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OTHER OPTIONS



# Integrated Vegetation Management Project Guidance

Stakeholder Informed



# Introduction

Integrated Vegetation Management (IVM) is a system of land management generally associated with infrastructure corridors, now ubiquitous across the landscape, including pipeline, transmission and rail. The corridors traverse a myriad of ecosystems, and by their operational nature, require continuous maintenance. IVM allows for objectives related to conservation to be set for segments of a system, prompting the maintenance and management of those lands according to desired outcomes of biodiversity and habitats. With the appropriate approach that will meet both operational needs and regulatory requirements, corridors can be sites of increased habitat diversity, can be used by wildlife as travel lanes between isolated patches of suitable habitats, can increase the amount of early successional habitat available to species, and much more.

IVM projects can include the variety of practices where conservation objectives are guiding habitat management – across all habitat types. It can also include projects that build awareness for those habitats or species hosted, as well as education about the conservation benefits of IVM.

# Building Your Program

Projects are divided into four categories: **Habitat**, **Species Management**, **Education and Awareness** and **Other Options**. You can build a program with more than one of each category but you must associate your program with at least one habitat. This Integrated Vegetation Management Project Guidance is in the **Other Options** category. You will be able to associate your IVM project with **Habitat**, **Species Management** and **Education and Awareness** projects.



**Habitat** – Projects that focus on conservation actions to protect, restore and manage different habitats.



**Species Management** – Projects addressing the conservation needs of targeted wildlife species or groups of species.



**Education and Awareness** – Projects to improve awareness, understanding and skills relating to conservation and the environment.



**Other Options** – Specialized projects that add value to your conservation efforts.

Browse the Project Guidance library at [wildlifehc.org/pg](https://wildlifehc.org/pg).

# What Do IVM Projects Look Like?

IVM projects will all progress through the following general steps, which are further refined for each situation:

1. Set vegetation management objectives
2. Evaluate conditions at site
3. Define action thresholds to guide vegetation management activities
4. Evaluate, select, and implement the appropriate control methods, based on the current conditions
5. Monitor the results and perform quality assurance of the work completed on site

While these steps set the backbone of an IVM project, a variety of additional activities support success, from stakeholder engagement to internal and external communication of metrics and outcomes. These ancillary actions often elevate the practice of IVM to a form of stewardship program, turning the linear features into an asset for the communities in which they are found.

In the context of WHC Conservation Certification, IVM projects consist of IVM activities with a specific

conservation-related objective. IVM projects attempt to manage the vegetation within linear features in a way that creates, enhances or maintains habitat, in a way that provides demonstrated value to species and overall biodiversity.

IVM projects typically occur on portions of a system and can be implemented on land that is leased, owned, or under easement or other agreement.

IVM projects will generally demonstrate the following attributes:

- Follow the principles of IVM
- Result from an assessment of the system to locate the most suitable locations for conservation activities
- Clearly show the link between conservation objectives and a set of thresholds and actions
- Be part of a broader Vegetation Management Plan
- Extend monitoring beyond regulatory requirements and gather data to evaluate success toward the objective

IVM projects can vary widely in scale, depending on the amount of land and resources available. The size of a continuous segment managed for a conservation objective across the landscape will affect which wildlife species will benefit. Small patches of habitat managed with IVM can be suitable for migratory species, for species needing the habitat created for parts of their life cycle, or for research. Large tracts of linear features managed for conservation through IVM have the potential to benefit multiple species, including those resident year-round.

While IVM can be applied to more than linear land features, this project guidance addresses large-scale systems within which segments of land are managed with a clear conservation objective. For other types of land where IVM is used as a habitat management technique, please consult the main habitat or species Project Guidance. Alternatively, smaller-scale projects on corridors not managed as a system are best aligned with the specific habitat and species projects.

# Considerations for Corporate Lands

Projects implemented on corporate-owned lands have different circumstances and challenges to those on public lands, protected lands or wild lands.

