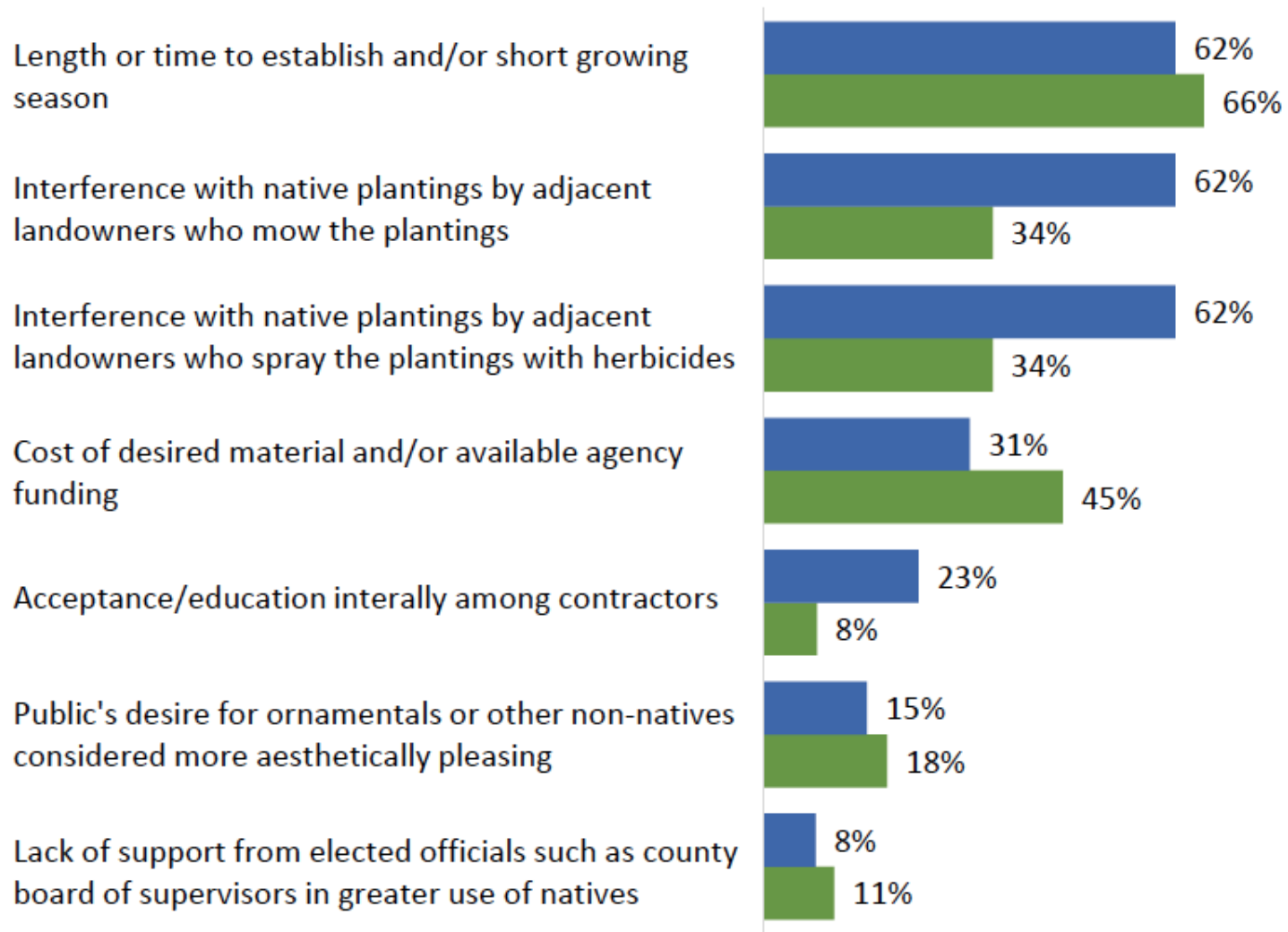


## Agency's experience with native vegetation



# Primary Challenges

\*Only asked to respondents who indicated their agency's experience using native plantings has been somewhat, moderately, or extremely challenging.





