

IVM for Utility ROW

COST-EFFECTIVE SOLUTIONS TO ENHANCE
ELECTRICAL SERVICE RELIABILITY AND
ENVIRONMENTAL SUSTAINABILITY

WHAT'S INSIDE:



POSITIVELY IMPACT THE ENVIRONMENT AND YOUR ROI

RELIABLE AND COST-EFFICIENT

You work hard to ensure the integrity of utility infrastructure. Several strategies can help you enhance electrical service reliability, but few promote environmental sustainability. By implementing an Integrated Vegetation Management (IVM) approach to managing problematic trees and other incompatible plant species, utility companies can effectively prevent interruptions in utility service, improve environmental conservation and make the most of annual resources.

SIMPLIFYING WORK FOR VEGETATION MANAGERS

Complementing mechanical vegetation control strategies with selective herbicide applications can help you protect utility infrastructure, surrounding wildlife and your program's pocketbook. Read on to learn how these IVM-based strategies can benefit your operation.

IN THE U.S.

**200K
MILES**

of high-voltage
transmission lines

**5.5MM
MILES**

of local distribution lines

WHY IVM?



SUPPORT ENVIRONMENTAL CONSERVATION

Vegetation managers can expect to release more than 175,000 pounds of CO₂ emissions into the atmosphere for every thousand acres treated with mowing applications.¹ Environmental research studies show that [herbicide applications significantly reduce carbon emissions](#) while improving time efficiency, productivity and results for today's utilities.

ENHANCE ROW ACCESSIBILITY

Interruptions in electrical service can jeopardize your pocketbook and public image. IVM strategies keep utility infrastructure clear of problematic vegetation, which minimizes downtime, improves compliance and makes it easier for crews to access the area when necessary.

Selective herbicide applications [make mowing easier and more effective](#). By selectively **controlling problematic trees and other incompatible plant species**, **vegetation managers can support the development of desirable low-growing plants that provide benefits throughout utility rights-of-way (ROW).**

REDUCE MAINTENANCE INPUT COSTS

Unlike mechanical mowing, which controls desirable plants, spreads seeds and stimulates incompatible plant growth, IVM supports native plant development. This creates a natural barrier against problematic vegetation, which improves the impact of mowing practices and reduces long-term maintenance needs.

GET MORE OUT OF MOWING

NON-IVM	IVM
Mechanized Mowing	Mechanized Mowing
	Vegetation Management With Herbicides : Selective herbicide applications reduce incompatible stem counts and support the development of compatible plant communities.
	Biological Control : Supporting native plant development improves habitat for various wildlife species that consume viable seeds and naturally control undesirable vegetation.



¹Hilbert, S. 2016. How Integrated Vegetation Management on Rights-of-Way Meet the Tenets of Sustainability.

SAVINGS

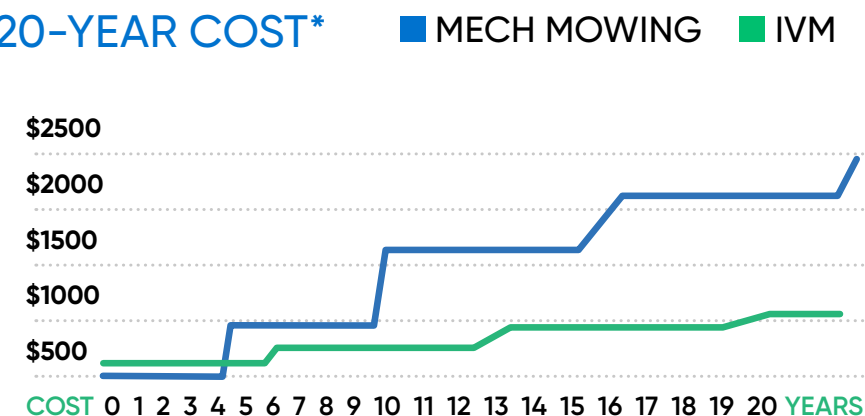
SPEND LESS TIME AND MONEY

Selective herbicide applications provide the flexibility you need to extend the treatment window. Starting and sticking with an IVM-based approach early can provide significant benefits to your vegetation management program.