## **Which types of corporate lands are best suited for IVM projects?**

IVM projects are particularly suited to linear features and most types of infrastructure corridors including, but not limited to: railroads, roadsides, and utility rights-of-way (ROWs) such as pipeline ROWs and electric transmission and distribution ROWs. Within a given system, specific segments of corridors best suited for IVM projects can be identified using regional conservation priorities, surrounding land use and presence of supporting partners. IVM projects occurring on lands adjacent to other ongoing conservation efforts present excellent opportunities for positive conservation impacts, if both areas are linked for greater habitat connectivity. Corridors stretching through both urban and rural areas can provide equally valuable benefits to the communities in which they are located.

## Addressing challenges

The corporate context presents certain challenges for implementing IVM projects. Understanding these concerns and potential ways to overcome them can help your project succeed in the long term.

Concern	Response
Teams may face resistance from maintenance contractors accustomed to implementing a single type of activity across the system.	<i>Teams can work with ground crews to present IVM guidelines, and to increase familiarity with the selected practices.</i>
Team may have concerns that implementing conservation activities on linear features may be incompatible with regulations.	<i>IVM has been demonstrated to be compatible within most regulatory frameworks that govern linear features.</i>
There may be concerns that conservation activities will increase wildlife-related conflicts with infrastructure and equipment.	<i>Evidence from implementation suggests that enhanced management of habitats on linear features is compatible with maintenance needs for most ROWs. In addition, objectives and approaches are flexible enough to allow teams to choose suitable projects to prevent an increase in wildlife-related conflicts.</i>

Concern	Response
<p>Creation of enhanced, diverse wildlife habitats can be difficult to sustain through regular maintenance activities at the same cost.</p>	<p><i>Research and decades of implementation data indicate that IVM is cost-effective and promotes self-sustaining communities of compatible plants, requiring increasingly lower maintenance inputs.</i></p>
<p>Conservation IVM typically requires the use of herbicides as one of the available treatment options, which can be negatively perceived by the public.</p>	<p><i>IVM programs, especially those targeting conservation goals, are best implemented with education and outreach activities. Consider involving stakeholders from the start of the project, as well as making available information from credible groups that demonstrates that the responsible use of herbicide is a proper technique to create valuable habitats.</i></p>
<p>Grass height ordinances in different regions may prevent the transition from mowed corridors to any other managed habitat types.</p>	<p><i>Most municipalities are receptive to the concept of wildlife habitat creation and enhancement, especially if paired with informational signage.</i></p>
<p>Companies may have concerns about liability and may therefore be reluctant to allow employees or community members to access the site.</p>	<p><i>Conservation activities do not specifically require on-site involvement, although most teams have found that systems and processes are already in place within their company to allow public access for a variety of purposes.</i></p>



# Getting Started with IVM Projects

**For a project to qualify toward Conservation Certification, you must be able to answer “yes” to five questions.**

1. Is the project locally appropriate?
2. Does it have a stated conservation or education objective?
3. Does it provide value or benefit to the natural community?
4. Have outcomes been measured and is there supporting documentation?
5. Does it exceed any pertinent regulatory requirements?

## **Conservation and education objectives**

It is a requirement of Conservation Certification that IVM projects be designed to meet one or more conservation objectives. Objectives can guide the direction of the project, help motivate others to participate and provide a basis for evaluation.

The following are suggested objectives for IVM projects. Your team may choose one or more of these objectives, or develop your own relevant objectives.