## Reasons for Not Using Native Vegetation

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*Cost - i.e. seed, labor and maintenance until established. – County Engineer*

*We use something that establishes faster for our major erosion issues. – Roadside Manager*

*Stormwater management is needed during and directly after construction. It takes 2 years to get natives established, so while they are an integral part of the re-vegetation process, natives are not considered a stormwater tool. – Roadside Manager*

*Current presumptions are that the ROW is not wide enough and that the tall native grasses actually cause more snow deposition on the roadway. – Roadside Manager*

*Don't like the results, they catch the snow more and then cause it to drift onto the road. – County Engineer*

# Conclusions

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Primary influences on roadside management:

- Considerations of safety

- Soil erosion concerns

- Maintenance cost savings

Barriers to greater use of native vegetation:

- Cost and available funding

- Length of time for natives to establish

- Cause of snow control issues

- Interference with plantings by adjacent landowners

## Conclusions continued

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Benefits of IRVM:

**Enhances biodiversity**

**Provides attractive roadsides**

**Maintains or improves water quality**

Protects soil resources

Promotes partnerships with other organizations

Reduces spread of invasive species

Optimizes the effectiveness of weed and pest control practices



## Next Step: Survey the decision makers

- Chairs of the county boards of supervisors
- Directors of county conservation boards







# Trees Forever-MindFire LRTF Research





## Research Objectives:

- to understand how typical Iowans, members of stakeholder groups and legislators view the mission of the Living Roadway Trust Fund (LRTF)
  - Who are our target audiences and where do we reach them?
  - What messages resonate with them?
  - How do we best drive engagement and support as well as perceptions of value in LRTF initiatives?





## Who we talked to:

- Representative sample of the Iowa general population
  - Fielded through Nielsen Opinion Quest

n=610

- Stakeholders

- Representatives of a variety of targeted groups identified by steering committee

n=840

- Legislators

n=21





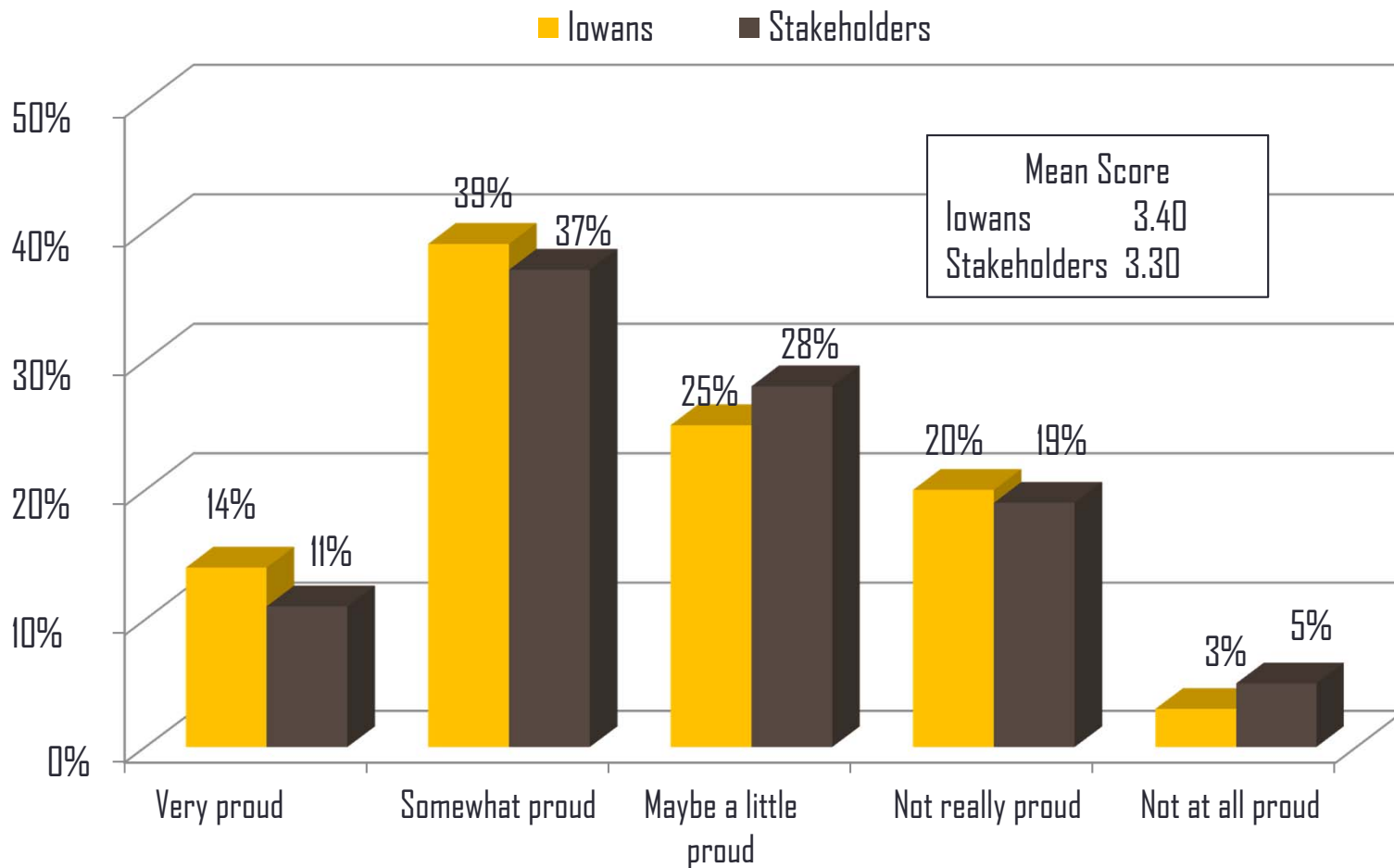
# Opinions and Perceptions: Iowans and Stakeholders