SUSTAINABLE COST-CUTTING

Selective herbicide applications can provide significant cost savings to your utility vegetation management program over time.

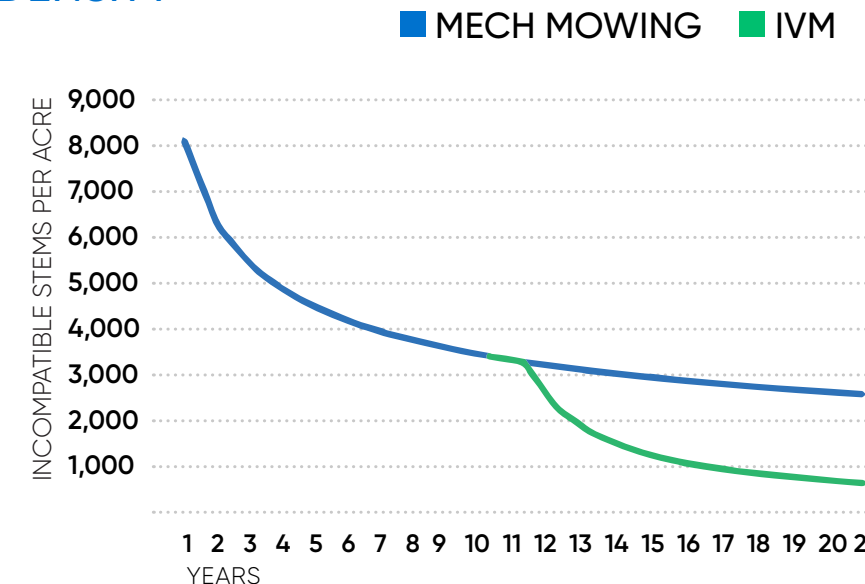
20-YEAR COST*



THE CASE FOR RECLAMATION

Herbicide applications can enhance ROW reclamation after mechanical mowing is used as an initial treatment.

RECLAIMED WITH HERBICIDES IN YEAR 10: DENSITY*



16%

less expensive than mechanical mowing practices.*

31%

increase in mechanical mowing costs in the 10 years following the stoppage of herbicide use.*

*Goodfellow, J. 2019. The Cost-Efficiency of IVM. BioCompliance Consulting, Inc.



MAXIMIZE YOUR ROI

IVM can complement mowing results by supporting the development of compatible plant species, which helps crowd out and prevent undesirable tree regrowth. Research has shown that this can help utility vegetation management programs effectively reduce average tree heights. As a result, vegetation managers can extend treatment cycles over time, which significantly lowers annual maintenance costs compared with programs that rely exclusively on mowing practices for ROW maintenance.