- Limiting the introduction and spread of invasive species
- Promoting or maintaining a healthy native plant community, such as early successional habitat
- Providing a demonstration plot or pilot program of IVM
- Implementing IVM to benefit species associated with conservation IVM efforts, such as pollinators, small mammals, migratory or resident birds, reptiles and amphibians, or ungulates
- Releasing the native seed bank
- Increasing habitat connectivity
- Managing a ROW as a movement corridor for wildlife
- Improving stormwater management in order to benefit watershed health

- Establishing a native plant community habitat that is naturally resistant to the establishment of woody vegetation
- Improving or maintaining the structural diversity of the native plant community
- Contributing to conservation education or scientific research efforts in the region
- Spreading awareness and knowledge of IVM, including its benefits, activities and implementation among employees, industry and community members
- Reintroducing a species of concern

**The following strategies are recommended to strengthen the conservation impact of your project:**

- Have a plan of action for the project that includes baseline data, goals and objectives, thresholds for taking action, and a road map for achieving the project's goals
- Establish a baseline of plant and animal species on the project site, upon which desired outcomes can be based and evaluated

- Include a diverse, appropriate mix of native species or non-invasive exotic species in habitat establishment, reclamation efforts or post-construction work
- Connect to larger local, regional and landscape-scale initiatives for conservation
- Include artificial or manufactured structures such as nest boxes that target multiple species and meet a conservation or education objective
- Describe or visually document the project's success story for employees and the community
- Demonstrate a leadership aspect in terms of IMV implementation with a goal of conservation
- Contribute to the conservation of species of concern by reintroducing a species and entering into voluntary agreements to continue corridor maintenance
- Work to improve communication with regional conservation organizations by engaging those groups for technical advice or help

- Contribute to educational efforts in order to develop future environmental leaders and scientists
- Implement the IVM project as part of a corporate-wide initiative for biodiversity and sustainability
- Manage and establish vegetation in a way that reduces hard edges and avoids their creation whenever possible
- Manage the ROW to provide for multiple uses, including habitat for wildlife, recreation, conservation education, etc.
- Provide opportunities for college students, professors or other scientific professionals to conduct research in the project area, the results of which are used to inform the project
- Include credible monitoring that contributes to a citizen science program or the database of an established conservation organization, the results of which are also used to inform the project
- Work with conservation organizations to identify suitable locations for conservation IVM but also to implement and monitor projects
- Provide multiple ecological functions on a landscape scale, including wildlife movement corridors or migratory pathways
- Coordinate with neighboring landowners for consensus or input into conservation activities
- Conduct proactive education with stakeholders and landowners before planning is complete
- Demonstrate the use of data as part of a feedback loop informing cycles of maintenance

## Partnerships

IVM projects will benefit from partnerships with groups that have similar conservation objectives to those of the project. A vegetation management or environment team may use a partnership to first identify which areas of a system are candidates for conservation efforts, and to assist in refining objectives and approaches for maintenance activities. Partners may also be able to assist the team with obtaining funding for the project, and identify learning links to other conservation priorities in the region.

## Resources

Your project may benefit from online or printed resources available for your region to support the design, delivery, maintenance and monitoring of invasive species projects.

A search for “integrated vegetation management” in the Conservation Registry returns 25 projects implemented through WHC’s certification program. This is a great place to find inspiration for your project and see what others are doing in and around your location.

The following terms, in any combination, may be useful when searching online for items related to this theme:

<b>IVM</b>	<b>pest plants</b>
<b>IVM demonstration</b>	<b>weeds</b>
<b>right-of-way (ROW)</b>	<b>seed bank release</b>
<b>utility ROWs habitat</b>	<b>pollinators</b>
<b>ROWs for wildlife</b>	<b>grassland establishment on ROWs</b>
<b>wildlife corridors</b>	
<b>migratory corridors</b>	<b>grassland</b>
<b>corridor revegetation</b>	<b>early successional habitat</b>
<b>invasive species</b>	

# Understanding the Application Process

## Documentation

When applying for Conservation Certification, you will provide documentation of the planning, implementation, maintenance and monitoring of your IVM project. The following is required documentation for IVM projects; however, you may also submit additional supporting materials.

**Map/image** of the project area, showing the segments under conservation IVM (other relevant information can be shown in the map as well, but is not required).