# Roadside Pride

As an Iowan, does the appearance of our state as reflected by the condition of our roadsides make you proud of our state?



Base: Iowans, n=610, Stakeholders, n=840



## Satisfaction vs. Importance: lowans

|  | Importance |             | Satisfaction |             | Mean Gap |
|--|------------|-------------|--------------|-------------|----------|
|  | Mean Score | % Very Imp. | Mean Score   | % Very Sat. |          |
| Effectively managed water quality strategies, incl. storm water runoff mgmt.     | 4.36       | 52%         | 3.45         | 7%          | 0.91     |
| Efforts to support pollinators, including bees and butterflies                   | 4.32       | 51%         | 3.56         | 7%          | 0.76     |
| Conservation of wildlife habitats  | 4.32       | 48%         | 3.70         | 10%         | 0.62     |
| Saving taxpayer money with smart approaches for roadside weed control            | 4.21       | 43%         | 3.64         | 6%          | 0.57     |
| Knowing that native plants and habitats will be preserved for future generations | 4.18       | 40%         | 3.74         | 9%          | 0.44     |
| Native trees and shrubs along roadways for beauty and storm water management     | 4.18       | 39%         | 3.68         | 12%         | 0.50     |
| Restoration of native plant species  | 4.08       | 36%         | 3.75         | 6%          | 0.33     |
| The beauty of Iowa viewed from the roadways                                      | 3.99       | 29%         | 3.66         | 12%         | 0.33     |