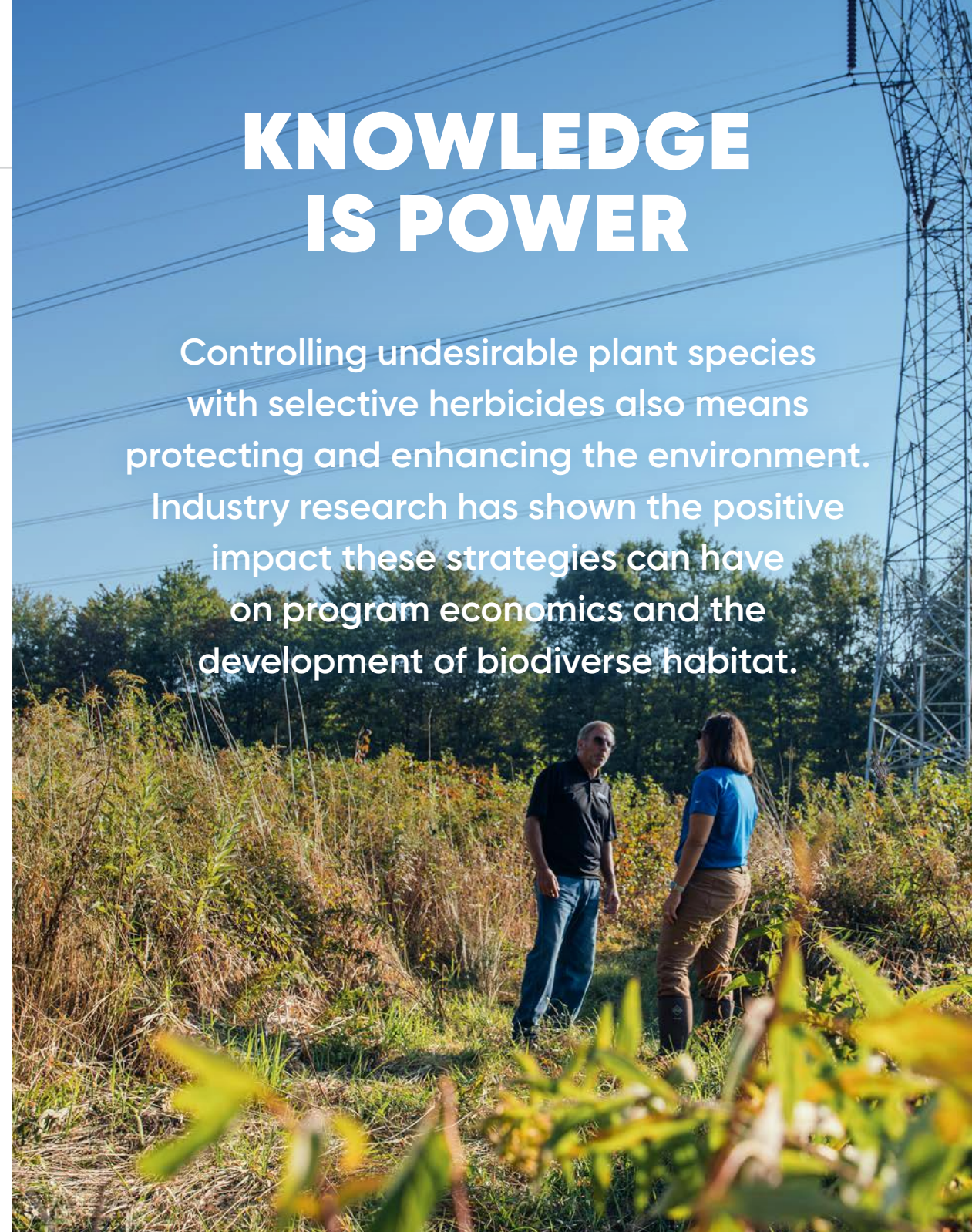
Cycle (Years)	Mechanical Annual Cost	IVM Annual Cost	IVM Cost Savings Over Mechanical	Max. Avg. Tree Height (ft)	
				Mech Mow	IVM
3	\$3,116	\$1,705	45%	12	8
4	\$3,114	\$1,352	57%	15	9
5	\$2,334	\$1,149	51%	18	10.5
6	\$1,888	\$1,412	25%	21	12

The Cost-Efficiency of IVM. BioCompliance Consulting, Inc.



KNOWLEDGE IS POWER

Controlling undesirable plant species with selective herbicides also means protecting and enhancing the environment. Industry research has shown the positive impact these strategies can have on program economics and the development of biodiverse habitat.







John W. Goodfellow's report directly compares IVM with non-IVM programs. And the results are not surprising: When it comes to improving habitat for wildlife species, mechanical mowing alone is less effective and more costly.

The table below, within the Goodfellow study, illustrates IVM benefits based on cost per acre over a 20-year maintenance period.

