Understanding the Economics & Benefits of Integrated Vegetation Management (IVM)

A vegetation management strategy based on the use of IVM, which includes integration of mechanical and herbicide-based prescriptions, is consistently and convincingly less costly than repeated treatments using only manual and mechanical techniques.

— John Goodfellow, BioCompliance Consulting

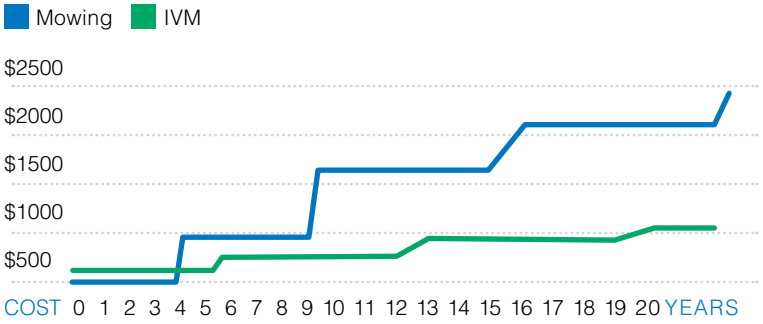
IVM-based rights-of-way maintenance programs are intended to create, promote, and conserve stable plant communities. **IVM is recognized as an environmentally responsible and sustainable means of managing early successional plant communities on extensive land areas such as rights of way.** A variety of vegetation maintenance methods are used to promote sustainable plant communities that are compatible with the intended use of the site, and to control, discourage, or prevent the establishment of incompatible plants that may create a variety of risks.

IVM is encouraged and supported by industry standards—ANSI A300 Part 7 (2019) and ISA BMP , Integrated Vegetation Management" 2nd Edition (2014)

The following is a **summary of a cost efficiency** analysis over a **20 year period.**

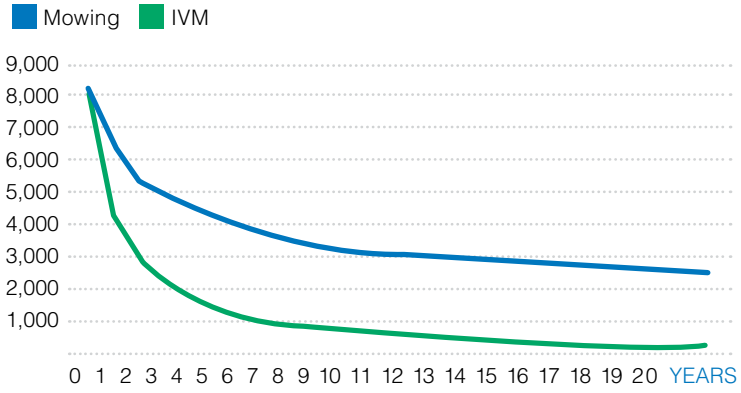
20 YEAR COST

20-Year Costs (Present Value) Comparing Maintenance Using Mechanical-Only Mowing Treatments v. IVM



20 YEAR DENSITY CHANGE

Production function predicting changes in density of incompatible trees over time under IVM-based and non-IVM vegetation management strategies over time.



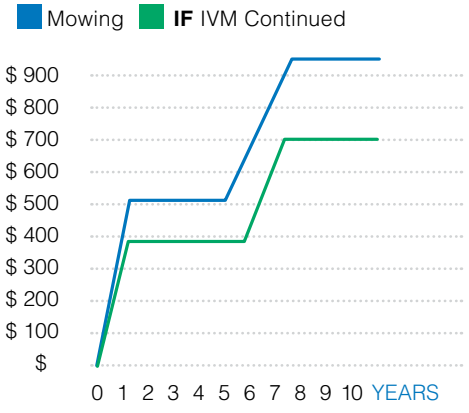
Key Findings

An IVM-based strategy that includes the use of a **variety of vegetation maintenance** techniques including herbicides was shown to be significantly less costly as compared to the non-IVM strategy of repeated mowing. In most cases it was also shown to be more cost efficient at producing a variety of benefits.

COST OF LOSING USE OF HERBICIDES

10 Year Present Value Cost

10-Year cost (PV) of maintenance after the loss of herbicide use compared to continued use of IVM.



Cost Ef•ficiency [noun]

The systems offer cost efficiencies in terms of easier administration and cheaper maintenance.

The **act of saving money** by making a product or **performing an activity in a better way.**

— Longman Business Dictionary

The Advantages of IVM vs. Non-IVM

> Public Safety
> Operational Risk
> Recreational Use
> Public Nuisance
> Site Disturbance
> Water Quality
> Compatible Vegetation
> Incompatible Vegetation (Density & Height)
> Range of Wildlife Species

— John Goodfellow, BioCompliance Consulting

WILDLIFE SPECIES	COST EFFICIENCY PER ACRE IVM	COST EFFICIENCY PER ACRE MECHANICAL ONLY
Quality of Deer Habitat	2X	
Bird Populations	2.4X	
Bird Species Diversity	2.4X	
Amphibians and Reptile Population	5X	
Amphibians and Reptile Diversity	2.7X	
Butterfly Populations	2.4X	
Butterfly Species Diversity	2.3X	

Research has shown **IVM is significantly more cost efficient** compared to mechanical only methods at:

> Producing Quality Deer Habitat
> Improving Bird Populations and Species Diversity
> Improving Amphibian and Reptile Populations and Species Diversity
> Improving Butterfly Populations and Species Diversity

Ecosystem Response to IVM

The overarching purpose of VM on utility ROW is to ensure safety, service reliability and regulatory compliance. VM enhances security, access, and visibility while reducing fire risk and restoration time. When done well, it can provide many environmental benefits.

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