Base: lowans, n=610



## Satisfaction vs. Importance: Stakeholders

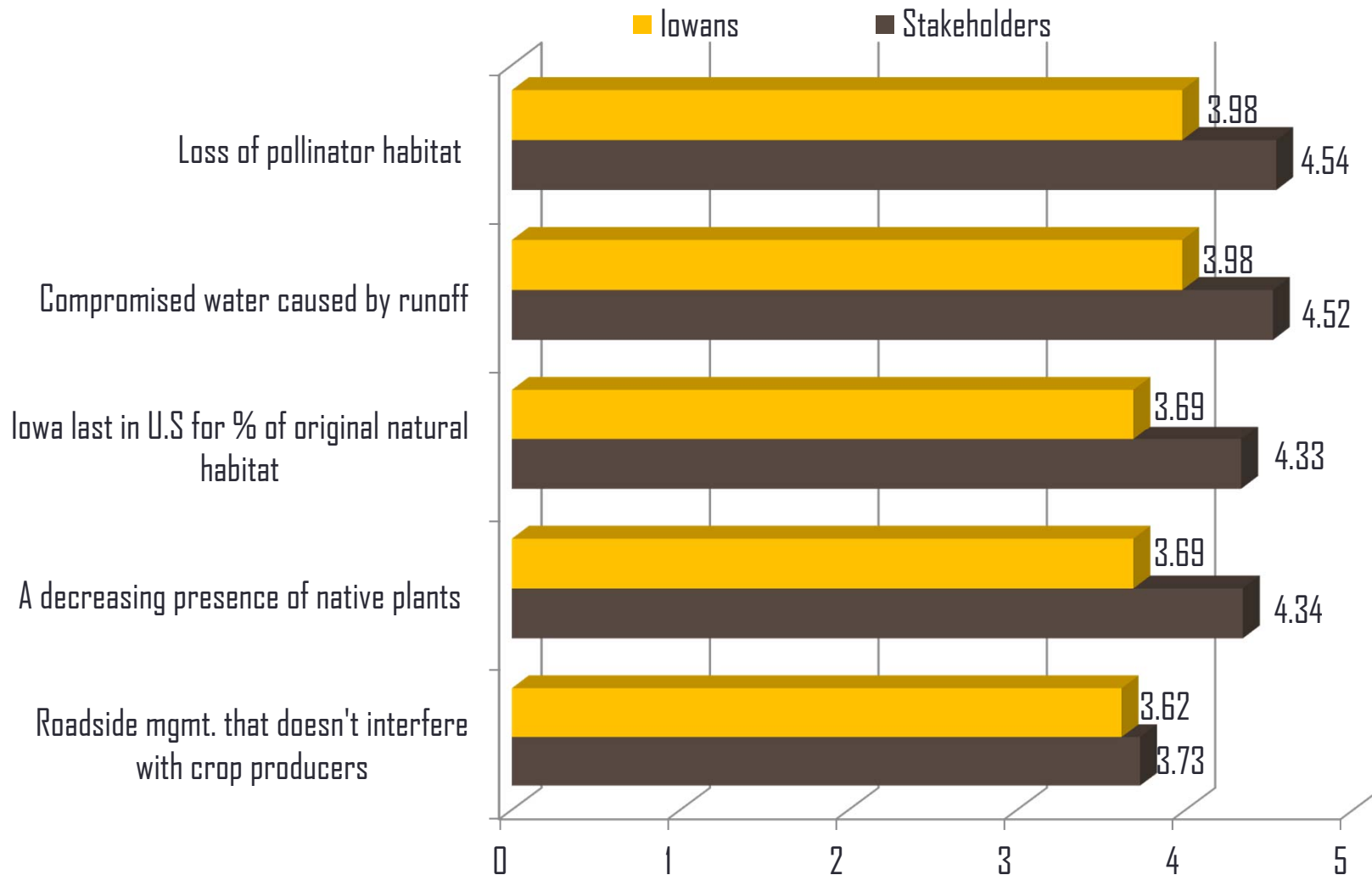
|  | Importance |             | Satisfaction |             | Mean Gap |
|--|------------|-------------|--------------|-------------|----------|
|  | Mean Score | % Very Imp. | Mean Score   | % Very Sat. |          |
| Effectively managed water quality strategies, incl. storm water runoff mgmt.     | 4.71       | 74%         | 2.33         | 3%          | 2.38     |
| Efforts to support pollinators, including bees and butterflies                   | 4.73       | 77%         | 2.76         | 5%          | 1.97     |
| Conservation of wildlife habitats  | 4.69       | 75%         | 2.89         | 6%          | 1.80     |
| Saving taxpayer money with smart approaches for roadside weed control            | 4.14       | 41%         | 2.99         | 5%          | 1.15     |
| Knowing that native plants and habitats will be preserved for future generations | 4.68       | 75%         | 2.70         | 5%          | 1.98     |
| Native trees and shrubs along roadways for beauty and storm water management     | 4.51       | 64%         | 2.84         | 5%          | 1.67     |
| Restoration of native plant species  | 4.61       | 70%         | 2.81         | 5%          | 1.80     |
| The beauty of Iowa viewed from the roadways                                      | 4.36       | 50%         | 3.15         | 7%          | 1.21     |

Base: Stakeholders, n=840



# Comparison: Likelihood to Support

How likely are you to support efforts to address the following?