ECOSYSTEM BENEFITS

RELATIVE COST OF MECHANICAL ONLY CONTROL **VS** IVM APPROACH

	Quality of Deer Habitat	2X
	Bird Populations	2.4X
	Bird Species Diversity	2.4X
	Amphibian and Reptile Population	5X
	Amphibian and Reptile Diversity	2.7X
	Butterfly Populations	2.4X
	Butterfly Species Diversity	2.3X

For nearly 70 years, this environmental research project has studied and upheld IVM-based practices as highly effective strategies for improving electrical transmission reliability and environmental sustainability. Key findings from the project's most recent three-year research cycle include:

- Selective herbicide treatments applied as part of an IVM-based approach yielded a higher abundance and richness of breeding birds.
- Mechanical mowing plots generally featured a lower abundance and taxa richness of bees than most herbicide-treated plots.
- Herbicide-treated plots in the wire zone and border zone generally featured lower incompatible stem counts than mechanical control methods.

ENHANCE WILDFIRE MITIGATION

Using herbicide applications as part of an IVM-based approach can help utility vegetation management programs mitigate the risk of wildfire.

Electrical power is the cause of nearly

10%

of wildfires annually.²

An average of

7MM ACRES

have been burned by U.S. wildfires each year since 2000.³

PROTECT UTILITY INFRASTRUCTURE FROM ENCROACHING TREES

IVM strategies can effectively control trees and tall-growing vegetation to promote the development of grasses, herbs and small shrubs. This reduces the risk of powerline interference.

ESTABLISH FUEL BREAKS

Many perennial grasses or forbs do not significantly contribute to a fire's intensity. Their presence provides a landscape of fire-resistant plant species where firefighters can suppress flames more safely and effectively.

PREVENT INCOMPATIBLE PLANT DEVELOPMENT

An IVM-based strategy can eliminate the tallest and most flammable plant species, provide ample spacing between less-flammable tree species and create a natural ventilation system for the heat of wildfires to escape.

²Porter, T., W. Crowfoot, and G. Newsom. 2021. 2020 Wildfire Activity Statistics. California Department of Forestry & Fire Protection.

³Fas.org, 2022. Wildfire Statistics. Congressional Research Service.

BIODIVERSITY MANAGEMENT & ESG REPORTING

Environmental, Social and Governance (ESG) reporting allows utility companies to showcase their values, ethics and actions. As IVM activities intentionally manage both compatible and incompatible vegetation, they qualify for ESG reporting if they prove to yield no net loss or net positive impact on biodiversity.



CONNECTING BIODIVERSITY TO ESG INDICES

The biodiversity sections featured in ESG indices support the development of conservation framework that links IVM practices to quantifiable biodiversity metrics or qualitative descriptions of habitat initiatives and their environmental impacts.

EXAMPLE: POLLINATORS

Plants that improve pollinator habitat are mostly compatible with utility infrastructure. IVM practices can complement ESG reporting by supporting biodiverse habitat development for threatened or endangered pollinator species.

BENEFITS PROVIDED TO UTILITY COMPANIES

Investing in biodiversity management and ESG reporting can provide the following benefits to utility companies and their vegetation management program:

- ✓ Enhances electrical service reliability
- ✓ Improves environmental sustainability
- ✓ Develops and protects public reputation
- ✓ Offsets unexpected headwinds

RESOURCES FOR GUIDANCE AND SUPPORT

If you're looking for even more resources regarding IVM programs and the economic or environmental benefits they can provide, visit the following sites:



Align your program with strategies, solutions and products that can protect utility infrastructure as well as adjacent ecosystems.



The Vistas® newsletter is a one-stop shop for product information, industry success stories, news, trends and environmental research insights.



Visit this site to learn about successful herbicide programs and management techniques that can help enhance beneficial wildlife habitat.