**Photographs or videos** that depict the progress of the project implementation and management.

**IVM plan or system maintenance specification** that outlines action thresholds and methods.

**Yearly work plan or equivalent** and document that present the results of the activities conducted on the segments managed in line with the conservation objective. This plan or equivalent should include your monitoring and evaluation data.

## Application questions

As you complete the application online, you will be asked the following questions about your IVM project. These questions will help us understand and evaluate your project.

	Question	Why this question is important
<b>Overview</b>	Is the property you're managing a linear feature?	<i>This provides us with a description of your project to allow us to assess it.</i>
	What type of property is IVM occurring on?	
	Are principles of IVM used on your system to guide the management of plant communities on land owned, leased or under easement?	
	Are you following an established IVM best management practice?	
	Is your system divided into spans/segments, where each category of span is assigned a clearly defined and documented objective?	
	What is the total area of the spans or sites where IVM is implemented with an objective of conservation?	
	Give a brief description of the vegetation communities found in the spans or sites where IVM is implemented with an objective of conservation and list several of the common plant species.	
	Upload a map showing the locations where IVM is implemented with an objective of conservation and photos showing the various habitats.	

	Question	Why this question is important
<b>Overview (cont.)</b>	When did work on the ground to implement IVM with an objective of conservation begin?	<i>This provides us with a description of your project to allow us to assess it.</i>
<b>Objective</b>	What are the project's conservation objectives?	<i>Having a conservation objective is a requirement for certification.</i>
	How were the conservation objectives specifically defined for the spans or sites in question?	
<b>Project Design</b>	Is this a new project not presented in previous applications?	<i>The selection process for choosing new IVM sites and expanding existing sites is an important design element that helps determine success and ecological benefit.</i>
	Identify the selection process used to identify the spans or sites where IVM is implemented with an objective of conservation.	
	Describe the selection process.	
	Upload documentation of the selection process.	
	Since the last application, have you expanded the area where IVM is implemented with an objective of conservation or the area being managed?	
	Select the methods used to identify the spans or sites where you expanded the project.	
	Please describe the selection process used.	
	Please upload documentation of the selection process	

	Question	Why this question is important
<b>Assessment</b>	Is your system under a yearly vegetation inspection cycle?	<i>Each system is managed differently based on cycles, thresholds and actions. It is important to understand not only how conservation and management activities need to occur within a given timeframe, but how progress and outcomes are assessed.</i>
	What cycle length is your IVM planning under?	
	Are there clear action thresholds linked to the project's conservation objectives?	
	Describe the monitoring or inspection process and any plan or protocol used to assess the thresholds.	
	Describe the specific habitat parameters being monitored.	
	Upload the monitoring protocols, if applicable.	
<b>Management</b>	Select which management methods are planned if the segment/span/site reaches the action thresholds.	<i>Appropriate management activities implemented within the right timeframe will impact project success and ecological benefit.</i>
	Upload your system maintenance specifications or your vegetation management plan that outlines action thresholds and methods.	
	Provide a brief summary of the activities conducted on the spans/sites under a conservation objective.	
	Upload the yearly work plan, pre-planning document or other documents presenting the results of the activities conducted on the segments under conservation.	
	If any seeding or planting has occurred upload the lists of species.	



	Question	Why this question is important
<b>Management (cont.)</b>	Are some of your conservation segments consistently managed by outside conservation partners?	<i>Appropriate management policies and practices are also important to the target species.</i>
	Please describe the involvement.	
<b>Monitoring</b>	Brief summarize how the yearly inspection/monitoring results are used to improve the project.	<i>Monitoring is essential to understand the impact of the project and to be able to adapt the project develops.</i>
	Is there a system or procedure in place for documenting and verifying that vegetation management work was completed to specifications?	
	Upload documentation of the system/procedure.	
<b>Employee Participation</b>	Do employees actively contribute to the IVM project?	<i>Employee participation can strengthen a project and secure its future.</i>
	How many employees participate in the project on a regular basis?	
	Describe how employees are involved in this project.	
	How many employee hours were spent on the following activities each year?	