Base: Iowans, n=610, Stakeholders, n=840





# Preferences: The Look

**Managed roadside prairie plantings and native landscaping** (wildflowers and grasses, native trees, wildlife habitat).



**Mowed grass and landscaped roadsides** with ornamental flowers and plants – make it look as park-like as possible.



**Mow roadsides periodically** for safety, but otherwise leave them alone.



# Preferences: The Look

Considering *strictly the look* of Iowa roadsides, what are your preferences? Rank the following in order of your personal preference so that your most preferred is ranked 1, and least preferred is ranked 3:

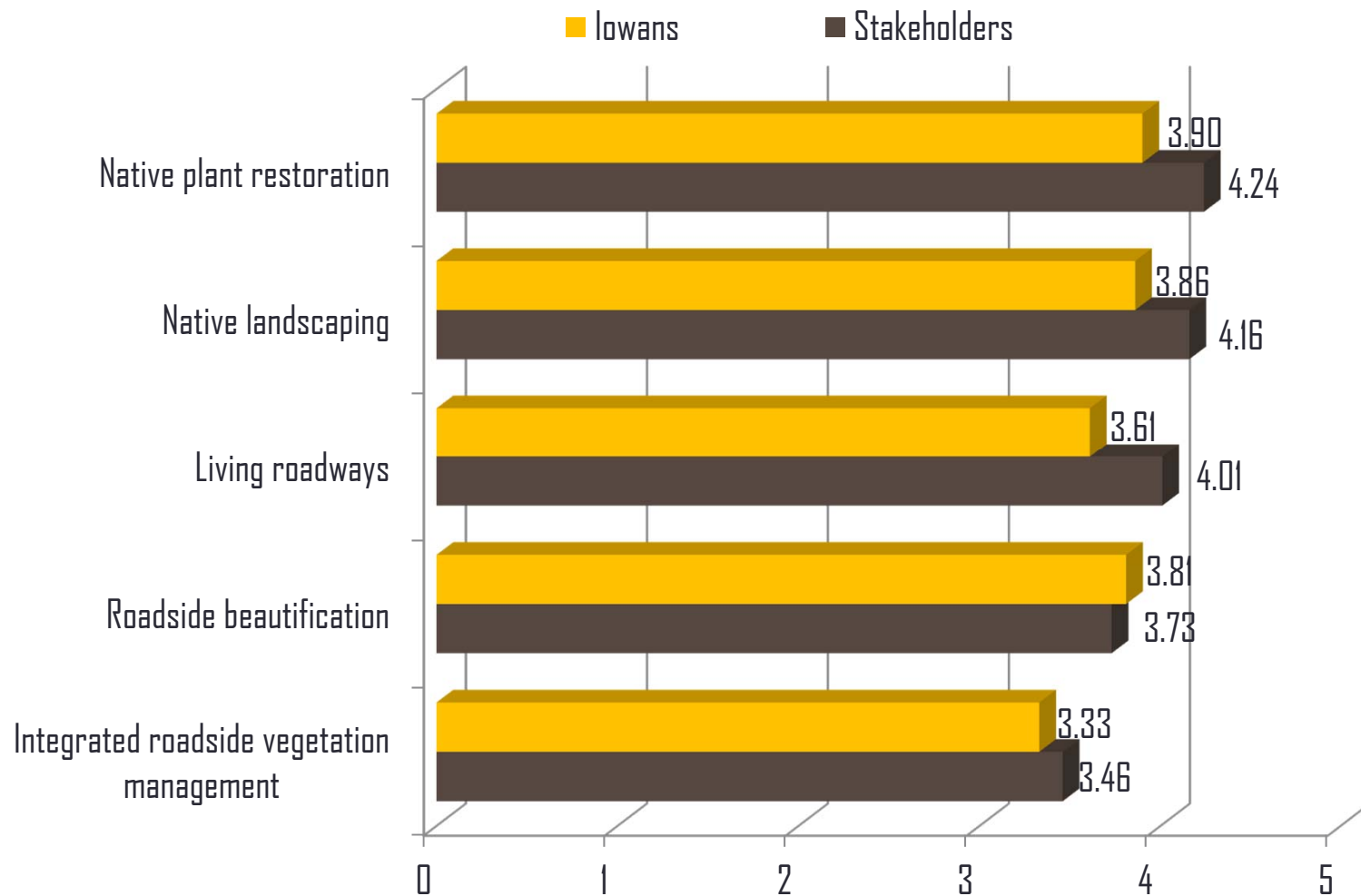
|  | Ranked 1 <sup>st</sup> |              | Ranked 2 <sup>nd</sup> |              | Ranked 3 <sup>rd</sup> |              |
|--|------------------------|--------------|------------------------|--------------|------------------------|--------------|
|  | Iowans                 | Stakeholders | Iowans                 | Stakeholders | Iowans                 | Stakeholders |
| Managed roadside prairie plantings and native landscaping.   | 49%                    | 83%          | 37%                    | 13%          | 15%                    | 4%           |
| Mow roadsides periodically for safety, but otherwise leave them alone.   | 25%                    | 13%          | 39%                    | 63%          | 35%                    | 25%          |
| Mowed grass and landscaped roadsides with ornamental flowers and plants – make it look as park-like as possible. | 26%                    | 6%           | 24%                    | 22%          | 50%                    | 72%          |