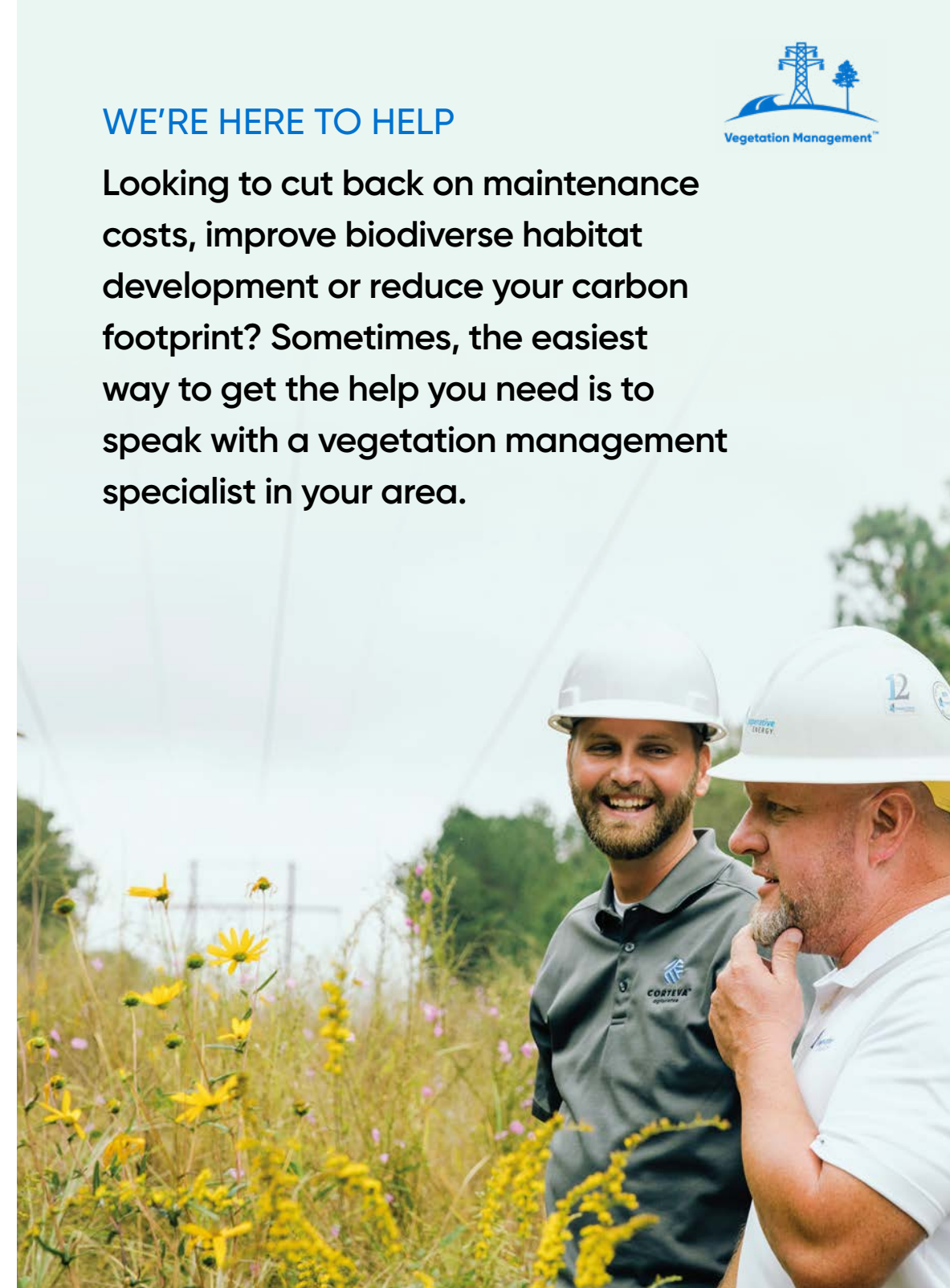
Explore self-guided digital trainings, how-to videos, expert analysis and product-related resources to help ensure success in the field.



This resource guide, developed by Corteva Agriscience, provides effective communications strategies for vegetation managers when talking with landowners and the public.

WE'RE HERE TO HELP

Looking to cut back on maintenance costs, improve biodiverse habitat development or reduce your carbon footprint? Sometimes, the easiest way to get the help you need is to speak with a vegetation management specialist in your area.



IVM FOR UTILITY ROW



WE CAN DO THIS.

As your partner in vegetation management, Corteva Agriscience provides products, solutions, technical support and expert advice to help you ensure a safe, reliable and sustainable future.