	Question	Why this question is important
<b>Other Participants</b>	Do any groups or individuals outside of your company actively contribute to the project on a regular basis?	<i>It is not always possible to recruit outside groups to a project. Conservation and education partners can strengthen a project and provide different audiences to use it for lessons or recreation, thus broadening its reach.</i>
	Select the types of groups.	
	List the names of the groups you work with.	
	Describe their involvement in this project.	
	How many hours were spent by the groups on the following activities each year?	
	If you work with a conservation specialist and have a current letter of support from them, upload it here.	
	List additional sources of technical advice (e.g. website, guidebook, etc.) and describe how they were used.	
<b>Regulatory Requirements</b>	Are any aspects of the project done in relation to regulatory requirements?	<i>Going beyond compliance is a requirement for certification.</i>
	Explain how the project exceeds requirements	
<b>Connectivity</b>	Do the segments managed under the conservation objectives connect with other habitats managed for conservation on neighboring land?	<i>Connectivity onsite and across fence lines helps to decrease fragmentation, one of the leading causes of habitat loss.</i>
	Describe how the project connects with the other habitats.	
	Describe any coordinated management efforts with other managed habitats.	

	Question	Why this question is important
<b>Alignments</b>	Do the objectives set for conservation segments align with any larger scale initiatives? (e.g. corporate strategy, regional conservation plan, migratory pathway, watershed plan, etc.)	<i>Aligning conservation efforts with large-scale conservation plans and other regional conservation initiatives allows a site-based activity to support a landscape-scale objective.</i>
	Is the project part of a corporate level commitment to practicing IVM with a focus on conservation?	
	Upload documentation of your corporate commitment to IVM as it relates to conservation, biodiversity and habitat.	
	Do the conservation objectives align with an existing conservation plan or other large-scale initiative?	
	List the conservation plans or other large-scale initiatives the project aligns with and provide website links, if available.	
	How does your IVM project align with these large-scale initiatives?	
<b>Existing Certifications</b>	Does this project have third party IVM/conservation related certification?	<i>Other certifications or recognitions illustrate strong efforts and commitments.</i>
	List the certifications and provide a website link if available.	

## Content development for Conservation Certification

To inform the development of Conservation Certification, WHC analyzed the projects it was recognizing through its certification program to assess whether they were aligned with contemporary conservation and education priorities.

Following this assessment and using information from it, WHC convened Advisory Committees around conservation and education themes to develop the content that would guide practitioners and applicants in the future. This content is the basis for the Project Guidance and the online application process.

The following provided feedback on the initial draft of the Integrated Vegetation Management Project Guidance:

**Alex Brown**, PECO Energy, an Exelon Company  
**Eric Brown**, Pacific Gas & Electric Company  
**Kate Daly**, Spectra Energy  
**Terry Doyle**, Spectra Energy  
**Megan Eschleman**, Baltimore County Soil Conservation District  
**Jody Johnson, PhD**, Cullaborate, LLC  
**Rick Johnstone**, IVM Partners, Inc.  
**Sally Krenn**, Pacific Gas & Electric Company, Retired  
**Rich Mason**, U.S. Fish and Wildlife Service, U.S. Department of the Interior  
**Bill Rees**, Baltimore Gas and Electric Company  
**Travis Rogers**, Dow AgroSciences LLC  
**Dan Stocks**, Pacific Gas & Electric Company

More information can be found about this process in the “Our Impact” section of [wildlifehc.org](http://wildlifehc.org) under “Commitment to Transparency.”

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The WHC Strategy and Planning team can help you build a successful project by identifying needs, making connections with partners and resources, and providing strategies that meet business and conservation goals. Contact us today.

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Every act of conservation matters.