Base: Iowans, n=610, Stakeholders, n=840



# What Do We Call It?

Following is a list of terms that could be used to describe the management of Iowa's roadside vegetation. For each, indicate its appeal to you personally.



Base: Iowans, n=610, Stakeholders, n=840





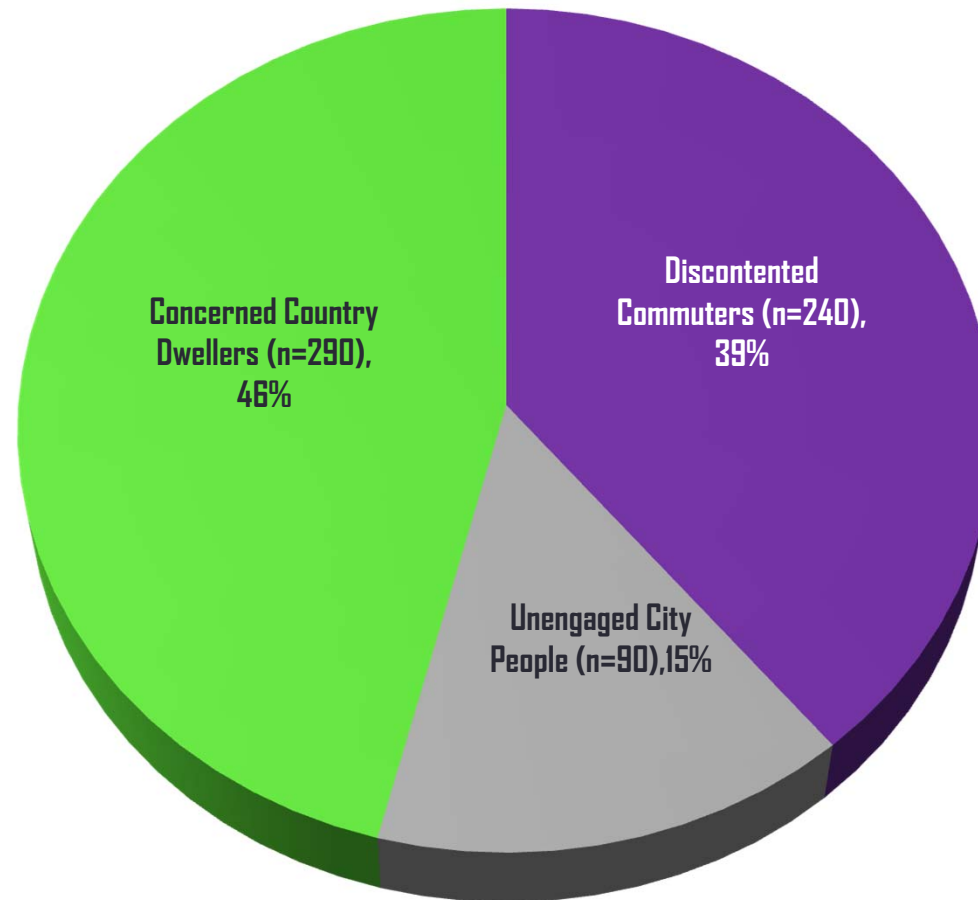
## Segmentation: General Population (Iowans)





# Cluster Analysis

Cluster analysis reveals that there are three distinct sub-segments within our sample of lowans:



Base: lowans, n=610



# Concerned Country Dwellers (largest segment)

These highly-engaged rural community and farm residents:

- Are very proud of the appearance of Iowa and its roadsides.
- Care a lot about all types of conservation and environmental concerns.
- Although they are happier with the state of Iowa's conservation efforts than other segments, their satisfaction is only mediocre.
- More likely than those in other segments to be a member of an organization associated with agriculture, water quality, environment or outdoor recreation.

## Demographic Characteristics:

- Ages 18-49
- \$20K - \$60K annual household income



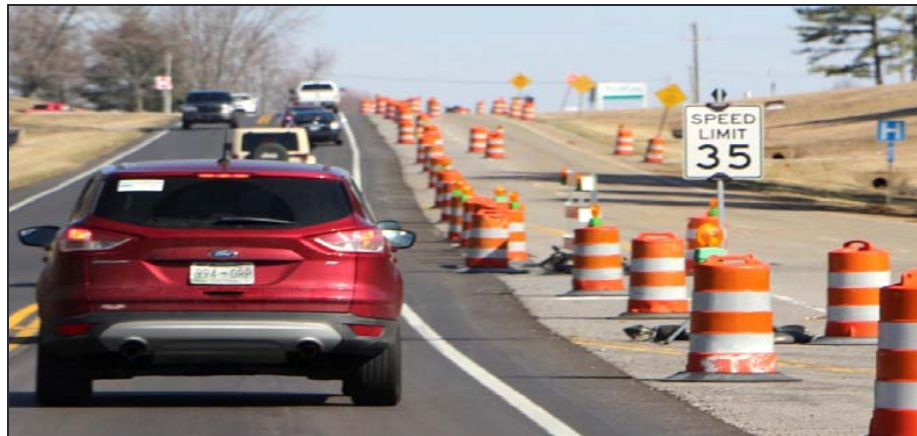
# Discontented Commuters

Residing in the suburbs and rural communities, this high-income, professional sub-segment likely spends a lot of time on Iowa roadways commuting to work.

- Have dismal levels of pride in the appearance of our state and roadsides.
- Are not very happy with Iowa's conservation efforts.
- Care about environmental and conservation issues, although not quite as much as Concerned Country Dwellers.
- See significantly less value in LRTF initiatives to them personally than other segments.
- Less likely than those in other segments to be a member of an organization associated with agriculture, water quality, environment or outdoor recreation.

## Demographic Characteristics:

- Ages 18-49
- \$61K - \$100+K annual household income



# Unengaged City People

- Older, lower income segment lives in the city (urban/suburban).
- Somewhat apathetic about conservation and environmental issues in Iowa.
- Don't feel much pride in the appearance of our state as reflected by the condition of the roadsides.
- Not totally unhappy with Iowa's conservation and environmental preservation efforts, but not very satisfied either.
- Nothing in particular was important to them.

## Demographic Characteristics:

- Ages 50 – 65+
- Under \$40K annual household income





# Recommendations







## Who are our target audiences?

- *Concerned Country Dwellers*
- *Discontented Commuters*
- *Stakeholders*

In that order of priority.





## What messages resonate most?

- The message with the widest support: *pollinator habitat conservation/restoration*.
  - This doesn't need to be the loudest message communicated, but it must be the most consistent.
- *Water quality management* is of critical importance to Iowans, and demonstration of how Native Plant Restoration helps manage storm water runoff should be a primary communication to Iowans.
- The many ways Native Plant Restoration provides *habitat for wildlife* is also a high-resonance message.





## Engagement, continued

- Respondents expressed a sincere desire to preserve native plant species for generations to come, for whom they see the biggest value of LRTF initiatives.



***Maintaining the link between our Iowa heritage and our children's future is a concept that will engage Iowans and garner support.***



## Engagement, continued

- The people who live and work in Iowa, now and for generations to come, are seen as the biggest beneficiaries of LRTF initiatives - should be a theme that is woven through communications.
- Managed prairie plantings and native landscaping is what Iowans want to see along their roadsides.
- But it's not just about the look and perceptions of beauty.

*It's about how Native Plant Restoration along our roadways address the many environmental issues we face.*





# Thank you!

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